Study on the Impact of Animal Welfare International Activities

Final Report

Volume 1 – Main Text

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ACRONYMS AND ABBREVIATIONS

ASEAN	The Association of Southeast Asian Nations
AW	Animal Welfare
AWIA	Animal Welfare International Activities
AWO	Animal Welfare Officer
BIP	Border Inspection Post
BTSF	Better Training for Safer Food
CA	Competent Authority
CAP	Common Agricultural Policy
CARIFORUM	Caribbean Forum
CETA	Comprehensive and Economic Trade Agreement
COMEXT	External Trade
COPA-COGECA	Committee of Professional Agricultural Organisations and General Committee for Agricultural Cooperation in the European Union
CSO	Civic Society Organisation
DCFTA	Deep and Comprehensive Free Trade Agreement
DG AGRI	Directorate-General for Agriculture and Rural Development
DG NEAR	Directorate-General for Neighbourhood and Enlargement Negotiations
DG RTD	Directorate General for Research and Innovation
DG SANTE	Directorate General for Health and Food Safety
DG TRADE	Directorate General for Trade
EBRD	European Bank for Reconstruction and Development
ECA	Export Credit Agencies
EIB	European Investment Bank
ENP	European Neighbourhood Policy
EQ	Evaluation Questions
ESF	Environmental and Social Framework
ESP	Environmental and Social Policy
FAO	Food and Agriculture Organisation of the United Nations
FTA	Free Trade Agreement
FYROM	Former Yugoslav Republic of Macedonia
FVO	Food and Veterinary Office
GATT	General Agreement on Tariffs and Trade
GPN	Good Practice Note
HSI	Humane Society International
IDF	International Dairy Federation
IFC	International Finance Corporation
IFI	International Financial Institution
IN	Normative Instruction (Brazil)
ISSG	Inter Service Steering Group
JMC	Joint Management Committee
MERCOSUR	Mercado Comun del Sur
MoU	Memorandum of Understanding
MPI	Ministry of Primary Industries
MS	Member States
NAEAC	National Animal Ethics Advisory Committee
NAWAC	National Animal Welfare Advisory Committee
NEU	Non-EU country
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development

OIE	World Organisation for Animal Health
OV	Official Veterinary
QA	Quality Assurance
SAG	Chilean Agriculture and Livestock Service
SG	Steering Group
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary
STM	Sustained Training Mission
TAIEX	Technical Assistance and Information Exchange
TL	Team Leader
TRQ	Tariffs Rate Quota
UN	United Nations
US	United States
WAP	World Animal Protection
WB	World Bank
WBG	World Bank Group
WSPA	World Society for the Protection of Animals

1. INTRODUCTION - OUTLINE OF THE EXERCISE

This Final Report (the 'Report) was prepared within the framework of the '***Study on the Impact of Animal Welfare International Activities***'. The Report is submitted to the European Commission (EC) Directorate General for Health and Food Safety (DG SANTE) by a grouping of consulting firms and research institutions led by Economisti Associati Srl and including Areté Consulting (hereinafter collectively referred to as 'the Consultant'). The Report is the last deliverable prepared by the Consultant under the Assignment.

1.1. Purpose, Objectives, and Structure of the Study

The ***purpose*** of the Study is 'to provide the necessary data and analyse the impact of the EU international activities dedicated to animal welfare on the competitiveness of EU livestock producers and operators'.[1] The outcomes of the Study are meant to be used by the Commission, together with additional information, to prepare a report reviewing the international activities on AW, and evaluating their impact on the competitiveness of EU producers and operators, as foreseen in the EU Strategy for the Protection and Welfare of Animals 2012-2015.[2]

In order to achieve this purpose, the Study has had a ***twofold objective***, having a descriptive nature, on the one hand, and an evaluative one, on the other. On the ***descriptive side***, the exercise has reconstructed and classified the activities carried out by the European Commission to promote the animal welfare agenda at the international level and foster the adoption of the EU/OIE animal welfare (AW) standards by its trade partners. This has included both the initiatives initiated and implemented by various Commission services and the activities implemented within the framework of agreements or in collaboration with multilateral organisations, notably OIE and FAO. On top of that, the study has identified and described the financial assistance provided by international finance institutions (IFI) and export credit agencies (ECA) to the industries affected by compliance with AW standards in their operations, and the degree to which EU AW standards have been used as reference benchmarks in their operations.

On the more ***evaluative side***, the study has assessed the impact AW standards have had on the competitiveness of EU producers and operators *vis-à-vis* non-EU operators, as well as their impact on non-EU livestock producers and operators in selected non-EU Countries as regards their competitiveness with EU exports in non-EU markets. Moreover, the study has analysed more in detail the contribution given by the EU in influencing the drafting of OIE standards, as well as the extent to which international activities in the field of AW have contributed to the implementation of these standards within the EU, when there are no specific EU AW standards in place (e.g. on dairy cows). These impacts on competitiveness have been assessed both in general terms and with specific reference to each of the policy instruments used by the Commission, as specified in Section 2.2 below.

The study has therefore been structured against two key tasks, i.e. (i) the inventory description and description of EU international activities and policy

[1] See Technical Specifications, p.1.

[2] Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on the European Union Strategy for the Protection and Welfare of Animals 2012-2015

instruments and (ii) the analysis and description of the impact of these activities on the competitiveness of EU livestock producers and operators.

1.2. Scope of the Study

The scope of the Study has been defined from a multidimensional perspective, taking into consideration (i) the period considered for data collection and analysis; (ii) the operations and activities covered; (iii) the sectors included in the analysis; and (iv) the geographical coverage.

Time Frame. The Study has covered the period ***2004-2015***. In some cases, particularly when/where activities have been initiated only very recently the scope has been extended to cover also 2016, in order to gain a more comprehensive and complete assessment (see below in Section 3 – methodological approach).

Operations and Activities. The Study has considered ***all policy instruments and all activities*** through which the Commission has supported the adoption and implementation of AW standards worldwide. Namely these include: (i) regulatory provisions to ensure equivalent standards at slaughter; (ii) technical cooperation within the framework of bilateral trade agreements; (iii) technical cooperation within the framework of cooperation fora; (iv) activities carried out under the European Neighbourhood Policy (ENP) and through TAIEX; (v) other technical assistance and capacity building delivered through the BTSF programme and in collaboration with other organizations (FAO and OIE); (v) the definition and implementation of the OIE international standards. Additionally, the Study has covered the financial support provided by IFI and ECA, with particular reference to the Export Credit Agencies of Italy (SACE), Germany (Euler Hermes), and the Netherlands (Atradius Dutch State Business).

Sectoral Scope. The selection of the sectors and industries covered by the Study has been made with a view to ensure the largest possible degree of overlapping with the analysis carried out for the preparation of the seminal 2002 *Communication on Animal Welfare Legislation on Farmed Animals in Non-EU countries and the Implications for the EU*. These have been differently affected by specific EU and OIE AW standards, as detailed in Table 1.1 below.

Table 1.1 – Sectors covered by the Study and relevant AW standards [a]

Industries / Sectors Covered	EU AW Standards at Transport	EU AW Standards at the Farm Level	EU-OIE AW Standards at Slaughter	Relevant OIE Standards
Livestock trade	✓			✓
Beef and veal meat		✓ (calves) [3]	✓	✓
Pig meat		✓	✓	
Poultry meat		✓	✓	✓
Sheep and goat meat			✓	
Eggs and egg products		✓		
Dairy products[4]				✓

[a] The beef and veal industry is specifically affected by the EU Directive on the Protection of Calves, although results from the survey have shown that it was also particularly impacted by the implementation given at the MS level of the general provisions of the Directive 98/58 on AW in Farming.

[3] The Industry is indirectly affected by EU animal welfare standards on calves.
[4] See footnote 1 above

In particular:

- International livestock trade is affected by EU and OIE AW standards on long haulages, with the former slightly more stringent than the latter.
- All meat and meat processing industries are horizontally affected by the impact of EU and OIE animal welfare standards at slaughter, again slightly more stringent in the EU than at the OIE level.
- AW at slaughter and the general provisions of AW in farming are the only relevant AW standards for the sheep and goat meat industry worldwide.
- Both EU and OIE AW standards at farming equally apply to the poultry meat industry, which can be considered for practical purposes as broadly equivalent.
- AW standards at farming for the pig meat industry and the egg and egg product industries only exist at the EU level, as OIE standards on pig welfare and laying hens are currently under development.
- OIE AW standards exist for beef and veal, and for dairy products, while no EU specific regulation has been developed for these sectors yet, apart from the general provisions about AW in farming and the Directive 2008/119/EC on the protection of calves.

Geographical Coverage. The Study has had a ***two-level geographical scope***. The inventory and description of the activities and policy instruments has covered all non-EU countries, in order to have the most comprehensive picture possible. On the other hand, the analysis of the impact of the activities has covered a set of ***twelve countries across five region***, as summarized in Table 1.2 below. The selection of countries to be included in the analysis has taken into consideration both market-related aspects and the level of development of technical cooperation with the EU. More details are provided in Box 1.1.

Table 1.2 List of Countries Selected for the Market Analysis

Macroregions	Selected Countries
Eastern Europe and Middle East	Ukraine, Lebanon
North and South America	Chile, Brazil, US
Asia	Thailand, India, China
Africa	South Africa, Namibia
Oceania	New Zealand, Australia

Box 1.1 – Rationale for the selection of the countries for in-depth analysis

Ukraine is an exporter of egg products and poultry meat towards the EU. As a signatory of the EU Association Agreement in 2004, it has committed to approximating its AW standards to those of the EU and as such has been the recipient of TA to this aim. It has also received substantial financing from both IFIs and ECAs in the period concerned in the poultry and egg industries.

Lebanon has long been one of the main destinations of EU exports of livestock (bovines and sheep and goats) in Northern Africa and the Middle East. It therefore represents a good example of the concerns that have been raised about compliance with long distance AW transport standards and slaughtering practices implemented at destination. Lebanon has also been the recipient of EU TA aimed at improving its AW slaughtering standards.

Chile is by far the most relevant example of bilateral cooperation with the EU within the framework of bilateral trade agreements. The country has been actively transposing the OIE standards into national legislation, also thanks to technical cooperation provided by the EU. Chile is an exporter of poultry meat, and exports significant amounts of pig meat to the EU, but is not subjected to the implementation of the same animal welfare standards for pigs at farm.

A large player in the world markets, ***Brazil*** does not have a particularly well developed animal welfare legislation, but certifies compliance with animal welfare standards for export purposes. Since 2013 bilateral cooperation with the EU has been strengthening within the framework of a Memorandum of Understanding. Brazil is a significant exporter of poultry meat to the EU and covers almost entirely its export quota there. It is also a notable exporter of beef and veal meat.

USA are the largest food trade partner with the EU and have no cooperation agreement on AW, which can serve as a benchmark for comparison. It is an exporter of some limited importance of beef and veal and live animals to the EU and remains a net importer of meat, pig meat and dairy products. Its approach to AW remains characterised by heavy reliance on industry voluntary standards.

Like Brazil, ***Thailand*** also implements a Government-run certification system of compliance with AW standards for export purposes. Thailand is a significant player in the market for poultry meat and almost entirely covers its export quotas to the EU. Cooperation with the EU on AW issues has been mainly developed within the framework of the BTSF programme.

India has long been a major player in the market for liquid and powder egg products due to very low production costs there. This is compounded by concerns about the animal welfare standards implemented in the industry, as these have not been regulated by any OIE standard yet.

China is the leading world producer and importer of pig and poultry meat and a major recipient of funds from IFIs. It is currently believed to have a potential to become an exporter of AW compliant poultry meat to the EU. It has also been somehow progressing towards the transposition of the OIE standards within its domestic legislation.

Namibia is one of the few African Countries with some significant role in exporting beef meat to the EU. It also implements its own Animal Welfare Friendly scheme to certify outdoor-rearing beef cattle.

South Africa is a large importer of poultry, pig and beef meat including from the EU.

New Zealand was the first Country recognised as fully equivalent at slaughter with EU standards within the framework of a Cooperation Forum on AW. It is a large exporter of beef and sheep and goat meat to the EU and the only significant exporter of dairy products there. New Zealand has actually developed AW standards for dairy cattle in their domestic legislation and codes of conduct. Another cooperation forum has been established with ***Australia,*** a major exporter of sheep and goat meat to the EU, and one of the leading exporters of live animals in the World. As such, it has been particularly affected by animal welfare standards on long distance transportation of live animals including its own regulations on the subject and the introduction of supply-chain responsibility scheme for exporters.

1.3. The Case Studies

To complement the market analysis of competitiveness, the Study has included ***seven case studies***. The purpose of these case studies is to have a more specific and in-depth understanding of the specific impact of the EU AWIA on direct developments in the Countries concerned and indirectly on the various industries affected, including, eventually, synergy effects and other interactions. In particular:

- three case studies – ***Chile, Brazil and New Zealand*** dedicated to activities carried out within the framework of bilateral trade agreements and cooperation fora - have been carried out to assess: 1) the extent to which these activities have led to concrete changes in animal welfare practices in the Countries concerned, 2) these have been supported by parallel EC technical assistance or participation into EU Research Projects and 3) have eventually facilitated the establishment of a level playing field and impacted on the competitiveness of local producers and their EU competitors;

- one case study has been specifically devoted to the impact of provisions on ***equivalent standard at slaughter*** that since 2013 have become mandatory for all certified establishments allowed exporting to the EU. This is expected to provide insights on the impact on the competitive position of both EU and non-EU producers in the light of the different set of constraints they face (full certification of operations vs. partial certification). The study has also investigated how the provision of technical assistance / organisation of communication events has facilitated an understanding of the new requirements;
- a specific case study on ***support to OIE standards*** has included the mapping of EC support activities to the OIE regional strategies and highlighted synergies with the achievements reached therein. The case study has also investigated the EU specific contribution to the standard setting process, and the impact of these standards on the market including on EU producers and operators in areas not covered by superseding EU regulations;
- another case study has been devoted to the mapping of ***IFI and ECA financing activities*** and their impact on promoting animal welfare standards in the different regions and industries and their degree of consistency or lack thereof with the parallel animal welfare-related trade policies of the EU;
- finally, a specific case study has covered the ***neighbourhood policy and TAIEX***. This has taken into consideration the different possible impacts of neighbourhood policy and the TAIEX facility on animal welfare-related competitiveness. The case study has more particularly considered Ukraine as an example of a dedicated trade agreement and Lebanon as a recipient of TAIEX assistance.

Table 1.3 below summarises how the various case studies are expected to be relevant to the analysis of competitiveness of the different industries concerned thereby complementing the information from the market analysis of the different Countries.

Tab. 1.3 Expected Main Linkages between the Competitiveness of the Various Industries, the Analysis of the Different Country Markets and the Proposed Case Studies

Industries / Sectors Covered	Main Geographical Markets	Relevant Case Studies
Livestock trade	Lebanon New Zealand Brazil US Australia South Africa	OIE Standards Neighbourhood policy and TAIEX New Zealand Brazil
Beef and veal meat	Brazil US Namibia	OIE Standards Brazil
Pig meat	Chile China South Africa	Chile IFI and ECA financing activities
Poultry meat	Thailand China Brazil Ukraine Chile	OIE Standards Brazil Chile Neighbourhood policy and TAIEX
Sheep and goat meat	Australia New Zealand	New Zealand
Eggs and egg products	Ukraine India	IFI and ECA financing activities Neighbourhood policy and TAIEX

Dairy products	New Zealand	OIE Standards / New Zealand

The impact of the BTSF and of the joint EC-FAO Capacity Building initiatives will not be the subject of a separate case study, but will be considered more horizontally throughout the exercise and in particular within the broader framework of EC support to the implementation of the OIE AW standards.[5]

1.4. Structure of the Report

The remaining of this Report includes an introductory section, three parts providing the main findings of the Study, and a concluding Section. In particular:

- Section 3, provides a comprehensive overview of the methodological approach adopted for the Study.

Part A includes two sections, and in particular:
- Section 4, focusing on the EU AW strategical approach and the policy instruments used to promote AW in non-EU countries; and
- Section 5, detailing all the activities funded to this aim through the various relevant financing facilities of the Commission.

Part B includes the six available case studies, in the following order:
- Section 6: the impact of Technical Cooperation within the framework of Cooperation Fora – Brazil;
- Section 7: the impact of Technical Cooperation within the framework of Bilateral Trade Agreements – Chile;
- Section 8: the impact of OIE International Standards;
- Section 9: the impact of the European Neighbourhood Policy and TAIEX;
- Section 10: the impact of International Finance Institutions and Export Credit Agencies;
- Section 11: the impact of the Equivalence at Slaughter under Regulation 1099/2009;
- Section 12: the impact of the Cooperation Forum with New Zealand

Part C includes the analysis of the Impact on Competitiveness. In particular:
- Section 13 includes some introductory elements:
- Section 14 provides a general appraisal of the international competitiveness of EU-28 in affected sector;
- Section 15 discusses the impact on productivity and cost competitiveness;
- Section 16 focuses on the impact on market access;
- Section 17 is dedicated to the distortions in trade flows of animal products and by products;
- Section 18 discusses the impact in terms of capacity to innovate, particularly regarding the demand for AW products;
- Section 19 summarises the main conclusions from the analysis of the impact on competitiveness.

- Finally, Section 20 provides the Conclusions of the Study.

[5] Also the organisation of EU-funded AW-related international events (e.g. the 2007 Animal Welfare International Conference in Montevideo, the First OIE Inter-American Meeting on Animal Welfare in Panama City in 2008 or the Second OIE Global Conference on Animal Welfare in Cairo also in 2008) has a mediated impact on the competitiveness of industry mainly through increased political awareness and enhanced implementation of the AW standards worldwide.

The Report also includes the following Annexes in a separate volume:

- Annex A - Bibliography;
- Annex B - OIE Standards Implementation and Commission Support In Selected Countries
- Annex C - Results of the Survey on EU Operators and Sector Associations
- Annex D - Results of the Survey on Selected Non-EU Countries Operators
- Annex E - Methodology for the assessment of impacts on competitiveness
- Annex F - Statistical Appendix

2. METHODOLOGICAL APPROACH

The Study has required the deployment of a ***variety of data collection and analytical tools***. Information has been retrieved from primary as well as secondary sources, through telephone and face-to-face interviews with nearly 90 interviewees overall, the desk review of no less than 250 bibliographic sources (see full bibliography in Annex A), the retrieval of quantitative information on trade flows and market trends from existing databases, and the set-up of two dedicated surveys. The evidence collected has been consolidated and reviewed using various methodologies and techniques, including the inventory of activities, the market competitiveness analysis, and the compilation of seven dedicates case studies. In particular, section 3.1 focuses on the activities carried out for the mapping of activities, and Section 3.2 on the analysis of competitiveness. Finally, Section 3.3 provides additional information on the approach used for the preparation of the seven Case Studies. It should be noted, however, that activities, particularly those used to collect data, are deeply intertwined, and, in many cases, have been used in more than one work stream.

2.1. Inventory and description of Activities

This stream of activity has entailed (i) a deep and comprehensive data collection stage, and (ii) a subsequent review stage, during which the information collected was consolidated and classified.

Data Collection. The collection of data triangulated a number of sources, in order to obtain a full and comprehensive picture of the involvement of the EU in the field of international promotion of AW standards. In particular, this has included:

- Retrieval of lists and details of activities from online database or other public sources. First and foremost, a thorough review of all information available from open sources was carried out. This has included, for instance, activities carried out under the instrument[6] or funded under DG RTD Framework Programs.[7] This was complemented with the review of reports and various publications produced by the various entities, such as BTSF annual reports.[8] This initial effort had the purpose of avoiding the duplication of efforts, so that further data collection activities would validate and, whenever necessary, complement this initial list.
- Collection of additional evidence from interviews with EC staff. Whenever available, the information collected from secondary sources was used as a starting point for cross-checking with key stakeholders. This has allowed to enrich the inventory with further details on the activities delivered and to ensure that all relevant activities are taken into account. In other cases, interviews were used to gain access to information on the involvement of the various institutions in operations relevant for the study.
- Collection of qualitative and anecdotal evidence from the case studies. All the above was further cross-checked with evidence collected within the framework of the case studies (see Section 3.3 below).

Review of Evidence Collected. ***The data collection phase led to a long list of projects, which was then refined to identify only relevant activities***. In particular, all operations ended before 01/01/2004 or started after 31/12/2015 were excluded, as were all projects only exclusively covering the EU 28. Then, the

[6] http://ec.europa.eu/enlargement/taiex/dyn/taiex-events/library/index_en.jsp
[7] See, for instance, on Horizon 2020: http://ec.europa.eu/programmes/horizon2020/en/h2020-sections-projects
[8] http://ec.europa.eu/chafea/publications/publications_for_btsf_programme.html

remaining projects were singularly reviewed through public sources (web searches, etc.), in order to assess whether and to what extent they concerned AW issues. Relevant operations were then ***consolidated in a database and classified according to a number of criteria***. These have included (i) the degree of importance of AW activities in it (i.e. whether the project was a fully dedicated activity / partially dedicated activity / activity with a marginal inclusion of AW-related issues); (ii) the stage of the AW value chain dealt with (farming/ transport/ slaughter) and the sector eventually concerned for projects addressing specific farming activities (pig, poultry, egg, etc.); and (iii) the type of activity funded (research project, technical assistance, workshop, etc.).[9]

Challenges. The complete census of AW International Activities has posed some challenges. First, it appears that some strands of activities, particularly regarding the EU contribution to OIE, have been funded ***directly by DG SANTE's budget***, rather than falling under the umbrella of one specific strand of activities or funding. Some of these activities have therefore been identified through crossed interaction with both DG SANTE and OIE. Secondly, it is possible that some of the ***development cooperation projects*** that have not been included in the final list of relevant operations contain some marginal activities in the field of AW. In fact, as described above, the identification of relevant projects was based on publicly available information, which was not always available or complete for all projects. Unfortunately, the inclusion of AW is not a 'searchable' item, and, as development cooperation projects are mostly implemented at regional or local level, headquarter staff does not possess sufficient information to assist in this process. Finally, in a similar vein, it is possible that some ***activities eventually funded through the budget of EU Delegations (EUD) in partner countries*** have not been grasped. In fact, AW components can be included in projects falling under a number of activity areas, without being explicitly identified or identifiable. In fact, AWIA support projects could be financed under very different strands of activities, and namely 1) development of sustainable agriculture, 2) animal health and veterinary services, 3) Government capacity building; 4) trade facilitation.

2.2. Analysis of the Impact of AW International Activities on Competitiveness

Definition of competitiveness and breadth of the analysis. For the purposes of this exercise, impact on competitiveness has been defined as a combination of impacts on 1) ***unit production costs***; 2) ***overall productivity of operations***, including quantitative or qualitative production improvements, as well as 3) ***access to markets and related market shares***. The study has also considered the indirect impact of these activities on consumers' ethical values and concerns, and the related creation of a marketable ***demand for AW-friendly products*** as a component of competitiveness. In fact, international demand for organic/animal friendly products is already of some market significance in some non-EU Countries. Finally, the study has also considered ***the ethical component*** of the impact on competitiveness, in terms of increase in the level of animal welfare affecting farmed animals. A table

[9] Additional criteria/information recorded in the database include: 1) the Commission service promoting the activity; 2) the dates of start and end of the activity; 3 the country/ies covered or involved, and the actual location (in case, for instance, participants from several country partake in an event organized in one specific country); 4) the activity budget, the amount of EU contribution, as well as on other funding partners, if any; 5) involvement of OIE and FAO (number of speaker, partner organizations, etc.); 6) additional information on implementation or contracting entities, participants, speakers, as appropriate for the various activities.

summarising the approach to the competitiveness analysis and related indicators is reported as annex E.

In practice, the analysis of competitiveness has been based on the triangulation of ***four key sources***: (i) an extensive review of literature; (ii) an interview program with all the main relevant EU-level business associations with the exception of COPA-COGECA that despite several attempts could not be reached; (iii) a comprehensive analysis of trade flows: and (iv) the carrying out of two dedicated surveys. The evidence collected was compared, and led to the findings reported in Part C of this report. These preliminary findings were then discussed and validated in a final workshop involving three external discussants and all those business associations and NGOs that had contributed as informants to the exercise.

Literature Review. This activity commenced during the very initial stages of the Study, and has been integrated and complemented throughout the Assignment with additional sources collected during the various subsequent activities (interviews, case studies) and the more recent materials of grey literature provided by business associations themselves. Overall, over 250 documents were reviewed.

In-depth interviews. In addition to the information collected from interviews with Commission Staff, as described in Section 3.1 above, this stream of work entailed interviews with (i) representatives of business associations at EU level (and particularly of the meat, poultry, egg and dairy industries, as well as livestock traders), and (ii) representatives of the main European NGO globally active on AW issues, and therefore in a position to be knowledgeable about developments outside the EU.

Not only was this aimed at facilitating contacts with national business associations to be consulted through the Survey, but it also allowed collecting first-hand information as regards past trends, emerging concerns, and key issues at stake. The interviews were conducted by core team members, based on specific interview guidelines. Whenever necessary, a follow-up was done with counterparts in order to collect all available documentary sources, and cross-check for incongruences.

All these stakeholders were subsequently invited to take part to the final workshop.

Analysis of Trade Flows. This analysis has been based on trade data mainly retrieved from two official databases:

- UN Comtrade: trade database of United Nations, used for all data concerning the 12 selected partner countries and the other third countries, and for the analysis of world trade flows;
- Eurostat-COMEXT: EU trade database, used for all data related to the analysis of inward and outward EU trade flows.

This first allowed the calculation of a revealed comparative advantage indicator for all the industries concerned and then to highlight main trade patterns of the EU producers and operators and in the twelve markets analysed more in detail to detect possible signals of trade diversions.

Survey of EU-28 stakeholders and of operators in non-EU countries. Two web-based surveys were carried out for this Study, with the purpose of collecting qualitative and quantitative evidence directly from producers and operators. The first survey covered ***EU 28 stakeholders***, particularly EU- and national-level business associations representative of all stages of the meat and dairy supply chains: farmers, slaughterhouses, processors and traders. The questionnaire in English included a combination of closed and open questions, and was distributed as Computer Assisted Web Interview (CAWI). Overall, the link to the questionnaire was sent to 4,731 contacts, three reminders were also sent to non-respondents, and the survey remained open for six weeks. Overall, however, only 45 respondents completed the questionnaire. The nationalities of respondents are summarized in Table 2.1 below, while more details on the characteristics of the respondents are provided in Annex C.

Table 2.1 – Geographical distribution of Respondents to EU 28 Survey

Country	#
Germany	7
Italy	5
Denmark	5
Portugal	4
Romania	3
United Kingdom	3
Spain	3
Belgium	3
Sweden	3
France	2
Cyprus	2
Hungary	2
Latvia	1
Slovenia	1
Austria	1
Total	***45***

The second survey targeted ***key operators in twelve non-EU countries***. The survey targeted (i) operators with establishments certified for export to the EU[10] as well as (ii) other leading operators, identified with the support of local experts and survey facilitators. As in the case above, the survey was carried out as CAWI, but in this case the survey was prepared and distributed in six languages. Overall, over 300 contacts were initiated, and individual follow-up were also carried out via email and/or by telephone by local experts. This lead to a total 79 responses, with the geographical distribution shown in Table 2.2. More details on the characteristics of respondents are available in Annex D.

Table 2.2 – Geographical distribution of Respondents to non-EU Survey

Country	#
Ukraine	15
India	14
Chile	12
Australia	12
Lebanon	7
China	6
South Africa	5
Namibia	5
Brazil	2
U.S	1
Total	***79***

In both cases, both the list of potential contacts and the questionnaire were shared with DG SANTE, and were revised according to the comments received. The number of responses to the EU survey has remained below the expected target partly also because not all the EU business associations proved sufficiently interested in the

[10] The lists of certified establishments was retrieved at https://webgate.ec.europa.eu/sanco/traces/output/non_eu_listsPerCountry_en.htm#

subject to sensitize their members about the exercise. Questionnaires addressed to a list of over 4000 companies also gave a very low return rate, given the specificity of the subject and the uneven degree of interest in it. The survey of non-EU operators elicited a much higher number of responses, but was skewed in terms of geographical coverage[11].

2.3. Case Studies

Data collection and analysis. The case studies required a comprehensive approach, combining the review of documentary sources with an extensive interview program, including on-site interviews with local respondents in four countries. These have included informants about relevant Government officers, business associations, AW experts, University Departments and Veterinary Professional Organizations, animal welfare NGOS. The case study on New Zealand was delayed upon the local Government’s request and therefore has been mainly based on secondary sources and limited exchanges of written information with few informants. The detailed bibliography is reported in Annex A. The information collected was consolidated, and complemented with the evidence collected under the other two streams of work, particularly the survey of non-EU countries and the analysis of trade flows and competitiveness.

Challenges. The exercise had to be carried out under a very stringent timeframe, which coincided with the holiday period in Brazil, Chile and New Zealand. AW is considered a very sensitive topic by different organizations and some notable resistances had to be overcome to involve stakeholders in the exercise – including requests for anonymity of contributions - particularly when trade negotiations were ongoing. Business associations have proved generally willing to elaborate on qualitative aspects, but less so to provide quantitative evidence on impacts, as this tends to be considered commercially sensitive information. This has somehow hindered the collection of quantitative indicators. As far as the case study on OIE is concerned a notable limitation to assess the impact of EU activities has been represented by the lack of a dedicated tool to monitor progress in the implementation of its AW standards in the Member Countries (MC) in the first place. Different sources, including OIE’s surveys and assessment reports or the Animal Protection Index (API), had to be used as proxies but with notable limitations as these are not systematically carried out, or fully accessible, and formally endorsed by the OIE itself. All IFI and ECA could be contacted and interviewed for the exercise, with the exception of the EIB (despite three attempts with two different offices). Information related to the latter is therefore based on secondary sources only.

[11] A relatively high number of responses was received from Countries with a keen interest on AW issues (Ukraine because of the approximation requirements with the EU AW standards, India because of possible trade distortions on the egg market). No replies were received from New Zealand and only two from Brazil were difficulties were experienced in getting in touch with operators possibly also because of concerns about the ultimate purpose of the exercise and its possible interference with ongoing bilateral trade negotiations and the related setting of tariffs and quotas. Few or no responses were received from operators in the US and Thailand, also possibly related to the fate of trade negotiations with both Countries resulting in more limited interest there. The survey was carried out in South Africa when the Country had just opened a case for alleged dumping of EU poultry meat and made related retaliations, but contrary to initial concerns this only limitedly impacted propensity to respond.

PART A

EU ACTIVITIES AND POLICY INSTRUMENTS TO PROMOTE ANIMAL WELFARE IN NON-EU COUNTRIES

3. THE EU INTERNATIONAL ANIMAL WELFARE STRATEGY

3.1. Overall Background

EU international activities in the field of animal welfare have commenced with the ***seminal 2002 Communication***[12] (2002 Communication thereafter) on *Animal Welfare Legislation on Farmed Animals in Third Countries and the Implications for the EU* that formally paved the way for the subsequent Commission's deeper involvement into the issue. The Communication was in response to what were considered entirely legitimate concerns on the possible competitive distortions – both to the advantage and disadvantage of EU producers - arising from differences in animal welfare standards worldwide. In fact, these concerns about the role played by third-country trading partners had been specifically highlighted by the Council in approving Directive 98/58/EC on farm animal protection.[13]

The 2002 Communication in itself was also largely inconclusive in defining a preferred approach among the various possible policy options to spread compliance with EU AW standards worldwide, also because there were little elements available at that time to conclude on the most effective tools at hand. First of all, there was no such thing as an international consensus on how to compare the animal welfare standards in place in the EU with those implemented in other countries so as to draw criteria to define "equivalent measures" for trade purposes. Since more precise elements were missing, the Communication concluded – more empirically and pragmatically - that efforts should concentrate on all possible fronts and advocated recourse to a set of diverse measures to promote the EU animal welfare agenda. These included ***various instruments*** at both the multilateral and regional level, including:

(i) the incorporation of <u>AW standards in bilateral or multilateral trade agreements</u> (see Box 3.1 below);
(ii) the promotion of <u>internationally agreed AW standards</u> under the aegis of the OIE whose mandate had been expanded to cover these issues in the same year;
(iii) the promotion of <u>AW labelling</u> and the mutual recognition of other Countries' labelling schemes;[14]

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[12] COM(2002) 626 final, 18.11.2002

[13] In particular article 8 of that Directive had explicitly required the Commission to send the Council a Communication comparing legislation in other countries with that applicable in the EU and exploring the possible implications on enforcement of the EU law and on competition. There were widespread concerns that large competitive distortions would clearly have the potential to undermine the implementation of the higher animal welfare standards promoted by the EU. The identification of the competitive disadvantages arising from this disparity in measures proved a complex exercise that could not lead to any precise quantification due to a number of confounding factors. However, in the majority of cases the impact of animal welfare standards on production costs was found limited when compared to other cost drivers. It was simply generally acknowledged that competitive distortions were "most likely to arise" in the more intensive segments of agricultural production where the EU animal welfare intervention had been stronger, notably the pig and the poultry industries that were therefore identified as worth particular attention.

[14] It was acknowledged that mandatory labelling of AW requirements (as foreseen, for instance, for the purposes of the egg marketing regulation) could raise a conflict within the WTO. To this aim the Commission had presented a note on mandatory labelling to the December 2001 session of the WTO Agriculture Committee highlighting that the right of WTO Members to choose a level of consumer information and protection as regards the characteristics and the production and processing methods of food and agricultural products should be maintained. In the specific case of eggs produced in non-EU countries (though only for direct consumption), it was foreseen that an indication of the farming method may be replaced by certain *other*

(iv) a general <u>awareness-raising activity</u> aimed at sensitizing non-EU Countries about the importance of enhancing their AW standards;

(v) the promotion of <u>scientific research</u> on the links between animal welfare and animal health and between animal welfare and the quality and healthiness of foodstuffs, to support the promotion of their international recognition (for which the OIE was selected as the most appropriate forum.

Box 3.1 – Inclusion of Animal Welfare provisions in trade agreements

The possibility of having sector-specific trade agreements with major trade partners and open to all interested WTO members, for instance covering AW standards in egg trade, etc., was ruled out from the out start, to avoid the risk of substantially lowering the standards established in the EU. This was based on the past experience in other areas, as in the case of the 'humane trapping' agreement signed with Canada and Russia. This left two options open, and namely (i) the explicit *incorporation of technical cooperation on animal welfare and generic references to AW standards* in the provisions of the bilateral agreements to be negotiated in the following years or under negotiation at that time; and (ii) *the establishment of AW specific cooperation fora or memoranda of understanding* (MoU).

At the time of the issuance of the 2002 Communication, the strategic decision was made to act in synergy with the OIE. Therefore, *newly negotiated agreements were to include reference to existing or future standards, including the OIE standards ones, as basis for technical cooperation.*

These strategic orientations were broadly confirmed in the subsequent Commission policy documents on animal welfare. The 2006 Action Plan on Animal Welfare went as far as suggesting giving a particular priority to designing EU rules to secure efficient enforcement of animal welfare within the set of existing WTO rules governing international trade (see box 3.2 below). This eventually substantiated in the inclusion of provisions for ensuring equivalent animal welfare standards in the 2009 Regulation on the protection of animals at the time of killing. Since 2013, in authorised Countries, compliance with criteria on how animals should be handled in the slaughterhouses have been included among the mandatory requirements needed by the different establishments to get their certification for exports to the EU. The same action plan also envisaged the creation by 2007 of specific communication tools to work with international trading partners to build a common understanding on the implementation of mutually agreed animal welfare standards. In line with these strategic indications, in 2007 the Commission eventually organised a major international conference on animal welfare in Uruguay also to build consensus on the WTO agenda under discussion at that time. In June 2007 however, negotiations within the WTO Doha round had broken down, as a major impasse occurred between the USA, the EU, India and Brazil on opening up agricultural and industrial markets in various countries and on how to cut farm subsidies and momentum for these major international activities was therefore lost in subsequent years. Focus on the organisation of events was increasingly switched towards strengthening multilateral cooperation with OIE and FAO.

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indications where the third-country procedures are not sufficiently equivalent to the technical rules and standards applying in the Union. The Council Regulation, in turn, says that, where necessary, the Commission is to negotiate with countries exporting eggs to the EU so as to arrive *at Appropriate ways of proving compliance with labelling standards equivalent to those in the EU*.

Box 3.2 – The Status of Animal Welfare under the WTO

The promotion of animal welfare standards by means of trade agreements faces notable limitations under the GATT principles ruling the international trade legal system. Animal welfare *per se* is not considered in the Treaties or even mentioned. The WTO has just recognized animal health concerns as justifiable trade restrictions under the Article 20 of the General Agreement on Tariffs and Trade (GATT), giving a State the sovereign right to determine trade under its own animal health standards. Therefore, differently from Animal Health, compliance with given Animal Welfare standards has not been explicitly recognized as trade relevant under GATT and, as a general rule, does not *per se* entitle to enforce any restriction to trade. As a consequence, the impact of all animal welfare-related clauses included in bilateral trade agreements ultimately depends on voluntary cooperation of the signatories. These provisions, in fact, cannot be enforced by the EU through trade restrictions or monitored by means of FVO inspections abroad. In promoting the highest possible AW standards worldwide, the EU has hence been fully dependent on the degree of willingness to cooperate.

The legal status of animal welfare-related trade restrictions has been reviewed by a recent WTO appellate body decision on the so-called Seals Products case. The WTO Appellate Body did uphold the previous WTO DSB position that if justified on scientific grounds and supported by strong evidence of real moral concerns among the majority of the population, animal welfare-related trade restrictions can be actually justified and enforced under art.20 of the GATT Treaty as measures necessary to protect the public morals. This was therefore the first time that the highest WTO body confirmed that these measures can be legally construed and defended on such grounds, although the concrete demonstration of the existence of these moral concerns would vary from case to case and cannot be inferred from the existence of relevant animal welfare legislation only.

What makes the Seals Product case peculiar, however, is that the ban applies to all hunts including those from EU producers. It would remain to be seen how the WTO would consider compliance with "equivalent standards" that do not disqualify from carrying out intra-EU trade under the Treaty, but eventually give rise to sanctions. Other sanctions are bound to be considered as technical barriers to trade under the WTO, or at least this remains open to dispute. In applying the territoriality principle, the European Court of Justice has held that in responding to the effects of fishing activities outside the European Union that are contrary to its conservation policies, the European Union is limited to legal sanctions that can be applied within the territory of the European Union.

The last 2012-2015 AW strategy has further reiterated the original 2002 approach by calling the Commission to continue including AW clauses in bilateral trade agreements or cooperation fora, as well as to increase the strategic opportunities for developing more concrete cooperation with third countries; while at same time remaining active in the multilateral arena, especially at the World Organisation for Animal Health (OIE) and ***the Food Agriculture Organisation (FAO)***. The last AW Strategy put the emphasis on examining how animal welfare could be better integrated in the framework of the European Neighbourhood Policy and to keep organising major international events aimed at promoting the EU's views on AW. The Commission was also requested to review these international actions in order to evaluate their benefits for the EU agricultural sector amongst others, and report to the European Parliament and Council, which is the subject of the study being discussed here.

3.2. Bilateral Trade Agreements

The first example of a bilateral trade agreement including explicit reference to AW standards has been that with Chile, that was under negotiation when the 2002 Communication was released. That Association Agreement, in fact, includes for the first time provisions to consider also AW standards in its SPS chapter (see related case study below). In fact, ***AW provision have been included in most of the other bilateral trade agreements finalised since then***, with the exception of the agreements signed with Iraq (2012), Papua New Guinea and Fiji (2011), and with some African countries. [15] In particular, AW provisions have been included among the SPS requirements in bilateral trade agreements, including among others:

- EU-Swiss Confederation Agreement on trade in agricultural products (2009);
- EU-Central America Association Agreement with a strong trade component (2012);
- EU-Colombia and Peru Trade Agreement (2012) (since 2017 also provisionally applied to Ecuador);
- EU-South Korea Free Trade Agreement (2015).

In the cases above, AW has been incorporated into the text of the trade agreements, but specific formal policy dialogue mechanisms on AW to turn principles into concrete actions have not started yet. [16] It should also be noticed that ***these agreements have been signed with minor world players in the market for animal products and live animals***, as most partner countries are either large net importers of these goods, or relatively small economies that do not represent a serious competitor of the EU neither on domestic nor on third markets. This is a consequence of the fact that, as explained in Box 4.1 above, the choice was made to avoid sector-specific agreements, and pursue the inclusion of AW provisions in the trade policy through Country-specific agreements. AW–related issues were then one of the many factors considered in setting the agenda for the negotiations ahead. As a result of this, the Bilateral Trade Agreement with Chile has remained the only bilateral agreement of some market significance for AW-related competitiveness purposes in place in the period.

The ***commercial relevance of bilateral trade agreements including AW provisions is expected to increase in the next few years***. Other trade agreements (in particular, Deep and Comprehensive Free Trade Agreements – DCFTA) have been signed in 2016 with Georgia, Moldova and Ukraine (more on this in Section 4.4 on Neighbourhood policy). In addition, the Comprehensive Economic and Trade Agreement (CETA) with Canada, signed in 2016, was approved by the European Parliament in February 2017 and is being ratified by MS Parliament,[17] while the negotiations for the Free Trade Agreement with Vietnam were concluded in 2016. Other agreements either are under active negotiations (e.g. those with MERCOSUR, Mexico, New Zealand, and Australia) or have started but temporarily put on hold (e.g. Malaysia, Thailand and India). Notably, the signature and entry into force of the agreement with the MERCOSUR would significantly increase the relevance of the regional dimension: apart from the agreement with Central American states, in fact, all other agreements have been negotiated on a national basis.

Two recurring elements deserve to be highlighted. First of all, available evidence suggests that AW requirements are included in trade policy agenda eminently because

[15] Particularly with Cameroon (2009), the agreements finalised but not yet ratified with West Africa and the East African Countries and the ones provisionally entered into force with the SADC Countries, the Ivory Coast and Ghana in 2016.

[16] Cooperation on animal welfare with Switzerland has not been formalised, nevertheless informal annual exchanges take place on a regular basis. Moreover, there are ongoing discussions with Central America to establish a regional animal welfare working group and an action plan under the signed agreement.

[17] CETA is the only case in which AW provisions have been included in the 'regulatory cooperation' chapter of the agreement, rather than in the SPS Section. While NGO representatives have voiced some concern that this might represent a step back compared to other agreements ('*It is a very uncommitted language*'), counterparts within the Commission have maintained that there is no substantial difference between the two arrangements.

of the provisions of the Treaty, and because of the civil society attention and demand in this sense. In fact, it appears that ***the inclusion of AW provisions is seen as a concession to the EU***, and therefore related resistances among partner Countries usually have to be overcome in various ways during subsequent negotiations. Secondly, ***the negotiation was not always accompanied by an assessment of the*** **status quo** ***in terms of AW enforcement***, and thus of the level of effort required by partner countries. In fact, in some cases it seems that some Animal Welfare NGOs have played this advisory role by submitting their own reports to DG TRADE in the few cases deemed worth particular attention.[18] In other cases the assessment was made immediately after cooperation started[19].

3.3. Cooperation Fora and Memoranda of Understanding

Since the provisions included in bilateral trade agreements have not had a major relevance in the EU international trade in live animals and animal products, ***AW issues with the main EU trade partners and competitors in these sectors have (at least so far) mainly been dealt with*** by either (i) establishing Cooperation Fora at times to complement pre-existing veterinary or sanitary agreements, or (ii) by signing administrative Memoranda of Understanding. For what concerns the first kind, the first example has been the Cooperation Forum established between the EU and New Zealand. In fact, the 1997 *"Agreement between the European Community and New Zealand on sanitary measures applicable to trade in live animals and animal product"* already included provisions to broaden the scope to "veterinary issues other than sanitary measures" applicable to trade in live animals and animal products. This brought ***New Zealand*** to sign the first Cooperation Forum that among other activities led to recognition of fully equivalent AW standards at slaughter.[20] Animal welfare cooperation was also established with ***Canada*** in 2004. By means of an exchange of formal letters, the parties voluntarily agreed to include AW within the scope of the Agreement and cooperate under the auspices of a joint management committee. As in the case of New Zealand, also in this case the result of the policy dialogue was the formal acknowledgement to Canada of its status of fully equivalent to EU AW standards as far as their stunning and slaughtering operations are concerned.

Other formal cooperation to foster policy dialogue have been signed outside of sanitary agreements. Another example of this kind was ***Australia***, with the AW Cooperation Forum established in 2008 within the framework of the high level Australia-EU Partnership Framework. A Memorandum of Understanding on Technical Cooperation in the area of animal welfare was signed with ***Brazil*** (see dedicated case study in Section 5). Furthermore, and Administrative Arrangement on technical cooperation on animal welfare at the time of the report is under negotiation with Argentina.

Differently from the bilateral trade agreements, the cooperation fora and the memoranda of understanding have also been motivated by the partners' (usually large exporting Countries) own desire to smooth their access to the EU market, in both terms of legal procedures (formal equivalence) or, at least, overall market image and acceptance *vis-à-vis* EU consumers. Moreover, both Australia and Brazil, the largest

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[18] See Eurogroup for Animals Report of the Mission to Vietnam http://trade.ec.europa.eu/doclib/docs/2013/july/tradoc_151633.pdf

[19] For instance, a study "Estudio comparativo de la normativa nacional con la Union Europea y elaboracion de propuesta de armonizacion" " was carried out in Chile in 2007 and helped orienting the activities of the Animal Welfare Working Group

[20] This will be expanded in more details in the dedicated case study, to be included in the Draft Final Report

countries with which MoU have been adopted, are federal countries. Given the coordination problems in aligning local provisions with international standards that arise as a consequence of this, a more flexible form of cooperation compared to bilaterally trade agreements has been preferred. In fact, the experience with administrative memoranda so far has shown some discontinuity of operations also as a result of these complex working environments. Cooperation with Australia has been in stand-by since 2013, due to restructuring within the Australian Ministry and allocation of AW responsibilities between the Federal and the State level.

3.4. Neighbourhood Policy

As envisaged in the 2012-2015 AW strategy, the EU Neighbourhood Policy (ENP) has included increasingly strong provisions in the field of AW. In terms of strategic programming of activities, ***virtually all of the most recent ENP action plans have included either an explicit reference to the adoption of AW***[21] ***or a generic requirement to comply with EU standards for animal product exports to the EU***.[22] Some of them also include recommendations to partner countries to play a more active membership role in OIE.[23] However, it should be noted that this approach has followed rather different paths in the two regions concerned as far as trade policy is concerned, with the association agreements with Eastern Europe and Central Asia (Neighbourhood East) countries including much stricter provisions that those signed with Mediterranean (Neighbourhood South) countries.

The language used in the association agreements with ***Neighbourhood East countries***,[24] in fact, borrows from the provisions enacted for Candidate Countries. These agreements explicitly mention a commitment to gradually ***approximate AW law to that of the EU***. The approximation is to be based on a timetable to be agreed between the parties in a strategy document, and monitoring and verification mechanisms are also envisaged to this aim. While technical assistance has been provided to help with this approximation process, the latter has not formally started yet and neither has policy dialogue and official cooperation on animal welfare issues, pending the approval of the related strategies. Since it is not formally considered a Neighbourhood Country, the enhanced partnership and cooperation agreement signed in the region with Kazakhstan in 2016 differs from the others, as it includes the traditional clause (also contained in the CETA with Canada) that the Parties shall discuss and exchange information on AW measures and on their development and implementation. As usual in these kinds of agreement, such discussions and exchange of information shall, as appropriate, take into account the guidelines or recommendations of the OIE as a framework for reference.

[21] See, for instance, point (34) of the EU/Jordan ENP Action Plan, pp. 22 and 23.
[22] In general, Action Plans require "the Fulfilment of EU requirements on animal health and for the processing of animal products (c.f.: "General Guidance for non-EU country authorities on the procedures to be followed when importing live animals and animal products into the European Union", DG SANCO/FVO October 2003)", which, among the rest, require the compliance with AW standards at slaughter.
[23] See, for instance, EU/Moldova Action Plan, p.20.
[24] These include particularly the Deep and Comprehensive Free Trade Agreements (DCFTA) signed with Georgia, Moldova, and Ukraine, while the agreements with Azerbaijan and Armenia were signed at the end of the 90s.

No AW provision has been included so far in the association agreements with Neighbouring South Countries.[25] In fact, most of them were negotiated before 2002, while the remaining were granted homogeneous conditions with the ones already negotiated. Preparatory steps have been recently undertaken for DCFTA with Morocco and Tunisia, but it is still unclear at this very preliminary stage what level of commitment on animal welfare, if any, will be aimed at there, whether one of full approximation or the usual dialogue based on OIE benchmarks.

3.5. Promotion and Mutual Recognition of Animal Welfare Labels

Initially conceived as one of the Commission priorities at the launch of the 2002 Communication, the promotion and mutual recognition of AW labels has been substantially played down and has become a residual component of the EU AW International Activities. In fact, the loss of momentum after the collapse of the Doha Round decreased the incentives of partner countries in seeking mutual recognition. Options for animal welfare labelling were outlined by the Commission in several policy documents and in particular in a Report[26] adopted in 2009. However, the promotion of official AW-related labels at the EU level did not proceed further (with the possible notable exception of slow growth poultry) and remained confined only to the regulation on the marketing of eggs. At the same time, there was a growing tendency in the market towards promoting private labels and private certification schemes.

The main exception to this has been represented by the organic farming labelling, whose official requirements in the EU include compliance with higher AW standards. The EU has unilaterally recognised several third countries as having equivalent organic production rules subject to verification of their control systems,[27] including Argentina, Australia, Canada, Costa Rica, India, Israel, Japan, New Zealand, South Korea, Switzerland, Tunisia and the US, as well as the members of the European Economic Area (Norway and Iceland). Moreover, some non-EU countries have also recognised the EU as equivalent to their organic farming standards through mutual equivalence arrangements, which has provided additional export opportunities for EU producers and operators. Mutual equivalence agreements concerning production rules[28] and control systems are currently in place with Canada, Japan, New Zealand, South Korea, Switzerland, Tunisia, the USA, Norway and Iceland. In some cases, as for South Korea in 2015, there is a clear correlation between the negotiation of equivalence agreements in organic farming and bilateral trade agreements. However, in most cases, the link between the two instruments is weak, and they run in parallel driven by different considerations. As emerges from the example of EU-US

[25] These included: 1) Algeria (2005); 2) Egypt (2004); 3) Israel (2000); 4) Jordan (2002); 5) Lebanon (2003); 6) Morocco (2000); 7) Palestinian Authority(1997); 8) Syria - Co-operation Agreement (1977); 9) Tunisia (1998)

[26] Report "Options for animal welfare labelling and the establishment of a European Network of Reference Centres for the protection and welfare of animals", https://ec.europa.eu/food/sites/food/files/animals/docs/aw_other_aspects_labelling_report_en.pdf

[27] See list in Annex III to Regulation (EC) No 1235/2008.

[28] When equivalence is not there foreign governments' accreditation procedures / certification bodies are accepted but the respective certification bodies still have to meet the requirements of the importing countries to issue certificates accepted there. This is for instance the situation of Australian or Argentinian exporters to the EU by the US, or of organic producers from India and Israel. Certification bodies accredited according to the US requirements by India, Israel, and New Zealand are also accepted in the US. The main difference is represented by New Zealand that is considered equivalent by the EU.

equivalence recognition of organic labelling (see Box 3.3 below), ***AW issues have typically played an ancillary role in the negotiations of these agreements***.

Box 3.3 – EU-US Agreement on Organic Farming Labelling

The US and the EU are the two largest market for organic products in the world. In 2012 they have recognized each other's national organic standards and control systems, except for animal products from the EU which still require extra verification of use of antibiotics. Under this agreement, ***the two parties have simply agreed to exchange information on AW***,[29] including living conditions and organic livestock health care concerns, antibiotic-free dairy and other animal production issues. Conversion practices and parallel production, control and approval processes in third countries are monitored by joint management committees that broadly resemble those created under the bilateral trade agreements, except for the fact that they are managed by DG AGRI and not by DG SANTE.

In practice, however, some differences remained between the two organic farming schemes on how animals raised for organic poultry, meat and dairy must be treated, including living conditions. For instance, there are misalignments on space requirements for hens and ensuring outdoor access for the birds and related increased risk of disease, not least because of the cost consequences these would have on US operators. The new US-proposed rules are currently under discussion at the Congress. It is still unclear whether they will eventually align with EU standards or be blocked because of cost considerations and organic producers' complaints.

The marginal role played by AW in negotiations regarding mutual recognition of organic farming depend on the ***limited importance of animal products in organic trade***. Despite grassland for pasture accounts for some two third of organic farm worldwide, particularly in Oceania, very little is known internationally on the size of the underlying market. Data on organic livestock have often been inconsistent over the past few years.[30] Moreover, not all goods produced according to organic standards end up being sold on organic market, which also adds a further element of confusion and uncertainty. This is true, in particular, for pasture livestock, as it may be difficult to find an organic-certified abattoir within a commercially reasonable distance from the farm. The farm-gate production value may therefore significantly differ from sales in organic markets only. It is expected that AW considerations will play a more significant role with the new generation of equivalence agreements just signed or under negotiation with Latin American countries, such as the one signed with Chile, and the one under negotiation with Mexico. The key objective is to create a market for organic products in partner countries, facilitating access to EU producers vis-à-vis US competitors, and allow Chilean exports of pasture-raised beef that could not be marketed in the EU as organic, but was to be generically sold as conventional. Due to the limited market significance of external trade in table eggs, no negotiations were undertaken on equivalence of technical rules and standards for compliance on equivalent standards with the egg marketing regulation.

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[29] Under the Arrangement, the EU and United States also agreed to begin work on a series of technical cooperation initiatives to promote organic production and to establish common practices for the assessment and recognition of the organics programs of third countries, but this has apparently never regarded animal welfare-related aspects.

[30] For instance in some Countries Some data included all age classes, while other data contained breeding animals only See FIBL&IFOAM, *The World of Organic Agriculture,* https://shop.fibl.org/fileadmin/documents/shop/1698-organic-world-2016.pdf

3.6. Linkages between AW and trade policy

However conceived, all the policy tools described so far need to be considered in light of the practical management of EU trade policy. In fact, external trade in animal products is largely regulated by means of Tariff-Rate Quotas (TRQ), which are not necessarily granted in response to bilateral trade agreements, but rather depend on a much more complex combination of factors. As a matter of fact, ***there seem to be only a partial correspondence between the attribution of TRQ and the policy instruments deployed to promote AW***. In fact, the only case in which there was a full correlation between bilateral agreements including AW provisions and TRQ allocation are ***Chile*** and ***Ukraine***. **Ukraine** was in fact allocated in 2014 substantial quotas of pig meat (40000 tons) poultry meat (36000 tons) and, for the first time due to its proximity to the EU borders, table eggs (3000 tons) and egg products (1500 tons) duty free. This was a direct consequence of the signature of the association agreement, and the TRQ allocation became effective while the definition of the AW approximation strategy was still pending and policy dialogue had not formally started yet. The association agreement with ***Moldova*** has had more limited trade consequences for AW-related aspects, as it resulted in quotas on dairy products only (1,500 t., as against 8,000 t. for Ukraine plus an additional 1000 t. of powder milk).

The ***EU-Chile Association Agreement*** led to trade barriers elimination for almost all Chilean products exported to the EU, but TRQ remained in place for most of the AW-sensitive products, including beef meat, pig meat, and poultry meat. The main difference is that Chile's quotas are put under a zero tariff rate, instead of the preferential rate charged on other large producers under WTO obligations. For instance, Chile received a 2150 tons (+100 annual increase) quota of beef and veal meat at zero tariff. In all other cases, the pattern of correspondence between AW-relevant agreements and TRQ allocation is only marginal. Other large exporters of high quality beef got preferential access under WTO obligations for larger quantities, but at a 20% tariff.[31] Pig meat remained largely impacted by WTO *erga omnes* quotas, with specific allocations to the US and Canada, irrespective of the level of AW policy dialogue established with the EU or the existence of veterinary agreements. The poultry meat sector was also largely dominated by quotas allocated under WTO obligations at various preferential rates. Some difference could be found in terms of quantities between Countries under a policy dialogue mechanisms (***Brazil***) and countries formally outside of it (Thailand, USA), which however still received substantial TRQ allocations. A different situation is the case of Israel, which was given poultry quotas outside WTO commitments under the dedicated agreement concerning the reciprocal liberalisation of measures without any AW policy dialogue instrument in place.

It is worth noting that there is no formal mechanism in place within the EC to assess the interaction between TRQ management and progress with animal welfare or to manage the allocation of quotas accordingly. Given the confidential nature of TRQ negotiations much is left to the initiative of negotiators and their personal appreciation of the information they might eventually have received in this regard.

[31] Argentina 30000, US 11500, Brazil 10000, Australia 7150, New Zealand 1300, Paraguay 1000 tons

3.7. Equivalence at slaughter and its enforcement

The requirement of equivalence at slaughter for imported meat was already laid down in the first Council Directive 93/119/EC on the protection of animals at the time of slaughter or killing. With the publication of the new ***EU Regulation 1099/2009 on the protection of animals at the time of killing***, and its application as of 2013, the situation changed substantially. In fact, the 2009 Regulation includes an annex listing in a detailed and clearly defined manner the relevant AW standards for which the principle of equivalence applies for meat imports. Consequently, it became much easier to ensure a punctual comparison, thus allowing for objective audits and controls. ***Between 2012 and 2015, 14 audits including inspections of over 60 slaughterhouses have been carried out in non-EU key exporters to the EU***. This is particularly substantial, especially compared to 10 Country audits specifically dedicated to AW at slaughter carried out in EU MS over the same period.[32]

The audits found the wide majority of abattoirs processing ***bovine meat*** to be fully compliant with EU standards, while some 15-25% of ***poultry*** slaughtering plants were found in need of additional investments. Finally, ***pig*** abattoirs were only marginally inspected and little information is available on the average level of compliance there. Given the mandatory nature of the Regulation, little difference could be found in the administrative capacity of the CA and the level of training among staff between Countries that had entered policy dialogue with the EU and the others in Latin America. However, a clear impact of the technical assistance provided by EU experts was clearly visible as support had a regional dimension. In other regions, full equivalence at slaughter was assessed and recognised in the context of formal bilateral technical cooperation with New Zealand and Canada. The ***size of trade flows with the EU and related market-driven incentives appear to represent by far the strongest explanatory factor behind compliance***. This was even visible at sector level, with higher compliance (and a higher impact of technical assistance) in the main exporting sectors.

In a number of cases, particularly in the poultry industry, the audit found that ***certified slaughterhouses in partner Countries were operating under a dual set of procedures***, one applying the procedures for export to the EU, and another for the remaining markets. This appears to be an indirect indicator that the EU-compliant procedures were considered more costly and cumbersome than the ordinary AW standards in place, which at that time should have been at least aligned with the OIE ones. It is unclear, however, whether the auditors always systematically checked this aspect. It should also not be taken for granted that, apart from the criteria listed in the annex, all audits positively covered necessarily all the same topics in a homogenous way. A summary of the main findings of these audit missions is reported in Box 3.4 below.

Box 3.4 – DG SANTE Audits on Compliance with EU AW Standards at Slaughter – Key findings

Thailand (2013, Poultry Meat). The audit team found evidence that specific training courses on EU requirements had organised for OVs involved with EU exports. Participants spread their knowledge to others who did not attend ("training of trainers"/cascade system). The approval document for export did not specify to which country the establishment could export to (Thai poultry meat is mainly exported to EU, Japan, and other Asian countries and subject to domestic

[32] Namely, Latvia, UK, Italy, Germany, Denmark, Czech Republic, Hungary, the Netherlands, and Spain. Moreover, another seven audits were carried out specifically on poultry meat in UK, France, Hungary, Ireland, Germany, Croatia and Belgium

export controls and procedures). The CA explained that this information was contained in an annex. There was no document issued by CA formally stating that the establishments indeed complied with the specific EU requirements. In all slaughterhouses visited, animal welfare officers were appointed. Animal welfare SOPs were available. The stunning parameters and stunning effectiveness were in line with EU requirements. However, in one of the slaughterhouses visited out of five, the automatic system to unload birds was not equivalent to the provisions of the EU Regulation and this had not previously reported during official controls of the CA**.**

Chile (2013, Bovine Meat and Poultry Meat). A documented set of control procedures was in place, but the manner in which the controls were carried out in meat other than poultry did not ensure that EU requirements were consistently met. The traceability system applied in the bovine industry could not ensure that only EU eligible carcasses were exported. A law on animal welfare was adopted in 2009, but its implementing regulations were not yet in force in abattoirs. Nevertheless, the specific requirements of Regulation (EC) No 1099/2009 had been addressed by means of circular letters. The audit team noted that a special training course on EU animal welfare legislation (including Regulation (EC) No 1099/2009) with the involvement of EU experts had been organised. Animal Welfare officers of the establishments visited had generally participated in this training course. Recurrent problems were found in a poultry slaughterhouse (out of four) already visited in 2009 although guarantees had been provided by the CA that the deficiencies related to animal welfare would be eliminated. Conversely, the situation remained unchanged.

Brazil (2013, Poultry and Bovine Meat). EU requirements concerning animal welfare at slaughter for poultry were satisfied except in two establishments visited out of eleven. Animal welfare controls in bovine abattoirs highlighted the same shortcomings already highlighted before. The stunning process and the controls at slaughter were at any rate satisfactory, but in one establishment visited, non-penetrating stunning was used. Nevertheless, the captive bolt stunning equipment was used when stunning would not be sufficient.

Uruguay (2013, Bovine Meat). Uruguay AW Law requires that the operators must comply with the requirements of the importing market and the CA must verify the fulfilment of these requirements. Animal Welfare Officer (AWO) at the slaughterhouse has to be a qualified veterinarian and accredited by the CA. The accreditation process was to be finalised in the first trimester of 2014. The industry had developed a Guide of Animal Welfare that was adapted by the different operators to fulfil the requirements of the Regulation. As part of the control procedures, the OV had to carry out routinely animal welfare checks. The CA had independently carried out some training initiatives on EU requirements with the participation of the OVs and representatives from the export slaughterhouses. In all the slaughterhouses visited, the AWOs in place were veterinarians. All had procedures to control animal welfare. The CA had issued Certificates of competence to operatives carrying out killing and related activities that had demonstrated relevant professional experience in the previous three years. Training and certification programme for new staff were under preparation.

Israel (2013, Poultry Meat). In general, official controls can guarantee that EU animal welfare requirements are met for birds entering the EU production chain. However, there are some weaknesses in particular CA' capability to detect deficiencies related to stunning of birds because of lack of experience with this practice. Actually stunning is not performed in any of the slaughterhouse visited, as kosher slaughter is applied. In all slaughterhouses visited, animal welfare officers were appointed by the FBOs and trained by the CA. Animal Welfare Standard Operating Procedures (SOPs) were available in all the slaughterhouses visited. According to the relevant procedures applied to exporting establishments, each FBO is required to drawn up an animal welfare plan and the OV performs a daily inspection of its implementation. The audit team found evidence of these in all the slaughterhouses visited. The audit team noted that amended instructions by the CCA on the animal welfare conditions have been disseminated on 12 and 26 May 2014. These instructions include a detailed checklist to be used by the OV in order to verify the appropriateness of the animal welfare conditions during arrival, waiting and slaughter of the birds and the implementation of establishment's welfare programme. In one slaughterhouse visited the audit team noted that the cleaning of lorries was taking place in close proximity to crates containing birds and to the killing point, without any protective measures against water spraying. This practice could lead to unnecessary stress for the birds

Argentina (2014 Poultry and Bovine Meat). Poultry slaughterhouse staff had received training representatives from a European university. The same training was provided to CA staff including OVs. Certificates of attendance were available to the audit team. However, it was not ensured yet that persons carrying out relevant slaughter operations held certificates of competence (as required by Art. 7 of the EU Regulation). Standard Operating Procedures (SOPs) were always available and in two out of five slaughterhouses visited these contained different stunning parameters for the non-EU and for the EU market. In these establishments, the audit team was informed that EU stunning parameters are respected during slaughter of birds intended for EU markets only. During the visit, the audit team noted that several birds slaughtered for domestic market presented signs of consciousness after stunning (corneal reflex, rhythmic breathing, wing flapping, etc.). Animal welfare, including records on animal welfare, were under regular official controls no deficiencies had been recorded as regards the effectiveness of stunning.

SOPs were in place in all the bovine establishments visited. The handling and restraining facilities were found to be well designed, built and able to cope with the speed of the processing without creating any unnecessary stress to the animals. Staff dealing with live animals showed the necessary knowledge on the movement of animals and the appropriate attitude. Animal Welfare Officers (AWOs) were available and dealing with animal welfare at the establishments visited, although such officers had existed for a longer time, they had only recently received official training and certification from the CA. In two of the three establishments visited, there was only one AWO available, training had already started for future AWOs. Regarding slaughterhouse personnel dealing with live animals these had been internally trained for the specific duties that they performed, however they did not hold certificates of competence. The CA stated that they intended to establish a system for issuing certificates of competence in the near future. Documented procedures were available covering the majority of AW requirements, however there were processes that were not included, such as religious slaughter (Kosher) of animals used for EU production. In another instance, written procedures fell short of all legal requirements… There was limited evidence of CA verification of documented procedures, nevertheless the CA verification of the implementation of animal welfare procedures in the field was routinely being carried out and a checklist was used to this aim.

Canada (2014, All Meats). The Canadian authorities stated that “The Canadian requirements for animal welfare controls are equivalent to those of the EU. […] The Manual of Procedure Chapter 12 (recently drafted with updated information and expanded guidance for field staff) is currently being piloted in Canadian equine processing establishments and a phased in implementation plan in other species. This response was considered to be satisfactory. No significant animal welfare concerns were found in any of the establishments visited, despite one incident at the moment of stunning.

Australia (2015, Bovine Meat). Animal welfare at time of slaughter was generally in line with the requirements of Regulation (EC) No 1099/2009

New Zealand (2015, All Meats). The handling and stunning of the animals observed by the audit team was adequate in the slaughterhouses visited. The handling and stunning of the slaughter animals in the establishments visited was, in general, adequate. Some animal welfare problems had been noticed during official controls but actions had been taken to tackle these.

Paraguay (2015, Bovine Meat) Animal welfare rules were respected in all four slaughterhouses visited. In particular, the stunning of animals was efficient and reserve equipment was available. At the request of the audit team, the use of this equipment was demonstrated in a satisfactory manner.

3.8. Awareness Raising and Organization of International Events

Between 2007 and 2013, the Commission has been very active in the organisation of major international events to promote the EU views on AW and raised as wide awareness as possible about the importance of enhancing non-EU countries' AW standards and engaging them in the international debate on the subject. Events were organised at least on a yearly basis, and culminated in the organisation of an International Conference on the EU Animal Welfare Strategy in 2012. From then on, activities have slightly subsided, but remained nevertheless substantial. Although the EU can be certainly considered as one of the largest financing institutions for such events worldwide, in most cases the events ***were jointly organized in cooperation with OIE and FAO***, as well as with key trade partners (e.g. China, Turkey, the US, etc.), and were supported by the EU in kind or in cash. The list of these initiatives includes a very large share of the major AW international events held in the period, including all OIE Global Conferences so far. A comprehensive list of the events organized or funded by the EU is reported in Box 4.5 below.

Box 3.5 – International Events Organized or Funded by the EU

- All the OIE *Global Conferences on Animal Welfare* so far (Paris 2004, Cairo 2008, Kuala Lampur 2012) held in the period (see case study on OIE). Other relevant international events organised by the EU include:
- The joint organisation with OIE of the International Conference *New Horizons for the 21th century / An international and regional perspective*, in 2007 in Montevideo, Uruguay;
- The 2008 *International Forum on Global Aspects of Farm Animal Welfare*, held in Brussels with also the participation of the FAO;
- The organisation of the 2008 FAO *Forum on Good Animal Welfare Practices*;
- The Conference on *Global Trade and Farm Animal Welfare* held in Brussels in 2008 jointly organised with DG TRADE and with the contribution of FAO[33];
- The Joint IDF-FAO-EC Conference on *Animal Welfare-Challenges and Opportunities for the Dairy Sector* held in Berlin in 2009;
- The *First Commission International Conference on Animal Welfare Education* organised in Brussels in 2010 with the participation of the FAO;
- DG SANCO and the EU Cypriot Presidency organised an international conference on *"Protection of animals in slaughterhouses: getting ready for 2013"* in Brussels in 2012 to explain the new rules on animal welfare into slaughterhouses' operations due to enter into force the following year;
- *The International conference on the new EU strategy 2012-2015* held in Brussels in 2012, possibly the major international event directly organised by the EU that was jointly held with the *1st FAO Global Multi-Stakeholders Forum on Animal Welfare*[34]*;*
- in 2013 in Prague the EU directly supported and chaired the *Global Veterinary Seminar on Animal Welfare* within the context of the 31st World Veterinary Congress organised by DG SANTE together with the World Veterinary Association and the Federation of Veterinarians of Europe and with the contribution of FAO (the event attended by over 1250 experts was considered the biggest vet event ever in Europe).

The EU has also organised major events at the regional level or with the major trade partners, and namely:

[33] FAO also took part to the related Expert meeting on global trade and farm animal welfare organised by SANCO

[34] The FAO forum was organized back to back to the Commission's conference on the new AW strategy. The EU provided in kind and financial support to pay for the accommodation of some experts attending both events.

- The 2006 Joint CoE-EU-OIE Workshop *Animal Welfare in Europe: achievements and future prospects* The Regional *Multi-Country Workshop on regional cooperation on animal welfare* held in Jordan in 2009 that also included the participation of FAO;
- the organisation of the OIE Inter-American Meeting on Animal Welfare, in August 2008 in Panama:
- the OIE conference *The importance of farm animal welfare science to sustainable agriculture*, held in 2008 in China (the EU provided financial support and contributed to the publication of the proceedings of the conference);
- the organisation of the OIE Regional Meeting on Animal Welfare in Turkey in 2009;
- a conference on the *Market-driven Animal Welfare in the EU and the US* organised by the Delegation of the European Union and the European Institute in Washington also held in 2012.

4. INTERNATIONAL ACTIVITIES FINANCED BY THE EU TO SUPPORT ANIMAL WELFARE

This section is dedicated to the ***inventory of the various projects implemented or financed by the EU to support AW in non-EU countries***. The financing of the activities supporting AW in third countries has been channelled through a number of EU services. This has included (i) DG RTD research projects; (ii) DG SANTE Better Training for Safer Food (BTSF) programme, (iii) DG NEAR technical assistance instruments (TAIEX and Twinning); and (iv) DG DEVCO development cooperation projects. In addition to this, (v) indirect support has been provided to international organizations, particularly by financing OIE events and through in-kind cooperation arrangements with the FAO.

4.1. Research Projects

In response to the call for the promotion of scientific research included in the 2002 Communication, a number of projects have been financed under DG RTD, and particularly under various programmes and topics of the Sixth and Seventh Framework Programs (covering respectively 2002-2006 and 2007-2013) and 6, 7, and Horizon 2020 (covering 2014 onwards). Some ***15 projects concerning AW involving participation of institutions from non-EU countries***, have been identified for a total budget of some € 60 million, of which € 50 million EU financing.

Out of the 15, ***four were fully dedicated to AW***, accounting for a total EU contribution of € 22 million. The largest of the four is by far the project WELFARE QUALITY - Improved strategies in animal welfare for improved food quality, which alone accounted for some € 14.6 million EU contribution, nearly one third of the total. Launched in 2004 and completed in 2009, the project was partaken by institutions from Latin American countries, and namely Uruguay, Chile, Brazil and Mexico. Notably, these are also the countries more involved in the establishment of OIE Collaborating Centres in the region in the same period. WELFARE QUALITY was an umbrella initiative to promote dialogue and mutual understanding in the developments of standards for on-farm welfare assessment and related product information systems, as well as practical strategies for improving AW in the different Country settings. The project focused on the standardization of information on AW measures, ***thus going in the direction of enabling clear marketing and profiling of products in AW terms***. This clearly inscribes the initiative within the framework of the Commission's broader efforts to promote official AW labelling as a part of its global WTO negotiation strategy by involving some of its main trade partners in the definition of concrete possible standards for reference. WELFARE QUALITY ran in parallel with another project, ALCUE-FOOD, which only included a marginal component concerning specifically AW. The initiative promoted broader cooperation with Latin American Countries in the field of food quality and safety. Participant institutions were from the same countries as WELFARE QUALITY, with the exception of Argentina instead of Uruguay.

The second largest AW-dedicated project also focused on the development of objective AW indicators, this time on minor species. The WELFARE INDICATOR project ('Development, integration and dissemination of animal-based welfare indicators, including pain, in commercially important husbandry species, with special emphasis on small ruminants, equidae & turkeys'), launched in 2011 and completed in 2015, had a budget of € 6 million (of which € 4.5 million EU contribution). Participation among non-EU partners of Brazilian and US entities made the initiative eventually more relevant for turkeys than for sheep and goats, which were the project original main focus, as Australian and New Zealander researchers were not included. With time, RTD financing in the field of AW has shifted towards Balkans and Candidate Countries. In 2008, the project ECONWELFARE - Good animal welfare in a socio-economic context: Project to promote insight on the impact for the animal, the production chain and society of upgrading AW standards, included one partner institution from Macedonia. More recently, in 2011, the project AWARE - Animal Welfare Research in an enlarged Europe was launched, funded with an EU contribution of €1 million. The project focused on extending cooperation and dialogue among Universities to improve farm AW in enlargement countries, and involved the participation of institutions from Macedonia and Turkey.

AW issues have also been the object of research projects covering a broader scope. In some cases, ***research projects have included a substantial AW component***. This was the case, for instance, of the project ANIHWA – Animal Health and Welfare. The project aimed at increasing cooperation and coordination of national research programmes on health and welfare of farm animals, including fish and bees, through systematic exchange of information and mapping of national research activities and facilities, gap analysis and preparation of a dedicated strategic research agenda, which also involved Israeli participation. Other examples include a major research project on Religious Slaughter, including AW related aspects, involving the participation of Israeli, Turkish and Australian partners. AW considerations have also been massively included in a couple of forward-looking projects on technological developments related to Precision Livestock Farming. The first was a research project on applying new electronic sensors to create animal condition scoring protocols for the automated measurement of health and welfare traits for use in sustainable organic dairy cow breeding programme, which envisaged the participation of an Israeli institution. The second was a project on Multidisciplinary Approach to Practical and Acceptable Precision Livestock Farming for SMEs in Europe and worldwide, which was conducted by a pool of research institutes including partners from the larger traders in animal products (e.g. Australia, China, South Africa, Malaysia, Thailand and Brazil). Finally, ***AW has played a marginal importance in other international projects***, concerning i.a. the enhancement of the training of veterinarians in the light of the new technologies, and the introduction of sustainable pork chains based on local breeds.

4.2. Better Training for Safer Food

The Better Training for Safer Food (BTSF) programme has represented one of the main facilities to finance AW international activities to date. The BTSF programme, launched in 2005, has its legal basis in the 2004 EU Food and Feed Control Regulation, which empowers the Commission to offer training to staff in charge of SPS controls in EU MS and in non-EU partner Countries exporting to the EU. AW has been included within the scope of BTSF since commencement of its activities. Capacity building has been delivered to non-EU participants through ***three channels***. First of all, (i) via dedicated activities organized and delivered in and for non-EU countries; (ii) by inviting non-EU participants to events organized for EU MS; and, more recently (iii) by offering e-learning modules.

The ***BTSF activities in Third Countries***, having the overall purpose of improving and strengthening the countries' SPS framework, have included three streams of activities:

(a) a dedicated mainstream capacity building program (starting from 2013 called 'BTSF World');
(b) more marginally, through the 2009-2011 BTSF Africa Programme;

(c) and the 'International Standard Setting Bodies' initiative, aiming specifically at increasing third countries' participation in the activities of OIE as well as other international bodies active in the field of food safety and quality and plant health (see more on this in the dedicated case study on OIE).

Capacity building activities (for simplicity indicated as 'BTSF World' thereafter) were delivered either as (usually regional) workshops or as Sustained Training Missions (STM), i.e. assistance missions in which an expert usually from a MS is seconded to a country to tackle specific issues. On average, approximately one third of all BTSF events i.e. between 10 and 15 per year, have been specifically dedicated to non-EU countries through the BTSF World facility. Up until 2009, AW held a very marginal importance in the trainings, and was mainly included in the training module on meat control, mainly focusing on the general principles of AW at slaughter enforced at that time. ***Starting from 2009, the importance of AW has steadily increased following the strengthening of AW at slaughter provisions*** as SPS issues with the new regulation and their applicability starting from 2013 to non-EU Countries,[35] which raised the challenge of having them prepared to the adaptation task. Apart from that, BTSF was marginally used to support OIE-related AW activities in Africa through the BTSF Africa facility (see box 4.1 below).[36]

Box 4.1 – BTSF Africa

The BTSF Africa programme was funded under the Food Security Thematic Programme of the EU's Development Cooperation Instrument. This € 10 million initiative was jointly coordinated by the EC and the African Union Commission (AUC) from 2009 to 2011. Out of seven capacity building activities targeting public and private sector actors in SPS systems at national, regional and continental levels, four (worth € 5.4 million) were implemented by the OIE. However, the amount of initiatives (at least partially) dedicated to AW was rather limited. It included an OIE Performance of Veterinary Services (PVS) evaluations and the training of national focal points, including the unique regional seminar for OIE National Focal Points on AW, held on November 2010 in Addis Ababa (Ethiopia).

BTSF World events with an AW component have been funded at a pace of three yearly events on average, i.e. a total 18 projects. This corresponds to less than one sixth of all BTSF World events, and some 5% of the total number of BTSF events. With the notable exception of 2013, year in which no event was organized concerning AW, BTSF World activities with an AW components have increased over time (See Table 4.1 below). A rough estimate, considering that detailed information is not always available, suggests that, ***between 2004 and 2015, BTSF World AW-dedicated activities had an overall budget of approximately € 1.4 million, and allowed reaching around 1,000 participants from non-EU countries***. Approximately half of these participants were from various Asian Countries for events mainly organised in Thailand, and Thailand was by far the largest beneficiary in terms of number of staff trained. Neighbouring Countries have hardly received assistance under BTSF World, as they are eligible under TAIEX. The notable exception has been represented by a

[35] This relative underuse was also noted in *Evaluation of the benefits of the Better Training for Safer Food Programme: Final Report*. Evaluators reported that training per subject area would need to be adjusted according to need (for example, estimated future demand for training in animal health and welfare is 27% yet this training represented just 13% of the total training provision during 2006-10.

[36] AW standards at transport are extensively reviewed within the framework of the TRACES courses. TRACES events have been organized exclusively in Sub-Saharan African Countries. In particular TRACES sessions have been organised in 2011 in Tanzania, South Africa, Senegal, Namibia; in 2012 in Ghana and in 2013 in Uganda

training session on EU AW at slaughter and transport organised at the JRC and linked to visit to the EU Pavillon at the Expo in Milan in 2015.
From a practical point of view, BTSF funding covers all organizational expenses, including the fees for tutors and experts, logistics expenses, etc., and provides reimbursement for transports and expenses to participants. The latter do not apply to large economies, such as the US, Australia, New Zealand, and Canada, which are required to cover their own participants' expenses. So, events organized in these countries are usually co-financed by BTSF and the recipient country (e.g. as was the case for the BTSF AW Workshop in Canada and South Korea).

Table 4.1 – BTSF-World Events with an AW Component

Workshops

Country	Title	Participants (*of which funded*)	Nationality of Participants
2009			
Thailand	Training on meat controls (focus on poultry meat)	74	Bangladesh, Cambodia, Indonesia, Malaysia, Myanmar, Pakistan, Philippines, Laos, Singapore, Vietnam
2010			
China	Sino-European Food Safety Cooperation Forum (AW Basic Principles)	127	China
Brazil	Training on poultry meat and eggs	83	Brazil, Chile, Colombia, Peru
Canada	Workshop on Equivalence of AW at Slaughter	90 *(53)*	FYROM, Turkey, Argentina, Colombia, Peru, Brazil, Chile and Canada
2011			
Chile	Workshop on AW at Transport and Slaughter	77	Argentina, Chile, Costa Rica, Cuba, Dominican Rep., Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Nicaragua
2012			
South Korea	Workshop on AW Basic Principles	70	Australia, Cambodia, China, Indonesia, Japan, Laos, Malaysia, Philippines, Singapore,

			Taiwan, Thailand, Vietnam, South Korea
2014			
Thailand	Workshop on AW Equivalent standards poultry	48 *(44)*	Thailand, Bangladesh, Bhutan, Brunei, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan, Vietnam
Brazil	Workshop on AW at slaughter	71 *(56)*	Brazil, Argentina, Paraguay, Uruguay, Venezuela, Chile, Bolivia, Peru, Colombia, Ecuador
2015			
Ispra-Milan	The EU AW at Slaughter and Transport	38	Albania, Algeria, Armenia, Azerbaijan, BiH, Egypt, Georgia, Jordan, Israel, Kazakhstan, Lebanon, Moldova, FYROM, Montenegro, Morocco, Ukraine
Costa Rica	Workshop on AW	62 *(41)*	Belize, Chile, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama

Short Term Missions

Country	Title
2010	
Thailand	Mission on AW (Poultry)
2014	
Thailand	STM on AW Equivalent standards – poultry
Brazil	STM on AW at slaughter and transport
2015	
Malawi	STM on AW
Lesotho	STM on AW
Chile	STM on AW at slaughter
Brazil	STM on AW
Thailand	Concept note on poultry welfare at time of slaughter (5 days)

In terms of topics treated, BTSF AW projects have ranged from general awareness raising and information activities about the basic principles of AW standards (e.g. China, South Korea) to regional workshops more specifically focused on slaughter in general (e.g. Canada, Brazil) or concerning particularly the poultry sector. Training missions have also mainly focused on the technicalities of complying with EU AW at slaughter standards, ***often in response to the findings of EU audit missions in the Country concerned***. ***In other cases, BTSF World activities concerning AW have been complementary to those organised within the framework of bilateral trade agreements (Chile) and cooperation fora (Canada, Brazil)***. However, they have also been used as ***preparatory tools*** in Countries signatory of bilateral trade agreements whenever formal policy dialogue and cooperation mechanisms had not started yet (see South Korea and Costa Rica). It is just starting with 2015 that BTSF appears more disconnected from actual trade flows and AW audits, and projects cover Countries that are minor trade partners and for which no certified exporters exist yet. The case of ***Thailand*** (see Box 4.2) is particularly relevant, since in this country the substantial assistance provided through BTSF activities was used to support policy dialogue, and, to a certain extent, to substitute for an ordinary research project on the equivalence at slaughter in special weather and operational conditions. Cooperation with Thailand has been made easier by the presence of a DG SANTE attaché at the EU Delegation in Bangkok, and its importance is even higher if one considers that the country is recipient of substantial TRQ allocation under WTO commitments.

Box 4.2 - BTSF Support to Thailand between 2009 and 2015

Thailand has been the beneficiary of five dedicated BTSF AWIA projects. In 2010, following a previous BTSF training on meat controls that also covered related welfare controls in primary production a two-week STM was organised focused on the whole export-oriented poultry industry in Thailand. FVO audits had highlighted some shortcomings in the AW conditions of poultry exported to the EU that required action along the whole poultry industry chain. It also reviewed the Thai Poultry Welfare legislation and compared it with the relevant EU Directives and Regulations to identify gaps. Training was organised to demonstrate practical issues such as the handling of birds (catching and shackling procedures) and video materials prepared to be disseminated among poultry farms for exports. The training provided to the CA officers covered both theoretical aspects related to the application of EU AW standards at slaughter and practical issues at both the farm level (handling and loading in crates) and in abattoirs (shackling and culling procedures). This resulted in a report assessing the gaps between EU requirements and the Thai Legislation and the main critical points concerning poultry Animal Welfare at farm, during transport and in the slaughterhouse in Thailand. The event was attended by 18 Veterinary Officers from the competent authority.

Another EU audit on the prospective implementation of the 2009 EU slaughter regulation had identified concerns about the application of the electrical stunning parameters for poultry and their compatibility with EU standards in the light of local animal management practices and weather conditions. The issue was first discussed within the framework of a meeting of the OIE Regional Animal Welfare Strategy where it was agreed that feedback would be provided to OIE headquarters in order to prompt a possible review of the OIE standards for the commercial slaughter of poultry in the light of different climatic conditions. Then a specific request was made by the Thai Government to DG SANCO to launch a joint research project to identify the research methods for establishment of poultry welfare standards suitable to the environment and conditions of Thailand and similar ASEAN countries. A first project identification mission was fielded in Thailand in June 2012 to draft the Terms of Reference (ToR) for this 24-month research project.[37] Policy dialogue was resumed in 2014 when the first BTSF World-funded regional workshop on animal welfare presenting the EU AW standards and priorities was organised in Thailand and attended by some 50 representatives from all ASEAN countries. Attached to the workshop, another one week Technical Assistance Mission was organised to support the identification of poultry welfare standards more suitable to local weather conditions. This was to review the effects of spraying water on chickens before transport on welfare (thermal stress) and meat quality and ways to improve poultry welfare and meat quality under the existing electrical water bath stunning systems and training was provided to this aim to Thai officers. A final workshop was then held on factors affecting Dead on Arrival (DOA) in poultry, related risk factors, and possible mitigation measures. Finally in 2015 another STM was fielded to develop a concept note on possible alternative stunning methods for poultry replicable also in other ASEAN countries. To this aim, the STM expert explored the head-only electrical stunning of poultry as possible method eligible method under the EU Slaughter Regulation 1099/2009 and the OIE guidelines and a minimum current of 240mA was prescribed. A secondary treatment would have to be applied to unconscious poultry to prevent or minimise wing flapping and maintain good carcass and meat quality. However, the commercial feasibility of the proposed system and its animal welfare implications under commercial slaughterhouse conditions could not be evaluated together with the health & safety of personnel would have warranted further research and development.

The second channel of capacity building to third countries under BTSF countries has been the ***participation of non-EU personnel in BTSF Events organized in the***

[37] This project should have included three missions of EU experts to Thailand to provide technical assistance on animal welfare research for veterinary officers, university researchers and poultry industry, one study visit of the Thai CA officer and a university researcher to the EU to see the activity of a university on animal welfare research and to visit poultry farm and slaughterhouse, and one final workshop to draft guidelines for DLD inspectors and poultry industry on animal welfare in which representatives from relevant parties and stakeholders will be invited.

EU. Between 2006 and 2015, 39 training events were delivered on AW, attended by a total 2,314 participants. The participation of non-EU countries remained limited, and accounted to some 15% of participants of which 3% from EFTA/EEA Countries. Ordinary BTSF events are specifically dedicated to harmonize official controls at the EU level, and are therefore not particularly conceived to cater to the needs of other non-EU countries. Moreover, there are also financial constraints, since having to cover trans-oceanic flights would substantially increase the budget. Among different topics, ***AW at slaughter and killing for disease control was the focus of the largest number of events*** (16), while other standards, i.e. transport, laying hens and broiler chickens, and pigs, were addressed by a similar number of trainings (7 / 8), with the latter two gaining ground between 2012 and 2015. A summary of the nationalities of participants from non-EU countries to EU BTSF events is reported in Table 4.2 below. Notably, apart from Ukraine, Russian-speaking countries' participation in these events has been extremely low. Among other non-EU countries, Chile and Thailand are, quite unsurprisingly, the two Countries that, together with Namibia, have been more involved in these events.

Table 4.2 – Overview of non-EU Participants to AW EU BTSF events

Countries	'06	'07 [a]	'08 [a]	'09 [a]	'10 [b]	'11 [b]	'12	'13	'14	'15	Total [c]
EFTA/EEA											***68***
Iceland		*	*	*			*	5	10	2	**17**
Norway	2	*	*	*	*	*	1	11	11	9	**34**
Switzerland	1	*	*	*	*	*			1	1	**3**
Enlargement / Neighbour Countries											***130***
Albania	1	*			*	*		2	2	1	**6**
Algeria			*	*						2	**2**
Armenia									1		**1**
Azerbaijan									1		**1**
Belarus					*						
Bosnia Herzegovina							1	2	1	2	**6**
Egypt	1			*	*			1		1	**3**
Georgia									1		**1**
Israel				*	*			1			**1**
Kosovo										1	**1**
Lebanon		*									
FYROM							*	8	16	6	**30**
Moldova					*			2	2		**4**
Montenegro					*				2		**2**
Morocco	1	*	*	*	*			1	2	1	**5**
Russia	1								1	2	**4**
Serbia	1			*	*	*			1	3	**5**
Tunisia		*	*	*	*		1		3		**4**
Turkey	4						*	5	11	3	**23**
Ukraine				*	*			2	1		**3**
Other non-EU countries											***110***
Australia	3	*	*	*							**3**
Argentina	1		*	*					1	1	**3**
Bangladesh	1										**1**
Botswana	1					*		1		2	**4**
Brazil				*	*				1	1	**2**
Canada	1	*	*								**1**
Chile	1	*	*	*	*	*		1	2	1	**5**
China	2	*			*			1			**3**
Costa Rica			*	*						1	**1**
Eritrea				*	*						
India	1								2		**3**
Kenya				*	*				2		**2**
Lesotho			*	*							
Libya			*	*							
Namibia	2	*	*	*	*				2	1	**5**
New Zealand	1		*	*	*						**1**

Nigeria					*						
Pakistan	1				*						**1**
Paraguay	1	*	*	*	*			1			**2**
Peru		*	*	*							
Philippines	3										**3**
Senegal	1										**1**
Singapore	1										**1**
South Korea					*						
Sri lanka	1										**1**
Syria				*	*						
Thailand	1	*		*	*	*			2	1	**3**
Uruguay		*	*	*				1			**1**
Uzbekistan									1		**1**
Vietnam	1								1		**2**
USA		*								2	**2**
Zimbabwe		*			*					1	**1**
Total	***35***	***N/A***	***N/A***	***N/A***	***63***	***60***	***20***	***45***	***81***	***45***	***349+***

Source:BTSF annual report; information provided by BTSF Interviewees
* specific figures not available.
[a] Only list of countries participating, no details on number of participants from each country/country group
[b] Generic reference to ENP and Candidate Countries
[c] Sum only of available figures

Finally, in addition to this, non-EU countries have been involved in ***capacity building activities delivered through e-learning training***. Between 2014 and 2016, BTSF has piloted 10 e-learning training modules on different technical topics, of which two regarding AW, respectively concerning AW at slaughter in general, and in the poultry sector in particular. E-learning allowed to significantly broaden the number of participants, especially from non-EU member countries. The geographical distribution of participation in these e-learning activities substantially differ from what just seen for participation in EU BTSF events. In this case, participants from other non-EU Countries have accounted for a 60% of the total 339 participants. It is worth noting that e-learning has allowed to reach trainees in Countries never (e.g. India) or only marginally (e.g. Japan, Mexico) captured through BTSF-World events. However, data are heavily skewed, because as high as 36% of e-learning trainees come from Chile (some 37% of non-EU participants), which clearly points to a synergy with the policy dialogue established there. In general, BTSF e-learning has had synergic effects with patterns of participation into BTSF-World, as data on Thailand (9.4% of non-EU participants) in the Table 4.3 below demonstrate.

Table 4.3 – Non-EU Participants to e-learning Modules on AW

Countries	Total Participants	Share on the Total
EFTA/EEA		
Andorra	2	0.6%
Iceland	17	5.0%
Liechtenstein	3	0.9%
Norway	68	20.1%
Switzerland	1	0.3%
Enlargement and Neighbourhood countries		
Albania	2	0.6%
Egypt	2	0.6%
Israel	8	2.4%
Lebanon	1	0.3%
Morocco	3	0.9%
Moldova	2	0.6%
Montenegro	1	0.3%
FYROM	16	4.7%
Serbia	1	0.3%
Tunisia	3	0.9%
Turkey	3	0.9%

Ukraine	1	0.3%
Other non-EU countries		
Argentina	5	1.5%
Bangladesh	1	0.3%
Chile	125	36.9%
India	9	2.7%
Japan	6	1.8%
Lesotho	1	0.3%
Mexico	13	3.8%
Namibia	1	0.3%
Peru	1	0.3%
Philippines	1	0.3%
Thailand	32	9.4%
Uruguay	10	2.9%
TOTAL	**339**	

4.3. TAIEX

The Technical Assistance and Information Exchange instrument (TAIEX) is DG NEAR peer to peer tool for capacity building and supporting public administration in Neighbourhood countries in the approximation, transposition and enforcement of EU legislation and policies. In terms of geographical scope, TAIEX covers the Balkans and all countries under the ENP, Enlargement and the Partnership Instruments.[38] Its activities target public and semi-public sector bodies, such as national administrations, Parliaments (permanent staff), legislative councils and regional governments, regulatory and supervisory authorities, as well as partners and representatives of commercial, professional and economic entities and civic society, which are involved in the alignment and implementation of the acquis and EU best practices. TAIEX interventions are essentially need-driven, and formally rely on a network of contact points at the level of beneficiaries' Government administrations implementing or enforcing EU legislation and contact points in public administrations of the EU Member States that provide the expertise needed in beneficiary countries. In practice input for TAIEX assistance can also come from the EU Delegations, EU Directorates General and EU experts visiting the Country. TAIEX activities can take the form of:

- workshops, where experts from EU MS present specific areas of EU legislation to a large number of beneficiary officials. This is broadly tantamount to the regional workshops under the BTSF;
- short term expert missions, where experts from EU MS are fielded to the beneficiary administrations to provide their advice on the transposition, implementation or enforcement of a specific part of EU law (similar to STM under the BTSF);
- study visits, where groups of three practitioners from a beneficiary administration take part into a study visit to an EU MS administration.

As far as its potential use for AW purposes is concerned, under many respects TAIEX closely resembles BTSF World activities, although it is only applicable in ENP countries, which makes the two instruments geographically complementary. ***Between 2004 and 2015, TAIEX funded over 60 AW projects for an overall financing of some € 1.2 million***. Compared to BTSF World activities, TAIEX events appear to have a

[38] Turkey and the Balkan Countries (FYROM, Macedonia; Montenegro, Serbia, Albania, Bosnia and Herzegovina and Kosovo), the Turkish Cypriot community in the northern part of Cyprus; the Mediterranean and North African Countries (Algeria, Egypt, Israel, Jordan, Lebanon, Palestine, Syria and Tunisia), as well as Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

lower cost per participant. In fact, with a budget slightly lower than the BTSF World over the same period, TAIEX events reached almost four times as much participants as BTSF World. The vast majority (70%) of these initiatives have been country or regional workshops, while one fourth have been delivered as expert missions. The list of activities include just four study visits.

Workshops. The over 40 workshops financed by TAIEX in the field of AW can be clustered into three main groups: (i) 22 country workshops, mostly or fully dedicated to AW; (ii) projects providing funding for seminars to promote policy dialogue and AW standards approximation between the EU and the other OIE Countries in the region and (iii) ten regional workshops or events. For what concerns ***country workshops***, TAIEX financing has been mainly used by Candidate Countries in the Balkans, which alone absorbed some half of its resources, while Neighbourhood East countries made use of less resources, and Neighbourhood South countries being the region less involved in these initiatives (see Table 4.4 below). In particular:

- ***Turkey*** between 2010 and 2011 was the beneficiary of three TAIEX workshops on AW at slaughter, during transport and for poultry, worth a total € 72,600. The first was to provide expertise on concrete experiences with implementation and practical aspects of official controls of slaughterhouse in EU Countries. The second dealt with procedures for the approval of vehicles, journey logs, operating GPS systems, loading and unloading of animals, proper handling of animals during transportation and official controls. It also reviewed the specific requirements for sea, train and flight transportation. Finally, the workshop on poultry reviewed minimum AW standards for enriched cages for laying hens – the related transition period - protection of chickens kept for meat production. The workshops were attended by officers from both the Ministry of Agriculture and the Animal Health Service Department, as well as by various NGOs and business associations (e.g. the butchers federation, poultry meat producers and breeders association, farmers association and transporters, etc.) and by experts from the Ankara University, for an overall nearly 300 participants.

- ***Balkan Countries***. Nearly 15 events were organized in Balkan Countries. Participants always included veterinary public officers. In four of these workshops representatives from business associations and operators were also invited, in another four farmers and farmer associations, and once transporters. All in all slightly less than half of the workshops organised in the region envisaged some form of stakeholders' participation, as against two thirds in Turkey. TAIEX projects in the region concerned assistance to the drafting of national legislation, particularly in Montenegro as well as assessment of administrative capacity for Twinning preparation purposes. The remaining ones were equally split between illustrating the principles of AW at transport, at slaughter and at farm level. Albania and Kosovo did not receive any assistance in the form of standalone projects, while they were involved in regional activities.

- Assistance to ***Neighbourhood East*** countries was mostly provided in form of expert missions (see Tab. 5.4. below) or in the framework of the policy dialogue with OIE. The two workshops organized respectively in Azerbaijan (2014) and Georgia (2010) were intended to provide an overview of EU AW legislation in general and EU AW standards at slaughter in particular.

- Also in the case of ***Neighbourhood South***, country workshops represented a minority of TAIEX initiatives. The three workshops financed by TAIEX in the area included a workshop on AW standards at transport at Border Inspection Posts (BIP) in Jordan, a project on slaughtering of animals for disease control purposes in Egypt (see more on this in the case study dedicated to OIE), and a workshop on AW standards in general in Lebanon. Differently from some of the events in the Balkan Countries or Turkey, these workshops were participated by veterinarians and other academic experts, but never by representatives of business associations or operators.

Table 4.4 – TAIEX Country Workshops and Seminars

Title	Year	Country	Budget	Participants	Speakers
Turkey					
Workshop on animal welfare during transportation	2010	Turkey	40,986	151	7
Workshop on Animal Welfare on Poultry Farms	2010	Turkey	18,693	75	6
Workshop on Animal Welfare During Slaughter	2011	Turkey	12,943	57	3
Balkans					
Expertise on AW Law	2006	Montenegro	3,044	8	1
Seminar the EU and AW	2006	Macedonia	409	1	9
Workshop on AW concerning protection of animals during stunning and slaughtering	2008	Macedonia	13,106	49	3
Workshop on AW in farms	2010	Serbia	17,841	54	5
Workshop on AW during stunning and slaughtering	2010	Serbia	16,240	48	4
Workshop on AW issues of animals for production	2010	Montenegro	21,393	90	7
Workshop on the protection of farm animals	2010	Macedonia	11,503	37	6
Workshop on AW during transportation	2011	Serbia	17,565	54	4
Workshop on Practical implementation of EU legislation on AW at the time of slaughter and killing	2011	Serbia	13,222	42	5
Workshop on training on AW in slaughterhouse	2011	Montenegro	14,936	35	5
Workshop on practical implementation of EU legislation on farm AW	2013	Serbia	20,283	37	4
Workshop on the protection of animals at the time of killing	2013	Macedonia	13,728	71	3
Twinning Review Mission on Building Capacity in the Areas of Food Safety and AW	2015	Serbia	6,273	19	2
Workshop on Standard Operating Procedures for the Welfare of Animals	2015	Serbia	8,315	29	4
Neighbourhood East					
Workshop on EU legislation regarding slaughterhouses and slaughter	2010	Georgia	14,139	21	5
Workshop on AW	2014	Azerbaijan	28,277	59	7
Neighbourhood South					
Workshop on AW in transport and BIPs	2009	Jordan	21,636	40	8
Workshop on AW	2010	Lebanon	28,840	58	13
Workshop on AW at the time of killing for disease control purposes	2010	Egypt	32,681	70	7

Between 2006 and 2007, TAIEX also financed the organization of 11 ***seminars to promote Dialogue and Common Activities between the EU and other OIE Member Countries*** of the OIE Regional Commission for Europe, while another seven outside of the scope of TAIEX were covered under the general budget of at that time DG SANCO. The key purpose of these seminars was to familiarise with and provide guidance on procedures related to OIE standards and the harmonisation of veterinary legislation, including a comparative presentation of the AW policies of the EU and the OIE. Target audience included veterinary services, representatives of private veterinary sector, university teachers and researchers, media and political authorities of the international guidelines recommended by the OIE itself. TAIEX support to OIE activities also includes some regional initiatives, and in some cases also entailed a collaboration with FAO.

Table 4.5 – Seminars 'Dialogue and common activities between the OIE Member Countries of the EU and OIE Member Countries of the OIE Regional Commission for Europe

Date	Country	Budget (€)	# of participants
April 2006	FYROM	14,745	113
April 2006	Albania	15,636	100
May 2006	Serbia and Montenegro	43,401	211
June 2006	Bosnia Herzegovina	22,907	151
October 2006	Georgia	14,932	76
October 2006	Armenia	7,629	67
October 2006	Azerbaijan	29,837	100
April 2007	Moldova	18,604	82
June 2007	Russia[39]	38,419	196
June 2007	Belarus	24,372	300
July 2007	Ukraine	78,309	454

Finally, TAIEX financed either the organization or the participation of non-EU countries representatives in a number of ***regional and multinational workshops and events***. The initiatives have included workshops and conferenced organized by TAIEX, including a couple of regional workshops on AW at slaughter practices (FYROM 2009 and Lebanon 2015), another handful regarding horizontal AW issues, and one aiming to enhance capacity to contribute to OIE standard setting process. Finally, TAIEX has also contributed to finance beneficiary countries representatives' participations to international events such as the Second OIE Global Conference on AW (Table 4.6).

Table 4.6 – Regional and International Workshops and Events

Title	Year	Location	Participants nationalities[40]	Budget	Participants	Speakers
Conference on AW	2006	Serbia	Turkey, Albania, BiH, FYROM, Kosovo, Serbia, Montenegro	41,143	79	12
Workshop on AW	2008	Croatia	Albania, BiH, Kosovo, Montenegro, Serbia, Turkey, FYROM	51,154	55	17
Financing of participation to the Second OIE Global Conference on AW	2008	Egypt	Albania, Algeria, Armenia, Azerbaijan, Belarus, BiH, Egypt, Georgia, Israel, Jordan, Kosovo, Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine, Russia, Serbia, Syria, Tunisia, Turkey, Ukraine, FYROM	37,897	33	1
Workshop on regional cooperation on AW	2009	Jordan	Algeria, Egypt,, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia	75,968	140	16
Workshop on understanding unconsciousness,	2009	FYROM	Albania, BiH, Kosovo, Montenegro, Serbia, FYROM	23,880	37	3

[39] Russia was still considered within the framework of Neighbourhood Policy in 2007, as was Belarus that now remains outside most of the structures of ENP.
[40] Non-EU only

stunning and slaughter						
AW: From cure to prevention	2010	Serbia	Albania, BiH, Kosovo, Montenegro, Serbia, Turkey, FYROM	59,922	99	11
Workshop on AW in Europe Achievements and Future Prospects	2010	France	Albania, Bosnia, Macedonia	34,545	55	3
EU Veterinary Week *(coverage of participants' expenses)*	2010	Belgium	Albania, Algeria, Armenia, Azerbaijan, Belarus, BiH, Egypt, Georgia, Israel, Jordan, Kosovo, Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine, Russia, Serbia, Syria, Tunisia, Ukraine, Macedonia	20,539	18	1
Workshop on World Organisation for Animal Health (OIE) Standard Setting	2013	Serbia	Albania, BiH, Kosovo, Montenegro, Serbia, Turkey, FYROM	26,331	46	7
Multi-beneficiary workshop to improve welfare practices at the time of slaughter	2015	Lebanon	Algeria, Egypt, Jordan, Lebanon, Palestine, Turkey	26,615	45	14

Expert Missions. Overall, 16 expert missions have been financed under TAIEX, exclusively upon request of Balkan countries (and Montenegro in particular) and Eastern Neighbourhood countries (see Table 5.7 below). In both geographical areas, expert missions have ranged over a variety of topics, including AW at farm, transport, and slaughter. ***Expert Missions have represented the main form of assistance provided to Neighbourhood East countries***, including notably three specifically related to the negotiations of the Association Agreements respectively with Georgia, Moldova and Ukraine. Moldova is the largest recipient of assistance in form of expert missions, with particular attention regarding poultry sector (including laying hen), while activities in the Balkans have not focused on one particular sector. Besides this set of expert missions, it is likely that AW issues related to transport of live animals have also been marginally dealt with within the framework of eight expert missions[41] focusing on identification and registration of animals, part of the effort to strengthen the TRACES system, having a total value of some € 35,000 (Table 4.7).

Table 4.7 – TAIEX Expert Missions on Animal Welfare

Title	Year	Country	Budget	Participants
EM on AW concerning protection of animals during transport	2009	FYROM	2,643	3
EM on drafting legislation concerning the protection of animals kept for farming purposes	2009	Montenegro	2,761	10
EM on drafting legislation on the protection of animals at time of slaughter	2009	Montenegro	3,147	10
EM on drafting legislation on the protection of animals during transport	2009	Montenegro	2,528	2
EM on the Coordination of Controls at the Border for Food Safety and AW and Health	2009	Montenegro	6,297	5
EM on AW: collection of data information (housing, transport, slaughter etc.)	2010	Montenegro	1,793	5
EM on AW during transport	2013	Serbia	3,689	10
EM on rural development measures improving environmental, food safety and AW standards	2014	Kosovo	4,046	6
EM on protection and welfare of farm animals	2012	Moldova	3,525	5
EM on the protection and welfare of farm animals	2012	Moldova	4,225	7
EM on AW of poultry kept for meat production	2013	Moldova	4,274	11

[41] These targeted beneficiaries in Kosovo, Jordan, Georgia, Belarus, Bosnia Herzegovina and FYROM (three times).

EM on the protection of laying hens	2013	Moldova	5,879	7
EM on protection of poultry at the time of killing	2014	Moldova	4,079	9
Peer assessment mission of SPS and AW legislation	2015	Moldova	8,189	42
Peer assessment Mission on SPS and AW legislation	2015	Georgia	6,728	38
Peer review mission on the SPS and AW legislation	2015	Ukraine	6,749	10

Study Visits. These have constituted a sheer minority of the activities carried out under TAIEX, and, with an overall cost of less than € 30,000, also a very marginal share of the overall budget. All study visits involved participants from Balkan countries, and three of them were fully dedicated to AW issues (Table 4.8)

Table 4.8 – TAIEX Study Visits

Title	Year	Country	Budget	Participants	Speakers
Balkans					
SV on EU standards for occupational safety, animal & plant health, environment protection, AW, hygiene & food safety	2010	Macedonia	9,871	3	3
SV on humane slaughter methods	2010	Kosovo	10,137	3	1
SV on AW during the transport	2011	Serbia	3,429	3	1
SV on the control system for animal protection and welfare	2015	Macedonia	4,791	3	1

4.4. Neighbourhood Policy: ENP Twinning Projects

Twinning is a European Union instrument for institutional cooperation between Public Administrations of EU Member States and of beneficiary or partner countries. Twinning projects bring together public sector expertise from EU Member States and beneficiary countries with the aim of achieving concrete mandatory results through peer to peer activities. ***The subject of approximation to EU AW Standards has been included in several Twinning Projects*** in the period concerned but these generally concerned Candidate Countries in the Balkans that received the bulk of financing. The only major ongoing initiative in the ENP region has been in Ukraine (see case study on TAIEX and Neighbourhood Policy). AW aspects have also been somehow covered, although more indirectly, in in Morocco and Israel (Table 4.9).

Table 4.9 – Twinning initiatives regarding AW

ENLARGEMENT	Start Year	End Year	Country	Beneficiary Institution	Budget	Partners
Strengthening the State Veterinary Office	2006	2008	Bosnia and Herzegovina	State Veterinary Office	1,000,000	DE
Building capacity in the areas of food safety and AW	2012	2014	Serbia	Ministry of Agriculture, Forestry and Water Management – Veterinary Directorate	2,000,000	LV, HU
Institutional strengthening of the capacities of Competent Authorities for implementation of the acquis for food safety, veterinary and phytosanitary policy	2014	2017	Macedonia	Veterinary Directorate, Phytosanitary Directorate and State Phytosanitary Laboratory, Seeds and Seedling Directorate within Ministry of agriculture,	1,280,600	IT

				forestry and Water Economy (MAFWE) and Food Directorate within Ministry of Health (MoH)		
Projects ongoing						
Capacity Building Regarding Official Controls, Animal Welfare, Zoonoses and Animal By-Product Management	*2016*	*2018*	*Turkey*	*Ministry of Food, Agriculture and Livestock*	*1,900,000*	*FR, HU*
Enlargement	**From**	**To**	**Country**	**Beneficiary Institution**	**Budget**	**Partners**
Renforcement des structures de contrôles sanitaires, vétérinaires et phytosanitaires (SPS)	2007	2009	Morocco	Ministère de l'Agriculture	2,160,000	FR, IT, PL
Strenghthening of Israeli Veterinary Inspection Authorities for Animal Health and Livestock Production System	2011	2013	Israel	Veterinary services and Animal Health	950,000	IT
Projects ongoing						
Assistance with implementation of SPS commitments under the EU Ukraine Association Agreement[42]	*2016*	*2017*	*Ukraine*	*The State Veterinary and Phytosanitary Service of Ukraine*	*1,000,000*	LV, IT

4.5. Development Cooperation Projects

AW has also been included, at times very marginally, in over 30 development cooperation projects implemented by DG DEVCO. These interventions can be divided in two, rather heterogeneous, groups. One third of interventions have been dedicated to the ***reinforcement and upgrade of veterinary services and veterinary governance in general*** (see Table 4.10). Three projects, in particular, have had a regional scope, and have been carried out in extensive interaction with the OIE (see Box 4.3 below).

Box 4.3 – Regional DEVCO projects in the field

The project ***Strengthening Veterinary Services in Asia - Regional Vaccine Bank and Capacity building for surveillance, early detection and eradication of highly pathogenic emerging and re-emerging animal diseases (HPED)*** was launched in 2009 and closed in 2014, and covered South and South East Asia. This 4-year cooperation programme was designed to promote multi-sectoral coordination and collaboration for prevention and control of high impact and/or highly pathogenic emerging diseases at the human-animal interface. It has been implementation by FAO, OIE and WHO, which institutionalized a tripartite coordination mechanism at regional level. The project's key focus was on the establishment of a regional vaccine bank. However, HPED also included an OIE component (managed by the OIE Sub-Regional Representation for South East Asia - SRR-SEA), which included the implementation of the Performance of Veterinary Services (PVS) Pathway and the organisation of national/regional capacity building workshops and seminars for the newly appointed National Delegates to the OIE and for the OIE National Focal Points, including on AW. Two sub-sequent regional initiatives

[42] Information were retrieved from the Twinning Fiche available at https://webgate.ec.europa.eu/europeaid/online-services/index.cfm?ADSSChck=1428651949716&do=publi.detPUB&searchtype=QS&orderby=upd&orderbyad=Desc&nbPubliList=15&page=1&aoref=136970

have been funded in Africa in the area of veterinary governance. Among the others, they also included activities aimed to address the low participation of African OIE Member Countries in providing sound comments during the process of standards setting. Since 2009, under the scope of the EU-funded (Aid for Trade) ***Participation of African Nations in Sanitary and Phytosanitary Standard Setting Organizations*** (PANSPSO, Phase 1 and 2) project, the African Union Inter-African Bureau for Animal Resources (AU-IBAR) convened annual meetings for OIE delegates in Nairobi to examine the proposed changes in the OIE Terrestrial (and Aquatic) Code submitted for adoption. Since 2012, these annual meetings have been funded by the EU-funded (DG DEVCO) ***Reinforcing Veterinary Governance in Africa*** (VETGOV) programme. Launched in 2012, this large programme has been jointly implemented by three technical agencies, i.e. AU-IBAR, FAO and OIE, and, following a no-cost extension, is expected to finish at the end of July 2017.

Table 4.10 – DEVCO Projects – support to veterinary services

Title	Start	End	Countries	Budget
HPED - Strengthening Veterinary Services in Asia - Regional Vaccine Bank and Capacity building for surveillance, early detection and eradication of highly pathogenic emerging and re-emerging animal diseases	2009	2014	South and South East Asia	7,000,000
PANSPSO – Participation of African Nations in Sanitary and Phytosanitary Standard Setting Organizations	2009	2014	Subsaharan Africa	2,000,000
VETGOV – Reinforcing Veterinary Governance in Africa	2010	2017	Subsaharan Africa	30,000,000
Provision of Technical Assistance to the Afghan Ministry of Agriculture, Irrigation and Livestock to contribute to enhance the functionality of Afghanistan's Animal Health and Welfare Services	2010	2015	Afghanistan	5,919,104
Support the State Veterinary Service Prepare for a National System for the Identification of Animals and Registration of Holdings	2011	2013	Azerbaijan	968,689
Enhancing living standards and food safety of rural people through access to improved veterinary services	2012	2016	Tajikistan	225,000
Mobile Veterinary Outreach Programme	2012	2014	Jordan	89,651
Construction of facilities under the Animal Health Development Programme II and the Perennial Horticulture Development Programme II supporting the Ministry of Agriculture, Irrigation, and Livestock in Mazar	2012	2014	Afghanistan	571,022
IGAD Sheikh Technical Veterinary School and Reference Centre (ISTVS)	2013	2016	Somalia	3,000,000

The remaining DEVCO projects are a mixed set of interventions in the field of ***value chain development, livestock production, and support to export***, which include marginal AW components regarding husbandry services, slaughter practices, etc. Because they concern developing countries, and at any rate smaller economies, their relevance in terms of international competitiveness or trade flows is extremely limited.

4.6. Joint Activities with FAO

Differently from OIE, the EU in its own right is a fully-fledged Member of FAO and this has further contributed to stir cooperation and mutual sharing of priorities. A milestone event in the cooperation between the EC and FAO in the field of animal welfare has been represented by the meeting in 2008 on *Capacity Building in Animal Welfare*. This paved the way for the creation of an explicit link between Animal Welfare in animal production and the FAO sustainability strategy, thereby declaring animal welfare as a public good for sustainability purposes. EU initiatives jointly shared with the FAO have mostly regarded the joint organisation of events as detailed in Box 5.4 below. Activities oriented towards the provision of training and capacity building have mainly concerned:

- a Technical Assistance mission to Malawi in June 2008

- the Joint EC-FAO co-funding on August 2008 of the establishment of the Lilongwe Society for the Protection and Care of Animals (LSPCA) in Malawi[43].

Box 4.4 EU FAO Cooperation in Animal Welfare International Activities.

FAO has never received direct financial support from the EC for its co-operation on AWIA activities, but eventually in-kind assistance without a broader framework of exchanges of mutual aid. As notable examples of this, since 2009 FAO has been running its online *Gateway to Farm Animal Welfare*, as a means to raise awareness about AW globally, including spreading the word about Commission's initiatives in this field. In exchange for that, two Commission Officials from the previous AW Unit have contributed their working time as members of the Editorial Board and contributors to the Gateway. Much in the same vein, the Commission provided support to the Brussels-based 2012 *1st FAO Global Multi-Stakeholders Forum on Animal Welfare* by arranging for the conference room and interpretation services at the European Economic and Social Committee. The FAO forum was organised together with the Commission's Conference on the New AW Strategy and the Commission also covered the travel and accommodation expenses of some experts that participated to both events.
Although precise data on the impact of FAO Activities are missing, as the Gateway is currently under evaluation, the FAO is believed to have strong outreach among developing Countries, which are mainly interested in farm-related aspects, and have an audience mainly composed of small and medium producers that are often cut off from export operations. FAO is not directly involved in or committed to the OIE standard setting process, but considers AW as a broader component of the sustainability of farming operations, which can create at times conflicting priorities. FAO has mainly supported EC activities by contributing their experts to EC projects and missions. Notable examples include at the more operational level:

- FAO experts' participation to the Final Stakeholders Conference of the DG RTD Welfare Quality project;
- FAO participation to the 2009 TAIEX multi-country workshop on regional cooperation on AW in Jordan;
- FAO contribution to the BTSF 2012 Regional Workshop on EU Legislation on AW in South Korea; and
- FAO attendance as a guest in the 2014 TAIEX Workshop on AW held in Azerbaijan.

Most importantly FAO has taken part as a speaker to most EC international events on AW, including in chronological order:

- the International Forum on Global Aspects of Farm Animal Welfare held in Brussels in 2008;
- the 2009 DG SANCO-DG TRADE Conference on Global Trade and Farm AW;
- related to that the 2009 DG SANCO Expert meeting on Global trade and farm AW;
- the 1st 2010 Commission's International Conference on AW Education;
- the 2013 WVA, FVE and SANTE - Global Veterinary Seminar on AW, held in Prague.
- The 2014 WVA-EC Webinar "Veterinary leadership: Empowering tools for vets in the field of AW".

In exchange for that, the Commission contributed its experts to a number of FAO-organised activities. For what concerns in particular farm animals, these have included (i) the 2008 FAO Expert meeting on capacity building to implement good AW practices and (ii) the 2011 FAO Experts' Meeting on Impact of Animal Nutrition on AW.

[43] The Lilongwe Society for the Protection of Cruelty to Animals (LSPCA) runs free veterinary clinics in the poorest communities and spay-neuter clinics in peri-urban areas. According to OIE sources it represents the only entity providing official veterinary services' work or direct support on animal welfare education/humane education and awareness in the Country. See, *OIE Animal Welfare in OIE Member Countries and Territories in the SADC Region - Summaries of baseline country assessments*, 2014.

Finally, the Commission and FAO have jointly organised a number of events both in cooperation with the International Dairy Federation given the importance FAO attributes to promote dairy activities to escape poverty in rural areas and addressed to small farmers in Brazil. These have included:

- The 2009 Joint IDF-FAO-EC Conference on "Animal Welfare-Challenges and Opportunities for the Dairy Sector", held in Berlin;
- The 2010 IWTO- FAO-EC Conference on "Environment and Animal Welfare", during the 79th IWTO Congress
- The joint FAO-EC "Workshop on Low cost practices and tools to improve farm animal welfare", held in 2010 in Jaboticabal, Brazil;
- The parallel FAO-EC Workshop on "Educational strategies to promote animal welfare concepts and practices", also held in 2010 in Jaboticabal, Brazil
- The Joint 2011 IDF-FAO-EC Conference on Animal welfare, organised during the IDF World Dairy Summit-Sustainable Food Security in Parma
- EC-FAO Workshop Animal Welfare: *The pleasure of respecting rights*, held within the framework of the Slow Food Salone del Gusto in Turin in 2014
- EC-FAO Workshop From farmer to farmer- Animal welfare and its benefits, also held in the same occasion.

PART B

CASE STUDIES

5. THE IMPACT OF TECHNICAL COOPERATION WITH BRAZIL

5.1. Introduction

The primary goal of this case study is to review and analyse the activities carried out under the aegis of technical cooperation with Brazil, with the purpose of assessing their impact on the competitiveness of the EU and Brazilian producers and operators. The case study is divided into five parts. After a background section putting technical cooperation into context and highlighting the main features of the Brazilian animal protection legal framework, the second part more specifically reviews the results of the activities carried out under the cooperation agreement signed between the Brazilian Ministry of Agriculture, Livestock and Supply (hereinafter MAPA) and DG SANTE, and their impact on the progress of AW standards in the Country. The third part will focus on other relevant drivers of animal welfare in the Country with particular reference to collaboration with OIE, while the fourth part deals with the demand for animal welfare friendly products in the Country. Finally, the fifth part summarises the main findings on the ultimate impact of these activities on the competitiveness of EU and Brazilian producers and operators. The case study is completed by final summary considerations about the role played by EU activities in the development of animal welfare in Brazil.

5.2. Background

The economic relations between EU and Brazil have been marked by significant trade and investment flows[44] and increasing cooperation in research[45] and capacity building. This led to the establishment of a Strategic Partnership at the 1st EU-Brazil Summit in Lisbon on 4 July 2007. The aim of this Strategic Partnership[46] was to ***foster cooperation initiatives and a deeper policy dialogue in a wide range of areas and policies with the overall objective of tackling global challenges such as climate change, human rights, multilateralism, and poverty***. Within this framework, an EU-Brazil Sector Dialogue Support Facility was created as a TA instrument and a related Joint Action Plan was released in 2008.[47] In 2013, during the sixth EU-Brazil Summit held in Brasilia, it was decided to include also AW among the priority areas supported by this cooperation framework. To formalise this decision an administrative *Memorandum of Understanding* (MoU)[48] on *Technical Cooperation in the Area of Animal Welfare* was signed between the MAPA and DG SANTE.

Animal protection is enshrined in the Brazilian Federal Constitution.[49] Another piece of legislation commonly referred to as Decree-law nº 24.645/1934, that provides for a

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[44] http://ec.europa.eu/trade/policy/countries-and-regions/countries/brazil/ [last accessed 22 January 2017]
[45] http://ec.europa.eu/research/iscp/index.cfm?pg=brazil [Last accessed 22 January 2017]
[46] http://europa.eu/rapid/press-release_IP-07-725_en.pdf [Last accessed 22 January 2017]
[47] http://sectordialogues.org/en/faq/what-eubrazil-sector-dialogues-support-facility [Last accessed 22 January 2017]
[48] Between November 2008 and May 2011, the EU-Brazil Sector Dialogue Facility supported 37 actions – involving 27 events, 12 exchange missions and around 1,300 effective working days by Brazilian and European consultants – on the basis of a budget of two million euros. http://sectordialogues.org/sites/default/files/documento_anexos/memorando_de_entendimento_mapa_dg_saude_0.pdf [Last accessed 15 October 2016]
[49] Article 225 holds that an ecologically balanced environment is a right, which both the Government and the society must defend and preserve. In order to ensure the effectiveness of

31-item list of actions that are to be considered crime of mistreatment to animals. However, there is disagreement among legal scholars and law enforcement officers on whether or not this provision has been revoked by more recent legislation and is still enforceable (Santos Filho, 2008; Viana, 2009).

Over and above this general framework, there is specific sectoral legislation on AW. In the case of farm animals, the Brazilian legal system provides for a comprehensive set of rules for animal health, which includes horizontal provisions on AW.[50] Then and more specifically a number of subject-specific Normative Instructions (IN henceforth) have been released to regulate more in detail AW standards, and namely:

- IN nº 03/2000 – technical regulation for stunning methods and humane slaughter procedures;
- IN nº 13/2010 - technical regulation for the export of live bovine, buffaloes, sheep, and goat intended for slaughter;
- IN nº 46/2011 – technical regulation for organic animal and plant production systems;
- IN nº 56/2008 –recommendations of good welfare practices in various stages of an animal life, including at farm and during transport.

The three first Normative Instructions (03/2000, 13/2010 and 46/2011) consist of mandatory requirements, whereas the latter (IN 56/2008) provides for non-binding general recommendations. This legal framework has remained mostly unchanged since 2013 when technical cooperation with the EU started. In fact, the approach followed by MAPA has been to use technical cooperation with the EU as a tool to ***involve industry in policy discussions on AW and to postpone normative changes after the widest possible consensus had been reached***.

In particular, in terms of AW governance, it is important to highlight that since 2008 MAPA has been running a Technical Committee on AW (henceforth CTBEA), whose structure well reflects the complexity and the continental size of the Country. At the time of writing this report, this Committee is composed of 69 MAPA federal inspectors from varying departments and regions. The responsibilities of the CTBEA[51] include (i) the draft and proposition of standards and technical recommendations for good AW practices; (ii) the stimulus and promotion of events; (iii) training of the various actors involved in the livestock chains; (iv) articulation with entities representative of the livestock and research sector; (v) the publication and dissemination of technical and

this right, it is incumbent upon the Government to protect the fauna and the flora, with prohibition, in the manner prescribed by law, of all practices which represent a risk to their ecological function, cause the extinction of species or subject animals to cruelty (CF/88, article 225, para 1º, item 7). This provision is further enhanced by Law nº 9.605 of 1998 that defines criminal and administrative sanctions for conducts and activities considered harmful to the environment. In article 32, it is stated that "acts of abuse, mistreatment, injury or mutilation of wild, domestic or domesticated animals, native or exotic" constitute a crime against the environment. The prescribed penalty is detention, from three months to one year, and fine. The penalty is increased from one sixth to one third if the animal's death occurs. These are the main pillars of animal protection in Brazil; they apply to all categories of animals

[50] These include: 1) Law nº 8.171/1991 – sets the general agricultural policy; 2) Law nº 9.712/1998 – provides a general frame for agriculture defence; 3) Law nº 569/1948 – establishes measures for animal health; 4) Decree nº 24.548/1934 – establishes the regulation for the animal health service; 5) Decree nº 30.691/1952 – establishes the regulation for the industrial and sanitary inspection of animal origin products; 6) Decree nº 5.741/200 – provides for a unified system of attention to health, sanitary and phytosanitary issues; 7) Decree nº 8.852/2016 - defines the internal structure of the Brazilian Ministry of Agriculture, Livestock and Supply (henceforth MAPA).

[51] As have been defined in Ordinance nº 524/2011

informative material; (vi) the conclusion of agreements, covenants and terms of cooperation with public and private entities to promote actions related to AW.

Apart from the development of technical regulations, the AW projects currently implemented by CTBEA also encompass the development of good practices and training programmes on various sectors (horse welfare, asinine welfare, sheep farming, dairy cattle, pig and poultry transport handling, and laying hens). These projects are run in partnership with different institutions, including the Brazilian Agricultural Research Corporation (EMBRAPA), the Inter-American Institute for Cooperation on Agriculture (IICA), and several local universities.

The CTBEA is generally considered as a key actor for the elaboration of AW policies in Brazil. It also plays a major role in extending technical and sometimes financial support to a number of pilot AW initiatives and in the dissemination of guideline materials. For instances, it funds the publishing of AW manuals to be freely distributed to stakeholders. The proactive attitude of the CTBEA in facilitating the diffusion of knowledge and in proposing normative instructions is generally recognised by all the stakeholders involved in AW. However, it is also noticed that many proposed INs have not yet been enacted due to both internal (reportedly from other departments within MAPA) and external resistances (mainly from some sector associations that are still unconvinced) and therefore most of its preparatory work has remained so far legally speaking a dead letter. Nevertheless, there was unanimous consensus on the enthusiasm with which the progress of AW in Brazil is promoted by CTBEA.

5.3. The Results of the Technical Cooperation within the Framework of the Memorandum of Understanding on Technical Cooperation in the Area of Animal Welfare between DG SANTE and MAPA

As mentioned above, MAPA and DG SANTE have formalised a technical cooperation agreement in the area of farm AW by jointly signing a Memorandum of Understanding (MoU) in 2013, during the 6th EU-Brazil Summit held in Brasilia. The MoU provides for the establishment of a regular exchange of information and technical cooperation on farm AW-related topics. Among the stated goals of this regular exchange there is the clear intention of acting to "facilitate the good understanding and the future negotiations on farm animal welfare matters between both sides" (MoU, 2013, item 3).

An important remark is made at the end of the MoU regarding the ***purely advisory nature of the activities included therein*** and the lack of any other further consequence on the relations between the two parties. It is stated that the MoU is established "without the power to interfere in other legally related instruments" (item 8) and "does not constitute an agreement under international law" (item 9). In other words, ***the MoU creates no legal obligation for the signatory parties***. Despite this lack of legally-binding power, scholars have found that MoU and other soft instruments[52] are able to exert significant influence on policy development and convergence in areas such animal welfare and environment (Maciel et al, 2015; Ahmed and Mustofa, 2016). As a member of MERCOSUR, Brazil is currently holding negotiations with the EU for a possible trade agreement. The inclusion of animal welfare in the agreement is under negotiation.

[52] In the context of international law, the terms hard and soft are used to differentiate among legally and non-legally enforceable commitments.

The Cooperation body that was established under the aegis of the MoU officially met twice. A first meeting between DG SANTE and MAPA with was held in August 2013. During this meeting, a number of actions were agreed for the period 2013-2014, including the organisation of a BTSF regional event on AW at the time of slaughter in Brazil in November 2014. The workshop extensively reviewed the stunning techniques allowed in the EU, religious slaughtering and the requirements to be met for certification purposes.

The BTSF event on AW at the time of killing held in Brazil consisted of 15,5 hours of lecture and 7,5 hours of practice in three slaughter houses (pig, bovine, poultry) on aspects related to the application of EU Regulation 1099/2009 and international standards (OIE recommendations) on this issue. In total, 57 people participated in this animal welfare training, including five from Argentina, five from Bolivia, six from Chile, seven from Paraguay, six from Peru, six from Uruguay and 22 from Brazil. The Brazilian group was composed by 16 federal inspectors from MAPA, five state level inspectors from different regions and one member of an NGO working on the development of best practices for humane slaughter. No industry stakeholders were invited. The workshop was highly appreciated and deemed useful by all interviewees. The only possible mild criticism is that the training inevitably followed a top-down approach and very little effort could be devoted to take into consideration factors such as local expertise and peculiarities in slaughtering practices.

Stunning techniques, particularly in the poultry industry, were considered issues of great interest for Brazilian counterparts at that time also because of the findings of FVO audits there. To this aim, the Brazilian industry had become very cooperative with the Brazilian Government, particularly over the controversial issue of equivalence of water-bath stunning techniques. Research work was carried out to test electrical parameters that could be considered as equivalent to those of the EU Regulation 1099/2009. As part of the policy dialogue, one study was thus submitted to the European Commission for evaluation and possible amendments of the Annex of Regulation 1099/2009, and consequently forwarded to EFSA for assessment, according to Article 4(2) of Regulation 1099/2009. EFSA, however, in July 2014 considered the proposed Brazilian technique as not equivalent.[53]

The 2º Technical Meeting of the Cooperation Forum was held in Brasilia also in November 2014, to review the achievements reached under the first action plan Brazil-Europe 2013-2014 and the preparation of the subsequent 2015-2016 action plan. Ten representatives from MAPA (from varying departments) and three officers from DG SANTE participated in the meeting. Aside the parallel BTSF event, the Commission contributed to the organisation by MAPA and World Animal Protection of a seminal Workshop on the welfare of pigs and the phasing out of sow stalls, one of the first such official events in the Country organised to involve industry into policy dialogue on the subject based on the results of previous pilot experiences in the Country. No formal technical annual meetings have taken place in 2015 and 2016, but activities have progressed on an informal basis through contacts and informal meetings with the Brazilian authorities.

Projects under the EU- Brazil Sectoral Dialogue Facility*.* Since 2014, ***specific actions have also been launched under the EU-Brazil Sectorial Dialogue***

[53] The outcome of such scientific assessment is represented by the Scientific Opinion on the electrical requirements for poultry waterbath stunning equipment (EFSA-Q-2014-00089), which the AHAW Panel adopted on 25 June has been published on the EFSA website. http://www.efsa.europa.eu/en/efsajournal/pub/3745.htm .

Facility. These actions are jointly financed by Brazil and the EU[54] and typically last a maximum one year, or so. Actions are concrete projects where EU experts support Brazil in specific areas (e.g. AW standards at transport) and develop, for example, guidelines to be disseminated by CTBEA. Since 2014 Brazil has carried out the following four AW actions, and namely:

(i) Road Transport of Live Animals (July – September, 2014). The project goal was to gather comparative information on the transport of livestock, as well as on the related legislation and institutional organization at the EU level, with a view to informing an existing draft proposal for a MAPA normative instruction on the subject and approximate it to EU AW standards. To pursue this objective an international expert on the subject was hired. This project also entailed a study tour to Spain. In September 2014, two MAPA representatives visited the AW Service of the Ministry of Agriculture, Food and Environment (Magrama) in Madrid; they visited the headquarters of the Council of Agriculture and Livestock in Castilla y León; and the Veterinary Unit of Salamanca and the National Livestock Market. The objective was to learn on site about EU surveillance practices, implementation of legislation and control of animal welfare standards during the transport of live animals. The findings of this project were presented at a workshop in Brasilia (October 2014), which was attended by approximately 80 participants from governmental bodies, academia, industry and sector association.

    It is acknowledged that the project could provide a good overview of AW at transport requirements and thus provided additional elements to further enhance the draft proposal for the Brazilian normative instruction under discussion. Materials, actually, proved useful for the preparation of a guideline on best practices disseminated for voluntary implementation. However, despite the fact that a working group consisting of representatives from several governmental bodies, research institutes, animal protection NGOs, independent experts, and the Brazilian Confederation of Agriculture and Livestock (CNA), representing small, medium and large farmers was established in 2012 with the task of drafting an IN on transport and the draft could be delivered within this timeframe, ***no concrete legislative impact could be achieved because the IN has not been officially approved yet***. According to some, this mainly depends on underlying political discussions, as the proposed IN had a sound scientific base and is a balanced document that cannot be certainly considered as “too progressive” or restrictive in its provisions.

    The Report of this project is called *Transporte de Animais Vivos.*[55]

[54] The EU-Brazil Sector Dialogues provided the administrative and economic support through a joint coordination between the Brazilian Ministry of Planning, Budget and Management (MPOG), and the EU Delegation to Brazil (DELBRA). The proceedings to perform an activity within the EU-Brazil Sector Dialogues initiates with an Action Proposal presented by a Brazilian Ministry or Agency in the context of a call for proposal, which is released at least once a year in the Sector Dialogue webpage . The Action Proposal presented by the Brazilian Ministry or Agency must be ratified by the corresponding EU Directorate-General (the so-called "Seconding Letter" in English, and “De Acordo” in Portuguese). The pre-qualified proposals are formalised and detailed in Terms of Reference. All beneficiary institutions need to contribute with a minimum of 25% of the sum received from the project. In the area of animal welfare, four researches have been identified, whose description follows below. They all have been submitted by the MAPA and ratified by DGSANTE.

[55] The findings of this project can be found on a 136 page report available at: <http://www.sectordialogues.org/sites/default/files/acoes/documentos/transporte_cargas_vivas_web.pdf>

(ii) Gestation Group Sow Housing (February – October, 2016). Proposed as a follow-up of the November 2014 MAPA Workshop and capitalising on the pilot work done by WAP on the subject, the objective of this project was to identify and analyse the current state of the art in terms of the adoption of gestation group housing systems in the EU and Brazil. To perform this study, two experts on pig welfare were hired: one from the EU and the other one from Brazil. The first expert gathered information on the obstacles and strategies for implementing the European Directive 2008/120/CE, whereas the second gathered information on the Brazilian scenario of pig production with a focus on existing voluntary practices of collective gestation system and the local strategies to foster this kind of practice. The findings of this project were presented during two Brazilian conferences: i) Seminário Técnico Brasil Sul de Gestação Coletiva de Matrizes Suínas (August 9th, 2016, Chapecó/SC), and ii) Pork Expo (October 18, 2016, Foz do Iguaçú/PR). It is estimated that over 300 professionals of the pig sector participated to the latter event[56].

This project can probably be considered the biggest success of the EU-Brazil AW Cooperation programme so far. It had a wide echo all over the Country and is possibly the main reason why the EU – Brazil AW Cooperation has become known outside official circles. The project has greatly contributed to a shift in the attitude of the pig raising industry as regards sow stalls. It is generally recognized that at the beginning of the project the two major business associations concerned had strong resistances towards introducing this practice in the Country. Conversely, in the course of the project activities, their opposition to this innovative practice decreased to the point that one of them even became partner of the project, cooperating to dissemination of related results. This change in attitude also resulted from the raised awareness that the local husbandry techniques were already not too far away from international best practice and that their adoption could have even triggered further economic benefits. MAPA has also taken up itspolicy stance on sow stalls and although no normative instructions have been drafted on the subject, a first supportive step in this direction has been the decision of reducing import tariff for electronic feeding stations[57] thus promoting the group housing as an alternative to crates.

The Report of this project is called *Estratégias do SVO e Setor Privado para Adoção de Gestação Coletiva de Matrizes Suínas*. [58]

(iii) Maritime Transport of Live Animals (March – July, 2016). This project was developed in an area already covered by an IN and sought to compare the situation of the transport of live animals by sea in Brazil and in the EU. The ultimate goal was to acquire knowledge on the EU practice in shipment of animals, particularly for what regarded AW indicators in official inspections controls, with a view to learning best practices for future policies on the matter. In pursuing this goal, two representatives of MAPA held meetings with the Spanish veterinary officials and visited the Port of Cartagena to see by themselves the port infrastructure for the boarding of animals and the internal facilities of a ship vessel for livestock transport. The findings of this project were presented at a workshop held in Brasilia in July 2016, with the participation of approximately 50 people from

[56] Their findings can also be found on a 76 page Report available at: http://sectordialogues.org/sites/default/files/acoes/documentos/ fito0007-relatorio.pdf

[57] http://www.abcs.org.br/component/content/article/89-noticias-destaque-pag-inicial/1857-abcs-conquista-reducao-de-ex-tarifario-para-importacao-de-maquinario

[58] Their findings can also be found on a 76 page report available at: <http://sectordialogues.org/sites/default/ files/acoes/documentos/fito0007-relatorio.pdf >

governmental bodies including the Agência Nacional de Transportes Aquaviários, the Brazilian Agency for Inland Waterway Transportation, a key player in this field.

The project is regarded as an important opportunity for networking and for exchanging experiences on the technical and scientific aspects of the subject. This project also contributed to establish valuable collaboration on future MAPA actions with EU institutions, as well as with other relevant Brazilian institutions, namely the ANTAQ. The area covered by the project activities is extremely relevant for international competitiveness purposes, although it might be too early to assess a practical impact, except for the preparation of guidelines on best practices.

The Report of this project is called *Bem-estar Animal no Transporte Marítimo ou Fluvial de Animais Vivos: Panorama da Atividade no Brasil e na Espanha*.

(iv) Humane slaughter in small scale establishments [2016]. This project aimed at spreading information about stunning equipment used in small-scale slaughterhouses in the EU. The knowledge acquired would serve as a basis for the development of an animal welfare guideline for the slaughter of goat and sheep. Within this project, two representatives of MAPA visited a pig farm in Mecerre and a cold store slaughterhouse in Condado de Treviño, municipalities located in the Spanish province of Burgos; the El Granjero laying birds farm and egg classification plant located in Cuellar, province of Segovia; the National Livestock Market and a beef cattle feedlot located in Salamanca; and the Agro-Food Complex, pig, sheep, and lamb slaughterhouse in Béjar, province of Salamanca. The study visit programme also included meetings with the Department of the Animal Welfare Office of the Spanish Ministry of Agriculture, Food and Environment.

Small scale establishments are usually not authorised for exports and goat and meet is poorly significant in export terms. However, and most importantly, the project could not entirely achieve its goals because the EU counterpart could not obtain access to all types of slaughterhouses that were initially planned.

The report of this Project is called *Estrategias de Inspección y Alternativas Tecnológicas del Sacrifício Humanitário en Pequeños Establecimientos.*

Impact of Other Initiatives and of the Cooperation Programme Overall. The collaboration between EU and Brazil in the field of AW has gone well beyond the above four projects. In 2015, a MAPA officer attended a BTSF training event on the EU Directive on Laying Hens in Scotland where she found a source of inspiration about the feasibility of launching a MAPA pilot project to promote the introduction of cage-free techniques in the Country. This continues to allow conventional cages with very high densities (probably among the highest in the World. Moreover, exchange of experience with the EU has also resulted in the elaboration of a draft normative instruction on the official mutual recognition of animal welfare courses for the purpose of certificate of competence on AW at slaughter qualification on the topic. Finally and possibly most importantly the successful example of this has facilitated the visibility and the diffusion of the importance of AW issues across several departments of MAPA. This has ultimately increased the political and financial support of the activities of CTBEA

Summary of Main Strengths and Weaknesses. The existence of a technical cooperation initiative between MAPA and DG SANTE on farm AW is now well known to all stakeholders and is very well visible in the Country. Even those who had never heard of it before, came to know at least about the results of the seminal project on gestation stalls, a watershed event in the Country. The overall perception of the existence of the cooperation agreement is good. There is general consensus on the view that this cooperation reinforced the importance of the topic and provided for exchange of best practices between Brazilian and European animal welfare professionals, in particular those from the official veterinary services. The main reported weakness is that the program does not have enough outreach in scope to finance much needed fundamental research on AW determinants in the Country, and on how AW standards should be adapted to local conditions. Numberless examples were provided suggesting that EU experts had limited knowledge of the local specificities. For instance, they were unaware of the fact that trucks in Latin America have with lateral load, or of the conditions of the roads, and of the implications these issues might have on drafting guidelines on good practice. Similarly, little attention was given to prevailing slaughtering techniques and the kind of local expertise available at abattoirs. The result is that EU practice is exported "wholesale", assuming that the standards developed based on research carried out in Europe (often Northern Europe) are implicitly adequate to other contexts or climatic conditions, while conversely they should be adapted.

In terms of suggestions for further improvement of future activities, it was noticed that better long term programming of activities and meetings could help reach not only the technical level, but also involve top government representatives. Moreover, the timeframe available for data collection in the actions funded under the sectoral dialogue facility does not take into consideration the size and complexity of the Country, its continental dimension, the local lack of pre-existing data and the need to win resistances to data sharing. Other suggestions relate to the need to increase the number of participants to BTSF and widen the scope of participants, as well as to further raise awareness about the timing of the events.

5.4. Other drivers of changes in AW standards

World Organization for Animal Health (OIE). Brazil has been an active contributor to the OIE AW standard setting process, but so far has only partially transposed its standards into its legislation. The engagement of OIE in the policy field of animal welfare is perceived by all the respondents as a contributing factor to the mobilization of local stakeholders around this topic. Particular importance is attached to the AW recommendations and PVS evaluation.[59] According to some interviewees, the OIE recommendations are the key AW provisions with which Brazil seeks regulatory convergence. The importance of OIE in the development of AW in Brazil has been pointed out in recent literature. A research conducted by Maciel (2015, p. 66) found that the activities of OIE have had a legitimizing effect on the policy field of farm AW, which has resulted in better openness on the side of Brazilian government and industry to address welfare related issues.

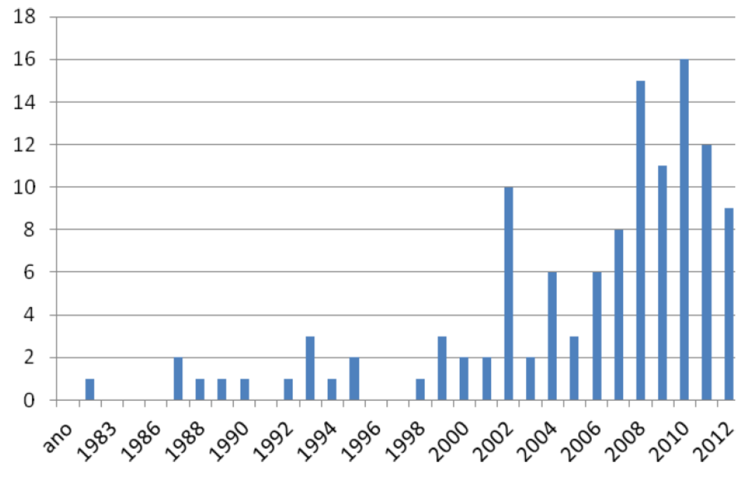
When asked whether and how activities supported by the EU played a role in facilitating the adoption and implementation of the OIE standards in Brazil, interviewees expressed a positive assessment, even though most of them had not attended the related regional or international conferences. In their view, the contribution of the OIE conferences spreads well beyond those who attended them, thanks to knowledge sharing that work reasonably well in the Country, at least as far as official veterinaries are concerned.

[59] The evaluation of Performance of Veterinary Services in terms of compliance with the OIE recommendations.

The use of broad terms in OIE recommendations is perceived as being of great help to leave room for local adaptations, while the lack of Portuguese translation for most of the recommendations is seen as being a major barrier to dissemination and awareness raising in the AW community where English is not necessarily well known. Besides the recommendations, some respondents also made reference to the PVS Tool and to the organization of regional and international conferences as particularly important OIE contributions to the advancement of AW policies. The attendance to OIE Conferences was also particularly noticed. Presence of Brazilian participants in OIE Animal Welfare Conferences has been confirmed to all of the four Global Conferences (Paris, 2004; Cairo, 2008; Kuala Lumpur, 2012; Guadalajara, 2016) and the regional Conference in Montevideo in 2013.

The AW Research Community. Another factor considered increasingly relevant by some interviewees is the growing degree of specialization of local research groups in farm AW issues. The Brazilian academia nowadays contributes not only with scientific data and research, but also with trained professionals who, once inside the marketplace, act as drivers for change. According to the literature review (Molento and Calderon, 2009), the discipline of applied ethology appeared in the curriculum of two Brazilian universities - Universidade Estadual Paulista and Universidade Federal de Santa Catarina – already back in the mid-1980s, while the discipline of AW was taught for the first time in 1999 at Universidade de Brasília. The teaching of AW in faculties of veterinary medicine and animal husbandry has been growing significantly in recent years. Figure 5.1 below reports a graphic elaborated by Gonçales Tonin (2015) on the growth of Brazilian research groups on the discipline of AW.

Figure 5.1 - Examples of Brazilian research activities to foster animal welfare policies



Source: GONÇALEZ TONIN, F.B (2015)

A survey conducted by Borges et al (2013) observed that in 2010 there were 130 faculties of veterinary medicine and animal husbandry registered at the Brazilian Federal Council of Veterinary Medicine, of which 94 made available their curricular grade online. Of these 94 faculties, Borges et al (2013) found that the discipline of ethology was offered by 25 faculties, whereas the discipline of AW by 43. Within this latter group, it was found that in 23 faculties the discipline of AW was mandatory, in 7 faculties it was optional, and in the other 13 facilities this information was not specified. Another interesting finding from Borges et al (2013) related to the content of the disciplines in AW. The authors concluded that in the teaching of veterinary medicine in Brazil there is an emphasis on the physical realm of AW, while there is still room for improvement in the naturalness and psychological realms and in the field of pain.

Involvement in EU Research Projects*.* As mentioned above, increased funding of joint research projects has been identified as one of the key tools, through which cooperation could be further enhanced. An example given by several respondents was ***The Welfare Quality***, a project initiated in May 2004 and finalised in 2009 that integrated specialists from varying disciplinary and geographical areas. In total, 44 institutes and universities (representing 13 European countries and 4 Latin American countries) have participated into this project, which aimed to develop reliable on-farm monitoring systems, product information systems, and practical species-specific strategies to improve AW. Interviewees described their view and experience with the Welfare Quality project as being very positive. According to some, the Welfare Quality project has represented a landmark event in terms of advancing scientific knowledge and expanding institutional collaboration in the Country. Although having a positive opinion about this project, respondents affirmed that there are still spaces for improvement within the context of the animal welfare protocols developed by the Welfare Quality project and adapt them to local conditions. Further studies are needed to enhance knowledge about welfare indications and adjusting them to local production systems and environment. Brazil took part to other seven EU research projects, including 1) Brightanimal where the participant Brazilian institute was EMBRAPA (National Agricultural Research Corporation); 2) Low Input Breeds – where the participant Brazilian institute was the University of Viçosa; 3) Welfare Indicators (AWIN) in which the participants were the Brazilian University of São Paulo and the Positivo Higher Education Center.

According to a government sources two projects - Welfare Quality and AWIN in particular – have been relevant sources of scientific knowledge to support capacity building activities and technical assessment. The latter appears to be well known also by independent experts in poultry.

Animal Welfare NGO. Working in Brazil since 2007, World Animal Protection (WAP) has sponsored a series of activities, including The Steps Humane Slaughter Programme, which has been referred by several respondents as an important reference in the evolving implementation of AW in Brazil. Launched in 2009, this programme sought to capacitate professionals in the pre-slaughter handling process for beef cattle, chicken broiler and pigs. The programme consists of a combination of theoretical and practical training on the use of humane handling techniques for the stunning and restraining of animals. It is estimated that over 7,760 professionals from the industry, academia and official veterinary service have taken part in the programme. It is worth noting that at the end of the training, participants are invited to take an examination test. Those who succeed in obtaining a minimum of 70% of good learning receive a certification of Responsible Professionals in Animal Welfare.

This certification is claimed to have national and international validity for the requirements sets in Regulation 1099/2009 of the European Union. Within that context, an ***approximate number of 7 billion animals have benefited from the changes implemented in 404 slaughter plants***. Another major contribution of WAP has been on the area of pig welfare. In 2012, the organization in partnership with the University of Brasilia and Coopead Institute from the University of Rio de Janeiro has set up two research projects to assess the practical and economic feasibility of making a transition from individual crates to collective gestation. The positive results from these studies have been compiled in brochures that were widely distributed and presented in the 2014 workshop in Brasilia. In 2015 a more detailed material was prepared so to provide a roadmap for producers to help then plan a transition for adapting local production to well-known AW standards (e.g. Directive EC 120/2008) while also ensuring productivity results higher than those recorded by traditional methods. The release of an educational DVD on this subject is expected for 2017.

Other Players. Other major players involved in raising awareness on AW in the Country are the Federal Council of Veterinary Medicine and the Agricultural Research Corporation through the overall organization of local and international conferences

5.5. The Demand for AW Friendly Products in the Country

The demand for AW-friendly products is small but on the rise in Brazil, although a precise quantification is not possible. It is mainly limited to the wealthier layers of the population although it is also entering mainstream consumption through the initiative of some multinationals. Sow stalls, in particular, have attracted considerable attention and most pork processors in the country (including BRF, SEARA, and Aurora, the three largest ones) have announced they will phase out the use of sow gestation crates.[60] [61] [62] This was also in reaction to announcements from major international corporations, such as McDonalds, Nestlé and Walmart among many others, that are keenly aware of the growing social demand for better farm AW. So far, Brazilian consumers are poorly informed about animal production and welfare issues, and largely unaware of AW issue[63].

Some awareness raising campaigns have been implemented by AW NGO. Over the last five years, Humane Society International (HSI) has been contributing with the development of farm AW policies in Brazil by engaging in high-level political talks with leading food producers. The goal is to make AW a priority corporate social responsibility issue. To achieve this, the organisation carries out two main programmes: Cage & Crate Free and Meatless Monday. With the former, they seek to improve the life of millions of pigs and egg-laying hens by persuading supermarkets,

[60] JBS. Animal welfare. www.jbs.com.br/en/content/animal-welfare. Accessed December 6, 2015.

[61] Pacelle W. 2014. Brazil adds its might to the move to end gestation crates. Huffington Post, November 25. www.huffingtonpost.com/wayne-pacelle/brazil-adds-its-might-to_b_6221032.html. Accessed January 11, 2016.

[62] Globo Rural. 2015. Aurora diz que vai eliminar gaiolas de gestação de suínos, December 29. http://revistagloborural.globo.com/Noticias/Criacao/Suinos/noticia/2015/12/aurora-diz-que-vai-eliminar-gaiolas-de-gestacao-de-suinos.html. Accessed January 22, 2016.

[63] The literature review on this matter pointed to the following data. Two out of three Brazilians declare that they do not know how animals are raised. This data resulted from a research based on a sample of 1,000 people investigated through an online survey during the period 22 Feb - 2 March, 2016, and a sample of 1,200 people investigated through a face-to-face survey, during the period of April 2-14, 2016. This research also showed that when questioned about the importance of farm animal welfare, 82% of respondents declared it to be very important or extremely important. After being exposed to images featuring industrial systems and imagines featuring production systems with good standards of animal welfare, the percentage rose to 89%. This research concluded that people find animal well-being important, although there is still no culture of thinking about it, especially at the time of purchase (World Animal Protection, 2016). Consumers admit to have difficulties in associating the food they eat with the animal that originated it. This data was found in a research carried out with 402 consumers from 13 Brazilian states through an online questionnaire during the period September-November 2013. The questionnaire was designed on the basis of an Eurobarometer research tool, which resulted in 39 closed questions, with answers in multiple choice options. This research found that 63.2% of the respondents had already heard about farm animal welfare, and that 93.6% of them consider the topic important. In spite of this, the majority of respondents (54.0%) said they did not think about animal welfare when purchasing food of animal origin (Franco, 2014).

hotels chains, and other food companies to commit with a cage & crate free supply chain; whereas with the latter they seek to promote a reduction in meat consumption. This promotion is developed with partnership with the Brazilian Vegan Society and supported by some celebrities who wear t-shirts and share the meatless campaign via social media.

The Fórum Nacional de Proteção e Defesa Animal is a network of about 100 affiliated non-governmental organisations in the various fields of animal protection. Their contribution to the development of AW policies in Brazil has consisted of diffusion of knowledge and the so-called blame-and-shame activism. In December 2016, they launched a campaign to urge the prohibition of sow gestation crates by placing a three-meter-high inflatable sow inside a crate in front of a fast-food chain in one of the busiest avenues in the city of São Paulo and inviting passers-by to experience the feeling of being locked up inside a crate. The organisation is also carrying out a digital mobilization campaign, which has an online petition and a list of local industries divided into three categories - adequate, inadequate, and awful - of corporate attitude towards the issue of sow gestation.

At any rate Brazil, like other Latin American Countries, remains one of the largest meat consumer in the World and meat consumption, with some 80 kg per capita, and has actually dramatically increased over the period. Most of this increase can be attributed to poultry meat that has moved from 30 kg per capita to some 40 kg.

5.6. Impact of EU Animal Welfare Activities on Competitiveness

(i) *What is the impact on the competitiveness of the EU producers and operators of the cooperation established within the framework of the Memorandum of Understanding?*

Production costs

Livestock*.* Activities carried out in the field of maritime transport of live animals are unlikely to have had a major level playing field impact on production costs. In fact, although Brazil had not adopted density benchmarks in its AW legislation yet, results from the survey of freight ships operating in the Country for internal and transcontinental transport funded under the cooperation study have highlighted how square meters available at declared capacity are already well above the EU AW standards. While instances of operations carried out above (nominal) capacity can indeed be identified over the last five years, these have hardly ever resulted in worse density conditions than those envisaged in the EU legislation.

Poultry Meat*.* Brazil has not formally transposed OIE standards on broilers in its legislation. However, the seminal industry-funded study[64] on the impact of animal welfare regulations on the structure of EU producers' costs has concluded that density regulations weighted some 1.5% of the total production cost structure at the farm level and could hardly be considered a determinant of international competitiveness. Moreover, Brazil is generally recognised to naturally implement densities at farm in line or even better than the EU benchmarks because of climatic reasons so the above legislative advantage would be largely theoretical.

[64] P.L.M. van Horne and N. Bondt *Competitiveness of the EU poultry meat sector International comparison base year 2013* – Report for AVEC 2014. http://www.avec-poultry.eu/system/files/archive/new-structure/Communications/Study%20on%20competitiveness%20of%20poultry%20meat%20sector%20updated%20with%202013%20data.pdf

Market Acces

All markets. Brazil is eligible to export beef, poultry, and horse meat to the EU for several product categories; and pork only if thermally processed. Currently, Brazil is not eligible to export milk and eggs to the EU. Pilot activities on laying hens and sow stalls are thus unlikely to have an impact on EU producers and operators. No mutual agreement on organic farming exist with Brazil, so its market cannot represent an export opportunity for EU producers and operators.

Poultry Meat. Brazil remains the largest exporter of poultry meat in the World, but its exports to the EU more than halved in the period. All technical cooperation activities to improve AW standards at slaughter there has thus not resulted in an enhanced market access onto the EU market.

(ii) What is the impact on the competitiveness of the non-EU producers and operators of the cooperation established within the framework of the Memorandum of Understanding?

Production costs

Equivalence at AW Slaughter. The introduction of equivalence at slaughter provisions was very badly received by Brazilian producers and operators as well as by the Government out of concern this would result in increased production costs and potential loss of market share in the EU. No elements were provided to estimate the overall impact of adaptation costs on the competitiveness of Brazilian producers in the poultry and beef meat industries, as these were considered as commercially confidential. The level of responses to the survey was too limited to provide elements in this respect.

Poultry Meat. Electrical water-bath stunning of poultry is confirmed as by far the most controversial aspect[65] because of disagreements on the electrical parameters used for water bath stunning and the related major adaptation costs. Whereas EU regulation addresses stunning procedure on the basis of input design (pre-defining levels of amperage), Brazil applies an output-design (post-clinical signs). No interviewee could explicitly confirm this was a factor behind the decreased Brazilian exports of poultry meat to the EU, although there are some indirect indicators this might have been the case, not only and not that much for the absolute impact on operational costs, but for the limited willingness to bear related investment costs given the buoyant domestic and World export markets.

Productivity Increase (Product Quality)

Beef Meat. There is a certain consensus that the cost for implementing animal welfare at slaughter requirements in the beef industry, especially in pre-slaughter

[65] Brazilian industry is cooperating with the Government on topic of poultry water bath stunning. They have been working on research trials to test electrical parameters that could be equivalent to those of the EU Regulation 1099/2009. In 2014, one study was sent to the Commission for evaluation and possible amendments of the Annex of Regulation 1099/2009, and consequently submitted to EFSA for assessment, according to Article 4(2) of Regulation 1099/2009. The outcome of such scientific assessment is represented by the Scientific Opinion on the electrical requirements for poultry waterbath stunning equipment (EFSA-Q-2014-00089), which the AHAW Panel adopted on 25 June has been publishttp://www.efsa.europa.eu/en/efsajournal/pub/3745.htm hed on the EFSA website. To access the document please follow the link:

handling of cattle – were eventually offset by a significant reduction in loss of carcasses and EU training activities could have contributed to raise awareness on the subject. Actually, the requirements of Regulation 1099/2009 have entailed changes in attitude and training practices, rather than changes in the facilities itself. In other words, it is a change in how slaughter plants' personnel would view and treat animals during pre-slaughter activities. Most of the cost with training personnel and hiring an animal welfare officer were soon compensated by a significant reduction in loss of carcasses, as a result of a decrease in bruises. Then gradually the idea has gained ground that animal welfare practices would bring an added value for the product, and thus the industry should see it as an investment, rather than a cost. This might eventually have resulted in a further competitive advantage on EU operators, as the same level of product quality as in the EU can now be achieved also in Brazil at much lower structural costs.

Pig Meat*.* Technical cooperation activities with the EU have certainly contributed to raise awareness that adaptation to a ban on gestation stalls appears much more feasible than initially anticipated, and actually starting conditions are better than those that were there in many EU Countries, which could eventually result in a small advantage in the World markets in the future.

Poultry Meat. Recourse to water-bath stunning has been reported as a possible cause of quality problems

Market Access

Beef Meat*.* Most of Brazilian beef meet production is from free-range operations. It would be possible to get a 40-50% premium price on niche World markets for AW friendly products if this status could be recognised by means of an international labelling.

Local Demand*.* So far, progress experienced in the field of animal welfare in Brazil can hardly be attributed to pressure from local consumer demand, although it is expected that this pressure will increase in the future. The idea of policies of animal welfare bringing an added value is further gaining ground as long as corporate commitments to animal welfare become important for business risk management and for market share expansion. The idea of animal welfare practices being part of a Corporate Sustainability Policies is still incipient in Brazil. There are very few products on the supermarket shelf displaying AW claims.

Animal Welfare – Ethical Dimension

It is generally acknowledged that most of the progress achieved through normative means has been in the area of humane slaughtering. This is likely to have benefited a total some 7 bn animals in the period.. Progress in the field of domestic transportation has been uneven and mainly left to voluntary initiatives.

Context Indicators – Shortage of Skills

Given the extensive involvement of Brazilian Universities in the delivery of courses on Animal Welfare lack of skills has not been reported as a major constraint.

Context Indicators – Capital Requirements

Since Brazil implements an import substitution policy and generally has high rates on imports of capital goods, it is possible that some of the resistances to modify water-bath stunning techniques are related to the need to import alternative equipment from the EU, although this could not be confirmed. There is only evidence that the Government has used the tariff leverage to promote discontinuation of sow stalls and that need for capital represents a barrier to AW implementation. Actually an issue highlighted by many interviewees is the lack of public funds to promote the implementation of animal welfare standards in Brazil outside of multinationals and the growing risk of a dual market in this respect. It is increasingly acknowledged that without special lines of credit it is difficult for small and medium-scale operators to comply with AW recommendations. To this aim there are concerns that that INOVAGRO - a government line credit for AW – presents several bureaucratic barriers and thus has not been of much help.

5.7. Final Considerations

Impact of EU cooperation on normative activities has been very limited, but this is also because that hands-on practice and normative provisions are not advancing in the same pace and development of animal welfare legislation is lagging behind. As an example of this, MAPA has already drafted proposals for a revision on the IN 03/2009 on humane slaughter and for a new normative instruction (IN) with AW requirements for terrestrial transport, but there reportedly would be little prospects for their publication any time soon.

Possibly the most relevant impact of the EU cooperation has been its major contribution to the shift in the overall attitude of farmers and industries regarding the debate on AW. To illustrate this shift, some respondents indicated that in recent years key players in the meat sector have released AW policy commitments, namely in what regards the transition from crates to collective gestation systems for breeding sows. The EU has also contributed to increase the standing of CTBEA and legitimate the debate on AW. About three years ago, just raising the topic of AW was a very hard thing to do. Nowadays, the resistance to debate about it has significantly decreased. The main unmet challenge remains to ensure a level playing field dialogue on AW research and related AW that is sufficiently inclusive of findings outside Europe and not based on Eurocentric research.

Equivalence with the EU AW standards is not considered as an objective per se. Brazil instead aims at achieving regulatory convergence with the international standards elaborated by the OIE and going beyond EU standards when feasible. All respondents linked with the pig breeding sector commented that the local voluntary initiatives in group sow gestation system go beyond EU requirements. This is because sows are kept in groups for longer periods than those required by European Directive 2008/120/EC. As for the question on the current degree of convergence with the OIE animal welfare standards is recognised as a work in progress, especially in relation to on-farm recommendations.

The available evidence allows concluding that the EU has indeed played an important role in advancing the development of farm AW policies in Brazil. The degree of influence of individual EU activities is difficult to assess. The combination of activities promoted by the EU had an influence in Brazil in terms of providing scientific, commercial and political inputs for the development of animal welfare in Brazil. Such influence has been exerted through research projects like the Welfare Quality and Animal Welfare Indicators, requirements of Regulation nº 1099/2009 and memorandum of cooperation. Most importantly the EU has represented both a source of knowledge and best practice and a commercial force pushing Brazilian stakeholders to adopt practices which are compliant with the animal welfare standards required for exporting to the EU. It is however doubtful how open to that influence Brazilian stakeholders would be if the policy field of AW were not uphold by the OIE. The EU is neither the only commercial partner of Brazil, nor it is the only legislating body in the field of AW. However, the importance of the EU's availability to continue the cooperation between Brazilian stakeholders and European institutions and experts is generally acknowledged.

6. THE IMPACT OF TECHNICAL COOPERATION WITHIN THE FRAMEWORK OF BILATERAL TRADE AGREEMENTS – CHILE

6.1. Introduction

This case study reviews the impact of the AW technical cooperation activities carried out within the framework of the bilateral trade agreement (BTA) with Chile on the competitiveness of the EU and Chilean producers and operators. The SPS Agreement, included in the BTA, was the first of its kind to include AW in its scope. Since its entry into force, the EU and Chile have worked together to develop a common approach in applying AW standards and supporting the international exchange of expertise in this field. The remaining of this case study is divided into six parts. Section 7.2 provides some contextual information on the Chile institutional arrangements and legal framework. Section 7.3 then specifically review the BTA between the EU and Chile, while Section 7.4 dwells on the results achieved by technical cooperation activities. Section 7.5 focuses on other relevant drivers of AW in the Country, while Section X.6 reviews the demand for AW friendly products in the Country. Section 7.7 summarises the main findings on the ultimate impact of these activities on the competitiveness of EU and Chilean producers and operators. Finally, Section 7.8 provides some concluding remarks.

6.2. Background

Animal protection in Chile is still founded on the Civil Code definition of animals as things, in order to ensure their use and ownership. Animals are semi-movable goods that are appropriable, with the exception of wild and marine animals. The EU instead recognizes animals as sentient beings, thus ensuring a higher degree of protection to them, as stated in the Treaty of Amsterdam in 1997.

Chile did not use to have a single regulation in which all aspects of AW were considered. Some pieces of AW legislation have been in force since 1992, when Law 19,162 first regulated the operations of slaughterhouses, cold storages and establishments in the meat industry. To apply that Law, Decree No. 94 was eventually promulgated, establishing the "Regulation on the operation of slaughterhouses, cold storages and processing meat plants and fixes the minimum equipment for these establishments". This decree covers cattle, sheep and swine; it also deals with aspects of AW in slaughtering plants, mentioning suitable facilities for the entry, reception and management of animals before and during their slaughter. In addition, it defines the stunning procedures that must be applied before slaughter.

Under the same legislative framework, Decree No. 240 establishing the "General Regulations for the Transport of Cattle and Meats" has been enacted. This decree includes norms related to the transport by land, sea and air. In addition, the decree defines the requirements for vehicles for the transport of animals, indicates the rules for loading and unloading animals, defines periods of rest and requires availability of water every 24 hours and for a minimum period of eight hours. To complement the above legislation, two **general technical standards** regulated the inspection of animals by the sanitary authority; thereby indirectly covering AW issues in some respects, and namely:

- General Technical Standard No. 117 "On veterinary medical inspection of poultry and their meat",
- General Technical Standard No. 62 "On Veterinary Medical Examination of Beef and Meat"

The first proposal for the protection of animals was first submitted to the Chamber of Deputies in 1995. This eventually became a law fourteen years later, in October 2009. The provisions of the law seek to protect animals by ensuring adequate treatment and avoiding unnecessary suffering. It establishes that operators must ensure minimum levels of care, according to the different species and categories of animals, and that the transport must be carried out to avoid mistreatment. In addition, it entrusts the Chilean CA in the field of livestock protection - the Agricultural and Livestock Service (SAG) - to draw up regulations for its practical implementation.

This led to three implementing regulations, subsequently enacted by SAG: (i) Regulations on the Protection of Animals Providing Meat, Hides, Feathers and Other Products during Utilisation in Industrial Establishments (regulation No. 28); (ii) Regulations on the Protection of Animals During their Industrial Production, Marketing and in Other Animal Maintenance Enclosures (regulation No. 29); and (iii) Regulations for the Protection of Livestock during Transport (regulation No. 30). These regulations were drawn up on the basis of the OIE standards for AW and have entered into force since May 2015. The overall AW legal framework in the Country can therefore be summarised as in the figure 6.1 below.

Figure 6.1 – Overview of legislation on AW in Chile: current framework

6.3. Overview of the Activities of the Association Agreement between the EU and Chile

Following the signing of the association agreement a Joint Management Committee (JMC) was established as envisaged in the Treaty. This, in turn, set up an Animal Welfare Working Group (AWWG) in charge of AW operational aspects to report recommendations back to the JMC itself. The Action Plan developed by the AWWG has to be endorsed by the JMC - whose annual meeting is held immediately after the AWWG annual meeting -, which also assesses the progress achieved by the AWWG. The Chilean institutions that are directly involved in the implementation of the association agreement for what concerns animal welfare are: 1) Ministry of Agriculture: Agricultural and Livestock Service (SAG); 2) Ministry of Economy: National Fisheries Service (Sernapesca) and 3) the Ministry of Health. Other private sector stakeholders having no direct responsibility in the implementation of the agreement, but finding themselves indirectly involved nevertheless, include: 1) the pork trade association; 2) the poultry trade association; 3) the dairy export association; 4) the slaughterhouse association. Finally, other institutions such as the Chilean AW Associations and Universities also indirectly participate to the agreement activities.

The AWWG met a total 13 times, i.e. once per year since its establishment. Eighteen different EU AW international activities have been listed among those covered by the agreement that cannot count on a separate financing facility, including four seminars; two courses; seven workshops; two e-learning courses; publishing of two books; and creation of one web page (see table 6.1). After a first start of activities in 2004-05 to clarify the basic AW concepts, these subsided until 2009 when the Chilean law on AW was eventually approved together with the provisions of the EU Regulation on Equivalence of AW at slaughter. After 2009, equivalence with EU AW at slaughter was a constant item included in the work plan of cooperation activities and a dedicated working team was created to this aim. Since 2014, when AW implementing regulations were approved in the Country, activities have been diversified towards other subjects, namely AW standards at transport and at contingency situations.[66]

Table 6.1 – EU Technical Cooperation Activities implemented in Chile

Activity	Date	Name	Organizer
Seminar	11 and 12 November 2004	The institutionalization of AW	SAG, EU, University of Italca
Book	11 and 12 November 2004	The institutionalization of AW	SAG, EU
Seminar	26 and 27 September 2005 Silvi Marina, Italy	Seminar on AW in Chile and the EU, shared experiences and future objectives	SAG, EU
Printed book	26 and 27 September 2005	AW seminar proceedings in Chile and the EU, shared experiences and future objectives	SAG, EU
Seminar	13 and 14 September 2010	AW Seminar in intensive production system	Chile, SAG, EU
Seminar	21 to 23 June 2011	International seminar on BA during transportation and slaughter	SAG, EU
Course	August to November 2012	e-learning BTSF AW at slaughter	EU
Workshop	02 October 2012	International workshop on protection of animals at the time of slaughter	SAG, EU
Workshop	04 October 2012	International workshop on protection of animals at the time of slaughter	SAG, EU
Workshop	04 July 2013	Risk analysis workshop in AW	University of Chile, SAG, EU
Course	24 to 27 June 2014 in Italy	BTSF Animals transportation	EU
Course	18 to 21 of November 2014 Uberlandia, Brazil	BTSF Humane slaughtering	EU
Course	08 June 2015	e-learning AW at the time of slaughter	
Workshop	08 September 2015	AW during transport and stunning of industrial production birds	BTFS, SAG
Workshop	10 September 2015	AW workshop for transport and livestock fairs	SAG, University Catolica de Temuco, University Austral, BTSF
Workshop	07 June 2016	AW at contingency situations	BTSF, SAG
Workshop	09 June 2016	AW at contingency situations	BTSF, SAG

[66] It is also mandatory for operators to have contingency plans that deal with emergencies (fires, earthquakes, floods). Companies have additionally had to modify their systems for moving live animals, animal restraints and practices in the human-animal interaction between workers and animals

6.4. Results Achieved by the Technical Cooperation on the Development of AW Standards in Chile

There is general consensus on the fact that the EU-Chile BTA has been of great importance as a driving force for the development of national legislation on AW. It is widely acknowledged that Chilean legislation on AW was already being developed some years before the agreement,[67] but the existence of cooperation greatly contributed to create the right framework conditions for the law 20,380 to be approved and subsequently enacted. An even more direct enabling impact can be seen in the drafting and approval of the underlying three Regulations that were clearly shaped by the provisions in the EU-Chile Association Agreement and EU Regulation 1099/2009, by incorporating the OIE AW standards up to the point of being very similar to the text of the original OIE recommendations. The Chilean legislation on AW can be considered as mostly based on OIE standards, and this was largely because of interaction with the EU through the activities of the AWWG. ***The EU-Chile BTA has contributed greatly to the development of standards for AW at transport and at slaughter, while those at the farm level are comparatively much less well developed***.

Aside from approximation to OIE standards, ***the EU-Chile association agreement has also contributed to improve the technical capacity of the official veterinary services and helped improve the know-how and technical capacity of operators, associations of producers and veterinary advisors***. According to some interviewees, the EU-Chile association agreement has indirectly contributed to improved knowledge on animal welfare inside the academia and veterinary studies. More generally speaking, it has greatly contributed to raise awareness and spread knowledge about the key concepts of AW among professionals related to animal production in Chile. The legal framework on AW in Chile is well known to all concerned actors also partly thanks to the visibility provided by cooperation with the EU.

The degree of actual enforcement of these provisions varies substantially. A part of the national industry currently goes well beyond mandatory requirements in terms of AW. For instance, some producer associations have provided their member companies with guidelines for the implementation of good AW practices, and some operators have included the concept of AW in their company quality policy. Some operators in the pig sector have also expressed interest for the recent release of ISO 34,700 standard on AW management as a way to signal their AW compliance in the future, even if specific regulations have not been enacted yet. However, there are also still portions of the industry where implementation of mandatory AW standards is less advanced, mainly due to the distance and the geographical dispersion of operators. For what concerns the transport sector, it is also acknowledged that the implementation of animal welfare standards has been a little slower, due to the greater number and the lower educational level of operators.

Another possible shortcoming in the views of some is that ***while dissemination among operators and professionals has been very good, no attention has been paid to the dissemination of AW concepts among consumers***. As a result of that, the development of a demand for AW friendly products is still slow in Chile. With specific reference to the BTSF program, over 35 representatives of the agricultural and livestock service participated in the related events. This side activities have hardly contributed to the introduction of new AW legislation in Chile; however,

[67] The country has been developing legislation that considered some general aspects of animal welfare since approximately 1995, mainly thanks to the effort of a number of parliament members. (Biblioteca Congreso Nacional, 2009)

they have been of great relevance for the understanding of the OIE standards, which are reflected in Chilean legislation on AW.

As a result of technical cooperation activities, ***Chile is also moving towards achieving the status of equivalent at slaughter with EU AW standards.*** The general principles for the slaughter of animals are included in Art. 11 of Law 20.380 on animal protection. According to the article: "the slaughter of animals must employ rational methods tending to avoid unnecessary suffering". Law 20.380 is applicable to all animal species: its recommendations are indeed quite general. As for stunning methods, Article 7 (a), paragraph 3 of the Decree states that "prior to death, all animals must be desensitized". Such desensitization should be carried out on the basis of internationally recognized methods that attenuate the suffering of animals, such as electronarcosis, narcosis with gas, concussion (with or without captive stem, whether the latter is operated pneumatically or by fulminant), or any other system authorized by the Agricultural and Livestock Service.

Regulation No. 28 "Regulation on the Protection of Animals Providing Meat, Skins, Feathers and Other Products During Utilisation in Industrial Establishments" incorporates similar provisions to that of the EU Regulation 1099/2009 on the protection of animals at the time of slaughter (see Table 7.2). In particular there are close similarities on: 1) conditions of protection and physical comfort in slaughterhouse; 2) avoidance of unnecessary pain and suffering; 3) avoidance of prolonged hunger and thirst, 4) stunning of animals before death; 5) stunning controls; 6) procedures for proper slaughtering; 7) elaboration and dissemination of guides to good practice; 8) requirement of a properly trained animal welfare officer; 9) contingency and emergency procedures; 10) slaughtering for prophylactic and emergency purposes and finally 11) methods of stunning and slaughtering. The only main difference that has remained in place for the time being is that the Chilean legislation does not contemplate the certification of the skills of personnel, which is responsible for the different processes in which the welfare of the animals may be affected.

Since the entry into force of EU Regulation 1099/2009, activities aimed at aligning AW standards at slaughter with the EU have been implemented in Chile: both official veterinary services and operators have increased the frequency and accuracy of inspections. The increase has been gradual for the public sector; permanent inspection ante mortem have been introduced, and this has required an increase in the number of contracted inspectors. The official inspection service went from a single veterinarian inspector to a team of inspectors. Since 2013, field inspection officers are required to attend training courses. Several changes have been introduced in the infrastructure and management of animals in slaughtering plants with the aim of achieving equivalence with EU.

Table 6.2 – Alignment with EU Regulation 1099/2009 in Chile

Before	After
The stunning of the chickens was measured by removing a chicken after the electric bath and counting the recovery time.	Physiological parameters are used for the assessment of stunning.
Animals had to get out alive from stunning	Death during stunning is allowed
Hanging time in turkeys: over 2 minutes.	Hanging time in turkeys: less than 2 minutes.
Time from neck cutting to bleeding was more than 20 seconds	Time from neck cutting to bleeding is less than 20 seconds
Cattle: slaughtering practices not described by the OIE (that were detrimental to animal welfare) were allowed.	Only OIE recommendations for slaughtering are applied

Before	After
Animals were not fed at the slaughterhouse if they remained more than 24 hours	The animals are fed at the slaughterhouse if they remain more than 24 hours
Rest areas devoid of protection against inclement weather	Rest areas with protection, water dispensers, drinking fountains suitable for animals.
There was only one method of slaughtering animals and if it failed for technical reasons the animals had to wait.	There are methods of emergency slaughter in case of failure in desensitization and slaughter. Emergency slaughtering is systematically implemented in the case of prostrated or suffering animals.
The operation of the slaughterhouse was not evaluated in such a way that animal welfare was a relevant area.	The slaughterhouse evaluation includes alerts on animal welfare.
<u>Other points that have been modified after the agreement:</u> Techniques have been applied such as blue or violent lights to relax the birds, combined with slight inclination of the support tape (among others). There has been a greater investment in improving the infrastructure, adapting it to the requirements of each species. Stunning and immobilization techniques and animal handling procedures (loading, unloading, transporting, moving animals, etc.) have been improved.	

6.5. Other Drivers of Animal Welfare Standards

Chile has intensively participated in all AW training activities of the OIE, either with representatives of the SAG or of the private sector. Between 2010 and 2015, over 500 SAG staff and more than 1,600 private sector representatives participated in AW-related activities, either in Chile or abroad. As part of the process of drafting the above mentioned regulations, SAG has had a permanent participation in all animal welfare meetings and working groups and in the four international conferences organized by the OIE. The OIE regional centre for animal welfare has contributed to the implementation of animal welfare standards for the transport of cattle; it is financed mainly by its own contributions and by contributions from the University Austral de Chile.

A collaborative network has also been created among independent consultants, the scientific academy and the official service, which has promoted, among other things, the development of guidelines to good AW practices and the organisation of several activities of diffusion and training in the scientific and technical aspects of implementing AW standards in the industry, and on the related benefits. Participation to such activities has been quite extensive, involving veterinarians, advisors, operators, producer associations, academics and other professionals.

As for the role played by IFI and ECAs in the implementation of animal welfare standards, Chilean producers have not received financing under any project that includes animal welfare requirements and therefore can be considered as marginal.

6.6. The Demand for Animal Welfare

Even though Chilean legislation requires the inclusion of AW issues in education at school level, teaching has not been carried out in practice, due to a lack of coordination among competent ministerial authorities. Nevertheless, Chilean consumers have shown some signs of an increasing interest in the welfare of farmed animals, as confirmed by a survey conducted by the WAP in Chile in 2016. Some notable changes in consumers include a shift towards more environmentally friendly products, products obtained in family farms and organic products. Although generally not willing to pay more for products with higher AW standards, it emerged that a group of consumers are preferring "free range" eggs, which are more expensive. This has led to an increase in the supply of these products in supermarkets. However, this trend towards AW friendly products has not emerged for other typologies of animal products (e.g. meat, dairy) yet.

6.7. Impact of EU Animal Welfare Activities on Competitiveness.

(i) What is the impact on the competitiveness of the EU producers and operators of the cooperation established within the framework of the Memorandum of Understanding?

<u>Production costs</u>

Pig Meat*.* Since technical cooperation with Chile is benchmarked to OIE standards, which do not include standards for pig raising, the possibility has arisen this could have resulted in decreased competitiveness for EU producers and operators because of related production costs, as Chilean pig meat is allowed into the EU without tariffs as a result of the trade agreement. Production trends in the Chilean pig sector are characterised by a steady growth and the Country is becoming a significant player in the market for pig meat[68] There are now 49 pig farming establishments in Chile, mainly in Central and Central-southern regions, down from 197 in 2000. It is also important to point out that in 2015 the four main pig farming companies held 85% of breeding females in Chile. The total number of breeding females is expected to increase from 194,392 to 253,500 by 2021 (a 30% growth of the current population) so the impact of provisions on gestation stalls could not have been negligible. Since the Association Agreement with the EUnion was signed in 2003, the leading Chilean operators had already been supplying supermarket chains overseas and were hence already familiar with animal welfare standards. However, the main AW concerns have focused on humane slaughter and transport, whereas good practice in AW in the pig farming stage has received less attention in Chile.[69] This means that practices such as tail docking and surgical castration (also without anaesthetics), and gestation crates

[68] Physical production has increased from 261,477 tonnes/year to 523,833 tonnes/year in 2015 (a 200% increase over the last 15 years). According to a survey conducted by the Statistical National Institute, production is also increasingly concentrated and vertically integrated. There is a small production of live swine in family farms, which could be considered as a sort of extensive pig farming; however, production from such farms has no impact on local markets (i.e. it is not sold as special pig meat to restaurants or gourmet shops).

[69] .Since operators are aware of animal welfare issues in pig farming, some measures have been adopted. A handbook of good practice for the welfare of pigs during transport and slaughter has been implemented by the Association of Pig Producers. Immunological castration is increasingly implemented and experimental environmental enrichment programs have been done in one company for finishing pigs and gestation sows.In the light of the interest of some operators for animal welfare, the Animal Welfare Chilean Association (ACBA by Spanish acronym) has released the following statements:

- Pigs are sentient animals that deserve proper treatment during breeding, transport and slaughter.
- Good Practices in animal welfare are not only a regulatory and/or export requirement.
- Operators recognize animal welfare as an element of the company policy and as a very relevant subject.

A system of animal welfare audits has been implemented to assess practice before slaughter; capacity building has been promoted through animal welfare courses given by the University of Bristol and by the Farm Animal Welfare Education Centre, and working together with the government to strengthen animal welfare mandatory requirements.

are still relatively common in Chile and might have represented cost advantages on EU operators, whose quantification, however, has not been attempted by interviewees. Theoretical cost advantages in the region of 10-20% on total farming operations have been mentioned as possible in the pig meat industry by survey respondents in Chile and other Countries because of different AW provisions implemented there. These however less than proportionally translate in differences in the final prices for pigs, as the added value mainly depends on the cost of feed. These have, however, hardly given rise to major concerns or trade disruptions and have remained somehow “below the radar” possibly because from 2008 onwards, prices in the market for pigs in the Country have been constantly increasing both for live animals and for meat (see Table 6.3), also due to growing local and Chinese demand. Compounded with logistical and transport costs to reach the Atlantic, this might have contributed to smooth perceived impact on competition, as potential cost advantages have been more than compensated by other factors. Actually, Chilean exports of pig meat to the EU have halved in the period reviewed here (see Annex F - Table F.8).

Table 6.3 – Evolution of prices in the Chilean pig sector

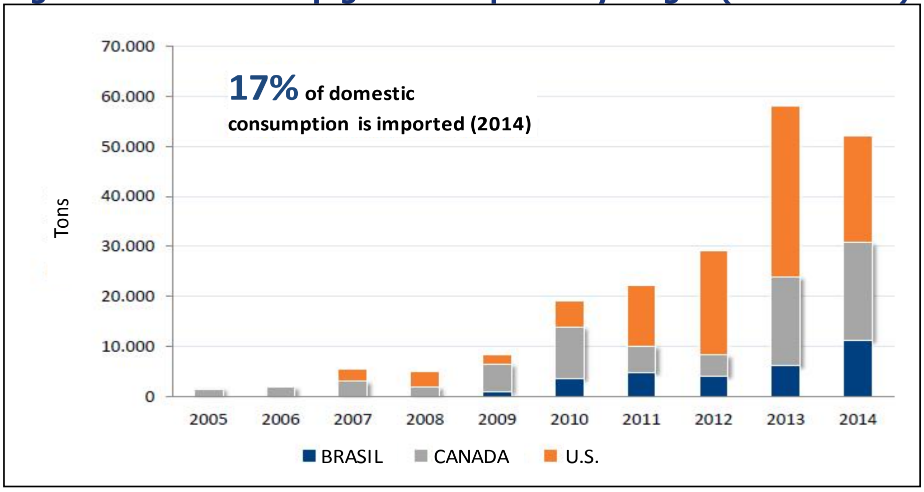
Year	Live pig to producer US$/Kg	Meat on a stick US$/Kg
2008	728	1,059
2009	767	1,144
2010	855	1,285
2011	889	1,438
2013	844	1,367
2013	891	1,417
2014	856	1,401
2015	903	1,512

Source: ODEPA 2016

Access to Market

Pig Meat. Due to strong increase in local demand (a 30% increase in the period from 13.4 kg to 17.5 kg pro capita consumption according to OECD statistics) Chilean imports of pig meat have massively increased in the period (see Figure 6.2). However, this did not bring advantage of EU operators because of the logistical barriers mentioned above. Most imports come from the USA, Canada, and Brazil. From 2007 to 2014, imports from the USA have markedly increased, and after 2012 also those from Canada. The recent signature of a mutual equivalence agreement of organic farming is expected to create market opportunities that so far, however, have failed to materialise.

Figure 6.2 – Chilean pig meat imports by origin (2005-2014)



Source: national custom services

(ii) *What is the impact on the competitiveness of the non-EU producers and operators of the cooperation established within the framework of the bilateral trade agreement?*

Production costs

AW at Slaughter. Since the entry into force of regulations No. 28, 29 and 30 in the year 2013, the operators in the concerned supply chains (especially in the cattle, sheep, poultry and pig sectors), have made a series of adaptations to comply with the requirements imposed by these regulations. The slaughtering plant, in particular, had to modify the unloading sites and the design of the waiting pens (which must provide minimum conditions: availability of water and protection against inclement weather). Most importantly, they had to standardize according to the recommendations of the OIE on the methods of stunning. This brought them on a levelled playing field with EU competitors, with the exception of poultry, where differences with OIE standards remain. Impact on production costs have generally been estimated below 10%, which would translate in negligible differences in final prices.

AW at Transport. Adaptation of AW standards at transport also triggered costs. The regulations established that all drivers must have training in AW and that loading and unloading facilities should be upgraded to defined standards. They also provided indications for the organisation of transportation, establishing rest periods and requiring availability of water, among others. Since Chile has not incorporated the more stringent EU AW standards for maritime transport in its legislation, this could have theoretically impacted competition with EU operators in other non-EU markets. However, Chile exports a small, although growing, number of pigs and cattle, so any impact on international trade flows can be considered negligible.

AW at Farm. Most of the impact has concentrate in the improvement of pain management practices - such as dehorning, castration, tail cutting – by favouring alternative practices that minimize the pain, or the use of pain palliative drugs. Impact on costs could not be quantified.

Access to Markets

AW at Slaughter. Certification for export to the EU is not very common among Chilean slaughterhouses. In total, including all species, there are about 120 operational slaughterhouses in Chile, of which less than 20% are certified for exports to the EU. On average equivalence with EU AW standards, continue to be considered as restrictions by many Chilean producers. As reported in the figure 7.3 below Chile has international trade agreements with a number of foreign countries, together with the EU. In 2015, Chilean exports of pig meat were mainly destined to Japan (32%) and South Korea (30%), followed by China (9%) and Russia (8%). Exports to the EU played a rather limited role (3%). Beef meat is mainly exported to Colombia, Costa Rica, Canada, Cuba all markets that in general do not have strict AW requirements.

Figure 6.3 – Trade Agreements subscribed by Chile

Free Trade Agreement	Economic Complementation Agreement	Partial Trade Agreement	Association Agreement	Economic Association Agreement	Commercial Protocol
• Australia • Canada • Central America (1) • China • Colombia • South Korea • EFTA(2) • USA • Hong Kong • Malasya • Mexico • Panama • Thailand • Turkey • Vietnam	• Bolivia • Cuba • Ecuador • Mercosur(3) • Perú • Venezuela	• India	• European Union(5)	• Japan • P4(4)	• Pacific Alliance

<u>Local Demand</u>

As far as local demand is concerned, a survey on consumer preferences in Chile, Mexico, Brazil and Colombia conducted by WAP indicates that 78% of consumers would buy products with higher AW standards only if they were available at equal price (i.e no premium price is recognised). Ninety percent of consumers perceive a higher quality; 77% believe that welfare-friendly production is cleaner and more environmentally friendly; 42% declare to be willing to pay more for certified welfare-friendly animal products, but 54% do not trust the related labelling.

Context Indicators – Shortage of Skills

Although no such thing as a shortage of AW skills has been mentioned, Chile has reported a keen interest in training its AW specialists also by means of the BTSF online programme, which is also confirmed by the very high number of past participants.

Context Indicators – Capital Requirements

Difficulties in having AW standards transposed among SMEs and in the most remote areas of the Country that do not have access to export markets have been confirmed, possibly also because of capital requirements, and are anticipated among farms.

6.8. Final Considerations

Interviews showed a good ***level of knowledge*** of the regulatory framework and of AW standards among all respondents. The interviewed stakeholders highlighted the fact that the degree of ***transposition of OIE standards into Chilean legislation*** on AW is very high, consistently with the fact that the Chilean legislation on AW is mostly based on OIE standards. According to the interviewed stakeholders, the EU-Chile association agreement has been of great importance as a driving force for the development of national legislation on animal welfare. Nevertheless, the Chilean legislation on AW was already being developed some years before the agreement.

All the interviewees knew about the agreement, but only those who participated directly in the related processes, knew how the implementation worked in practice. It is widely acknowledged that ***cooperation activities have contributed to promote the development and the improvement of Chilean AW legislation*** through partnerships between the Chilean government, producer associations, NGOs and universities, as well as through a working team that contributed to the initial harmonisation between the Chilean and the EU legislation.

Most interviewees agreed that there have been significant changes in welfare standards, such as changes in the workforce, the responsibilities of managers, and changes in procedures and infrastructure to meet the new equivalent requirements with the EU. This said, ***very few concrete elements emerged from interviews on the assessment of the impact of AW International Activities on cost competitiveness***.

Most interviewees concluded that the role of the agreement was paramount for the implementation of specific AW requirements in Chile; they however also pointed out that Chile was working on AW legislation beforehand, and this helped in finding a common understanding in the negotiations. As for the perception of the main weaknesses of the agreement, the majority of the interviewees argued that ***the range of the activities carried out should have covered also animal farming more than was the case***, and that ***no effort has been put on the dissemination of AW concepts among consumers.***

To date, Chilean consumer demand for welfare-friendly animal products has not emerged as a driving factor for further development of the national legislation on AW. The international activities on animal welfare promoted by the EU in Chile do not seem to have played an important role in promoting the evolution of the attitude of the Chilean population towards the welfare of farmed animals. These activities have indeed been very technical, designed to transfer scientific knowledge to professionals who work in the livestock industry, rather than focusing on raising consumer awareness about animal welfare

As regards the impacts of AW International Activities on the competitiveness of Chilean operators, it is first of all important to note that ***the EU is far from being the main destination market for Chilean exports of animal products***, or the main origin of Chilean imports. It should also be noted that thanks to the agreement between Chile and the EU, other markets have been opened for Chilean products in the EU, where access was previously not granted not for reasons related to animal welfare, but for safety, traceability or health issues. On the domestic side, the Chilean national market does not have a system of animal welfare labelling, and this makes assessing the real impact of animal welfare on the domestic market very challenging, since no direct evaluation of consumers' buying preferences is possible.

As long as Chilean export trade in animal products continues, issues such as AW in production processes, transport and slaughter, which are already covered by OIE recommendations, will be among the main challenges to be met for further development of the sector and for maintaining Chilean achievements in export trade of animal products.

7. THE IMPACT OF OIE INTERNATIONAL STANDARDS

7.1. Introduction

This case study assesses the contribution given by the EU to influencing the OIE standards, as well as the extent to which its international activities in the field of AW have supported the implementation of these standards within and outside the EU. After investigating the EU specific contribution the OIE standard setting process, a comprehensive mapping of EC support activities to the OIE regional strategies and other initiatives, including activities carried out within the framework of the European Neighbourhood Policy, through the TAIEX facility, and more horizontally those delivered through the BTSF programme, is provided. The achievements reached by these activities as well as other EC relevant initiatives, such as technical cooperation provided within the framework of bilateral cooperation agreements and cooperation fora, is then illustrated.

7.2. The Role Played by the EU in Shaping the OIE Standards

AW was first identified as a priority under the OIE 2001-2005 Strategic Plan and a permanent working group on AW was established in 2002 to draft recommendations and standards in identified priority areas*.* This Animal Welfare Working Group (AWWG) consists of eight permanent experts, selected for their scientific excellence and representative of different OIE regions,[70] including a representative of the EU[71]. Besides the geographically-balanced AWWG membership, the democratic development of the OIE standards is guaranteed by a transparent, science- and consensus- based process, where all Member Countries (MC) have an equal voice and repeated occasions to engage with the OIE. MC's participation in the standard-setting process is coordinated through the national OIE Delegates (in most of the cases, the Head of the national Veterinary Services), with the assistance of the National Focal Points on AW (NFP-AW)[72].

Requests for the development of a new standard or the revision of an existing one primarily come from the national OIE Delegates, with highest priority given to common positions expressed by several countries through the relevant OIE Regional Commission. Recommendations on new standards and on significant revisions of existing ones are developed through the work of expert Ad Hoc Groups, which are convened to develop draft texts for the OIE Terrestrial Animal Health Code (the 'Terrestrial Code'). The draft animal welfare texts are normally reviewed by the OIE AWWG, which provides recommendations to the OIE Terrestrial Animal Health Standards Commission (the 'Code Commission'). Following the review by the Code Commission, draft texts are sent to OIE MCs for written comments. After at least two years of rounds of comments (June-July and November-February) (June-July and November-February), a draft text may be proposed for adoption in the

[70] The OIE has set up five Regional Commissions to express specific issues, i.e. (i) Africa (54 countries); (ii) Americas (30); (iii) Asia, Far East and Oceania (36); (iv) Europe (53, including all EU 28 MS); and (v) Middle East (20). Some MCs are member of more than one Regional Commission.
[71] Representation is also drawn from a consortium of non-governmental organisations (i.e. the World Society for the Protection of Animals - WSPA) and industry organizations covering different sectors, whose representatives participate as full member (one) and observers (the others) on a rotational basis.
[72] The OIE encourages national Delegates to nominate, under their authority, a NFP on eight different topics, including one on AW.

Terrestrial Code. All written comments submitted by the MCs are reviewed by the Code Commission, who may deal with comments directly or send them to the Ad Hoc Group and/or the AWWG for advice.[73]

The Code Commission meets twice a year, in February and September, and its reports are placed on the OIE website after their meetings (in March and October). In March of each year, as part of the meeting report of the Code Commission that have met by February, all texts proposed for adoption by consensus at the OIE General Session (in May) are sent to MC for consideration prior to presentation to the World Assembly of Delegates (representing the 180 Member Countries). Although there is no provision for written comments to be presented to the General Assembly, there is opportunity to make oral statements and to request clarification of texts before adoption. ***The normal cycle of comments is therefore two to four years***.

Given the global applicability of the OIE standards, ***the main challenge is to reach a consensus among all OIE MC***, which requires striking the right balance between 'AW demanding' countries, such as the EU MS used to the highly advanced EU legislation, and the economic development needs of other MC that do not share the same ethical concerns as a priority. Thus, ***the exclusive use of a scientific basis is the sole common point to establish news standards for adoption***. Coherently, the OIE standards are permanently updated in accordance with new scientific information and technological advances. Besides the availability of sound scientific research, the prioritization of AW standards to be developed has been reportedly informed by pragmatic considerations on the likelihood of their consensual adoption, based on the advice of the OIE AWWG. In this respect, it was ***easier to reach global consensus on horizontal areas***, such as AW during transport and at slaughter, rather than on farm AW in largely different husbandry systems. This partly explains the 'postponed' adoption of welfare standards for laying hens (see below), due the existing difficulties in reconciling the EU position (where only enriched cages are allowed and free range is encouraged) with the situation in other regions that might have different concerns (particularly on the appropriateness of encouraging free range for animal health considerations).

Since May 2005, the OIE has adopted 11 AW standards for the Terrestrial Code, of which eight are relevant for the present Study[74]. These include the first five standards adopted in 2005, which cover the transport of animals (by land, sea, and air), the slaughter of animals for human consumption and the killing of animals for disease control purposes. Standards on on-farm welfare of beef cattle, broiler chickens and dairy cattle were introduced more recently, in 2012, 2013, and 2015 respectively. Four OIE AW standards overlap with topics covered by the EU, while others do not and actually fill existing gaps there. In fact, these OIE standards have been voluntarily agreed by the Member States and should be routinely enforced at the national level. Their main limitation is that by stating broad principles only, they leave much more room for interpretation than ordinary EU legislation.

As regards the EU Contribution to the OIE Standards Development, various interviewees concurred in assessing ***the EU has been the best 'commenter' during the standards setting process***, invariably providing meaningful comments before and during each OIE General Assembly. Two main factors explain this result. First, as indicated above, the OIE standards are science-based and the wealth of AW scientific-research backing the EU legislation, including the series of EFSA guidance documents,

[73] Reports of Ad Hoc Groups on Animal Welfare are normally released to the public as annexes to reports of the Code Commission.
[74] Animal welfare standards for fish are included in the OIE Aquatic Health Code

ensures the Commission's capacity to formulate sensible comments (as well as the conformity between the OIE standards and the EU requirements). Second, the Commission acts as coordinator throughout the process, thereby allowing to reconcile the different positions held by EU MS as well as to reduce the MS burden during the revision of draft texts, as illustrated in Box 7.1 below.

Box 7.1 - EU Coordination Mechanisms during the OIE Standard-setting Process

Following review by the Code Commission, the OIE sends draft texts to all MC and to partner organisations including the EC. DG SANTE conducts a first review of these texts based on the comparison with relevant EU legislation, formulates draft comments/positions and sends them to the MS. Then, the MS provide their feedback to the Commission and discuss them during a coordination meeting held in Brussels to take a common EU position (a specific "OIE Coordination Working Group" of experts meets in Brussels and elaborates draft EU comments). The revised EU comments/positions are proposed to Chief Veterinary Officers (CVO), which discuss and validate the final EU written comments/positions at the Working Party of CVO meetings at the European Council, before sending them to the OIE (and being published on the DG SANTE website).[75]

Above qualitative indications on the constancy and the high-quality of the EU comments[76] is largely confirmed by quantitative analysis. The review of the EU final common positions sent to the OIE in each year between 2005 and 2015 and their comparison with the relevant chapters of the various versions of the Terrestrial Code annually published allowed formulating the following considerations. First, ***all relevant OIE charters of the Terrestrial Code have been extensively commented by the Commission***. The number of original, non-trivial comments,[77] sent by the Commission to the OIE typically range between 50 and 150 per chapter, with exception of transport by air, which received a smaller amount of comments as indicated in the Table 7.1 below. Second, ***the rate of acceptance by the OIE of Commission's original comments has been exceptionally high***, ranging from 80% to 100%, depending on the chapter. In the vast majority of the cases, the EU comments were incorporated in the text of the Terrestrial Code within two years from their initial formulation. These results are broadly in line with indications provided by interviewees, which estimated the rate of incorporation of the Commission comments in the 60%-80% range, on average. As a result, co-existing EU and OIE standards have been progressively harmonized overtime, although the OIE ones remain forcedly somehow more vaguely defined, due to their global nature, and the need to accommodate a large variety of different production systems.

Table 7.1 - OIE AW Standards, EU Legislation and Contribution to Standards Development

Main Areas	OIE Standards	EU Standards	Comment
Transport	✓ (2005)	✓ (ten legislative acts between 1991 and 2005)	Both the EU and the OIE have AW standards on long haulages. Over time, the distance has decreased due the acceptance of the EC comments. Chapters on transport by land and by sea received a broadly comparable, high number

[75] See http://ec.europa.eu/food/safety/international_affairs/standard_setting_bodies/oie/eu-comments_en.htm.

[76] The Commission coordinates the EU position, and the comments sent to OIE are "EU" comments as they are agreed and endorsed by all EU MS.

[77] In practice, excluding (i) comments that were not adopted in a given year and identically re-submitted in the following year and (ii) the few comments dealing with minor, grammatical corrections.

			of comments from the Commission (118 and 95, respectively), while transport by air attracted much smaller interest (14 comments), most likely due to the fact that these standards were agreed by the International Air Transport Association. Irrespective of the mode of transport, the rate of acceptance of Commission's comments was extremely high, around or above 90%. Still, the EU requirements remain more stringent (e.g. the OIE standards on transportation by land do not specify maximum journey times and rest periods). In particular, concerns were reported on the stricter EU requirements on the stocking density of live animals transported by sea (as seemingly confirmed by the comparison of relevant EU and OIE texts)[78].
Slaughter	✓ (2005)	✓ (Directive 1993/119/EC, replaced by 2009 regulation)	Both the EU and the OIE have AW standards at slaughter. The Council Regulation 1099/2009 on the protection of animals at the time of killing foresees that the OIE standards on the slaughter of animals should be taken into account when equivalency with EU requirements under this Regulation needs to be established for the purpose of imports. The OIE standard has been significantly revised over time, moving from an input- to an outcome- based approach and progressively aligning to the EU one, which remains slightly more stringent. This chapter received the largest amount of comments from the Commission (over 150), and the rate of acceptance (75%), albeit very high, is comparatively lower than the other standards. Indeed, EC positions on some articles, such as the stunning of pigs or the electrical stunning of birds using a waterbath, despite repeated discussions, remain pending. With reference to latter article, giving the difficulties in reaching a consensus and the constraints imposed by the 'equivalence' with the EU 2009 regulation, after several attempts, the decision was recently taken to adopt a more comprehensive approach, involving a revision of the full chapter.
Beef cattle farming	✓ (2012)		Despite the lack of an EU directive, the Commission extensively commented the relevant chapter: 43 and 21 non trivial changes were proposed by the Commission in 2012 and 2013, which have been invariably adopted by the OIE.
Pig farming		✓ (Directive 2008/120/EC)	OIE standards are still to be adopted. The commenting process on the first draft text just started.
Broiler farming	✓ (2013)	✓ (Directive 2007/43/EC)	Both EU and OIE AW standards at farming equally apply to the poultry meat industry, which can be considered broadly equivalent. The EU played a critical role in the development of this standard. When it was first proposed, the EU position (asking for a more stringent text) was barely reconcilable with the one of African countries, which consider it way too high. Thus, its acceptance was postponed by a couple of years, during which the OIE worked on its revision. The about 50 comments sent by the Commission between 2013 and 2014, were almost all adopted by the OIE.

[78] Indeed, the EU Council Regulation (EC) No 1/2005 provides minimum pen area per head for different specifies, while the OIE relevant chapter (7.2) provides only guiding principles (e.g. "*The amount of space required, including headroom, depends on the species of animal and should allow the necessary thermoregulation*", "*Each animal should be able to assume its natural position for transport without coming into contact with the roof or upper deck of the vessel*. "*Calculations for the space allowance for each animal should be carried out in reference to a relevant national or international document*.").

Egg-laying hens farming		✓ (Directive 1999/74/EEC)	OIE standards are still underdevelopment (the first draft will be included in the next version of the report), although an agreement was signed with the International Egg Commission back in 2006.
Dairy cattle farming	✓ (2015)		Despite the lack of an EU directive, the Commission extensively commented the relevant chapter: 46 non trivial changes were proposed by the EC in 2015, 92% of which were adopted in the same year.

Overall, the EU has been a major driving force for the development/revision of OIE standards and its direct contribution to standard-setting process has been assessed as "tremendous". Key success factors include: (i) the 'multi-layer' approach, i.e. member of the AWWG,[79] coordinator of EU MS, and observer; (ii) the one-voice approach, which has been replicated by other regions/sub-regions, such as Africa, delivering common positions on behalf of the 53 African OIE MC, also thanks to an EU-funded project (see below); (iii) the close cooperation with other regions, in particular Africa, which clearly increases the chances of acceptance (most of the code chapters were adopted unanimously after the inclusion of changes suggested by either the EU or Africa and supported by the other side). These 'internal' factors were complemented by the strong interest of the EU major trading partners to support the Commission positions, to maximize the high degree of conformity between EU and OIE standards (enabling them to comply with both standards at the same time).

7.3. The Role Played by the EU in Building Consensus among Non-EU Countries for the Definition and Adoption of the OIE Standards

Besides the Commission, there are only a few more countries that have been actively participating in the OIE standard-setting process, such as Australia, USA, Japan, China, New Zealand, and South Africa. Linguistic barriers, low level of national interest, little scientific AW research available and limited resources allocated to this task are the main problems constraining the MC's participation in several regions.[80] These issues have been further compounded by the limited participation/involvement of OIE NFP-AW. NFP-AW have been entrusted with some key tasks, such as (i) establishing a local network of AW experts, (ii) conducting in-country consultations on draft texts proposed in those reports as well as draft standards proposed by the Code Commission when dealing with AW, and (iii) preparing comments for the Delegate. Despite this, their actual contribution has remained largely inadequate in several countries, particularly as far as the involvement of

[79] The EU representative sitting in the AWWG since its establishment has reportedly been a driving force and a major contributor of all relevant OIE standards. During this period, EU participation was constant and active, in some cases going beyond what normally requested. This was clearly the case when different opinions arose on the revision of the Art. 7.5.7 on 'Electrical stunning of birds using a waterbath'. In order to assist in bridging opposite positions of different counties and ensuring conformity with the EU 2009 regulation, he also participated in the related Ad Hoc Group.

[80] For instance, in the Americas region, less than 40% of MCs participated in that standard-setting process and one of the problems identified as the cause of low participation was the lack of translated version (Spanish) of reports of Ad-Hoc Groups and Working Groups and Specialised Commissions (see, Summary Report of the Annual Meeting of the OIE Regional and Sub-Regional Representatives, held at the OIE Headquarters from 12 to 14 December 2007). Similarly, in Europe, the participation in the standard setting-process of non-EU member countries is assessed as extremely limited (with a few notable exceptions, such as EFTA countries), largely due to language barriers (12 are Russian-speaking countries) and the lack of experienced/dedicated human resources.

stakeholders is concerned.[81] Such a situation has only slightly improved overtime, and, indeed, the current, OIE Sixth Strategic Plan 2016-2020 envisages "*improvements in the OIE standards-setting process, in particular the fostering of the inclusive engagement of all Member Countries in the process, ensuring clear understanding and transparency of the OIE procedures and improving the involvement of stakeholders with whom the OIE has signed Cooperation Agreements*".[82]

The Commission has tried to improve the limited participation of the OIE MC in the development of standards (not only AW) through different initiatives. Since 2010, the OIE has undertaken capacity building to support Delegates and nominated focal points. As indicated above, the NFP-AW are envisaged to play a critical role in the OIE standard-setting process at country level. To enhance their contribution to the development/revision of standards, regional seminars for OIE NFP-AW have been rather regularly organized in all regions, to provide them with necessary information, updates and skills to better assume their responsibilities as advisors to the OIE Delegates. During the period under review, three to four of these seminars were carried in each region, but in Africa where only one could be organised, for an overall 15 seminars. Through different programmes and agreements, ***the Commission financial supported most of these training events (10 out of 15) in various regions, with the exception of the Middle East***. Still, based on the, admittedly unsystematic, information on these seminars, it seems that limited participation of some countries (as in the Middle East, where between 10 to 13 MC out of 20 participated) and/or changes in the audience (i.e. the staff sent by MC to different seminars)[83] may have somehow reduced the effectiveness of these capacity building events. More recently, through BTSF, the EC has been implementing a programme to provide training and capacity building for non-EU countries in order to enable them to participate more effectively in the meetings and work of international standard setting bodies (ISSB), including the OIE. Since 2014, three multi-country trainings for OIE delegates have organized.[84]

Table 7.2 - Regional Seminars for OIE NFP-AW

#	Date & Venue	Key Results	Commission Support Sources
Africa (54)*			
1	November 2010, Addis Ababa (Ethiopia)	The seminar was attended by 40 participants, comprising the NFP-AW of 31 countries	BTSF Africa[85]
Americas (30)*			
1	June-July 2010, Santiago (Chile)	Occurred back to back against the 1st meeting of the OIE Inter-American	No

[81] According to interviewees, in the Europe region, most of the non-EU member countries (but also some EU MS), do not conduct country consultations due to a lack of human resources and/or proper organization, while in some Asian countries, OIE delegates reportedly fail to share the draft texts with the NFP-AW.

[82] OIE, The Sixth Strategic Plan 2016-2020 - Draft Prepared by the Council, February 2015, page 4.

[83] For instance, only seven (out of 26) MCs sent the same personnel to second regional seminar for OIE NFP-AW for Asia and the Pacific as in previous year. Similarly, seven out 12 NFP participating to the seminar for the Middle East region held on April 2016 in Jordan did not attend the previous meeting in 2014 (see, Mission Report for the Regional Seminar for OIE National Focal Points on Animal Welfare (Middle East), 6-7 April 2016, Amman, Jordan).

[84] These include: (i) one training in Tunisia (7-9 October 2014) for Mediterranean basin European Neighbourhood Policy countries; (ii) in Ukraine (9-11 June 2015) for Eastern European Neighbourhood Policy countries; and (iii) one in Abu Dhabi (8-10 March 2016) for Middle East countries.

[85] For more information on BTSF Africa, see part A.

		Committee for AW. The seminar was attended by 63 participants from 20 OIE MC and 5 non-MC	
2	October 2013, Montevideo (Uruguay)	Held immediately before the OIE Regional Conference on AW and Trade (see below). The seminar hosted NFP-AW from 23 countries in the Americas and 16 countries in the EU	DG SANTE (as part of Contribution Agreement for the implementation of "EU financed OIE activities 2012-2013")
3	August 2015, Santa Cruz de la Sierra (Bolivia)	The seminar was attended by 51 participants from 24 MCs	No
Middle East (20)*			
1	November 2010, Beirut (Lebanon)	44 people attended the seminar, including NFP-AW from 10 countries, as well as observers from many Veterinary Associations and Lebanese NGO	No
2	December 2012, Beirut (Lebanon)	9 countries participated	No
3	March 2014, Amman (Jordan)	13 countries participated	No
Asia (36)*			
1	April 2010, Bangkok (Thailand)	21 OIE MC in the region participated	DG DEVCO - HPED programme[86]
2	November-December 2011, Tokyo (Japan)	Occurred back to back with the 2nd Meeting of the Asia, Far East and Oceania Regional AW Strategy Coordination Group (see below). 52 people attended the seminar, including NFP from 26 OIE MC and animal health experts	DG DEVCO – HPED programme
3	August 2013, Seoul (Republic of Korea)	The seminar was attended by 51 participants, comprising NFP-AW from 30 OIE MC as well as a wide range of resource persons and observers	DG DEVCO - HPED programme
4	November 2014, Canberra (Australia)	Attended by 53 participants including 27 MC representatives and 3 observers	DG DEVCO - HPED programme
Europe (53)*			
1	July 2009, Istanbul (Turkey)	Involved all 53 countries in the region	DG SANTE (€ 50,000 disbursed out of € 100,000 allocated)
2	March 2012, Kiev (Ukraine)	Out of 26 NFP invited, 20 participated (including 11 Russian-speaking countries)	DG SANTE
3	March 2013, Teramo (Italy)	The seminar hosted OIE NFP-AW from 40 countries	DG SANTE (as part of Contribution Agreement for the implementation of "EU financed OIE activities 2012-2013")
4	October 2015, Kakheti (Georgia)	20 MC participated	DG SANTE (as part of Grant Agreement titled "OIE activities 2015-2016: OIE global conferences, regional seminars, and regional meetings and activities on

[86] For more information on the HPED programme, see Box 5.3 above.

			animal health and welfare")

* total number OIE MCs in the region as of end 2016.

To the same aim, the Commission has participated to and supported initiatives aimed at improve regional coordination. In ***Africa,*** through the DG DEVCO PANSPO and VETGOV programmes, since 2009, the Commission has sponsored annual meetings for OIE delegates convened by the African Union Inter-African Bureau for Animal Resources (AU-IBAR) to examine the proposed changes in the Terrestrial (and Aquatic) Code. Overall, both MC participations (typically some 35-40 out of 50 MC in the region) and the amount of comments formulated are still moderate. However, ***the preparation of positions reflecting the common view of the participating African countries' delegates and the increased level of coordination with EU can be safely regarded as positive achievements***. In ***Europe***, a Task-Force of the OIE Regional Commission for Europe for improving regional participation in the OIE standard setting was launched in 2012 by the Bureau of the OIE Regional Commission. It was revitalized in the last year, when a meeting of this Task Force, including both EU and non-EU countries, was held in Belgrade, where the Commission has been involved as observer. In order to facilitate comments from non-EU countries, both the relevant standards and the comments provided by the EU 28 are translated in Russian. Still, to find a compromise reportedly remains a challenging task even if, for the time being, only selected chapters (none of relevance for this Study) were commented.

Vice versa, during the period under review, the Commission has funded only a few, ad-hoc initiatives that supported scientific research outside the EU*.** Most of the non-EU countries, especially developing ones, lack the scientific basis to perform an assessment of the new/revised AW standards as well as of their applicability to local conditions, which, in turn, largely constrain their ability to provide comments during the process of standards setting. The Commission could offer critical support to address this issue and assist countries to ensure that OIE standards properly reflect different, local animal management practices and climatic conditions, This is clearly highlighted by the case of Thailand, where BTSF-funded supported policy dialogue, leading to requests for revising the OIE standards for commercial slaughter of poultry for human consumption. However, no other similar EU-funded research initiative has been identified. In the same vein, ***the Commission has provided minimal support to the so-called OIE Collaborating Centres, which ensure that the OIE standards, guidelines and recommendations are scientifically sound and up-to-date in the designated specialty. In 2015, there were 49 OIE Collaborating Centres in 26 countries across the globe, of which four on AW in three regions.[87] Similar centres are still lacking in the Middle East and Africa regions (although in the latter case the situation is expected to be addressed in the near future),[88] further corroborating concerns about the limited amount of scientific and technical studies conducted and data collected and analysed on animal welfare-related issues. So far, the EC has co-funded one single collaborative project with the participation of an AW Collaborating Centre in Asia (see below).

[87] These include: (i) the Americas region: Animal Welfare and Livestock Production Systems (Uruguay/Chile/México) and the Laboratory Animal Welfare and Science (USA), (ii) the Asia, Far East and Oceania Region: Animal Welfare Science and Bioethical Analysis (Australia/New Zealand); and (iii) the European Region: the Veterinary Training, Epidemiology, Food Safety and Animal Welfare (Italy).

[88] The first AW twinning project between the University of Pretoria (South Africa) candidate and the IZSAM (parent) has just been launched.

7.4. The Role Played by the EU in Supporting the Implementation of the OIE AW Standards

Overview of EU Financial Support to OIE. Throughout the period under review, ***the Commission has been the major contributor of the OIE World Animal Health and Welfare Fund***[89] to support the implementation of AW activities. In recent years, Australia has also gained a prominent role, funding three major initiatives, but on a more limited and discontinuous basis. In June 2010, a Framework Agreement aimed at facilitating and simplifying the contractual negotiations of individual contribution-specific agreements was concluded between the Commission and the OIE. Besides funds directly contributed to the OIE World Animal Health and Welfare Fund, the EU has further supported the successful implementation of the OIE-related dissemination and training events through TAIEX and BTSF programmes. In these cases, the financial support either covered the participants expenditures or was channelled through different service contracts with the organizers of workshops/seminars and STM.

Commission Support to Global OIE AW Conferences. *The Commission has been supporting the OIE for the organisation of all its global conferences on AW*. The first OIE global conference was held in February 2004 in Paris to raise awareness on its expanded AW mandate and pave the way for the adoption of its seminal four standards on animal welfare during transport and at slaughter. The Commission provided strong in kind support from its organization. During the period under review, two more global conferences on AW have been organized by the OIE and invariably received substantial financial support from the Commission, through different channels, as illustrated in the table below.

Table 7.3 - OIE Global Conferences on AW, 2005-2015

Title	Date and Venue	Key Features	EC Support
2nd OIE Global Conference on AW, entitled 'Putting the OIE Standards to Work'	October 2008, Cairo (Egypt)	Attended by over 400 participants, including 350 Delegates, representing 99 Countries and Territories (of which 96 OIE MC). Two representatives from the DG SANCO and two representatives from EFSA attended the Conference. The most important outcome was the identification of key needs and tools to help OIE MC strengthen their capacities, including good governance and relevant infrastructure, to implement OIE	• DG SANTE (€ 154,000 disbursed out of € 200,000 allocated) • TAIEX (sponsored 33 participants and 1 speaker)

[89] The EC funding largely occurred by the means of specific Grant Agreements funded from the EC general budget under article 17 04 02 (Other measures in the veterinary, animal welfare and public health field). Under the Financial Regulation No 966/2012, new management modes have been introduced and are applicable since 1 January 2014. Thus, the previous contractual template (the Standard Contribution Agreement) and the 2010 Framework Agreement between the EC and the OIE became obsolete. Under the 2012 Financial Regulation, the EU Contributions to international organisations may fall within two management modes: direct and indirect. The so-called PAGoDA template has been established for these two management modes, which is applicable for internal and external EU policies, i.e. Pillar Assessed Grant or Delegation Agreement. The OIE has already passed the six-pillar assessment, and may thus enjoy more flexibility in the use and monitoring of the EC funds

		standards	
3rd OIE Global Conference on AW, entitled 'Implementing the OIE standards - addressing regional expectations'	November 2012 Kuala Lumpur (Malaysia)	Attended by some 400 participants, including OIE National Delegates and NFP-AW, deans of veterinary education establishments, heads of national animal welfare research institutes, representatives of partner international organisations and non-governmental and farmers' organisations	• DG SANTE (as part of Contribution Agreement EU-OIE 2012-2013) • DG DEVCO – HPED

Regional OIE Initiatives and Commission Support in Asia. Under the leadership of the Australia Government, the first ***Regional Animal Welfare Strategy (RAWS) for Asia, the Far East and Oceania***[90] ***was developed in 2008*** to provide the OIE MC with an overarching guidance framework to achieve AW outcomes consistent with OIE standards and customise them to meet their national needs. The RAWS second edition (2013–2015)[91] builds on the first strategy, by providing MC with a direction for future improvements to the welfare of animals, with specific reference to farm animals. To monitor and to advise on developments of the RAWS, the Director General of the OIE agreed to establish the RAWS Coordination Group (RAWS CG) and nominated OIE regional representatives, industry, and an international animal welfare NGO as its members. Until 2015, the Secretariat for the RAWS CG, the Independent Chair and funding for meetings were provided by the Australian Department of Agriculture, Fisheries and Forestry (DAFF).[92] Thus, ***the Commission involvement in the development and implementation of the RAWS was rather limited, although an EU representative participated as observer to some of the meetings of the RAWS CG***.

Support provided by the Commission towards the implementation of the OIE AW standards in the region has been geographically- and sector- focused. ***Thailand*** received repeated assistance under the BTSF programme (including three different STM) to facilitate the establishment of poultry welfare standards appropriate to local environmental and climatic conditions (to be eventually also transposed in other ASEAN countries). The strong degree of cooperation between Thailand and EC in the AW area is also confirmed by the country frequent participation to both BTSF traditional trainings in Europe and the e-learning module. In addition, under the BTSF programme, a couple of regional workshops on AW (South Korea in 2012 and Thailand in 2014) have been organized to enhance capacity of participants on the understanding of EU legislation on animal welfare and on how to implement equivalent standards in ASEAN region, with a focus on AW at slaughter. At these events, OIE representatives were present and illustrated the OIE animal strategy. Finally, DG SANTE (as part of Contribution Agreement EU-OIE 2014-2015) has been providing financial support to a collaborative project aimed at supporting the implementation of the RAWS by ***increasing awareness of standards for slaughter and during transportation in South East Asia and South Asia***. Launched in 2104, this ongoing project is led by the University of Queensland (Australia), together with as the University Putra (Malaysia) and support from the AW Collaborating Center in the Region.[93] Besides, the bilateral collaborating agreements with Australia and New Zealand are worth to be mentioned.

[90] OIE, *Regional Animal Welfare Strategy - Asia, the Far East and Oceania.*
[91] OIE, *Regional Animal Welfare Strategy - Asia, the Far East and Oceania 2013-2015*, Edition 2.
[92] The OIE Regional Representation Asia and the Pacific (RRAP) assumed the RAWS Secretariat and the RAWS CG has been replaced by a RAWS Advisory Group.
[93] For more information, refer to http://www.animalwelfarestandards.org

Regional OIE Initiatives and Commission support in Europe*. Several joint Commission/OIE initiatives have been conducted in the region in the first half of the period under review*. Between 2005 and 2008, the Commission has supported the organization of 19 national seminars titled '*Dialogue and common activities between the OIE Member Countries of the EU and OIE Member Countries of the OIE Regional Commission for Europe*'. These initiatives had the purpose of familiarising and providing guidance to non-EU countries of the region with procedures related to OIE standards and the harmonisation of veterinary legislation, including a presentation of the AW policies of the EU and the OIE.[94] In November 2006, the European Commission (DG SANCO), the Council of Europe and the OIE regional commission for Europe jointly organized, with TAIEX support, the CoE-EU-OIE workshop "Animal Welfare in Europe: achievements and future prospects", where agreed to a ***joint declaration on co-operation on AW***. This regional event was attended by 55 participants from 13 non-EU member countries.

More recently, OIE MC in the Europe region developed a platform (rather than a RAWS as done in Asia and in other regions, as illustrated below) to address key regional issues, by fostering (i) countries' participation in the OIE standard setting procedure, and (ii) the dialogue between EU and non-EU countries to close the existing wide gap, especially as far as AW is concerned. Differently from a RAWS, which consists of a broad strategic approach to be used as a basis for national welfare strategy developments, the ***OIE Platform on Animal Welfare for Europe*** (the 'Platform') envisages the implementation of a set of communication, information sharing, and capacity building activities. Indeed, the Platform has recently concluded its first three-year action plan (2014-2016), and 100% of envisaged activities have been fully completed. During this phase, works focused on three ***priority standards, i.e. transport by land, slaughter*** and stray dog population control, based on the indications formulated by the MC.

The adoption of different standards was promoted in different sub-regions/homogenous groups of countries, so to maximize available resources in terms of experts' mobilization and facilitate the measurement of results. Training activities adopted an operational approach, where classroom sessions and site visits are complemented by presentations/training sessions on specific topics made by the trainees. ***Train the Trainers (TOT) Regional Workshops have been organized for the group of Russian speaking countries***, including (i) a TOT on slaughter in Georgia in the 1st semester of 2015, attended by five countries (Azerbaijan, Georgia, Kazakhstan, Moldova, and Ukraine), with 10 trainers formed, and (ii) a second TOT on slaughter in Russia in the 1st semester of 2016, attended by 7 countries, with 14 trainers formed; and (iii) a TOT on long distance transport in Kazakhstan in later 2016-early 2017, with 10 trainers formed from Kazakhstan and Ukraine. The Platform training activities invariably referred to OIE standards, but, in the case of transport by land, training modules duly take into consideration EU legislation[95]. ***These trainings have already produced some short-term outcomes, such as cascading events organized at country level***. According to an evaluation of the first TOT workshop on slaughter, all countries have delivered presentations/workshop to disseminate the acquired knowledge, and cascading trainings to different national veterinary services and slaughter houses, attended by a total of 728 people. In a couple of countries, these national workshops have triggered some positive outcomes, including the

[94] For the detailed list of these events funded by TAIEX, see Table 3.6 above.
[95] This was largely motivated by the 2015 European Court of Justice Judgment, which upheld the refusal of German authorities to allow the export of live cattle to Kazakhstan, a 7,000 km journey involving insufficient rest stops and unloading (see, Zuchtvieh-Export (Judgment) [2015] EUECJ C-4242/13).

expansion of the veterinary core curriculum in Kazakhstan, and the implementation of some correctives actions by operators, such as the revision of the schedules animals delivery and stocking densities, in Ukraine.

The Commission has provided 'instrumental and indispensable' support for the functioning and activities of the Platform. DG SANTE funded all the meetings of the Steering Group[96] governing the Platform[97], which took place in different countries from Europe on rotational principle under the chairmanship of the OIE Headquarters. According to the biannual frequency of these meetings, the meetings funded by DG SANTE during the period under review include: (i) first meeting in the OIE Headquarters on December 2013; (ii) second meeting in Moscow on May 2014, (iii) third meeting in Brussels on December 2014, (iv) fourth meeting in Belgrade on May 2015, and (v) fifth meeting in Dublin on November 2015. Besides financial contribution, the constant and active participation of the EC representative at these meetings was also acknowledged. As part of Contribution Agreement EU-OIE 2014-2015 and the contract to support OIE Regional meetings and activities of the Animal Welfare Platform, the EC (DG SANTE) also funded (i) the first TOT workshop in Georgia, (ii) the development of website for the OIE platform, and (iii) the translation of awareness raining documents in Russian. Besides the EU, other donors were interested in the Platform and earmarked funds (for instance, the TOT on transport has been primarily sponsored by Germany).

In addition to the direct support to OIE activities in the region described above, BTSF delivered ***39 training events in Europe on AW, which almost invariably saw the participation of OIE relevant experts as tutors.*** Indeed, the OIE involvement has reportedly became more active over time, allowing the OIE to further familiarize with EU legislation and acquire extensive know how (methodological approach and good practices), transferred to other OIE trainings. ***The participation of non-EU countries of the region remained limited,*** with the exception of some candidate (potential candidate) countries, such as Albania, Bosnia, Macedonia, Serbia and Turkey. In particular, the participation of Russian speaking countries was extremely low, with the exception of Ukraine. As for the e-learning module on AW at the time of killing, between March 2014 and April 2106, it was attended by 34 participants from eight different countries of the region (EFTA excluded), but no Russian speaking one. Indeed, language barrier was clearly identified as the main problem, limiting participation and re-use of training materials at local level. Three events on AW were funded by TAIEX in the region, primarily for Enlargement countries, which saw the active participation and sharing of speakers and expertise between the EC and the OIE. In particular, in 2013, a regional workshop was organized in Serbia specifically focused on the OIE Standard Setting.

Regional OIE initiatives and Commission support in the Americas. ***DG SANTE financially supported, through the OIE World Animal Health and Welfare Fund, and actively participated in three regional conferences on AW participated/organised by the OIE,*** with the active support of its regional and sub-regional representations. After a first international seminar organised by Uruguayan

[96] The Steering Group is composed of OIE Delegates from three non-EU and two EU countries, a representative of the EC, the OIE Regional and Sub-Regional Representations of the European Region and a representative of the OIE Collaborating Centre on animal welfare for Europe. Secretariat of the Steering Group is provided by the OIE Sub-Regional Representation in Brussels.

[97] Funding was extended as part of Contribution Agreements for the implementation of the actions entitled "EU financed OIE activities 2013-2014" and "EU financed OIE activities 2014-2015", as well as the contract to support OIE Regional meetings and activities of the Animal Welfare Platform.

entities in 2007, the first regional workshop on AW entirely organised by the OIE was held in Panama on August 2008, with assistance from the main OIE regional representation for America (Buenos Aires, Argentina) and by the OIE sub-regional representation (Panama). During this event, the need to establish a common strategic position for the Americas was confirmed and initial steps towards its formulation were taken. In 2013, the OIE organized an International Conference on Animal Welfare and Trade in the Americas to review the implementation of OIE standards in production, transport and slaughter (with a focus on beef cattle) and to discuss about AW bilateral trade requisites. The event was attended by 233 participants from 35 countries of the Americas region and the EU and five international organisations. Besides, through the BTSF programme, ***the EC funded three additional AW training workshops at regional/sub-regional level (in Canada, Brazil, and Costa Rica), which saw the participation of the OIE representatives and primarily focused on AW during transport and at slaughter***[98].

Even though the need to discuss and prepare a joint regional strategy was already established in 2008, as indicated above, ***the RAWS for the Americas was only adopted in Barbados in 2012***. Moreover, as highlighted by a 2015 OIE survey, its level of dissemination at country level remained constrained (only four out of 25 respondents indicated that the RAWS had been published on the website of the national Veterinary Services and 7 indicated that their countries had established working groups to facilitate implementation of good AW practices and OIE standards). Likewise, the implementation of AW policies across the different Countries is largely uneven.[99] Out of 25 responding countries, nine had specific national standard for the AW during transportation by land, which, in six cases, was secondary legislation to ensure implementation. As AW at slaughter, 16 countries had national laws/standards, but only seven covered most of the elements in the relevant OIE standard and only one made specific reference to it. Again, only six countries had secondary legislation for the implementation of laws on slaughter. Finally, only four countries (i.e. Argentina, Canada, Costa Rica and the USA) had secondary legislation for both transport and slaughter.

Regional OIE Initiatives and Commission Support in Africa. It is widely acknowledged that ***AW policies are largely absent, legislation inadequate/outdated and enforcement lacking in Africa***. According to the OIE Baseline Study conducted in 2011 to assess the status of AW in the SADC Member States to inform the preparation of the Southern African Regional Animal Welfare Strategy, none of the 15 countries in the Community had a dedicated AW policy and the SADC Treaty and numerous SADC Protocols were all silent on AW.[100] Coherently, only Tanzania had a modern, comprehensive AW Act and two countries (South Africa and Namibia) had animal protection Acts, which, however, needed to be reviewed to extend their scope and coverage. More recently, at the 2015 First Continental Consultative Stakeholders Conference on Animal Welfare in Africa, the participants noted: "*that African countries were at different levels with regard to animal welfare*

[98] For more information on these BTSF-funded workshops, refer to Table 3.1 above. Two more, multi-country events have been funded by the BTSF programme in the region, i.e. (i) a seminar on the EU Legislation on Poultry Meat Hygiene and Official Controls held in Brazil (September 2010), and (ii) a Workshop on Animal Welfare during transport and at slaughter in Chile (June 2011), attended by 77 participants of some 15 countries of the region. However, it is not clear if the OIE standards were illustrated and/or OIE representatives attended these events.

[99] Glass E, Kahn S, Arroyo Kuribreha M, *Awareness and implementation of the regional animal welfare strategy for the Americas: a questionnaire.* Rev Sci Tech. 2015 Dec; 34(3):673-88.

[100] Cox J.H., Mapitse N.J. & Mtei B.J., *Animal welfare in OIE Member Countries and Territories in the SADC region: summaries of baseline country assessments*, OIE Sub-Regional Representation for Southern Africa, Gabarone, April 2011.

laws, legislations and standards. The laws are either lacking or not adequate or inadequately enforced. Similarly, the participants noted that despite Africa MS being signatories to the OIE standards, there is limited understanding of the standards and minimal compliance with the standards."[101]

Still, in the last years, some important initiatives have been undertaken to improve this situation and support the implementation of OIE AW standards. An umbrella body – the ***Pan African Animal Welfare Alliance (PAAWA)*** - was established to coordinate all AW activities in the continent, lobby government through the African Union, and establish the Africa Animal Welfare Declaration. At its inaugural Conference held in 2013, the need for PAAWA to spearhead the development of a Regional Animal Welfare Strategy (RAWS) was confirmed. A first concrete step in this direction was the recent development of ***regional AW and action plan towards compliance with OIE standards and the development animal welfare good practice in the IGAD member countries[102] for the 2017-2021 period***. The OIE reviewed this strategy to verify its conformity with its standards.

The Commission provided instrumental support towards the above recent, regional/sub-regional achievements, through the VETGOV programme. In particular, this programme (i) co-founded the first Continental Consultative Stakeholders Conference on Animal Welfare in Africa (Mainstreaming Animal Welfare in Africa) held in Kenya on late 2015. Financial support was also provided by World Animal Protection, the Brooke Hospital for Animals, the Donkey Sanctuary and the USAID (through the Standard Methods and Procedures in Animal Health project), while technical support was extended by the OIE and FAO; and (ii) supported the development of the IGAD RAWS and Action Plan, financing the organization of a regional validation workshop held in Addis Ababa in early August, 2016. OIE (together with FAO and animal welfare organizations, such as Brooke, World Animal Protection, African Network of Animal Welfare, PAAWA and Donkey Sanctuary) was among technical partners in attendance. ***Differently, the EC did not provide bilateral support to African countries.*** Thus, specifically looking at the selected countries in the region, the only relevant EC AWIA concerns the BTSF trainings on AW organized in Europe, which was frequently attended by ***Namibian*** participations (in 7 different years, the second most constant participating country in the region, after Morocco).

Regional OIE Initiatives and Commission Support in Middle East. Australia provided assistance to the Gulf Cooperation Council to develop a regional animal welfare strategy since 2005, but the RAWS for the Middle East Region, broadly mirroring the structure and the provisions of the successful Asian model, was only adopted in 2014[103]. The Middle East Animal Welfare Action Plan 2016-2019 was only recently adopted (during the 84th General Session). During the period under review, ***little progress in terms of the implementation of the OIE AW standards in the region was recorded***, as clearly reported at the latest regional seminar for OIE National Focal Points on Animal Welfare[104]. A working session focusing on the major gaps on the handling practices on transport in the Middle East reported that AW legislations and regulations are largely missing, incomplete, outdated and barely disseminated to and implemented by the stakeholders and the public, nor enforced or

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[101] AU-IBAR, *Final Communique – Animal Welfare Continental Consultative Stakeholders Conference*, December 2015, pages 3-4.
[102] Intergovernmental Authority for Development (IGAD) member states include: Djibouti, Eritrea, Ethiopia, Kenya, Uganda, Somalia, South Sudan and Sudan.
[103] Middle East - Regional Animal Welfare Strategy (2014-2019).
[104] See, Mission Report for the Regional Seminar for OIE National Focal Points on Animal Welfare (Middle East) 6-7 April 2016, Amman, Jordan.

sanctioned by the competent authorities. An exception to this negative picture is represented by the United Arab Emirates, which first published its animal welfare law in September 2007[105] and, then, received technical assistance from the Australian DAFF to write the by-laws and train inspectors responsible for their implementation.

Overall, the support provided by the Commission towards the implementation of the OIE AW standards (and to AW in general) to this region has been very limited. No AW dedicated workshop was organized and STM conducted under the BTSF programme, and the participation of representatives of countries in the region to the trainings on AW organized in Europe has been quite limited, with only Egypt having participated to these events in several (5) years. The Commission funded two AW training workshops at regional/sub-regional level through TAIEX (in Jordan and Lebanon), which saw the participation of the OIE representatives. Finally, the Commission and the OIE jointly organized a workshop on AW at the time of killing for disease control purposes in Egypt to deal with the national measures adopted by the government to combat bird and swine flu. Indeed, in April 2009, the People's Assembly of Egypt had passed a law regulating the trade in live poultry and, during the same session, the Parliament also ordered the executive branch to kill all 300,000 pigs in the country. The workshop was organized in November 2010 by an OIE Collaborating Centre in co-operation with the Egyptian Ministry of Agriculture and with support from EU. Although only partially relevant for the present Study, this event provides a vivid example of ***the close, 'out-of-box' collaboration between the EU and the OIE***.

7.5. Impact of EU AW Activities on Competitiveness

What is the impact of EU support to OIE on the competitiveness of the EU producers and operators vis-à-vis imports to the EU from non-EU Countries?

(i) To which extent has the EU influenced the OIE standards?

The EU has been a major contributor to the development of OIE standards and managed to achieve a notable degree of alignment with the provisions of EU AW standards in most areas, but AW standards at slaughter for poultry. It could play a smaller role in agenda setting and some of the EU AW standards with major cost implications for EU producers and operators (pig raising, laying hens) have remained out of the scope of OIE recommendations in the period reviewed here and are scheduled for release in the near future. Some of the OIE AW standards approved (broilers, maritime transport) fall short of having explicit provision on density of animals that could in theory have triggered some consequences on differential in unit production costs, but these consequences have often failed to materialise due to concrete business practices naturally aligning towards EU provisions for other reasons.

(ii) To which extent the existence of OIE international standards has influenced the competitiveness of EU producers and operators?

For the reasons explained above there is prevailing consensus among survey respondents (see Annex C – Table C.22) that a full harmonization of the working conditions (and, consequently, of the cost structures) between EU and non-EU contexts has not been achieved yet, and would require more prolonged effort. This perception is particularly acute among operators in the beef, pig and egg industry, while those in the poultry and dairy industries reported more positive views. So a

[105] Federal Law no. 16/2007 concerning Animal Welfare.

more positive appreciation correlates with areas where OIE standards at farm have been approved.

The case of operators in the beef industry is somehow different. In fact, no sector-specific EU regulation has been issued for beef cattle, which means that the sector falls under the provisions of the Directive on AW in Farming and the Directive on the protection of calves, whose impact on costs is, however, generally deemed as marginal. The absence of a specific Directive has led to inhomogeneous interpretations at the national level of the provisions of the general directive on farming, including, in some cases, the direct incorporation of EFSA opinions. This has apparently translated in certain MS into a substantial impact on investment costs for intensive cattle raising, particularly fattening. However, operators in this sector also face structurally different conditions from competitors in non-EU Countries where free range operations prevail. EU producers and operators' complaints focus on the burden that the current implementation of the EU legal framework pose on their domestic intensive production systems, but nevertheless hold an overall marginally positive appreciation of the impact of the OIE standards internationally. They therefore feel at a competitive disadvantage because of the domestic AW standards, and not because OIE standards (that do not include provisions on density) have not done enough to fill the gap, as they could do very little on Countries already operating extensive farming practices. Actually the specific impact of these standards on competitiveness as regards both the raising of cattle and transport is deemed negligible or at any rate largely neutral when not slightly positive (see Annex C – Table C.15).

(iii) *To which extent the EU international activities and support to OIE have contributed to facilitate the implementation of OIE animal welfare standards in the EU?*

The contribution to facilitate the implementation of OIE AW standards in the EU in areas not superseded by more stringent EU legislation has mainly consisted of awareness raising activities aimed at the EU NFP-AW during global conferences and the OIE regional meetings, but apart from these activities aimed at focal points little other training or technical assistance has been specifically undertaken by the OIE (with or without the Commission support) to foster the implementation of AW standards not covered by the EU legislation,[106] i.e. beef and dairy cattle farming, in the EU, because priorities in Europe have been represented by AW standards at slaughter and at transport. In the EU, the welfare of dairy cows (as well as of beef cattle) is governed by: (i) Council Directive 98/58 concerning the protection of animals kept for farming purposes, ii) the Directive for the protection of calves; and (iii) the Recommendation concerning cattle adopted by the Standing Committee of the European Convention for the Protection of Animals Kept for Farming Purposes. Since the EU ratified the European Convention, the Recommendation concerning cattle is due to be applied by Member States.

[106] In the EU, the welfare of dairy cows (as well as of beef cattle) is governed by: (i) Council Directive 98/58 concerning the protection of animals kept for farming purposes; and (ii) the Recommendation concerning cattle adopted by the Standing Committee of the European Convention for the Protection of Animals Kept for Farming Purposes. Since the EU ratified the European Convention, the Recommendation concerning cattle is legally binding to the MS and the provisions laid down in the recommendation shall be applied within the EU. As with the Council of Europe Recommendation, farmers who do not respect the OIE standards may find it difficult to establish that they have taken 'all reasonable steps to ensure the welfare of animals under their care' as required by Directive 98/58. Thus, in principle, considering that all the EU MS are members of the OIE and accordingly agreed to the dairy (beef cattle) standards, they should implement them. However, the collected evidence and the review of secondary sources suggest that the actual situation is likely to be different.

The degree of familiarity with and the application of the OIE standards varies across sector but remains far from unanimous as it is the case for mandatory EU AW standards. Awareness of OIE AW standards actually ranges from some two third of EU survey respondents for the AW standard on beef cattle (the first to be introduced) to some half of respondents for that on dairy cattle (introduced in 2015). Practical consequences in implementation are also likely to vary accordingly and being more limited in the case of dairy. For instance, 2016 FVO reports of audits carried out in EU countries (such as Poland, UK, Ireland) to assess the suitability and effectiveness of the measures in place to the welfare of cattle on dairy farms do not make any reference to the relevant OIE standards.[107] Thus, the introduction of '*welfare legislation at EU level for dairy cows in order to achieve harmonisation of Member State legislation and to address the range of welfare issues that affect the millions of dairy cows in Europe*' put forward by an evaluation carried out in 2010[108] seems to be still relevant and valid.

<u>What is the impact of EU support to OIE on the competitiveness of the EU producers and operators vis-à-vis imports to the EU from non-EU Countries?</u>

(iv) To which extent has the EU influenced the policy of non-EU Countries towards OIE standards?

There is overwhelming consensus among both EU and non-EU survey respondents that the EU was very influential in terms of putting AW on the agenda of many non-EU Countries and facilitating the transposal of OIE AW standards in their legislation. Among EU producers and operators, only those in the egg sector disagree with the fact that EU international AW activities helped to create a shared understanding of AW issues and responsibilities at global level (see annex C – Table C.22), while non-EU operators agree on the role of the EU in this sense (see annex D – Table D.38). The EU has been also very proactive in fostering active participation in the standard setting process, although it could do little to tackle shortcomings in the availability of basic research among partner Countries and in redressing their tendency not to consult with stakeholders' organization. The new Governance mechanism being proposed for discussion at OIE should radically tackle the second issue by directly invovling stakeholders through the establishment of a stakeholders' forum.

(v) To which extent has the existence of international OIE standards influenced the competitiveness of non-EU producers and operators?

The wide majority of non-EU operators surveyed agree that OIE AW standards at slaughter had either a positive or a neutral impact on the competitiveness of their industries by improving product quality and productivity (and the few dissenting views pointing to negative impacts concentrate in the poultry industry). Similar considerations extend to AW standards for cattle and broilers while those on dairy are too recent to have elicited any notable reaction (see annex D – Table D.20). Also OIE standards at transport have been positively assessed overall, but there the level of

[107] See, (i) EC, DG SANTE, Final Report of an Audit Carried Out in Poland from 11 April 2016 to 15 April 2016 in order to Evaluate the Measures to Ensure the Welfare of Cattle on Dairy Farms, (ii) EC, DG SANTE, Final Report of an Audit Carried Out in the UK from 19 September 2016 to 23 September 2016 in order to Evaluate the Measures to Ensure the Welfare of Cattle on Dairy Farms, (iii) EC, DG SANTE, Final Report of an Audit Carried Out in Ireland from 15 February 2016 to 22 February 2016 in order to Evaluate the Measures to Ensure the Welfare of Cattle on Dairy Farms.

[108] GHK Consulting with ADAS UK, *Evaluation of the EU Policy on Animal Welfare and Possible Policy Options for the Future*, 2010.

awareness among producers and operators is clearly much more limited (45% of respondents have never heard about them, compared to 33% for those at slaughter), and their transposal as national standards has often been as merely voluntary guidelines or recommended best practices.

(vi) To what extent have the EU international activities and support to the OIE contributed to facilitate the implementation of animal welfare standards in non-EU Countries?

No EU international activity has directly facilitated the implementation of OIE AW standards at farm in non-EU Countries, with the possible limited exception of broilers in Thailand. Most of the EU support activities have concentrated on AW standards at slaughter, with particular reference to the poultry industry. This is also the policy area where AW standards were more clearly and consistently transposed in the Countries considered. The notable exception is represented by the Neighbourhood Region where whatever transposal took place, this was mainly on AW standards at transport (for more detail, see annex B)

8. THE IMPACT OF THE EUROPEAN NEIGHBOURHOOD POLICY AND TAIEX

8.1. Introduction

This case study reviews the support provided to AWIA through TAIEX and other Neighbourhood Policy TA instruments, with a specific focus on Ukraine and Lebanon. It assesses related strengths and weaknesses as perceived by local counterparts, and identifies the mechanisms through which they have contributed to the enhancement of AW capacities in beneficiary Countries. Synergies with other assistance programmes, particularly those carried out by OIE, are also reviewed. Finally, conclusions are drawn about the impact these activities might have had on the competitiveness of EU and non-EU producers and operators. The case study is based on an interview programme and a review of literature (see Annex A). Interviewees have included Government officers, OIE focal points, business associations, as well as independent experts and AW NGO.

UKRAINE

8.2. Background

The basic legal framework on AW in Ukraine has so far been represented by ***the 2006 Law 3447-IV on the Prevention of Cruelty Against Animals***.[109] This law was approved in concomitance with the first wave of international interest in AW that followed the decision to expand the mandate of OIE. It can therefore be indirectly considered as a first result of that climate, and of the raised awareness among OIE Member Countries about the increasing importance of ensuring some degree of AW protection in their legal systems.[110] More or less at the same time, the Lviv State Veterinarian University[111] started playing a pioneering role in disseminating some scientific knowledge on the subject[112] as part of their courses on animal hygiene, although development of curricula since then has lagged behind.[113] After the approval of the basic framework law, the farm AW agenda somehow lost momentum until 2011-2012, when two Ministerial Decrees were issued (and namely the Ministerial

[109] The Law of Ukraine #3447-IV "On animal protection from cruel treatment"/ The official website of the Verhovna Rada of Ukraine www.rada.gov.ua/

[110] The Law falls short of mandating the respect of the five fundamental animal freedoms, but nevertheless states three basic principles. In particular: (i) it forbids the use of devices that may harm or injure animals; ii) calls for the avoidance of cruel treatment, beating of animals or excessive population densities; and iii) outlaws the breeding of animals with identified genetic variations or hereditary aggressiveness and the undertaking of genetic modification.

[111] This was then followed by some other major Agrarian Universities of the Country, among others Kiev, Kharkov, Vinnytsia.

[112] Legal developments at that time were not necessarily accompanied by parallel progress in the educational infrastructure. Approved curricula taught at universities are often outdated. Their update procedure is long and cumbersome. The level of knowledge available on AW has long remained a major gap. To remedy this state of thing, some large enterprises have begun pilot cooperation projects with universities directly at the company premises. When these employers cooperate with a university, this, first of all, gives priority to what the employer needs and, only secondly, to what is required in the curriculum. Certain business associations particularly in Western Ukraine (Rivne, Lutsk) with the support of donors even felt the need to upgrade the skills of State Veterinaries there to make them better aware about the new requirements and increase their level of competence. Hence, company specialists had to train State officers on how to make controls more effective.

[113] http://www.isah-soc.org/userfiles/downloads/proceedings/2005/sections/91_vol_2.pdf

Decree October 25, 2012 #652 on *"Procedures for use of animals in agriculture"* and the Resolution of the Cabinet of Ministers of Ukraine November 16, 2011 #1402 *"On approval of animal transportation rules"*). ***The two decrees detail some specific implementation provisions on broad AW standards respectively at farm and at transport***.[114]

As concerns AW standards at transport, the Ukrainian Decree included general provisions in compliance with OIE principles on feeding and density of animals, the design of transport vehicles and loading and unloading techniques. However, it remained silent on several other more technical aspects, such as planning of long-term and short-term transportation, certification of companies and drivers, training of drivers, routes approval, transportation logs, etc. Indirect references to other AW issues particularly at slaughter could be construed through other pieces of the veterinary legislation, but an organic set of norms on the subject is still missing. ***Some basic provisions on AW at slaughter were included in the 2012 Order on Procedures for the Use of Animals in Agriculture***. These included the requirement that animals should be slaughtered in a state of loss of consciousness and the need to have separate facilities for keeping animals before slaughter and areas where stunning and slaughter takes place. Apart from that, the Country has never had any comprehensive and all -encompassing regulation of AW standards at slaughter. A consultation group had been created to this aim with, among others, representatives of the only farm animal NGO active in the Country and the Lviv University, to update the legal framework in the light of the OIE standards that had remained until 2014 the reference benchmark for the Country.

A 2014 WAP assessment of the State of AW in the Country[115] found Ukraine characterized by a ***complex AW governance***. The 2006 law had made AW a collective responsibility of the Council of Ministers, while practical implementation was delegated to the different Ministries based on their areas of responsibility. At least until 2010, the Ministry of the Environment and Natural Resources had taken the lead in issuing decrees/orders on AW for wild animals, at zoos, etc. These were the subjects that attracted most of the public opinion’s attention and where the activities of all but one Ukrainian AW NGO concentrated. Other topics had received comparatively less attention. This also meant that there was a notable lack of coordination of action between the various executive powers involved at national, regional and municipal level. Finally, and even most importantly, this also resulted in ***unclear enforcement mechanisms*** concretely in place.[116]

8.3. TAIEX and ENP Support Provided by the EU

TAIEX. As many other Countries in the region, ***Ukraine has long been only rather marginally involved in TAIEX–funded AW support activities***, and assistance

[114] One of the first academic paper published in the Country on the subject of regulatory AW in 2015[114] highlighted some major convergences on matters of principle, but also pointed out gaps to be filled between the mainstream principles of the EU AW Standards at farm as highlighted in Directive 98/58 and the system very broadly outlined in the relevant Ukrainian legislation he work of Melnychenko O.P and Bogachyk O.G. Analysis of differences in legislation on animal welfare in Ukraine and the European Union / Economy and Agriculture Management, #1 2015, p/1-5

[115] World Animal Protection, Ukraine Animal Protection Index, 2014

[116] This up to the point that it could appear unclear whether these orders had remained in a draft format or actually enacted given the very limited evidence available about their enforcement until as late as 2014. [116] World Animal Protection, Ukraine Animal Protection Index, 2014

received was generally within the framework of OIE-related broader regional initiatives. TAIEX funded the participation of Ukrainian representatives to the Workshop on Animal Welfare in Europe organised by the Austrian Presidency in 2006, and to the EU Veterinary Week in 2010. TAIEX financing was also instrumental to ensure their participation to the second global OIE conference. Ukraine was not a recipient of any other EU support under other EU financing facilities in the 2005-2015 period. In 2016 Ukrainian representatives participated together with other Neighbourhood Countries to a BTSF-funded training session and study visit on AW standards at slaughter carried out at the JRC in Milan, followed by a visit to the EU Pavilion at the Expo.

Ukraine hosted the TAIEX-funded 2007 *Seminar on the Dialogue and Common Activities between the OIE Member Countries of the EU and other OIE Member Countries of the OIE Regional Commission for Europe*. This event was organised by the Ministry of Agricultural Policy of Ukraine and was targeted to the official veterinary services, representatives of the private veterinary sector, university teachers and researchers, and political authorities, but not extended to business associations, private operators or other stakeholders' organisations. The event had a massive participation of over 450 attendants, being by far the most actively participated TAIEX event in the whole period, accounting for about one third of the total TAIEX participants in the region. It certainly contributed to create ***that overall co-operative climate with OIE*** that characterised Ukraine during those years.

However, while notable progresses on major OIE SPS standards was generally acknowledged at that time, incorporation of OIE AW standards into the Ukrainian legislation had comparatively lagged behind. As late as 2014 the Country still scored E on a scale from A to G in this respect in the WAP Index and some tangible progress in incorporating OIE standards was recognised only in the field of AW at transport. In 2013, USDA seemingly still considered Ukraine as partially non-compliant with the trade-relevant standards established by the OIE.

One of the main strengths of TAIEX assistance was the support given to the establishment of policy dialogue with OIE on AW, to some extent irrespective of subsequent concrete achievements in the Country that were made difficult by the complex and cumbersome AW Governance overall. This is further demonstrated by the fact that Ukraine hosted in 2012 the first OIE seminar for NFP-AW to set the path for the establishment of an OIE Regional Commission to improve the implementation of AW standards in Europe, which proved instrumental to the creation of the OIE Regional Platform (see case study on OIE). ***Moreover, TAIEX was certainly of great help in ensuring continuing exposure to international events***. Two weaknesses are reported by interviewees, particularly business associations. Firstly, TAIEX projects did not involve stakeholders and industry operators, but their audience remained restricted to officers, veterinarians and academic circles. Secondly, the Country – despite its application to be certified for exports to the EU – remained for a long time cut off from any support in facilitating compliance with equivalence of EU AW standards at slaughter. In 2009-2010 – the dates of the latest audit reports available on the subject – FVO inspectors at slaughterhouses for red meat could note that OVs at *"both slaughterhouses were not aware of the EU requirements on animal welfare at the time of slaughter or killing"*.[117]

[117] Final report of a 2009 mission carried out in Ukraine from 20 to 29 October 2009 in order to evaluate the operation of controls over the production of fresh meat destined for export to the EU. DG (SANCO) 2009-8282.

ENP Support. The 2014 ***Association Agreement between Ukraine and the EU has represented a dramatic game changer and a major determinant of future developments in the field of AW there***. The agreement opened trade opportunities for agricultural exporters by allowing the entry of Ukrainian animal products into the EU market at zero tariff quotas, which represents a huge incentive for local producers. The 2014 Association Agreement includes SPS provisions to align Ukrainian AW legislation to that of the EU with specific references to 1) stunning and slaughter of animals; 2) transport of animals and related operations; 3) farming animals. To this aim, the Ukrainian Government is to submit a dedicated strategy detailing its staged approach to approximation and this strategy has to be agreed by the EC. The agreement caused important changes in the governance of AW in the Country. First, a formal working group in charge of the harmonization of Ukrainian legislation on AW was established in 2014. The working group is composed of officials from the State Veterinary Services of the Ministry of Agrarian Policy and Food, scientists in AW from Ukrainian Universities and producers of animal products, but no longer included representatives from NGO organizations, as was previously the case.[118]

Secondly, the lack of a clear enforcement mechanism for AW provisions was finally tackled. In November 2014 the Parliamentary Committee on Agrarian Policy and Land Relations prepared the bill #0906 *"On state control carried out to verify compliance with the legislation on foodstuffs and fodders safety and quality, animal health and welfare"*[119] that is currently undergoing its second reading in Parliament. The proposed legislation is to ensure compliance with the *Acquis Communautaire*,[120] by incorporating into the Ukrainian legal system the basic principles and requirements for the organization and implementation of State controls over the compliance with EU food, fodders, animal health and welfare provisions, including the HACCP system. When approved, the bill will make finally possible the introduction of an effective and modern state control system similar in all respects to what is now in force in the EU. This enhanced regulatory framework and the reputational effect this will have in terms of market credibility ***is also expected to boost exports also to other non-EU countries as well***. Moreover, it will also have an impact on industry credibility *vis-à-vis* Ukrainian consumers that will become more confident in food safety, as controls will now be targeted not only on final food products, but along all stages of the production chain. AW considerations have extensively informed the Ukraine ENP Country Strategy. The idea that the enforcement of SPS provisions is a component of consumer protection, together with the need to ensure a better separation between the protection of producers and controllers' interest, lies behind the recent decision taken by the Ukrainian government to move responsibilities for the implementation of AW legislation from the State Veterinary Services attached to the Ministry of Agriculture to the newly created State Service for Food Safety and Consumer Protection that can hire new staff with a new mentality for this purpose.

Thirdly, AW had finally to become the subject of a ***dedicated Government strategy***. To this aim, TAIEX was used late in 2015 to fund a peer-review mission composed of EU MS representatives on the sanitary, phytosanitary and animal welfare legislation of

[118] Ministry of Agrarian Policy and Food of Ukraine: Discussing of welfare issues of various kinds of farm animals to further adapt the relevant legislation to EU standards http://minagro.gov.ua/node/15320

[119] This is to complement the key approval in 2015 of the framework law *"On basic principles and requirements for food safety and quality"*. The further introduction of an effective system of food safety should be the next step in this direction.

[120] Harmonising Ukrainian legislation with EU legislation has also long been in the EU ENP Agenda, particularly as concerns supporting the approval of bill #0906. In fact, the bill is to incorporate the provisions of EC Regulations #882/2004, #854/2004, #669/2009, #136/2004, Council Directive, 97/78/EU and Decision #2007/275.

the Country to provide suggestions for a possible roadmap for approximation as a basis for subsequent negotiations with the EU. This eventually resulted in the ordinance of the Cabinet of Ministers of Ukraine #228- of February 24, 2016 approving a comprehensive strategy for the implementation of the Chapter IV (Sanitary and Phytosanitary Measures) of the Section IV "Trade and issues related to trade" of the Association Agreement as a basis for discussion with the EU. In particular the following timeline was tentatively proposed as reported in Table 8.1 below.

Table 8.1 – Strategy for implementation SPS measures – proposed timeline for AW matters

Measures	EU legislation	Preparation year	Implementation year
VIII. Standards of animal welfare (appendix IV-B)			
63. Measures applied to stunning and killing of animals	Council Regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing	2018	2019
	Commission Implementing Decision 2013/188/EU of 18 April 2013 on annual reports on non-discriminatory inspections carried out pursuant to Council Regulation (EC) No 1/2005 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97	2016	2018
64. Measures applied to keeping of animals	Commission Decision 2006/778/EC of 14 November 2006 concerning minimum requirements for the collection of information during the inspections of production sites on which certain animals are kept for farming purposes	2016	2018
	Council Directive 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens	2016	2018
	Commission Directive 2002/4/EC of 30 January 2002 on the registration of establishments keeping laying hens, covered by Council Directive 1999/74/EC	2016	2018
	Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production	2016	2018
	Council Directive 2008/119/EC of 18 December 2008 laying down minimum standards for the protection of calves	2017	2018
	Council Directive 2008/120/EC of 18 December 2008 laying down minimum standards for the protection of pigs	2017	2018

Negotiations with the EU on SPS matters, however, have taken much longer than expected and a finalised version of the timeline of the strategy and related commitments is not yet available at the time of writing this report. These delays go in parallel with the delayed approval of the bill #906. The strategy as outlined in the original Government ordinance meets some internal resistances, because alignment with EU AW standards will imply the repeal of some Soviet technical regulations and infrastructure will consequently become outdated and will have to be rebuilt / bought from scratch. Since many companies are *de facto* company towns and sources of financing for this massive refurbishing programme in such a short time are deemed not existent, there are concerns this could cause social distress in several areas hit by the need to find extra financing to fund continuation of activities as going concerns. SME and companies targeting the domestic market or with little interest in developing exports to the EU show some notable resistances to change and think they have been badly affected by the new harmonisation requirements. Limited knowledge of new management techniques and the difficulties in training a relatively old workforce (80% of which would reportedly be in the pre-retirement age) into new subjects are also among the obstacles to change frequently voiced in the Parliament.

To help with the reforms ahead***, TA support provided by the UE to Ukraine on AW matters has been substantially scaled up.*** Since 2016 a dedicated Twinning project *"Assistance in the application of sanitary and phytosanitary measures within the Association Agreement between Ukraine and the EU "Food Safety"* has been fielded. The project also includes modules on AW, and in particular deals with preparing legislation and delivering training on AW at transport and slaughter. A first module of the Twinning carried out a comparative analysis of existing Ukrainian legislation on AW standards at transport and slaughter and EU requirements to come to proposed draft legislation. A training module on AW at slaughter and on the additional requirements of Regulations 853-854/2004 was also carried out. Over the last few months, the subproject *"Implementation of EU legislation requirement, which regulate animal protection during transportation"* carried out three seminars addressed to the staff of the State Agency for Food Safety and Consumer protection and other Official Veterinaries in various locations.[121] Other events were organised for the Agency staff in Odessa, Dnipropetrovsk, Zaporizhia, Kirovohrad, Kherson, Luhansk, Mykolaiv and Donetsk regions. [122] ***The choice of focusing the Twinning on EU AW standards during transport and at slaughter instead than on the sectoral AW regulations appears controversial to some stakeholders and was openly criticised by others***. However, it appears that it was mainly motivated by the need to provide in-depth training to all the staff of the newly created Agency all across the Country on few well identified subjects rather than spreading assistance on too many topics for too few recipients with could have caused absorption capacity problems.

8.4. Synergies with the OIE Regional Strategy, IFI Activities and Other Assistance Programmes

OIE. Ukraine is a good example of the conundrum created by the implementation of the OIE Regional Platform in Eastern Europe and ***the problems of synchronization in coordination of policy support it created with TAIEX and the other instruments of the Neighbourhood Policy***. Some seemed to have perceived a tacit division of labour between the EU and OIE, according to which the first would focus in the Balkans while the second would mainly take care of the rest of Eastern Europe –

[121] http://consumer.uz.ua/index.php?page=news&id=1252. These were attended by more than 50 participants

[122] http://www.gudpss.zp.ua/news_9_50.html; http://zt-dpss.gov.ua/%D0%B1%D0%B5%D0%B7-%D1%80%D1%83%D0%B1%D1%80%D0%B8%D0%BA%D0%B8/seminar-na-temu-implementaciya-vimog-zakonodavstva-yes-yakim-regulyuyetsya-zaxist-tvarin-pid-chas-perevezennya/

including Ukraine, at least until 2014. However, this setting suddenly collapsed with the approval of the Association Agreement and the related approximation requirements. Therefore, when OIE assistance in the region finally scaled up with the establishment of the Regional Platform, the training delivered by OIE through TOT schemes became *de facto* partly irrelevant as the Country was given other objectives. At the same time, technical assistance under the Neighbourhood Policy was not ready to fill the gap and replace the first, because of the inevitable inertia related to project preparation. Ukraine, therefore found itself is a sort of limbo for a couple of years between 2014 and 2016 when the old patterns of support had become partly outdated, and the new ones were not ready to replace them. This was also crucially compounded by the uncertainty created by the Governance changes under preparation at the Government level and the need to outline a strategy. The result was that for a couple of years the Country could get TAIEX assistance only for the preparation of the strategy itself.

IFI. As a matter of fact***, one of the biggest drivers towards compliance with EU AW standards has been represented by the IFI, and particularly EBRD***. In fact, companies seeking access to financing need to demonstrate compliance with the EU AW standards, or develop an action plan to achieve compliance, a condition that some resent as unfair, because assistance about compliance with AW standards is not provided by the State but *de facto* restricted to EBRD clients. In the last few years, Ukrainian agribusinesses have been massive recipients of IFI financing (see related case study). IFC has been present in Ukraine since 1993, and has invested over US$ 1 billion in the agricultural sector through both direct financing operations (mainly as lender) and support to local banks to provide access to financing to small farms. The largest player in the Country has been by far the EBRD, that has invested over US$ 11 billion overall, including ten large operations as part of its Private Sector Action Plan in 2014. For all its agricultural investments in the Country, EBRD states that it applies EU AW standards. In comparison with IFC and EBRD, the EIB has been a relative latecomer to the agribusiness sector in Ukraine. Nevertheless, in the 2014-2016 period, its commitments in the Country have totalled € 3 billion, including an SME financing facility. The EIB has operated in Ukraine on the basis of an external lending mandate by the EU but until recently without a clear AW policy. On the contrary, there was an interrogation at the EU Parliament on whether EIB had inadvertently ended financing conventional cage-based egg operations there, which would be forbidden in the EU, but remains legal in the Country pending ratification of the approximation strategy and related provisions.

Many IFI have set up comprehensive advisory programs for the Ukrainian Government to support reforms in the agricultural sectors, but this does not appear these have ever covered AW issues. IFI have generally been in a position to assist their large investee companies with the implementation of state-of-the-art AW standards, meeting or more frequently even exceeding EU requirements, particularly in the poultry industry. However, their impact as providers of extension services to smaller operations is more complex as SME should get access to consulting services that are not so well developed in the Country, but have become *de facto* compulsory to receive financing in a number of industries, particularly poultry. ***To some extent, there seems to be a two-tier situation in the Country***. On the one hand, IFI-participated large companies targeting export markets have received state-of-the-art support in the field of AW, and reportedly reached very high AW standards often exceeding common AW practice in most EU MS. This has included the creation of *ad hoc* projects with the Agrarian Universities to train specialists in the company premises. On the other hand, smaller operations substantially lag behind, and face more difficulties in finding assistance in this respect. Notably, no bilateral international donor is currently filling this gap. There are preliminary indications that once the approximation strategy is approved FAO might get involved with the provision of on-the-field support

Other Donors. The main donor active in extension services for farmers and SME, USAID, is at odds in coping with these AW information needs. USAID staff have very limited familiarity with EU AW standards. It is unclear whether other bilateral programmes will fill this gap. In March 2016, the Swiss-Ukrainian project *"Creation of food safety control system based on risk assessment in the dairy production and sales cycle in Ukraine"* was officially launched in Kiev. The project is to assist the milk processing industry in improving the production of safe and high quality milk at the level of primary production, but AW considerations have hardly been included so far. The other major bilateral cooperation programme launched by the German Federal Ministry of Food and Agriculture *"Consulting Ukraine on the issue of agricultural trade within the Deep and Comprehensive Free Trade Area (DCFTA) between the EU and Ukraine*" has also been running for a year with the purpose of facilitating bilateral trade, but apparently does not cover AW issues.[123]

8.5. Impact of AW Standards on Competitiveness

Poultry Meat. Since the mid-2000s, ***the Ukrainian poultry industry has undergone massive consolidation and vertical integration***, with large industrial meat companies gaining control over their whole value chain - from feed production to processing and retail. The number of companies engaged in poultry production fell from 500 to 200 and production has increased at a pace of over 3% growth on a yearly basis, i.e. some 40% in the period. Ukrainian poultry meat production amounted to about 991,000 tons in 2016. The top five producers control almost the entire market, with 84.5 % market share. MHP, the leading firm, is the largest poultry meat producer in Eastern Europe and is projected to become the largest in Europe within 5 years. ***It already has a production capacity exceeding that of France's largest producers***. Currently around 35% of its production is exported abroad as against a Country average of 20%, and controls alone over 50% of the Ukrainian chicken meat market. Several sources have confirmed that the industry is hugely profitable. Structural conditions in Ukraine are so favourable that costs can be 20% lower than those of Brazilian competitors. EBITDA margins in Ukraine can reach as high as 30-40% or even more, as against a global industry average in the 5% to 15% range.

The largest importers of Ukrainian poultry are Iraq (accounting for 26% of the export market), the Netherlands (23%, where MHP has a processing plant), Kazakhstan (9%), and Uzbekistan (8%). Other importers include Germany and several countries in the Middle East, including Egypt, Jordan, Bahrain, Qatar, Saudi Arabia, Kuwait, UAE, and Oman. Ukraine received halal certification in 2014 and after then exports to Muslim countries significantly increased to compensate for the Russian ban on Ukrainian products. ***Due to a number of trade policy developments, exports of Ukrainian poultry are projected to increase significantly*** to the Gulf Cooperation Council countries, China and the EU in the next few years. A free trade agreement with the Gulf Cooperation Council should enter in to force in 2018 and this is expected

[123] The project has five goals: improving the political dialogue on agricultural trade within the DCFTA; 2. Increasing awareness of agricultural producers about agricultural trade within the DCFTA; 3. Analysis of information on agricultural trade within the DCFTA for the interested institutions and organizations in Germany (eg. for associations); 4. Increasing the export opportunities for Ukrainian producers and agricultural processing enterprises; 5. Improving the export opportunities of Ukrainian agricultural sector by providing corporate development services.

to double exports there. Due to a recent agreement, also exports to China are set to increase, and the DCFTA with the EU should entail the progressive removal of customs tariffs and quotas that is likely to boost poultry exports to the EU even more than is currently the case. To convey the flavour of the potential for expansion, some 67% of the Ukrainian poultry production capacity is currently certified for exports to the EU but the share of exports of poultry meat under the quota in the EU amounted to just 1.6% of the total production in 2016. Box 8.1 below provides, as an example, more information of MHP’s AW policy.

Box 8.1 – Animal Welfare and MHP

The main supplier of poultry meat to the EU is currently MHP. The company alone ships roughly 20% of its export production to the EU, and has practically become the monopoly supplier of Ukrainian poultry meat to the EU market, making use of all available quotas and exporting products even beyond the quotas, as the company can break even under a tariff regime. MHP is reportedly one of the more price-competitive suppliers of poultry meat to the EU. Apart from the EU market, MHP exports to the UAE, Yemen, Iraq, Kuwait, and Egypt and is obtaining accreditation for supplying poultry meat to Saudi Arabia as part of its sale diversification strategy.

As all IFC and EBRD investee companies in the region, MHP choose to comply with, or even exceeding, the most stringent EU AW standards for both tactical and strategic reason. Tactically, to avoid the AW argument being raised as an argument to build barriers to entry. Strategically, to exploit the benefits of investing in AW even in the absence of a willingness to pay for it, as is the case of Middle East countries, as well as the rest of Asia or the Ukrainian domestic market. Since this has become the IFI policy in the region, and 60-70% of poultry meat production in Ukraine envisages some kind of IFI financing, this has made all the region possibly one the best performing region in the World in terms of compliance with EU AW standards. Broiler density in IFI-financed operations in Ukraine falls within the range of EU targets and can range from 32 to 38 kg (average 36) per sq mt.

As other IFC-investee companies in Ukraine, MHP implement a Chinese Wall policy and is independently audited on compliance with AW standards. The existence of such independent audits proved a very strong argument against allegations made in the Dutch Parliament that poultry meat raised outside EU AW standards was imported and processed in the Country. Once the audits became known, the argument subsided in less than two weeks. According to interviewees, AW certainly requires additional capital expenditure, but then pays off over time in terms of indirect production benefits (better health, patterns of animal growth, etc.). It is certainly easier to implement in greenfield operations where infrastructure is built from scratch, state of the art equipment purchased and staff trained in line with best practice in husbandry techniques. Moreover, Ukraine has the additional competitive advantage that operations are heavily vertically integrated, which makes AW management much easier and straightforward. In the opinion of international investors Countries relying on contract farming – with the possible exception of Australia – would have had more difficulties in exploiting the benefits of AW and investing in it. Brazil is a possible case in point due to the fragmented structure of production there with thousands different producers.

From the point of view of the largest Ukrainian producers, one of the main obstacles they face in export markets is t***he lack of global accreditation body certifying the level of compliance reached with AW standards***. This would help win the a priori belief that the level of AW standards implemented by large operators coincide with the requirements of the legislation enacted in that Country. To reassure EU consumers MHP even decided to formalise its AW policy in 2016 and publish it on its website.

Eggs and egg products. Also the ***Ukrainian egg industry has undergone consolidation although not at the same levels as the poultry meat industry***. Today, large operators account for nearly 60% of a total egg production estimated at some 14.6 billion pieces per year. Three industry leaders have gradually emerged, and two of them are currently authorised for exports to the EU. These large operators are responsible for Ukraine exporting some 5% of the eggs it produces, a share that has doubled over the last few years and is further set to increase as demand from the Middle East and Central Asia is projected to grow and the Country has gained SPS access to the Israeli and Chinese markets. The leading producers actually have plans to increase their exports by 30% to 60% in the next few years, although not necessarily to the EU market.

As of today, ***only two Ukrainian companies have obtained permission to export eggs and egg products to the EU***. Their main export market is reportedly Denmark. So far, these products have been exported on a non-preferential basis, i.e. without using any of the duty-free quotas allocated with the Association Agreement. These have started being used only from January 2017. According to Ukrainian sources, this would be due to the bureaucratic difficulties importers would have faced to gain the right to use these quotas. On more substantial issues the Country still suffered from the lack of recognition of an equivalent State system of controls on salmonella which hindered any possibility of exporting table eggs. Because of that, Ukraine had to export the much less profitable eggs for further processing (category B). Since margins there are too low to justify transportation costs, it is more profitable for operators to directly process eggs into egg products, and then export them already as egg powder which is the product category where exports have actually concentrated.

It is widely acknowledged that Ukraine has always operated based on conventional cages and is not compliant with EU AW standards. The two largest producers have started conversion to enriched cages in 2016 and still need to get familiar with the new technology. There are no precise estimates of cost implications for Ukraine of this switchover. Compliance with EU AW standards is deemed to have substantial implications, since EU AW standard has both an investment cost and an operational cost component accounting alone for some 20% extra costs. Estimates made in Turkey pointed to a possible extra cost of complying with EU AW standards to the tune of some 12-13€ per hen.

Live animals*.* AW standards at transport are not considered a significant determinant of international competitiveness due to the limited importance of external trade of live animals overall. In 2016 Ukraine has exported just some 45,000 units of cattle and sheep and goats, as little as 3,300 pigs and 25,000 chickens.

Beef and Veal Meat*.* It is generally acknowledged that beef exports to the EU have a huge potential in Ukraine, but much more fundamental barriers have to be overcome than the rather negligible obstacles posed by compliance with AW standards for calves or the OIE recommendations. ***First of all to enter the EU market, Ukrainian producers must obtain European certificates of compliance as a precondition***. Although Ukrainian beef producers have started a procedure for accessing the EU market already back in 2008, when the European Commission was first requested to enable exports, Ukraine has been unable to pass the verification of its meat quality control system. A FVO mission visited the Country in 2009 and listed fifteen preconditions to be met. Ukraine quickly removed most of these obstacles, but then postponed settling the few remaining ones. One of the reasons for this is that - as mentioned before - the SPS control system had undergone a major restructuring in the period and the needed actions were deferred and have not been completed yet. Another major factor is represented by the ***budgetary crisis of the public finances hindering investment***[124].In spite of these difficulties the level of market interest in

[124] For instance, after responsibility for controls was moved to the State Agency for Food Safety and Consumer Protection the re-assessment of compliance with the OIE Animal Health's requirements has not even started. While Ukraine is trouble-free under most of items under the OIE "A" list regulating external trade, the Country has still to get a disease-free status under the trans-border diseases and diseases common for humans and animals criterion. Moreover, to trade with the EU Ukraine has to invest in infrastructure to be able to certify its BSE-free status. To get this status, the Government must allocate budgetary resources for sampling and examining animals older than 36 months. An estimated amount of UAH 35 Ml (some € 12 mn) would be necessary to organize this monitoring, but these figures have been budgeted in the agriculture development program running till 2020, which gives an idea of the Country's budgetary constraints.

Ukrainian beef meat remains keen. In 2016, representatives of Ukraine and Ireland discussed competitiveness of Ukrainian produce in the Irish market. In addition, Ukraine and Denmark signed a veterinary certificate in April 2016 to pave the way for exports of Ukrainian beef there. Apart from the EU, there are a number of countries already prepared to buy beef of Ukrainian origin. The Country is in talks with China, UAE, Egypt, Jordan and Israel to start a program of deliveries there once the OIE criteria above are met and the Country can ensure due compliance with halal and kosher religious slaughtering practices prevailing in the region.

Pig Meat*.* The exports of pig meat have been hindered by the presence in the Country of ***the African swine fever virus***. Some ninety cases were registered in 2016 and the disease is now spread all over the Country, and is no longer confined to its eastern districts bordering Russia as it was in 2012[125]. In order to improve the status of Ukrainian pig meat on global export markets, a solution to the problem of ASF is first needed. However, the approval of these provisions is meeting serious obstacles because of the disruption of well-entrenched traditions, particularly as concerns safety of produce obtained from household slaughtering and mandatory identification of pigs. In this scenario, compliance with AW standards is not deemed to play a major role given the impact ASF already has on operational costs of producers[126].

Dairy*.* It took seven years to gain permission for milk and dairy products to access the EU markets. Four audit missions had to be carried out by DG SANTE. Now 14 Ukrainian companies have got permission to export milk and dairy products to the EU. In the end of December 2015, the European Commission granted the first ten Ukrainian dairy producers access to the EU market. ***To some interviewees European export certificates are more worth as quality and health safety signals and competitive advantages in the domestic and non-EU markets rather than for export to the EU***.[127] However, according to statistics, the butter and

[125] The State Service on Food Safety and Consumer protection has identified a number of reasons behind the ASF epidemics in Ukraine including : 1) long procedures for pig stock reimbursement during disease liquidation; 2) no effective control of pigs and raw materials movement. In particular, because of veterinary police closure and the absence of appropriate power in the National Police service 3) lack of proper pig stock identification mechanism in the private sector 4) insufficient funding of the State Service on Food Safety and Consumer protection to implement the mandatory measures (including monitoring) 5) pork products and live animals traded in unregulated markets; 6) home based hog slaughter and further sale of slaughter products; 6) widespread neglect of biosecurity measures; 7) incomplete depopulation of wild boars; 8) no clear responsibility for controlling the spread of disease; 8) oversiimplification of state veterinary and sanitary control procedures.

[126] Major Ukrainian pig farms had to introduce very tough provisions to contain ASF. These include several rules concerning personnel: 1) some farms hire only urban residents to work with animals in order to minimize the possibility of contact with pigs in private households; 2) they can also forbid any contact between workers on the farm and employees working outside 3) a number of enterprises switched to the rotational work system. It means that the staff lives on farms in equipped rooms, provided with food and entertainments. In this case, workers stay on the farm for several days or weeks in a row. 4) sometimes producers carry out control by using drones in order to detect cases where, for instance, an employee from the "clean" area hangs out of the window to smoke, and then he returns to pigs in the same clothes. 5) companies built change facilities with "barrier connecting passages" 6) some companies even provide all employees with mobile phones, so that they do not bring their personal phones 7) some farms oblige meat processers to wash trucks which arrive at distance about 100 km from the farm. 8) specially trained employees are allocated for livestock transshipping, ramps cleaning and disinfection, etc.

[127] Ten Ukrainian dairy companies got permission to export products to EU http://www.eurointegration.com.ua/rus/news/ 2015/12/29/7042877

dried milk quotas were for the first time partially used in 2016 (46% and 30%, respectively) and AW is not considered a major issue in perspective.

Local Demand for AW Friendly Products

In Ukraine there ***is no domestic market for AW friendly products*** and there are little signs this is going to appear any time soon. Organic-certified production is an extremely niche market often imported from abroad. All the commercial interest operators have to become AW compliant is because of efficiency gains (poultry) and/or access to the export markets notably the EU.

LEBANON

8.6. Background

The legal protection of animals under the current laws is still rudimentary and outdated in Lebanon. Current AW legislation envisages maximum penalties of less than 15 US$ for vaguely defined instances of animal mistreatment, but according to local NGO sources this law has never been implemented over the past 20 years. There are no legal provisions for implementing AW standards at farm, at slaughter or at transport. AW is a relatively new field in Lebanon and is still poorly known by the majority of stakeholders. The country provides only basic academic support[128] and lacks a capacity for scientific studies and investigations. Few Lebanese NGO are active in the field of AW[129] and they mainly operate in the areas that raise more interest in the population, notably pets, animal in zoos, and campaigning against animals in circuses. Nevertheless, the Country is a signatory of OIE AW standards and of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES). However, the practical implications of this have reportedly been so far quite limited and have mainly translated into some supervision of AW conditions in control posts across the border and for quarantines in ports. Lebanon has recently subscribed to the OIE Regional Strategy but it is recognised that the level of implementation is still uneven in the region.

Since Lebanon is one of the largest importers of livestock from the EU, it has long raised considerable attention among EU-based AW NGOs investigating the destiny of these animals. This also reflected the intention of introducing legislation into the EU mirroring the provisions of the Australian law, which makes the exporters responsible for compliance with OIE standards also at slaughter in the Country of final destination, an area that EU authorities currently consider outside the scope of the Treaties. In particular, in 2013, Compassion in World Farming (CIWF) issued a report showing evidence of ***bad mistreatment of animals in public municipal slaughterhouses in Lebanon***, and particularly at the Beirut municipal slaughterhouse (Karantina). The report had a considerable echo in the EU media and was widely circulated within both the Commission and Parliament as evidence that action was needed. It was clear from the findings of the investigation that animals slaughtered there, lacked even the minimum standards set in the OIE recommendations and had to go through inhumane conditions. As a consequence of that report, several meetings were held by CIWF with

[128] Beginners' courses are available at the Lebanese University and at the American University of Beirut.

[129] BETA aims to improve the lives of animals in the region. It provides rehabilitation and a safe shelter. It works on preventing animal overpopulation and cruelty through education and direct action. Animal Encounter works on conserving wildlife by promoting awareness through education programs on biodiversity conservation; and rehabilitating wild species through captive breeding and releasing of wild animals when cured.

Lebanese Government officers to discuss animal welfare issues at Karantina and the possible measures to reduce animal suffering there were discussed, although there was no really clear legal basis for authorities to intervene. There were also disagreements on the impact of the phenomenon on the Beirut market as estimates about the market share held by Karantina varied from less than 10% to some 30% depending on the sources.

The CIWF report, however, attracted local authorities' attention also for reasons other than AW. In fact, it highlighted the very poor hygienic and environmental conditions at the plant, for which, conversely, a clear legal basis to take action existed. Therefore, in November 2014, ***the Karantina slaughterhouse was simply shut down for public health and environmental reason***s by order of Beirut's Governor, a decision that had some echo in the Lebanese media. The Municipality of Beirut was mandated with a complete rehabilitation of the abattoir and its waste system, and requested to construct a new municipal slaughterhouse elsewhere. No licensed alternative temporary abattoir was provided to butchers and meat traders to continue their operations in Beirut. Since the closure of Karantina did not have any notable impact on the Beirut meat market, it is commonly believed that operations there were simply replaced by a surge of illegal slaughtering activities in unlicensed facilities, but no detailed investigation has ever been carried out on the subject. At the moment of writing this report, events are still unfolding.

The Karantina case, however, raised the issue before National Government, and prompted the Ministry of Health to carry out a major investigation on food safety and animal health conditions in the Country. The investigation revealed a series of major shortcomings ranging from slaughterhouses operating without official veterinaries on duty, to widespread recourse to staff without proper health certificates, and most importantly, confirmed lack of waste treatment and waste emission permissions at abattoirs as a common practice with major environmental consequences. The investigation also confirmed widespread very poor treatment of animals at abattoirs and therefore animal welfare is now increasingly perceived not as a standalone issue of relatively limited practical significance as was in the past, but as ***one of the several facets of animal health and hygienic conditions and as an indicator of food safety overall***.

8.7. The Results of TAIEX and ENP Support

The Association Agreement between Lebanon and the EU that has been operating since 2006 does not include anything on AW. Similarly, official ENP documents for the country do not encourage any compliance with AW requirements or envisage measures accordingly (e.g. EU-Lebanon Action Plan 2006; Implementation of the ENP in Lebanon 2013; ENP Country Progress Report 2014; Action plan 2013-2015). Nevertheless, ***EU support has played a key role in steering the policy agenda in the field of AW*** in the Country by means of two-fold and synergic approach, building on growing animal health concerns on the one hand, and on increasing societal awareness about AW and the Country's international commitments on the other hand.

First, as a result of the participatory strategic planning promoted under the framework of the EU funded project on ***Agriculture and Rural Development Program***, the Ministry of Agriculture framed its 2015–2019 Rural Development Strategy. The Ministry established ten Technical Working Groups (TWG) to elaborate the strategy with the assistance of ARDP experts**.** One of these TWG specifically concerned Animal Health and Production issues (MoA 2014). The SWOT analysis conducted by the TWG and shared with the stakeholders highlighted how animal health and production sector suffered from a series of interrelated problems. These included: weak animal health system overall and related poor enforcement of animal welfare provisions and the absence of permanent animal health control programs; inadequate animal health and production laboratories; poor hygienic and AW conditions of slaughterhouses; and the absence of implementation of OIE international standards there, which hinders the export potential of animal products (MoA 2014).

As a result of this work, the Government approved the programme *"Increase Productivity and Competitiveness of the Lebanese Agriculture Products"* as the Country's agricultural development strategy. This includes a dedicated axis of intervention on *"strengthening animal health"*. The axis contains provisions on updating the animal health legislation and husbandry systems based on OIE international standards; developing the import/export and animal quarantine system in order to meet the international requirements; and strengthening MoA capacities in animal diseases surveillance, control and containment (MoA 2014), as well as enforcing relevant OIE AW standards. A Twinning project to help implement the strategy is currently being explored together with the Ministry of Agriculture. It is foreseen the Twinning will also have an AW component particularly focused on AW standards at slaughter.

Secondly, ***in 2010 a TAIEX workshop was run in Beirut on AW issues***. The workshop focused on wild animals and the CITES convention, and therefore only very indirectly dealt with AW standards during transport.[130] However, this was the first international event on AW in the Country and had a dramatic impact in raising awareness on AW and sensitising the population on the subject. According to a local NGO, the workshop proved instrumental in persuading everybody about the inadequacy of the AW legislation in place and the need to change and align it with the Country's international commitments. Following this workshop, Animals Lebanon launched a major campaign in November 2011 for a new draft law for the welfare of animals.

The Law was to address on the one hand Lebanon's commitment to relevant international agreements and recommendations, particularly to adopting the OIE standards and the CITES. It was also to address issues increasingly perceived by the Lebanese population such as the protection of endangered species, animals in zoos and the absence of laws governing the use of animals for scientific experiments and for entertainment purposes in circuses. Actually, the establishment of this regulatory system had become an urgent requirement demanded by a large section of the Lebanese public (see Chehayeb 2014).

The newly proposed law[131] was the result of the collective collaboration between officers at the Ministry of Agriculture and NGO activists, TAIEX experts,

[130] "Workshop on animal welfare" was held in Lebanon in May 2010. The workshop dealt with animal welfare issues related to the CITES and zoos. The workshop tackled possible future participation of Lebanon in this convention. The addressed topics included transportation of endangered species, handling at border inspection posts, and confiscated animals. In addition, the workshop dealt with animal welfare in zoos and in particular with the standards of the European Association of Zoos and Aquaria (EAZA). The Ministry of Agriculture was the beneficiary institution, and the workshop targeted relevant stakeholders from Ministries, NGOs, veterinary faculties, border inspection posts, and zoos (TAIEX AGR 41543, 2010).

[131] The law is composed of 11 chapters and 30 articles with clear definitions, objectives, conditions required for handling animals, specific requirements for different types of establishments, and sanctions and penalties. Article 2 states that the law aims to guarantee the protection and welfare of live animals and organize align practices with the related international

international AW organizations as well as single individuals and officers in Lebanon. After going through final Ministry review, a public consultation and the Council of Ministers review, the law was finally approved by the Council of Ministers in February 2015 and proposed to Parliament as a law of Government's initiative. To become fully enacted, the draft law still has to go through the Parliamentary committee assigned and voted by the plenary. It will become operational when finally published in the official gazette. All interviewees confirmed widespread awareness that, even when approved, its enforcement will pose substantial challenges in terms of implementation mechanisms, available resources, as well as – and possibly even most importantly - the availability of trained personnel, given the absolute paucity of AW specialists available in the Country to start any training of trainers programme.

Third, DG SANTE, TAIEX and OIE organised in 2015 a very timely "Multi-beneficiary workshop to improve welfare practices at the time of slaughter". The workshop worked on addressing AW standards during transport and at slaughter by meeting the relevant international OIE standards. The workshop clarified the EU legislation in the area of animal welfare and presented technical and practical assistance to state veterinarians, slaughterhouse operators and other relevant experts in order to improve slaughter conditions. The beneficiary institution was the Ministry of Agriculture, specifically the Animal Resource Directorate. The workshop had a regional dimension and targeted chief veterinary officers, slaughterhouse inspectors and operators from Lebanon, Egypt, Turkey, Palestine, Algeria, and Jordan. The workshop attracted considerable attention and it is only regretted that possibly due to its regional dimension relevant Lebanese stakeholders' organisations and other contributors to the strategy could not be invited to attend. To keep momentum on the subject, a few months later Lebanese representatives also participated into a DG SANTE *"BTSF Workshop on animal welfare during transport and at the time of slaughter"* within the framework of the EXPO in Milan. Participation to BTSF events is highly appreciated and sought after and waiting lists can be there for experts to participate given the outstanding reputation the programme has gained in the Country.

8.8. Synergies with other Donors and the OIE Regional Strategy

FAO and UNDP have been both very active in the Country although not specifically on animal welfare issues. FAO in particular has been promoting the local dairy industry together with IDF, an initiative that also indirectly covers AW. Moreover AW is also being dealt with within the framework of a joint FAO – Ministry of Agriculture project on surveillance and sustainability.

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conventions and regulations, especially OIE AW standards and CITES. Chapter IV deals with "Raising Animals in Farms and Their Use for Working Purposes" under which four articles are identified "Requirement to Obtain a License", "Submission of Periodical Medical Reports", "Slaughtering of Animals", and "Working Animals". According to the proposed law, raising farm animals and slaughtering operations will be made subject to licencing. These establishments will require compliance with AW standards, which shall be determined by a joint order of the Ministers of Agriculture and Interior and Municipalities. Every owner of slaughterhouse or farm will submit to the Ministry of Agriculture a yearly report issued by the appointed veterinary doctor on the animal welfare and health conditions of the animals and the general situation of the farm. In addition, slaughtering should take place in licensed specialized establishments, and the health and technical conditions appropriate to the slaughtering houses shall be determined by a Decree at the Council of Ministers upon suggestion of the Minister of Agriculture and in accordance with the provisions of this Law and the guidelines of the OIE

Lebanon has had a very active role in participating to all OIE AW-related activities organised in the region and OIE remains the largest provider of training on AW. Lebanon participated into different Conferences of the OIE Regional Commission for the Middle East (10th, 11th, 12th and 13th Conference of the OIE Regional Commission for the Middle East) as well as different OIE seminars. In 2010, the OIE Regional Representation for the Middle East organized in Lebanon a Regional workshop for OIE Focal Points for Animal Welfare. It was hosted by the Lebanese Ministry of Agriculture. Forty-four people attended the workshop, including NFP-AW from ten countries (Jordan, Cyprus, Iraq, Kuwait, Lebanon, Qatar, Oman, Saudi Arabia, Yemen and United Arab Emirates) as well as observers from many Lebanese non-governmental organizations and Veterinary Association. Discussions held during the workshop concerned the transportation and slaughter of animals and the control of stray dog populations. Participants supported the idea of constructing a network of regional OIE NFP-AW e to discuss particular issues they are facing at regional level. MC were fully aware that in order to successfully implement the OIE recommendations on AW in this region continuous efforts would be required to strengthen veterinary services, update and adapt the current legislative framework, improve the skills and knowledge of the relevant staff and professionals, and develop appropriate methods of communication (OIE 2011).

In 2012, an OIE NFP-AW seminar was held in Beirut to discuss concepts of good governance to develop animal health and welfare at the national level, and to explain and clarify the responsibilities and the role of OIE NFP-AW. Nine countries participated in the seminar: Iraq, Jordan, Bahrain, Kuwait, Lebanon, Syria, Saudi Arabia, the United Arab Emirates and Yemen. Representatives from various non-governmental organizations and industry also attended. Experts stressed on the importance of adopting a regional strategy and ensuring that the national legislation, education and awareness programs support the implementation of OIE standards on animal welfare which were also described. Religious slaughtering practices were discussed (OIE 2013), as well.

In 2014, an OIE NFP-AW seminar for the MENA Countries was held in Jordan to discuss the progress made on the application of animal welfare standards, identify constraints and challenges, accomplish the regional strategy and offer proposal for potential support resources. Thirteen countries participated in the seminar: Bahrain, Jordan, Iraq, Kuwait, KSA, Lebanon, UAE, Syria, Oman, Egypt, Yemen, Tunisia and Morocco (OIE 2014). All these initiatives are deemed useful to keep AW high on the agenda. The main limitation they share with TAIEX is that they presuppose that a dissemination system exists at the national level which is not necessarily the case and ***the involvement of key stakeholders, particularly farmers' organisations is very limited***. To this aim better synergy in targeting different audiences would be welcome as TAIEX and OIE risk ending addressing always the same official counterparts and veterinary circles without a wider impact in terms of awareness raising and sensitisation.

8.9. Impact of AW Standards on Competitiveness

Lebanon has a very fragmented livestock industry largely insufficient to cover internal demand.[132] The Country heavily relies on imports to meet its demand for beef and

[132] In 2010, the number of animal breeders (cow, sheep, goats, pigs) reached about 15800 units representing 9% of the total agricultural holders (MoA 2012). Some 46% of farmers were recorded in the North (Akkar and Northern Lebanon), 31% in the Beqaa region, 10% in Nabatiyeh, 8% in Mount Lebanon, and finally 5% in the South (MoA 2012). In addition, pig raising has almost disappeared from the Country as only 51 pork breeders are recorded, and

goat meat. Over the last decade Lebanese sources report that there was ***no substitution of imports of frozen or refrigerated meat for imports of live animals***. Actually imports of livestock from abroad has comparatively increased in importance while that of frozen or refrigerated meat has, if anything, further comparatively decreased its role.

Several factors affect the imports of live animals and red meat from abroad including ministerial licenses that are always subject to change. However, imports from Europe have decreased since 2005 and EU exporters, while collectively remaining the most important ones lost some market shares. This is, however, attributed to the overvaluation of the Euro and the lift of subsidies to exports to European farmers that has made European cattle too expensive than to differential in transport costs due to different AW standards between the EU and other major livestock exporters catering to the Lebanese markets. Lebanon traders have consequently switched to suppliers of live cattle from South America, particularly Brazil, because prices there are more competitive and the price gap is wide enough to compensate for any other factor. ***Lebanese importers, therefore, do not have the impression that trade with Europe was affected in any notable way by the additional cost due to AW standards at transport there***. The only notable market impact was given by Australia's decision to suspend exports of live animals to Lebanon based on AW at slaughter conditions in the Country and the requirement that imported animals be slaughtered on OIE-compliant plants which would require a traceability system that is not possible to enforce there.[133] Australia's decision[134] has notably caused a reduction in the imports of goats and sheep as no major alternative supplier could be found. In fact, imports from the EU, however increased, could not fill the gap.

The poultry sector is managed completely by the private sector with minimal intervention from Governmental authorities. Two major producers control about 40% of the poultry industry, animals are slaughtered in-house and operations there are deemed generally in line with international standards, or at any rate of much better quality than in public slaughterhouses for beef and goat meat. ***It is acknowledged that there can be growing exports of live broilers to Iraq in poor AW at transport conditions*** but this is unlikely to create interference with EU competitors there and actually is a recognized cause of problems as this entails significant stress on the animals, causing mortality and deterioration of the final product.

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pork raising has decreased by 20% since 1998 due to the appearance of swine flu which made Lebanese consumers prefer imported processed pork meat (ham, mortadella, etc.) on fresh pork meat (MoA 2012).

[133] Animals imported live are slaughtered either in one of the five public slaughterhouses, or more frequently in one of many private slaughterhouses. One of the major beef importers in Lebanon has his own slaughterhouse near the capital which operates privately outside the jurisdiction of Beirut's municipality. The slaughterhouses are non-specialized, simple killing stations and non-specific receiving cows, sheep and goats (CNE 2003).

[134] Since imports from Australia were discontinued Lebanese operators could not confirm the creation of a dual market for OIE-compliant and non OIE-compliant animals Australian sources have anecdotally reported and the fact that the first are sold at a discount price over the latter. Australian sources have anecdotally reported the creation of dual market in non-EU Countries for their export livestock due to a combination of traceability and compliance with animal welfare at slaughter requirements (see sixth paragraph at pag 36 of http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/export/live-animals/livestock/escas/escas-report.pdf. Animal s sold outside traceability and AW at slaughter requirements would be actually paid more in local markets

Organic and AW-friendly products are sold outside price-regulated markets but they represent a very small niche of some minor relevance in big cities only and Beirut in particular.

8.10. Overall Impact of EU AW Activities on Competitiveness

(i) *What is the impact on the competitiveness of EU producers and of imports from non-EU Countries?*

Production Costs

Eggs and egg products. ***The delayed implementation of EU AW requirements for laying hens in Neighbourhood Countries could have theoretically caused EU producers and operators cost disadvantages in the region of some 10%-20% of total costs***. This risk was bound to materialise in Ukraine as a consequence of the association agreement and related misalignment of provisions between the timing of enforcement of the allocation of trade quotas and the timing of the approximation requirements with EU AW standards. Such cost disadvantages, however, have not materialized in concrete trade distortions in the market for table eggs in the period reviewed here because of concurrent other SPS issues and has remained limited in size in the market for egg products due to delay with the implementation of quotas.

Poultry Meat. The cost advantages the major Ukrainian producers appear to have on their EU counterparts are not related to differences in the AW standards implemented at farm or at slaughter.

Access to Markets

Livestock and Refrigerated Frozen Meats. Lebanese sources maintain that differences in ***AW standards at transport between OIE and the EU have not specifically caused a loss of market shares in the EU export markets for livestock in the Middle East***. Lebanon might, however, represent a special case as Australia has discontinued its export operations there due to limited possibility of ensuring compliance with OIE standards at slaughter there. There is clearer evidence that international AW standards at transport and related support to their implementation has not resulted in any increased market opportunities for EU refrigerated or frozen meat operators. Trade of livestock in the Neighbourhood region has, if anything, increased in the period rather than decreased and EU operators have benefited from it particularly in the market for live poultry and live sheep and goats.

Demand for Animal Welfare

All markets. No evidence could be found that increased awareness about AW at the Government level triggered by EU AW International Activities in the two Countries visited has resulted in increased demand for AW-friendly products for EU operators.

(ii) *What is the impact on the competitiveness of non-EU producers and operators of exports vs. imports?*

Production Costs

Livestock. EU AW International Activities in the Mediterranean and the Middle East have mainly concentrated on the promotion of AW at slaughter, while AW at transport has been comparatively less covered. The impact on uptake of OIE AW standards has been more visible in the field of AW standards at transport. Since trade of live animals in the region has increased, including, intraregional trade, the case could be made that local producers and operators still enjoy cost advantages on their EU competitors, particularly in the market for live poultry and live sheep and goat. No quantification of cost advantages is possible, as these markets although growing remain marginal overall and relatively poorly known. There are preliminary indications that cost advantages are however more than compensated by reduced productivity in terms of mortality and quality of meat.

Eggs and egg products*.* In the period reviewed, Ukraine has become one of the largest world exporters of eggs and egg products, alone accounting for some 5% of world trade, i.e. one fifth of the EU market share. Most of Ukrainian exports target the Middle East. Since the Country is now bound to approximate to the EU AW standards as a consequence of the Association Agreement and lose a 10-20% cost advantage it enjoyed on EU competitors it is possible that part of its market share will return to EU producers and operators who have collectively lost some 1% of the World Market in the period.

Context Indicators – Shortage of Skills. Lack of availability of adequate AW skills has clearly emerged as a major barrier to the implementation of AW standards in the region, up to the point that large multinationals had to fund ad hoc University teaching courses themselves to fill this gap in Ukraine.

Context Indicators – Capital Requirements. The cost of capital to fund AW related investment and the need to finance operations in hard currency appears as major barriers to both the approval and the subsequent implementation of AW standards in Ukraine and a key factor contributing to the emergence of a two-tiered system in the Country.

8.11. Final Considerations

For different reasons ***EU policy and activities can be recognized as a major driver for change in the implementation of AW standards***, although this has not concretely materialized in legislative changes yet. EU support in the region has proved a key factor in ensuring exposure to international events and keep AW on the Government agenda.

The impact of TA suffers from uncertainties in the AW Governance mechanisms of the beneficiary countries and is negatively affected by high rotation of staff among counterparts, as built-in expertise is lost. Moreover its effectiveness presupposes domestic dissemination mechanisms that are not always there. There are notable linguistic barriers to the possibility of providing support beyond a relatively small circle of counterparts familiar with English or French. The timing of TA can be difficult to coordinate with that of policy developments.

While AW is often considered as a component of broader Animal Health issues, there is nothing in between short term missions and components of large Twinning very slow to mobilise to provide more structured assistance in time.

9. THE IMPACT OF INTERNATIONAL FINANCE INSTITUTIONS AND EXPORT CREDIT AGENCIES

9.1. Introduction

This case study reviews the impact of ECA and IFI AW standards on the competitiveness of EU and non-EU producers and operators. It first describes the evolution of the AW standards over time and the role played by approximation towards the EU standards and the influence played by EU advocacy and lobbying in driving these developments. Secondly, it aims to assess the degree of incorporation of AW considerations in IFI and ECA's operations so far, and the ultimate impact this could have had on underlying trade and investment flows and the operators' behaviour. Finally, conclusions are drawn on how IFI and ECA working practices can have affected the competitiveness of EU and non-EU operators. The case study has been based on an extensive review of literature, as reported in Annex A, and on an interview program with major IFI and three national ECA in Germany, Italy and the Netherlands.

9.2. Background

International Finance Institutions (IFI) and Export Credit Agencies (ECA) have been extensively involved in the financing or insurance of operations in the agribusiness sector, and particularly in AW-sensitive livestock production and meat processing. IFI and ECA in fact often collaborate and provide finance to leading market operators, to the point that, in some – typically Europe, Middle East & North Africa – countries the large majority of large-scale industrial investments are, somehow, related to IFI/ECA-financed operations. AW-related issues have, until relatively recently, have received lukewarm attention, particularly in official policy documents. A study published in 2013 by some of the most relevant NGOs working in the field, called *"International Finance Institutions, Export Credit Agencies and Farm Animal Welfare"*,[135] reviewed the approach and key operations of the main IFI (namely EBRD, EIB, the WBG, and IFC), and of some European ECA, finding that in a number of cases these institutions had involved in the financing of companies which were apparently operating with AW provisions below EU AW standards. Not only this was considered as ethically unacceptable by civil society, but raised concerns that EU- (or MS-) funded institutions were somehow financing operations that could take advantage of the differential in AW standards to compete with EU operators not on a level play field. The study had a wide echo. Since 2013, the attention raised on the issue by the 2013 study has triggered a process of formal evolution in the AW standards adopted and implemented by IFI and ECA, as confirmed by the 2016 update of the HSI study itself, although the situation remains unfolding.

9.3. Evolution in the Animal Welfare Standards adopted by IFI / ECA

The EBRD.[136] Since its establishment, the EBRD has been guided in its operations by an ***Environmental Policy*** (currently named Environmental and Social Policy – ESP).

[135] Thereafter "2013 HSI study", available at http://www.hsi.org/assets/pdfs/investments-in-suffering.pdf, last accessed on 13/02/2017.
[136] The European Bank for Reconstruction and Development (EBRD) was founded in 1991 to 'build a new, post-Cold War era in Central and Eastern Europe', with the mission of 'develop[ing] open and sustainable market economies in countries committed to, and applying, democratic principles.'[136] The EBRD is owned by 65 countries from five different continents, plus

The first revision of the Environmental Policy in 1996 already included an explicit commitment that "EBRD operations will be structured to meet ***national and existing EU environmental standards*** or, where EU standards do not exist, national and World Bank ones. If these standards cannot be met at the time of Board approval, operations will include a program for achieving compliance with national and EU or national and World Bank standards" (emphasis added).[137]

Such a commitment, however, did not necessarily concern AW, which strictly speaking does not fall under the scope of environmental standards. Notwithstanding several revisions throughout the years, it was only with the May 2014 revision that mandatory provisions regarding AW were included in the ESP. The ***2014 ESP***, which still remains the current official framework for reference, mandates that "Clients involved in the farming, transport and slaughtering of animals for meat or by-products (for example, milk, eggs, wool) will adopt and implement national regulatory requirements, relevant EU AW standards and GIP, whichever is most stringent, in animal husbandry techniques."[138] This has been the ***first instance of an IFI adopting mandatory provisions in the field of AW***.

Evidence collected during consultation with EBRD suggests that the adoption of compulsory requirements for AW was the ***formalization of an existing praxis within the institution***. In fact, since the surge of attention within the public on AW issues in the early 2000s, the EBRD had reportedly already started adopting AW standards with an *ad hoc* perspective in assessing and designing operations, particularly in industrial farming. Since, by 2014, the approach had become a standard procedure, its incorporation in the reviewed ESP was smooth, and was eminently driven by the desire to make a formal commitment vis-à-vis external stakeholders, whose pressure was becoming increasingly audible. According to the sources interviewed, ***growing public interest and pressure from civil society*** have been by far the most important driver of the formal inclusion of AW provisions in the ESP. Although the presence of the EU in the board has probably influenced and facilitated the process, pressure from EU institutions *per se* does not seem to have had a direct role in the adoption of mandatory AW provisions by the EBRD.

The EIB.[139] ***The current Environment and Social Handbook of the EIB[140] does not include any reference to AW standards or other husbandry good practices***. There is evidence, however, that some degree of attention has been put in

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the EU and the European Investment Bank, its core business being the provision of financial investment in the form of loans, equity, or guaranteesSource: http://www.ebrd.com/who-we-are/history-of-the-ebrd.html, accessed on 31/01/2017.

137 EBRD, Environmental Policy, revised September 1996, p. 4. (http://www.ebrd.com/downloads/about/policies /environmental_policy/1996-09-01_Environmental_Policy-_English_publication.pdf)

138 EBRD, Environmental and Social Policy, May 2014, p. 40. (http://www.ebrd.com/cs/Satellite?c=Content&cid =1395238867768&d=Default&pagename=EBRD%2FContent%2FDownloadDocument).

139 The European Investment Bank (EIB) is the bank of the EU, owned by and representing the interests of EU MS. Active in lending, blending, and advisory activities, the EIB is the largest multilateral borrower and lender. Notably, 90% of its activities are in the EU. However, the EIB is also active in financing operations in non-EU Countries, particularly, but not exclusively, Neighbourhood and African Countries.

140 European Investment Bank, Environmental and Social Practices and Standards, December 2013 (http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf, last accessed on October 30, 2016).

the past on the matter.[141] Furthermore, according to the 2016 HSI study, the EIB is currently revising its codified Environmental and Social Practices. The revised handbook will include general provisions regarding international good practice, as well as OIE AW standards, while EU Candidate and Eastern Neighbouring countries will have to comply with existing EU legislation on the matter, as already envisaged in the conditions of some of its agro-credit lines in Eastern Europe, notably Ukraine. According to other sources, the EIB is going to commit to "ensure that all EIB lending will reflect EU animal welfare standards"[142]. It seems likely that the Bank's stance and the need to further clarify its position on AW was influenced by a written request made at the EU Parliament on its alleged financing of conventional cage-based egg production in Ukraine that followed the publication of the 2013 HIS study on the subject, but this could not be confirmed.

The World Bank Group.[143] The environmental and social impact of the WBG's operations, particularly those envisaging investing activities, is assessed and monitored under the ***Environmental and Social Framework*** (ESF), and particularly through the so-called Safeguard Policies, i.e. "policies […] that serve to identify, avoid, and minimize harms to people and the environment. These policies require borrowing governments to address certain environmental and social risks in order to receive Bank support for investment projects."[144] The framework adopted up until 2012, and also used by the African Development Bank (AfDB) and the Asian Development Bank (ADB), had been developed some 20 years before and, among the rest, did not include any specific provision regarding AW. In order to reflect the changes and evolutions occurred since their drafting, the WBG started in 2012 a comprehensive four year-long consultation process to review its Safeguard Policies. The new ESF[145] was approved by the board of Executive Directors on August 4, 2016, and will enter into effect once the internal process of capacity building is completed (tentatively in 2018). ***The new ESF, as approved and published, includes for the first time a direct reference to AW*** and extends to the whole WBG group the existing IFC

[141] For instance, a press release regarding the launch of an impact loan introduced in collaboration with Rabobank in the Netherlands explicitly included AW among the dimensions of sustainability to be considered to access the loans (see http://www.eib.org/infocentre/press/releases/all/2015/2015-270-rabobank-and-the-eib-encourage-smes-and-midcaps-to-make-sustainable-investments.htm, accessed on October 30, 2016). Similarly, in the Environment and Social Data Sheet of some projects refers to AW standards (see for instance http://www.eib.org/infocentre/register/all/66530290.pdf, last accessed on October 30, 2016).

[142] UK Government, The Government's 5 year Progress Report on International Animal Welfare, Februrary 2015 (available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/412631/animal-welfare-5-year-progress-report.pdf).

[143] First conceived towards the end of World War II to support the reconstruction of European countries, the World Bank Group (WBG), has been a leading development organization ever since. Its core mission is to "galvanize international and national efforts to end extreme poverty globally within a generation and to promote "shared prosperity," a sustainable increase in the well-being of the poorer segments of society. The WBG consists of five organizations: (i) the International Bank for Reconstruction and Development, active in lending to middle-income and creditworthy low-income countries; (ii) The International Development Assocaition, providing interest-free loans and grants to lower-income countries (collectively known as the World Bank); (iii) the International Finance Corporation; (iv) the Multilateral Investment Guarantee Agencies; and (v) the International Centre for Settlement of Investment Disputes.

[144] From http://www.worldbank.org/en/news/feature/2016/08/05/the-new-environmental-and-social-framework , last accessed on October 28, 2016.

[145] Available at: http://consultations.worldbank.org/Data/hub/files/consultation-template/review-and-update-world-bank-safeguard-policies/en/materials/the_esf_clean_final_for_public_disclosure_post_board_august_4.pdf

practices. It mandates that "[t]he Borrower involved in large-scale commercial farming, including breeding, rearing, housing, transport, and slaughter, of animals for meat or other animal products (such as milk, eggs, wool) will employ [good international industry practices] in animal husbandry techniques, with due consideration for religious and cultural principles".[146] The documents specifically indicates the IFC Good Practice Note (see below) as the benchmark for reference of good industry practices. Consultation with the WBG confirmed that this choice was driven by the intention to peg the ESF only to internal standards, in order not to bind the WBG to the decisions of external entities (for instance, the ESF does not adopt the ILO standards for children work).

The revision of the ESF was seemingly very participative, with a consultation process in which two versions of the documents were published and commented upon respectively in 2014 and 2015. Actually it appears that reference to AW standards was included as a result of the consultation itself, as the original version simply and more generically included a reference to 'good industry practice' to be adopted.[147] According to the WBG representative consulted during the Study, this was mainly because of external pressure coming from CSOs and international NGOs. The EU and its MS played a marginal role in this sense, reportedly participating in a workshop in Vienna in which the ESF was discussed. Notably, the inclusion of AW standards in the ESF met some resistance from borrowing countries (mostly Developing Countries).

IFC.[148] The current Framework, adopted in 2012, includes the ***Environmental and Social Performance Standards***, which "define IFC clients' responsibilities for managing their environmental and social risks'.[149] Performance Standard 6 deals with Biodiversity Conservation and Sustainable Management of Living Natural Resources, and includes a very broad reference to the fact that "Clients who are engaged in such industries will manage living natural resources in a sustainable manner, through the application of industry-specific good management practices and available technologies. Where such primary production practices are codified in globally, regionally, or nationally recognized standards, the client will implement sustainable management practices to one or more relevant and credible standards as demonstrated by independent verification or certification."[150] To complement the Sustainability Framework and the Performance Standards, already back in 2006, the IFC introduced a Good Practice Note (GPN) on AW. Given the worldwide change in attitude towards

[146] World Bank, Environmental and Social Framework - Setting Environmental and Social Standards for Investment Project Financing, August 4, 2016, p.104.

[147] The two draft frameworks are available at http://consultations.worldbank.org/consultation/review-and-update-world-bank-safeguard-policies.

[148] The International Finance Corporation (IFC), part of the World Bank Group, is an international development institution focused exclusively on the private sector in developing countries. IFC implements advisory service as well as investment projects in all continents and across a huge variety of sectors. As member of the WBG, the IFC is subject to the same provisions that apply to the Group as a whole. However, in parallel with the safeguard policies adopted its own Sustainability Framework, which applies to all investment and advisory clients.

[149] Source: http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Our+Approach/Risk+Management/Performance+Standards/

[150] IFC, Overview of Performance Standards on Environmental and Social Sustainability, Performance Standard 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources, January 1, 2012, p.6 (http://www.ifc.org/wps/wcm/connect/bff0a28049a790d6b835faa8c6a8312a/PS6_English_2012.pdf?MOD=AJPERES)

animal production, the GPN was reviewed and, in 2014, the ***GPN on Improving AW in Livestock Operations*** was issued.[151]

The document lays down IFC's approach to AW, both at project appraisal and during implementation. Notably, IFC's due diligence refers to ***OIE standards***, but the document specifies that "[w]here IFC clients are looking to enter European markets – irrespective of their location - IFC works with such clients to achieve EU AW standards over the course of the investment project."[152] Given IFC vocation as private sector development institution, its approach to AW is ***business-oriented***, i.e. based on the promotion of the business case for improved AW, and sustainability-oriented, and takes into account cultural differences, as well as the technological and developmental context. It is characterized by two main salient features. First, compliance with the AW standards in the investee company is not to be demonstrated only in the environmental appraisal phase but has to be independently audited over time. Second, IFC itself is involved in assisting with consulting services on compliance with AW standards in their investee companies, which further justifies the Chinese Wall approach before to distinguish between its role as an investor and as a "consultant".

In order to complement the GPN and further support its effective implementation in the field, since 2015 the IFC has started a pilot project to draft a comprehensive AW Assessment and Management Framework, including the development of an AW Audit Checklists to harmonize the work of independent auditors, and a set of Guiding Manuals. The latter are intended to cover not only AW, but also other interrelated themes such as husbandry, biosecurity and contingency plans.[153] The manuals have the double purpose of providing IFC's clients with more practical and technical information regarding AW standards worldwide, and of compensating for absent standards at the OIE level. According to the information collected through interviews with IFC staff, manuals have currently been developed (but are not publicly available) for poultry, pigs, dairy cattle, and are being developed for sheep and goats. Discussions are ongoing on how to give all this further external recognition and formalization, as ISO recent incorporation of the OIE recommendations in its standards is considered a step in the right direction, but not enough in finding ways to reassure the global market that producers and operators are effectively AW compliant.

The 2014 GPN was reportedly the result of a comprehensive consultation process. Since detailed information on contributions and comments are not publicly disclosed, it is hard to disentangle the contribution of developments at the EU level in the process. However, there is a tendency to consider AW as good husbandry practice *per se* and a self-repaying investment justified in economic terms in the wide majority of cases. Moreover the strategic decision was taken to reach and possibly exceed the EU AW Standards in all operations aimed at the EU market. This was also based on business risk mitigation considerations to counter the perceived risk that uneven

[151] The GPN is available at: http://www.ifc.org/wps/wcm/connect/67013c8046c48b889c6cbd9916182e35/FC+Good+Practice+Note+Animal+Welfare+2014.pdf?MOD=AJPERES (last accessed on October 29m 2016). Notably, the document makes explicit reference to EU AW strategy (pp. 6-7) and standards (p. 17 and following pages). The GPN is also referenced in IFC's Environmental, Health and Safety (EHS) Guidelines regarding Mammalian Livestock Production, Poultry Production, as well as other Industry Sector guidelines.

[152] IFC, Good Practice Note – Improving Animal Welfare in Livestock Operations, December 2014, p.21.

[153] See Hatton, R.J, Mousseau, L.P., Animal Welfare in emerging markets – IFC's perspective, abstract of the presentation delivered at the OIE 4th conference, http://www.oie.int/eng/animal-welfare-conf2016/Abstracts/3.6.%20Hatton.pdf.

implementation of AW standards in investee companies could be used one day as a spurious argument within the EU MS themselves to raise barriers to trade.

Export Credit Agencies. Governments provide officially supported export credit through Export Credit Agencies (ECA), which can be either government entities or private companies operating on behalf of their Government. ECA support exporters either through direct credit to foreign buyers, or by providing coverage to exporters in the form of insurance or guarantees on credits made available by private financial institutions. Two main bodies serve as coordination fora for the various national ECA around the world, and namely the International Union of Credit and Investment Insurers (the Berne Union), and the Working Party on Export Credits and Credit Guarantees (or Export Credit Group - ECG) of the OECD.[154] The ECG is, in particular, "responsible for discussing and progressing work on good governance issues, such as anti-bribery measures, environmental and social due diligence, and sustainable lending [..]".[155]

Technical aspects related to environmental and social issues are specifically discussed by an informal sub-group of the ECG, the so-called "Practitioners group" gathering technical experts from the various Member ECA. More recently (seemingly starting from early 2013), a small group of ECA started gathering to discuss AW-related issues, due to increasing pressure from the public opinion regarding the matter. Born from the initiative of specific European ECA (and particularly Atradius Dutch State Business – ADSB – from the Netherlands, and Euler Hermes from Germany), the AW working group has been meeting informally in a self-organized manner in parallel with the Practitioners Group. The AW working group does not have any formal structure, especially since the issue reportedly does not raise the interest of all ECAs, but nevertheless all representatives of ECA interviewed for the Assignment reported its usefulness, and maintained that it had an important role in pushing towards the inclusion of AW-related provisions in the relevant policy documents – as reported below. According to the interviewees, participants to the AW Working Group include, apart from ADSB and Euler Hermes, the Italian ECA (SACE), as well as Eksport Kredit Fonden (Denmark), Export Finance and Insurance Corporation (Australia), the Export-Import Bank of the United States, and the Swiss Export Risk Insurance.

The OECD has long been the reference point in terms of rule-making in the area of officially supported export credit. For what concerns Environmental and Social issues, the first recommendations seem to date back to the late 90s. In 2003 the Trade Committee of the OECD adopted the first "Recommendation on Common Approaches on Environment and Officially Supported Export Credits", which was updated in 2005, and revised in 2007.[156] In 2012 the Recommendation was superseded by the "Recommendation of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence" (the '***Common Approaches***' - CA), which was finally revised in April 2016.[157] The CA adopts the WB Safeguard Policies as a general benchmark, and to the IFC Performance Standards referenced herewith. In the 2016 revision of the CA, for the first time, has included specific reference to AW standards: "In the absence of any relevant industry sector EHS Guidelines, Adherents [..] may refer to relevant international sources of guidance

[154] Notably, representatives from the Berne Union attend meetings of the ECG, see http://www.oecd.org/tad/xcred/ecg.htm
[155] *Ibidem*.
[156] See http://www.oecd.org/tad/xcred/oecd-recommendations.htm
[157] The revised version of the Common Approaches is available at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/ECG%282016%293&doclanguage=en.

such as, for example, where appropriate, [..] the ***standards of the World Organisation for Animal Health (OIE) for animal welfare issues, as well as any relevant IFC publications***, such as its Good Practice Notes. [..] Alternatively, where appropriate, Adherents may benchmark projects against the relevant aspects of any other internationally recognized standards, such as EU AW standards, that are more stringent than those standards referenced above."[158]

According to the information collected by means of interviews with representatives of three among the main ECA of EU MS, it can be safely maintained that ***some kind of AW review had already been adopted already before the latest revision of the CA in 2016***. As was the case for the main IFI, the inclusion of mandatory provisions was, in fact, simply the *de jure* crystallization of and formal commitment to procedures that had *de facto* already been adopted Europe-wide. As a matter of fact, track of this can be found in the ***Joint Declaration on Animal Welfare*** issued in 2014 by the relevant Ministries of Denmark, Germany, and the Netherlands. The declarations reads that the three Countries "intend to promote animal welfare in the framework of national and international financial institutions that engage in the farming sector, as well as in the international policy framework for national export credit agencies, with due consideration for maintaining a level playing field".[159] In practice, given the multiple cross-reference existing among IFI standards (see the previous sections), the most recent version of the ***CA fixes the OIE standards as reference for AW, but leaves the possibility open for ECA to adopt stricter standards*** (and specifically reference to EU AW Standards when deemed relevant) at the discretion of national authorities. Notably, the approach adopted by the CA is risk-based, with a more thorough review for projects considered more risky. This relatively ample room of manoeuvre has thus created a composite framework, which seems to be still rather uncertain and continuously evolving, both with regards to the criteria for the identification of high-risk projects, and to the standards eventually concretely adopted for projects' appraisal and implementation. However, as a first proxy it appears rather clearly how the approach tend to be stricter in countries where civil society is more sensitive and active on the matter. Of the three ECAs reviewed in more detail here, in fact, ADSB and Euler Hermes often adopt a stricter approach as compared to SACE.

General Considerations. As emerges from the previous sections, ***EBRD is the only IFI to have adopted precise binding standards***, albeit only in 2014. The other institutions have adopted a Russian doll-like system by which the ECA Common Approach makes reference to WBG Safeguard Policies, which in turn refers to IFC Good Practice Note, which adopts OIE standards as reference. In practice, thus, the ***EBRD is also the only IFI/ECA having officially adopted EU standards and the EIB has plans to do so, while virtually all other institutions ultimately refer to OIE standards***, and use EU standards only as complementary or additional reference (see Table 10.1 for a summary) in particular conditions. This is also partly explained by the weight EU MS have in the Board. For what concerns the WBG institutions (thus including also the IFC), it should be noted that EU MS represent only a minority of the voting power and of the shares of these institutions, particularly if compared to the voting power of other countries, traditionally scarcely concerned with AW issues such

[158] See Common Approaches, p. 10-11.

[159] See Denmark, Germany, and the Netherlands, Joint Declaration on Animal Welfare, 14 December 2014, p. 3. (http://www.bmel.de/SharedDocs/Downloads/EN/Agriculture/AnimalProtection/JointDeclarationAnimalWelfare.pdf?__blob=publicationFile, last accessed on February 13, 2017),.

as the US and China.[160] Consequently, it is hard to foresee that in the near future these institutions will move to any referencing of EU AW standards. Decision making at the ECA level has followed the same line of reasoning and privileged a compromise that was acceptable to all members worldwide by ultimately leaving them free to adapt more stringent provisions at their own discretion in their day-to-day management of operations.

On more substantive grounds, representatives of both IFI and ECA have also raised concerns about the appropriateness of transposing EU AW standards in other, different, climate and cultural contexts without any adaptation to local conditions. For instance, developing countries, and particularly Sub Saharan African countries, are scarcely concerned with issues related to the density of animals in farms, since farming is typically carried out at household level. On the other hand, in tropical climates, certain techniques for laying hen farming which would be allowed by EU AW standards, and be appropriate for the EU climate, may actually cause a worsening of animal conditions. In a notable case an ECA felt compelled to commission an expert opinion to a renowned EU research centre on AW on whether the implementation of EU AW standards in given tropical conditions would not ultimately result detrimental to the welfare of animals as project proponents backed by local investors claimed.

9.4. Implementation of EU AW standards by IFI and ECA and Impact on Their Operations

Overview. As emerges from the previous Section, for most of the period covered by this Study (i.e. at least until 2014) no AW policy was in place for any of the institutions covered by this Case Study. ***Evidence regarding the situation before the adoption of these documents is somehow contradictory***. On the one hand, all institutions interviewed for this Study have maintained that they had already been applying AW provisions and standards *ad hoc* since 2009/2010. In this sense, the inclusion of AW among binding or at least officially recognized standards has been a mere consolidation of an existing praxis, with the key purpose of answering to the growing concern of the civil society. On the other hand, the 2013 HSI study already mentioned found a rather different scenario, and claimed that many of the operations receiving financing or coverage were not complying with EU AW standards, and were at times violating even less stringent international best practices, particularly in poultry and pig farming. Notably, over three years after the publication of the 2013 study, a September 2016 update highlighted that, notwithstanding the undiscussable progresses made, the situation was still less than ideal.

The assessment of the degree to which AW standards have been incorporated into IFI/ECA operations revolves around three main aspects, and namely (i) transparency in disclosure ; (ii) degree of extension into vertical integration of operations; (iii) actual monitoring of financial intermediaries' behaviour; (iv) means of verification. All these aspects have to do with the possible loopholes that may – inadvertently or not – hinder the operational application of AW standards during project appraisal and implementation.

As regards ***transparency in disclosure***, the key issue seems to be a trade-off between the need to release detailed information, in order to ensure compliance with

[160] For what concerns the IFC, the sum of EU 28 voting power accounts for 28.5% of total votes, compared to 20.99% of the US, known to have particularly low AW standards. The situation is no different, for instance, within the IBRD, in which the total voting power of EU 28 MS is 23.07% of the total, while the sum of US and China voting power is over 21%.

AW standards, and the commercial sensitivity of the issues at stake. Project documentation does in fact often include only generic references to AW assessment carried out, or to the existence of a plan for the improvement of various aspects of the production site or procedures, but lacks detailed information on the conditions (e.g. density or number of animals in the production site, etc.) or on the implementation plan (e.g. timeline, etc.). While NGOs tend to consider lack of reference to AW aspects as evidence of non compliance, IFI and ECA refer to the need to protect sensitive commercial information, and point to the fact that in most cases assessments are entrusted to third-party experts.

The issue of ***vertical integration*** refers to the scope the AW assessment is meant to cover. NGOs maintain that the assessment should cover the whole value chain, independently from the fact that it is actually integrated in the same company or not. IFI and ECA tend to be more flexible, often reportedly adopting an *ad hoc* approach based on the leverage potential of the specific operation. The issue is particularly relevant in the dairy sector, in which most operations only concern the processing phase. The review of project documents of operations in this sector suggests a mixed situation, with a minor, but relevant, share of document including reference to the AW situation in milk suppliers (see below in the relevant sections).

Another contentious issue concerns operations conducted with the involvement of ***financial intermediaries***. In fact, both IFI and ECA often provide credit lines or guarantee schemes to commercial banks or investment funds, which in turn deal with the final beneficiary. CS organizations and NGO have a concern that this may result in a less strict assessment and monitoring capacity of the situation in the client companies. In fact, the contract agreements established with the intermediaries do not include specific requirements in term of AW standards of end beneficiaries, but only a reference to good practice and environmental sustainability. All entities interviewed maintained that they monitor directly the AW situation of the final Clients. However, given the absence of formal commitments in this sense, or documentary evidence, it is not possible to report information on the frequency and strictness of this. Finally, only few IFI have an open explicit policy about ***independent audit of operations as means of verification*** about actual compliance and make commitments to directly assist investee companies in their understanding of AW standards they are poorly familiar with by providing / facilitating access to relevant expertise and extension services.

Among the projects financed by EIB in non-EU countries between 2004 and 2015 references could be found only to the creation of credit lines for the financing of agribusinesses without entering into specific operations.[161] These financing operations might have ended up supporting livestock production and meat or egg processing in non-EU Countries, but no information is available, nor on the operations eventually financed with such funding, nor on the environmental requirements imposed on the financial intermediaries.

EBRD. Operations in the agribusiness sector have represented between 9 and 10% of the overall financing between 2004 and 2015.[162] Over the years, agribusiness has gained an increasing importance in EBRD's portfolio, representing approximately 9% of the value of financing issued between its foundation up to 2015, and over 10% of the value financed in the last five years of the period. Operations concerning farm animals, however, represent a minor share of the investments in the agribusiness sector. Overall, thus, relevant operations represent a sheer minority of overall EBRD

[161] http://www.eib.org/projects/loan/list/index
[162] Source: EBRD Investment as at 31 December 2015.

portfolio. Starting from the early 2000s, AW has gained increasing importance among environmental and social issues. AW assessment were initially carried out *ad hoc* in industrial farming projects. Even in absence of explicitly identified standards, which, as already underlined, were adopted only in 2014, an AW due diligence would be entrusted to external expert from accredited institutions, who would typically benchmark the project against EU and/or other standards considered equivalent or exceeding them ("*We would not use OIE standards. If EU standards did not exist – for instance in the dairy sector – we would use what would be considered international best practice, typically the US or Dutch standards.*"). This is broadly confirmed by the fact that AW considerations (in several cases also referencing directly to EU standards) can be found in documents relating to projects dating back to 2005 (see Table 10.1 below).

Differently from other institutions (e.g. ECA see below), EBRD does not identify ex-ante a set of quantitative or sector criteria to determine which projects should undergo which kind of environmental (and, specifically AW) review. Rather, it adopts a ***risk-based approach***, taking into account, as well as the degree of connection between the operation under assessment and the rest of the value chain. Overall, the EBRD adopts a vertically integrated approach whenever the farm stage is internal to the company or group they are providing financing to ("*For instance, if we are financing a bio-mass plant, we look at whether they also own the farm and the herds. If so, we also carry out an AW assessment. But suppose they only collect manure from other companies – in that case, we do not consider that AW is relevant for the project*"). Similarly, a flexible approach is adopted when it comes to the appraisal of projects. Coherently with EBRD's 'transitional' vocation, the 2014 ESF states that if AW standards cannot be met at project approval, the operation will include a plan for ***achieving compliance with national and EU (or equivalent) standards***. In fact, one of the considerations that are reportedly taken into account when selecting operations for financing is their leverage potential. EBRD reportedly turned down projects, whenever they felt that not only AW was not complied with at appraisal stage, but the potential client had no interest or intention to progress towards compliance over the investment period. Actually, evidence collected from the review of documentation of selected relevant projects (Table 9.1) suggests that only in a sheer minority of cases the companies receiving financing were already compliant with AW standards – and particularly EU standards – at project appraisal.

Table 9.1 – AW considerations in selected EBRD Project documents

Project/Company (sector, country)	Year	Env. Cat.	AW considerations
Tnuva - Romania Dairies SRL (dairy, Romania)	2005	B	The project entailed renovation of the farm milking and construction of a new milking station. The project fiche states that "all equipment and practices will be compliant with EU standards and Romanian regulations including those on the welfare of animals kept for farming purposes and live animal transport."
Somboled DOO (dairy, Serbia)	2006	B	Absent. The company is active in dairy processing, and only has an indirect link with primary production
Boni I (pig meat, Bulgaria)	2006	B	The project fiche states: "[..] the animals observed were in good condition at the Boni sites and showed evidence of appropriate levels of welfare. A number of recommendations have been provided to align animal welfare with EU standards including a review of housing to ensure EU minimum space allowances, development of programme for providing environmental enrichment objects across all sites, replacement

			of damaged flooring, provision of dry, comfortable bedded areas within hospital /sick/ injury pens and development of a programme for inspection of automated or mechanical equipment essential for the well-being of animals. The recommendations to address the observed issues above have been integrated into a comprehensive ESAP covering corporate EHS actions, EHS actions specific to each site, and action covering animal welfare improvements at all pig farms. The ESAP has been reviewed by, and agreed with, the Company and is structured to ensure compliance with the Bank's PRs and, in particular, EU standards. The Company will be required to provide regular reporting on key EHS issues and on the implementation of the ESAP."
MHP (egg and poultry meat, Ukraine)	2010	B	According to project documents, a third-party assessment was conducted, which found that "company's facilities are generally operating to a level consistent with national and EU standards for environment, occupational health and safety, animal welfare and bio security."
Globino (pig meat, Ukraine)	2011	B	Absent.
IZ (egg, Ukraine)	2012	B	From the project documents "The audit team included an animal welfare expert who observed that animals were generally in good condition with evidence of high levels of animal welfare. A number of recommendations have been mae to align the Group's practices with the European standards and these have been integrated into the ESAP."
Keskinoglu (egg, Turkey)	2012	A	According to project documents: "the Company has a system in place for the management of animal welfare which is largely overseen by a number of veterinarians employed to ensure the health, welfare and biosecurity of poultry to Turkish standards. The Company is currently using a non-enriched caging system with stocking densities higher than would be best practice in the EU. Keskinoglu have agreed, as part of the capex programme to be financed by the Bank the procuring of new type of so-called enrichable cages (i.e. cages that can be converted into 100% EU compliant within a couple of days at the sheds' premises by removing the partition wall, providing for the so-call dark section for the hens to lay eggs in darkness, installing perches and "claw-shortening devices". The Company is the first (and still the only) poultry company in Turkey which has started investing in the new EU-compliant cages. Once the expansion programme is completed, 60% of the Company's cages will be enrichable and 40% will be non-enriched cages."
Sutas (Tarfas) (dairy, Turkey)	2013	B	Absent
Juhayna Dairy (dairy, Egypt)	2013	B	Project documentation include generic reference to AW, whose improvement however seems to be a target of the technical cooperation
Danosha (pig meat, Ukraine)	2013	B	From project fiche: "The planned upgrades will lead to the improvement of animal welfare standards in line with the EU regulations and thus significantly going beyond prevailing levels in the sector. [..] Animal husbandry and welfare arrangements were assessed by an independent UK pig farming and animal welfare specialist whose findings were that overall standards of animal welfare were acceptable and in many instances above average. Issues identified with respect to 'enrichment objects' are being mitigated."

Nyva (pig meat, Ukraine)	2014	B	According to the PSD, the project aims at increasing the standards of operation of the company, including "gradual adoption of the most recent EU standards on animal welfare." The environmental assessment found that "the overall level of compliance with animal welfare requirements was good in most cases. A training programme is in place for all staff with training obligatory for incoming staff and certification of those involved in animal handling and transportation. However, the three following key areas have been identified where actions are required to bring farm animal welfare practices in line with EU welfare standards those being adjustments to current housing for sows and gilts, modification of stocking densities for finishers, and provision of further enrichment in cages."
Astarta Group (dairy, Ukraine)	2014	B	Absent. Although the company is also active in the dairy sector, financing only covers the sugar production segment of the company.
MHP Corporate (egg, poultry meat, Ukraine)	2015	B	As in the case of the previous financing, "The consultants found that MHP Group's facilities were generally operating to a level consistent with national and EU standards for environment, occupational health and safety, animal welfare and bio security."
Servolux (poultry meat, Belarus)	2015	B	The project documents reports that the environmental and social due diligence was ongoing. The operation is seemingly on hold.

EBRD project documentation does not include any information on the number of animals farmed by the Client companies, which prevents any quantification of impact in this sense. However, given its strict approach to AW – at least compared to other IFI – EBRD's operations are likely to have had a demonstration effect on local operators. Anecdotal evidence has confirmed that, by requiring its client, mostly market leaders in the countries, to comply with the stringent EU AW standards, EBRD has set a precedent and triggered a mechanism that is likely to have a 'lighthouse' effect in local markets as well. An interesting aspect of this situation is that EBRD's clients are reportedly willing to undertake the expenses connected to the adjustment necessary to comply with AW requirements, not much (or at least, not exclusively) because of absence of other sources of funding, but because "*having EBRD 'mark' is a guarantee for other financial institutions as well as for clients*". This confirms that proper market signalling of compliance with AW standards for companies operating in Countries otherwise lagging behind with AW standards adoption/transposal is an important element of added value and is sought after by the operators concerned.

WBG. The WBG does not directly finance investment projects, delegating this function to the IFC, its private sector arm (see below). Its involvement in livestock operations could therefore only be indirect, either by providing on-lending to financial institutions in beneficiary countries, or by funding developing project that are implemented by dedicated Units within the Governments of borrowing countries (e.g. community development projects, etc.). In both cases, project agreements include specific environmental and social clauses that, if not complied with, can lead in extreme cases to discontinuing the project. As anticipated, AW considerations will be systematically included only once the new ESF will enter into force.[163] According to the information collected during consultation with WBG representatives, there have been instances of inclusion of references to AW in environmental plans of operations in the past, although seemingly mostly concerning the animals used in research in the funding of

[163] According to the WBG representative interviewed, there is already evidence of voluntary uptake of the new ESF in some operations. However, there is no evidence, even anecdotal, that this has concerned AW-relevant operations.

scientific research. On the other hand, HSI found evidence of WB operations (in particular in Vietnam) which provided technical assistance to laying hens farmers using battery cages.[164] At any rate, it should noted that, ***even when fully implemented, the new ESF will only apply to large industrial farming operations***. In fact, the provisions do not apply to SME, partly due to 'practical considerations', and partly in response to the concerns of Developing Countries. This is likely to remarkably limit the effects of the ESF, particularly considering the types of operations funded by the WB.

IFC. Agribusiness represents a key sector in IFC activities, especially given its high development impact potential, and its strong role in poverty reduction. Currently, its priorities in the sector include food security, sustainability, and an inclusive approach to development. IFC's involvement in the sector covers all stages of the value chain, 'from farm to fork'.[165] Livestock production and processing has traditionally represented a minority, but substantial, share of investments in the sector. As of 2014, the IFC had a US$ 800 million portfolio in livestock (and aquaculture) projects, mainly in the pig and poultry sector, with some beef processing.[166] In general, IFC interacts with some of the leading operators in the sectors (e.g. MHP, Globino, Axzon, Nyva in Ukraine; Muyuan and Anyou in China; Zambeef in Zambia; Alqueria in Colombia; etc.). In a number of cases in Eastern Europe and Central Asia IFC and EBRD are joint investors in the same company and operate under *de facto* risk sharing arrangements. In all these cases, IFC applies the EU AW standards as a reference by default to align with EBRD practices.

The 2014 GPN details a two-stage approach to AW, at appraisal, and during the implementation as supervision. During project appraisal, the industry or investment officer works together with the environmental specialist to classify the project based on environmental risk and assess the operation. Differently from other environmental or social themes, ***AW aspects are not prescriptive***. The IFC has adopted a praxis by which they consider some practices as unacceptable even if not currently regulated by OIE (particularly referring to caged egg production, which, even in absence of a formal commitment, they have not financed in the most recent years), and other practices as highly undesirable (e.g. sow stalls). In these cases, either the IFC refuses to engage with the client, or they insist for a shift to more appropriate techniques. Since their interaction on the matter is of advisory nature, IFC staff insist in making the case of the business opportunities related to an increased AW.

Compared to EBRD, relatively less public evidence – and much later in time – seems to have been given to AW in IFC operations. ***Out of nearly 70 projects reviewed,[167] only 26 included references to AW in their environmental assessment***. Of them, 17 found the client to be already compliant with AW standards, while in nine cases the documents referred to a plan to improve AW provisions during the project. Notably, eight of the 26 references include explicit mention of EU standards, while other international standards used as benchmark include globalGAP, the Australian AW standards, and WSPA standards. As emerges from the overview provided in the Table 9.2 below, only after the publication of the first GPN in 2012 the share of projects including AW considerations becomes

[164] See HSI, finance update, p.6. (http://www.hsi.org/assets/pdfs/finance-updates.pdf).
[165] See http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/_Agribusiness
[166] See IFC, Improving Animal Welfare in Livestock Operations, December 2014.
[167] See Section XXX – the list of projects include all operations that could be retrieved on IFC website (https://disclosures.ifc.org/#/landing) in the sectors and time period covered by the Study.

significant. This is particularly true in the case of projects in the ***poultry sector***, all of which include AW assessment starting from 2012, i.e. one year before OIE approved the relevant AW standards for broilers.

Table 9.2 – AW considerations in selected Project documents by year and sector

Year	# projects reviewed	# projects including AW assessment
2004	1	0
2005	6	0
2006	5	1
2007	3	0
2008	3	1
2010	9	3
2011	4	1
2012	8	3
2013	17	11
2014	8	4
2015	4	2

Sector	# projects reviewed	# projects including AW assessment	Notes
Dairy	17	2	In many cases only milk processing facilities without internal farming
Poultry	16	7	All projects after 2012
Other animal production (*including pig*)	13	9	This also includes animal feed projects in larger, integrated companies
Slaughter/processing	15	6	In many cases exclusively processing facilities
Miscellaneous	7	2	Includes a variety of different projects (canteens with special agreement with suppliers, financial participation in bank operations, etc.)

Operations in the ***dairy sector*** show particularly scarce inclusion of AW due diligence. In the vast majority of cases, this is attributable to the fact that beneficiaries operate exclusively as processors, and purchase milk from other companies, or from small suppliers in the area of operations. Similar considerations apply to other projects, which do not deal with living animals, and thus do not include AW considerations. As was underlined in Section 10.4.1, this depends on the approach to the vertical integration of AW considerations in the supply chain. IFC appears to have a case-by-case approach to the matter, which, incidentally, applies to AW as well as to all other sustainability issues (e.g. environmental considerations, etc.). Some example of supply-chain approach to AW considerations are reported in Box 9.1 below.

Box 9.1 – Instances of AW Vertical Integration in IFC projects[168]

Project "Alqueria" (Colombia, dairy sector). In 2010, IFC provided a combined financing of an US$8 million loan and a US$5 million equity investment to fund part of an acquisition/expansion plan. Alqueria is the third largest dairy company in Colombia, active,

[168] The box includes extracts of the Environmental and Social Review Summaries of the referenced projects.

among the rest, in the processing of milk and subproducts in a variety of dairy products. The company does not own any herd, but sources milk from up to 5,610 farms, some directly and some through intermediaries. The Environmental and Social Review Summary of the project includes nevertheless a reference to the ***analysis of the supply chain***: "Any increases in production to meet new targets are to come from more efficient and better production techniques involving nutrition for the cows and collaboration in new areas, etc. Several farms visited as part of the appraisal appeared to be well run (e.g., waste management practices were seen to be good). The company provides free outreach to its suppliers in the form of training presentations on animal health and wellbeing [..]. Any future company Merger and Acquisition targets should be subject to environmental and social assessments as part of overall due diligence if targets are to be acquired."

Project "NCS Holdings PNG" (Papua New Guinea, mining sector). NCS holding is a leading food services and camp management company that currently provides services to sixteen project sites across 10 provinces in PNG. The operation is a package of US$5 million as preference shares and US$12.5 million guarantee, meant supports the operational expansion of NCS Holdings catering and camp management services. Under an advance supply arrangement, NCS had also supported (by way of commercial loans) the construction of a livestock breeding and raising facility (Lihir Integrated Livestock Limited - LILL). This facility consists of a 170 sow pig production unit (currently operating with up to 27 sows), an 11,000 hen layer unit and 5 x 10,000 broiler bird sheds (not yet operational), workshop, feed storage, water supply storage, effluent ponds, an office and staff accommodation. In addition, a feed mill, hatchery, abattoir and rendering plant are proposed. The facility will supply NCS, but once it is running efficiently it is planned to supply other consumers with broilers and pigs. The ESRS of the project includes ample reference to the AW standards implemented in the LILL facilities, under the assumption that, even though it is not owned and managed by NCS Holdings, it will be partly financed by NCS and will be a preferred supplier to its catering business. AW issues treated in the ESRS include animal housing, feeding, and management, as well as AW standards at stunning.

As in the case of EBRD, IFC has repeatedly worked with top-market companies, which considerably expands the potential impact of improving AW of the client companies. As already mentioned, however, IFC approach to AW is business-oriented, and is based on building a business case for higher AW standards. In accordance with its nature of a development institution, IFC would be in a position to engage with clients even if at project appraisal they are not fully compliant with AW standards, in order to support their transition to a higher market segment ("*The issue is: if they are not compliant, do we invest to change the situation, or do we avoid to engage? Some clients may be sceptic or show resistance at the beginning, since there is a – sometimes remarkable – upfront cost for adaptation. However, for instance for what concerns saw stalls, experience has shown us that once staff is trained, there is no difference in costs.*"). Most importantly, IFC independent AW audits are then considered important tools to win the confidence of large retailer chains / multinationals for operations based in Countries otherwise known for their poor adoption / implementation of AW standards.

ECA. ECA are active in provided insurance and coverage to operations across all economic sectors. Operations in agribusiness – and particularly in the livestock sector – are typically among the smallest financed by ECA, especially compared to operations in the construction or in the energy sector. In some cases, e.g. in the Netherlands, ECA receive a number of application in the agriculture and livestock sector. In other cases, as Italy, the sector is comparatively less important. Each application for coverage from ECA adhering to the OECD CA goes through a two-stage environmental and social assessment. The first stage, the ***screening***, classifies projects based on their environmental risk and likelihood of adverse impact. This is based on the size of the project, the geographical collocation in sensitive areas, and on the sector. Projects classified as category A (i.e. high potential environmental and social impact) undergo a full-fledged ***environmental and social impact assessment*** (ESIA), which would also include AW assessment. The depth of the review of projects falling in category B (medium potential environmental and/or social impact) is to be assessed on a one-to-one basis. The OECD CA only requires information to be collected, either in the form of an ESIA, or in other project documentation. Evidence suggests that in most cases ECA require an ESIA to be carried out, as in the case of category A project. Finally, no further action is required for projects classified as category C (minimal or no potentially adverse environmental and/or social impact, typically re-financing of previous operations, or small projects). As anticipated, OECD CA leave a relatively broad room of discretion to each national ECA to establish stricter criteria, both in the definition of sensitive sectors to be considered automatically as having high environmental impact potential, and in terms of standards to be adopted. The deeper analysis conducted on three ECA suggest that there are deep differences in the approach adopted even among EU MS ECA, with the main driver being civil society attention to the matter. Box 9.2 summarizes some key elements concerning the approach of Atradius Dutch State Business - ADSB (Netherlands), Euler Hermes (Germany), and SACE (Italy).

Box 9.2 – ECA and Animal Welfare

ADSB (Netherlands). The Netherlands are possibly the country in which the public opinion is more vocal regarding AW, to the point that the ‘Party for the Animals’ has gained two seats in the national Parliament. The Netherlands have in fact adopted an integration to the OECD CA stating that ***large scale agricultural projects (including animal farming) is to be considered a sensitive sector by default***. Due to the exposure of the issue, ADSB has been among the founders of the AW Working Group within the Practitioner Group of the OECD ECG, advocating for the inclusion of AW issues in the revision of the OECD CA. Similarly, it has had an active role in interacting with multilateral institutions to comment on their environmental policy documents and sharing of best practices. As a consequence of the specific provisions issued by the Government, most projects including farm animal production thus fall in category A or B; however, even when operations are classified as category C, specific topics of concerns are typically reviewed in more details, at least through secondary sources. Notably, the AW sensitivity is placed in the farm stage of the production, which, for instance, means that a separate slaughterhouse does not fall in the scope of such provision, and thus answers to the ‘ordinary’ CA criteria. As an OECD CA adherent, ***ADSB applies the IFC GPN, but always benchmark operations also against EU standards***. Working under the strict surveillance of the Government and the Parliament, as well as CS at large, ADSB has at times sought the scientific advice of high-profile institutions, such as Wageningen University. ADSB has been involved in a number operations in the field of livestock production, especially in the ***poultry sector***, while it has experienced virtually no involvement in the pig and cattle farming sectors. Main countries of destination of its operations are Eastern Europe (particularly Russia and Ukraine), as well as the Middle East, with a recent increase in application concerning Sub Saharan Countries (e.g. Zimbabwe and Mozambique). ADSB has never reportedly had to refuse applications due to AW considerations yet, while in many other cases unsatisfying AW standards were found to be correlated with scatter financial situations. Notably, ***ADSB also directly assesses projects when the financing goes through financial intermediaries***.

Euler Hermes (Germany). Similarly to the case of the Netherlands, AW has been among the most discussed issues in the public debate for some 15 years. Starting from 2012, it has also become a prominent issue for Euler Hermes in particular. Together with ADSB, it has been ***among the promotors of the AW working group within the OECD***, and has amply participated in the consultations regarding the revision of the WBG safeguard policies and the IFC GPN. Overall, Euler Hermes approach to AW matter is very similar to ADSB’s, with IFC GPN being the main reference for AW, but operations also being benchmarked for EU AW standards. According to the interviewee within Euler Hermes, ***the majority of the Agencies’ operations are complying with EU standards as well***, with some exceptions exclusively regarding laying hen rearing. Euler Hermes has arranged a special treatment of AW-concerned projects that would not fall in the scope of the OECD CA, either because of their size or because of their shorter duration. In these cases, the agency carries out a risk-based AW review, depending on the specificities of the project. Euler Hermes’ involvement in livestock production operations covers a huge variety of countries of destinations, the main three being Turkey, Ukraine, and Belarus, but also including other Eastern Europe and Central Asia countries (e.g. Uzbekistan, Russia, Serbia, Kazakhstan), North Africa (e.g. Morocco). Up to ***80% of the operations are in the poultry sector***, including all stages of the value chain, although projects typically involve animal farming, and include other activities (e.g. slaughter, biomass, etc.) only if integrated in the same company. ***Most operations are rather small*** (typically between € 2 and 5 million), and thus fall in the 'special provision' group, outside the CA, whit a couple of larger operations per year.

SACE (Italy). Compared to other EU MS, Italy has known less civil society involvement in the field of AW. Consequently, SACE has approached the topic driven by the interest of other ECA, still deciding to participate in the AW working group. ***SACE adheres to and adopts the OECD CA as such***, and therefore applies AW standards only to operations falling in category A and B, while no review is foreseen for category C projects. Over the period 2004 – 2015, SACE has financed some 15 operations in animal farming and processing, a couple in the egg sector, and another 20 in the dairy processing sector, which however do not concern animal farming. Overall, only a handful have been classified as category A, and AW standards have only been applied in one case. In fact, SACE has started applying AW review and standards only since 2015, when, even though the revised CA had not been approved yet, the debate had started becoming more concrete. This instance refers to a pig farming operation in Eastern Europe, whose ESIA included reference to procedures clearly contrary to the EU directive (e.g. tail docking). SACE engaged in a debate with the company, reaching an agreement for the abandonment of these procedures and homologation to higher standards.

9.5. Final considerations on the Impact of IFI / ECA Operations on the Competitiveness of EU and non-EU Operators

(i) What is the impact of on the Competitiveness of EU producers and operators for imports from non-EU Countries?

Production costs

IFI have been in a position to steer the behaviour of operators mainly in the Eastern Europe and to a more limited extent the Mediterranean towards alignment with the EU AW standards. In fact, the level of their operations in these regions has reached a critical mass, and incentives, which compounds with the fact that the geographical proximity with the EU increases the incentives provided by EU consumers. The only notable exception seems to be the market for egg and egg products, for which cost distortions could indeed emerge. However, since both IFC and EBRD have decided for different reasons to stay away from the financing of cage-based egg operations, they cannot have substantially contributed to any potential trade distortion in this area. Evidence available about other IFI and ECA is more opaque and probably varies on a case by case basis and over time particularly on small operations.

Market Access

IFI and ECA tend to consider that practically no demand for AW-friendly products from consumers in the two fastest growing markets in the World: Asia and the Middle East is there. Moreover they have played a rather marginal role as investors in Latin America. Results from the survey (See annex D.37) confirm that their operations and practices are well known in Africa and Asia, particularly in the beef meat industry, but contribution to spread AW practices has been more limited in these regions. Their possible indirect role in creating an AW-friendly market there that could represent an export opportunity for EU producers and operators can therefore be considered as negligible.

(ii) *What is the impact of on the Competitiveness of non-EU producers and operators for imports from non-EU Countries?*

Production costs

One of the clearer effects of the implementation of EU AW standards is on the need for substantial upfront capital investments (e.g. on discontinuing sow stalls, etc.). Consequently, the application of high AW standards in non-EU countries is a driver towards a strong vertical consolidation of the industry, as hierarchical relations are more efficient in dealing with this uncertainty and complexity than market transactions, discouraging the fragmentation of the production process among many, smaller, operators.[169] In this sense, countries having favourable preconditions in this respect would find themselves at a competitive advantage irrespective of any other cost considerations and IFIs and ECAs might have further contributed to this natural tendency. Even in the worst case scenario cost increases related to EU AW standards-related adaptations are unlikely to account for more than 1%-2% of total production costs and ***therefore represent a negligible factor in international trade where oscillations in margins are usually much wider***.

Productivity

IFI's – and particularly IFC's – approach to investee companies is based on the assumption that, when properly implemented, ***EU AW standards 'pay for themselves'***, since in the long run they translate into improvements in husbandry techniques and ultimately in increased productivity. This means, first and foremost, that the uneven implementation of AW standards is unlikely to translate into a lack of even playing field among competitors.

Market Access

One of the most relevant impact of this capacity to influence the choices of operators is linked to the 'trademark' reputational effect their presence among the companies' investors can have. In fact, their sheer presence has reportedly ***reassured buyers about compliance with AW standards in investee companies***. This surveillance function is not played by Governments in these countries, since they are not trusted in their capacity to enforce legislation or, in some cases, they are known even to lag behind in their domestic transposal/implementation of OIE standards. In this sense, IFI somehow compensate for the absence of a global AW certifying body, whose lack is perceived by investors in non-EU Countries as the main cause of reputational distortions in the market.

Context Indicators – Shortage of Skills. IFI have long recognised shortage of skills as a key factor in implementing AW in non-EU Countries and have taken measures accordingly ranging from grants for the purchase of consulting service to direct assistance.

[169] A similar consideration can be found in Temple Grandi *The Effect of Economics on the Welfare of Cattle, Pigs, Sheep, and Poultry*, 2013. Highly Segmented Marketing Chains With Many Dealers, Agents, and Middlemen are Bad for Animal Welfare: […] In the developing world, all classes of livestock are often sold through middlemen and dealers. In all countries, the sectors of the livestock market where the animals go through a series of auctions, dealers or middlemen will be the most difficult to improve. In a highly segmented market system there is often no accountability for losses. Middlemen and dealers who do not own the animals have little economic incentive to reduce bruises, injuries, and sickness because they are not held financially accountable for losses.

Context Indicators – Capital Requirements. There is widespread awareness among IFI officers that it is not that much impact on production costs, but rather upfront capital investment needs representing a cause of resistance to uptake of AW standards among investee companies. Greenfield investments that do not face past amortization problems are therefore considered easier to manage from an AW perspective.

10. IMPACT OF THE EQUIVALENCE AT SLAUGHTER UNDER REGULATION 1099/2009

10.1. Main Legal Provisions, Controversial Issues and Degree of Uptake

Legal Provisions. The EU legislation regarding animal welfare at slaughter has changed during the years; the most recent text currently in force is Council Regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing. In case of imports of meat into the EU, at least equivalent animal welfare standards at slaughter should be certified. The number of slaughterhouses in the non-EU Countries which are permitted to export meat to the EU – broken down by country and type of slaughterhouse - is reported in the table 10.1 below.[170] The EU has completed an equivalence agreement of AW standards at slaughter with New Zealand and Canada and negotiations are ongoing with Chile where they are expected to be finalised soon.

Table 10.1 Number of establishments in non-EU countries permitted to export meat to the EU

Country	Ungulates	Poultry and lagomorphs	Farmed game
Argentina	32	17	--
Australia	39	--	2
Botswana	2	--	1
Brazil	64	52	--
Canada	8	--	--
Chile	14	4	--
Falkland Islands	1	--	--
Israel	0	6	--
Japan	4	--	--
Mexico	4	--	--
Namibia	5	--	--
New Zealand	55	15	--
Paraguay	11	--	--
Serbia	9	2	--
South Africa	4	--	8
Swaziland	1	--	--
USA	21	1	5
Uruguay	22	--	--
Zimbabwe	2	--	--
FYROM	6	--	--
Total	**304**	**97**	**16**

The EU comprises 28 Member States with common legislation in many areas, including animal health, animal welfare and food safety. For what concerns intra-EU trade, the conditions for trade in animals and food of animal origin are harmonised between the Member States: relevant live animals covered by the EU animal health rules in place must travel with a health certificate validated by an official veterinarian specifying that the animals fulfil the animal health requirements as set out in the relevant EU legislation. No checks are carried out at borders between Member States, but random checks on the animals may be carried out at the final destination. Food of animal

[170] The list of non-EU Countries approved for export to the EU can been found at: https://webgate.ec.europa.eu/sanco/traces/output/_non_eu_listsPerCountry_en.htm

origin may be traded freely within the EU without official certification, based on agreed guarantees in place.

For the purposes of trade in live animals and animal products, all countries outside the EU are termed "non-EU Countries". Great importance is placed on controls of animals and of food of animal origin applied at the designated entry points to the EU, i.e. the "Border Inspection Posts" according to the legislation applied at the time of the report.

The EU legislation provides for inspections and audits being carried out in non-EU Countries, based on the results of which the non-EU country may be added to the list of non-EU countries authorised for exports to the EU. A department of the DG SANTE of the EU Commission is responsible for practical implementation of this regime.

The initial assessment of a non-EU Country is detailed and includes scrutinizing the competent authorities and conditions in food producing establishments[171], such as the slaughterhouses which are the object of this case study.

The non-EU Country undertakes to inform regularly and rapidly on infectious animal diseases both the Commission and the OIE.

Specific requirements for listing of non-EU countries are laid down in the relevant EU Directives. As example, among those:

1) All levels, including border controls and laboratories, must have sufficient personnel, financial and equipment resources to allow them to carry out their control functions.
2) The above must be independent of outside pressures, and be able to carry out their duties without undue restrictions.
3) All staff must enjoy an independent status within the official services.
4) Adequate communication links between central, regional and local official services must be ensured.
5) There should be a properly resourced laboratory network which must be available to, and used by, the official services.
6) There must be effective import controls in place at the points of entry to the non-EU country to safeguard the health status of the country.

The EU non-EU Country regime is also based on trust to a large extent, where the Commission can closely cooperate with the competent authority of a non-EU Country, which contributes to approve and redraw approval for individual establishments for exports to the EU.

The approval of slaughterhouses will be made by the competent authority of the concerned non-EU Country, which is audited, depending on the needs and trade flows, by the DG SANTE Department "Health and Food Audits and Analysis[172]"(Former FVO) of the European Commission: this service will verify that the non-EU Country competent authority concerned is living up to expectations, and complying with agreed conditions regarding export to the EU.

In case the conclusion of a visit by the Department in a non-EU Country is that conditions have not been complied with, this might result in a slaughterhouse being removed from the list of establishments allowed to export to the EU. In case the

[171] https://ec.europa.eu/food/sites/food/files/safety/docs/ia_ic_guidance_import-requirements.pdf
[172] http://ec.europa.eu/food/audits_analysis_en

conclusion confirms that the non-EU Country competent authority has been providing wrong information on conditions and arrangements, that might result in the non-EU Country concerned being removed from the list of countries allowed to export to the EU.

The conditions to be applied by a slaughterhouse in non-EU Countries exporting meat to the EU are laid down in Article 12 of Council Regulation (EC) No 1099/2009. This article stipulates that chapters II and III of that Regulation are applicable for non-EU Countries exporting meat to the EU (see also Article 12 (2) (a) of Regulation 854/2004[173]). It is moreover laid down that the non-EU Country concerned must certify that the requirements applicable to the production of the products are at least equivalent to those laid down in these two chapters.

Animal welfare standards are also referred to in bilateral agreements between non-EU Countries and the EU, such as the EU-Chile agreement[174] (See Annex IC of the agreement). Several of the requirements might include investments in buildings, equipment, staff and education, depending on the level of animal welfare commitment in each non-EU Country. The key conditions to be met in certified establishments are the following:

1) Unloading and lairage areas are constructed in such a way to prevent the animals from slipping or falling.
2) Facilities are provided to feed and water the animals.
3) Animals are kept separated in such a way to prevent harmful interactions between animals.
4) Stunning methods as laid down in Annex I of the Regulation are used and checks on stunning are performed.
5) Facilities for fixing animals during stunning are provided (e.g. a stunning box).
6) The establishment has nominated an animal welfare officer and provided adequate training for its operators.
7) That standard operating procedures are created and complied with.

Further requirements on structure and layout of establishments are laid down in Annex II of the Regulation, and operational rules are laid down in Annex III of the Regulation. Some of these rules might result in additional investments, but in most cases mainly in additional education and retraining of operators.

8) Unloading and lairage areas are constructed in such a way to prevent the animals from slipping or falling.
9) Facilities are provided to feed and water the animals.
10) Animals are kept separated in such a way to prevent harmful interactions between animals.
11) Stunning methods as laid down in Annex I of the Regulation are used and checks on stunning are performed.
12) Facilities for fixing animals during stunning are provided (e.g. a stunning box).
13) The establishment has nominated an animal welfare officer and provided adequate training for its operators.
14) That standard operating procedures are created and complied with.

Controversial Issues. The FVO carried out a series of fact finding missions in 2011 concerning animal welfare at slaughter in non-EU Countries with regard to future

[173] REGULATION (EC) No 854/2004 Of the European Parliament and of the Council of 29 April 2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption, Off. Journal of the European Union L 139 of 30 April 2004.

[174] http://trade.ec.europa.eu/doclib/docs/2004/november/tradoc_111628.pdf

compliance with regulation 1099/2009 (FVO 2011). The report concludes that much development work has already been done by the industry and the competent authorities in non-EU Countries exporting meat to the EU, and that these countries were well on their way to satisfying the requirements of Regulation 1099/2009. However, the most frequently found weaknesses were that several non-EU Countries needed to make changes to their ***transport/delivery practices or to the arrangements for accommodating animals, in order to respect the requirement to feed and bed animals if not slaughtered within 12 hours of their arrival at the slaughterhouse***. This was furthermore confirmed by other sources: as to the rest most slaughterhouses inspected in non-EU Country were fully complying with regulation 1099/2009. Interviewees also agreed in suggesting that as compliance with the regulation might be of critical importance for export-oriented operators in non-EU Countries, these tend to put great emphasis on achieving it.

The ***electrical parameters applied in waterbath stunning[175] for poultry*** have also emerged as a controversial issue in some non EU Countries (especially Brazil, but also Thailand). These countries have maintained that the application of EU stunning parameters has serious negative implications on product quality (such as multiple cases of breast haemorrhage in slaughtered poultry). To this aim, the Brazilian stakeholders presented to the Commission for evaluation a scientific study on the use of electrical parameters equivalent to those of Annex of Regulation 1099/2009, and proposed a possible amendment of the same Annex. Article 4(2) of Regulation 1099/2009 allows the Commission to amend its Annex I so as to take into account scientific and technical progress on the basis of an opinion of the EFSA. The Commission forwarded such proposal to EFSA for assessment. EFSA evaluated the proposal and published its conclusions in July 2014: the proposed Brazilian technique was deemed as not equivalent[176] for the purposes of compliance with Regulation 1099/2009.

Degree of Uptake. Elements providing indications on the share of production capacity formally compliant with EU slaughtering standards mainly come from the survey of non-EU operators[177]. The share of total production exported to the EU by the

[175] "Stunning" is defined in the Regulation as any intentionally induced process which causes loss of consciousness and sensibility without pain, including any process resulting in an instantaneous death.
[176] The EFSA Panel concluded that the methodology and the data reported in the Brazilian study do not provide conclusive evidence that the combination of the proposed electrical frequency and current induced unconsciousness without exposing the chickens to avoidable pain and suffering. The scientific opinion issued by EFSA concluded that in the context of Directive 2010/63/EU on the protection of animals used for scientific purposes, and of current scientific evidence, a frequency of 600 Hz with a current of 104 mA does not result in efficient stunning of poultry. Therefore, additional research into these stunning parameters was not recommended. Even though the Brazilian study did not provide enough information upon which to base an assessment of the scientific approach and parameters tested, it did nonetheless provide sufficient information to conclude that the birds were not rendered immediately unconscious by the intervention. Indeed, the application of a current less than that required to induce immediate unconsciousness causes pain, distress and suffering. The Brazilian study failed to demonstrate absence of pain and suffering until onset of unconsciousness. The EFSA panel concluded that the parameters provided by the Brazilian proposal did not provide for "The loss of consciousness and sensibility [being] maintained until the death of the animal" and should therefore be disregarded. *Scientific Opinion on the electrical requirements for poultry waterbath stunning equipment (EFSA-Q-2014-00089)*, which the AHAW Panel adopted on 25 June, published on the EFSA website at http://www.efsa.europa.eu/en/efsajournal/pub/3745.htm
[177] Some 43 out of 152 valid responses outside the EU, i.e. 28%, specifically concern the slaughtering stage. Roughly half of these 43 survey respondents operated slaughterhouses which were specifically certified for exports to the EU, mostly in the beef and poultry meat

surveyed operators was generally below 30%; shares above 30% were the exception. However, the share of total production which was formally compliant with EU requirements tended to be significantly greater than actual exports to the EU, as it can be seen from Table 10.2 below half of the surveyed operators had 30% or more of their production capacity certified for exports, which tends to indicate a degree of uptake above the strict export market requirements. The only notable exception is represented by poultry meat, where the degree of uptake seems more strictly related to what required for export purposes. There, it has also to be considered that the EU constitutes a significant export market only for beef meat and for sheep and goat meat, while it is much less so for poultry meat.

Table 10.2 Share of total production certified for export to the EU

	Less than 5%	From 6% to 10%	From 11% to 30%	From 31% to 50%	From 51% to 70%	More than 71%
Beef & Live bovines	2	1	1	2	3	2
Pig meat & Live Swine	2	0	0	0	1	2
Poultry meat & Live poultry	2	2	2	1	0	0
Eggs and egg products	0	0	0	0	0	0
Sheep and goat meat & Live sheep and	1	0	0	0	0	2
Dairy products	0	0	0	0	0	0
Total	**7**	**3**	**3**	**3**	**4**	**6**

Source: survey of non-EU Countries operators

10.2. Drivers Behind Certification

The degree of leverage given by market incentives to become compliant with the provisions of Regulation 1099/2009 greatly varies by Country and by sector. As mentioned above, the EU remains a minor destination market of limited importance at global level for exporters of pig meat and of poultry meat. Incentives there are relatively small and interest in compliance is therefore limited and regards specific market niches: pig in Chile, poultry in Thailand and Ukraine, etc. It plays instead a more significant role on the international market as importer of beef meat and of sheep and goat meat. As far as ***beef meat*** is concerned, the EU has remarkably lost importance as a destination market for Brazilian operators; it has gained some importance for Australian and US exporters, but it is still very far from being a key destination market for them (see Tables 10.3-10.5).

Table 10.3. Main destinations of Brazilian exports of beef meat (volume, kg)

Ranking (av. 2013-2015)	Main destinations	Average 2004-2006	Average 2013-2015	% variation (2013-15 on 2004-06)	% on tot world 2004-2006	% on tot world 2013-2015
1	Russia	255,788,507	261,124,286	2%	23.7%	22.4%
2	China	24,502,391	244,143,914	896%	2.3%	21.0%
3	Egypt	152,298,242	155,167,248	2%	14.1%	13.3%
4	Venezuela	11,126,271	140,347,868	1161%	1.0%	12.1%
5	Iran	38,495,355	72,643,952	89%	3.6%	6.2%
6	EU 28	233,802,700	66,044,967	-72%	21.7%	5.7%
	World	**1,078,698,421**	**1,163,931,945**	**8%**	**100.0%**	**100.0%**

supply chains Additional evidence from the case study on Chile indicated that certification for export to the EU is not very common among Chilean slaughterhouses. In total, including all species, there are about 120 operational slaughterhouses in Chile, of which less than 20% are certified for exports to the EU.

Table 10.4 Main destinations of Australian exports of beef meat (volume, kg)

Ranking (av. 2013-2015)	Main destinations	Average 2004-2006	Average 2013-2015	% variation (2013-15 on 2004-06)	% on tot world 2004-2006	% on tot world 2013-2015
1	US	337,900,560	350,751,631	4%	33.1%	27.1%
2	Japan	436,426,529	294,642,812	-32%	42.7%	22.8%
3	Rep. of Korea	140,880,237	170,590,996	21%	13.8%	13.2%
4	China	5,545,668	160,790,944	2799%	0.5%	12.4%
5	Indonesia	11,990,412	47,428,616	296%	1.2%	3.7%
10	EU 28	7,487,833	22,348,533	198%	0.7%	1.7%
	World	**1,021,546,830**	**1,293,381,319**	**27%**	**100.0%**	**100.0%**

Table 10.5 Main destinations of US exports of beef meat (volume, kg)

Ranking (av. 2013-2015)	Main destinations	Average 2004-2006	Average 2013-2015	% variation (2013-15 on 2004-06)	% on tot world 2004-2006	% on tot world 2013-2015
1	Japan	4,395,503	193,731,678	4307%	1.9%	24.7%
2	Mexico	159,558,405	127,366,356	-20%	68.1%	16.2%
3	China	991,875	121,428,194	12142%	0.4%	15.5%
4	Rep. of Korea	152,217	107,599,920	70589%	0.1%	13.7%
5	Canada	34,973,788	102,623,433	193%	14.9%	13.1%
6	EU 28	424,333	17,833,267	4103%	0.2%	2.3%
	World	**234,304,094**	**784,507,396**	**235%**	**100.0%**	**100.0%**

Source: UN Comtrade and Eurostat-COMEXT (for EU data)

As for **sheep and goat meat**, the EU still represents a key destination market for New Zealand; much less so for Australian operators (see Tables 10.6-7).

Table 10.6 Main destinations of New Zealand's exports of sheep and goat meat (volume, kg)

Ranking (av. 2013-2015)	Main destinations	Average 2004-2006	Average 2013-2015	% variation (2013-15 on 2004-06)	% on tot world 2004-2006	% on tot world 2013-2015
1	China	26,578,531	154,907,416	583%	7.0%	37.2%
2	EU 28	184,499,200	136,376,567	74%	48.6%	32.7%
3	US	24,548,979	22,833,617	93%	6.5%	5.5%
4	Saudi Arabia	14,456,095	15,912,059	110%	3.8%	3.8%
5	Canada	10,872,247	11,081,880	102%	2.9%	2.7%
	World	**379,763,522**	**416,949,109**	**110%**	**100.0%**	**100.0%**

Source: UN Comtrade and Eurostat-COMEXT (for EU data)

Table 10.7 Main destinations of Australian exports of sheep and goat meat (volume, kg)

Ranking (av. 2013-2015)	Main destinations	Average 2004-2006	Average 2013-2015	% variation (2013-15 on 2004-06)	% on tot world 2004-2006	% on tot world 2013-2015
1	China	16,824,472	114,424,012	580%	5.2%	24.4%
2	US	67,458,288	80,579,421	19%	21.0%	17.2%
3	United Arab Emirates	14,414,407	28,887,875	100%	4.5%	6.2%
4	Malaysia	8,989,753	23,788,396	165%	2.8%	5.1%
6	EU 28	17,872,900	16,716,467	-6%	5.6%	3.6%
	World	**321,645,413**	**468,768,780**	**46%**	**100.0%**	**100.0%**

Source: UN Comtrade and Eurostat-COMEXT (for EU data)

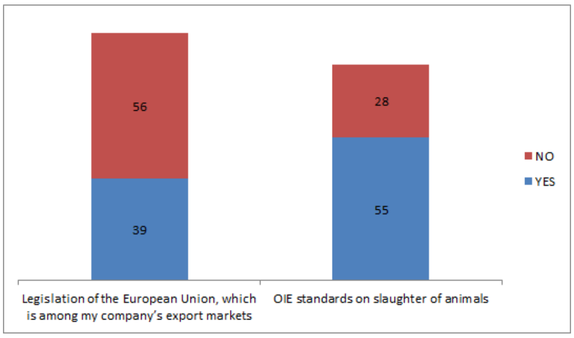
It is therefore little surprise that non-EU Countries operators that have achieved the certification for exports see the ***EU as a premium export market which can (moderately) grant increased revenues*** (See Table 11.8). Aside from that, ***access to premium export markets*** with similar AW requirements is also mentioned by operators, while synergies with domestic certification schemes or requirements from multinationals have been mentioned only in the beef industry. Advantages from access to premium segments of the respective domestic markets characterised by higher consumer attention to AW are therefore perceived as less important by certified non-EU operators. No significant negative impacts (Table 11.9) are reported by the surveyed non-EU operators as regards their achievement of the certification for exports to the EU.

For the reasons explained above, in all relevant sectors, the survey revealed higher awareness levels among non-EU operators for OIE standards on slaughter of animals than for EU legislation on AW, with the exception of operators in the beef sector, which further confirms that equivalence with EU AW is of greater importance for them (see Figure 10.1).

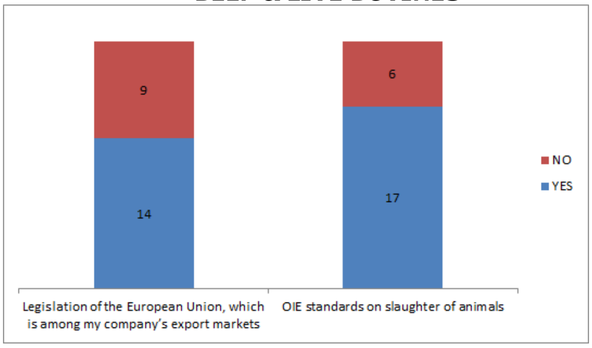
Figure 10.1 Awareness levels among non-EU Countries operators about AW legislation/standards

***Question**: Among the following animal welfare legislation/standards, which are the one(s) you are aware of?*

ALL SECTORS



BEEF & LIVE BOVINES

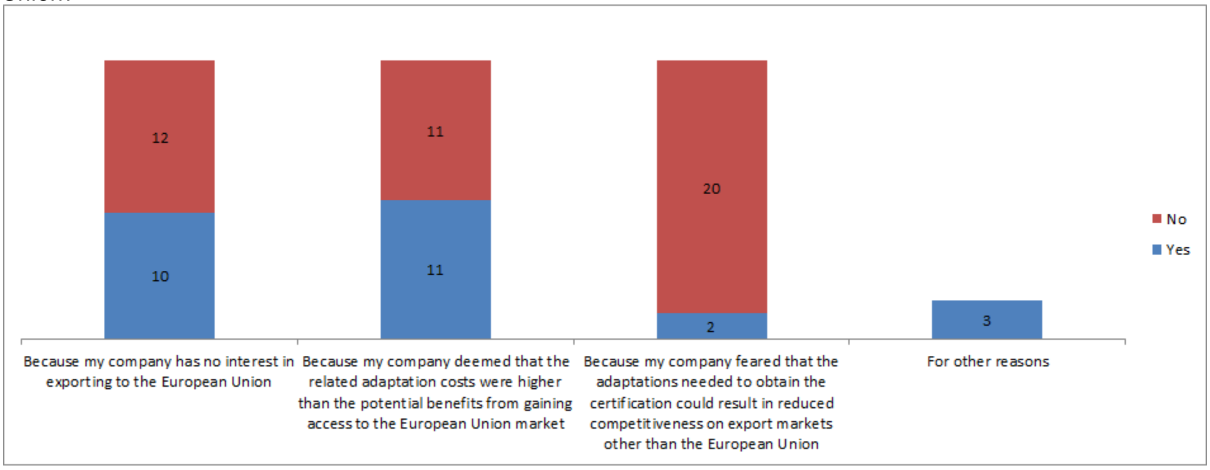


Source: survey of Non-EU Countries operators

The survey of non-EU operators provided some insights also about the reasons why a number of non-EU operators do <u>not</u> see the EU certification as a viable opportunity. These are inertial (or "business as usual") considerations that are especially related to a perceived imbalance between adaptation costs for achieving equivalence at slaughter and the expected benefits of accessing the EU market. However, they also rule out any significant specific negative expected impact on their competitiveness on other non-EU markets, which further confirms that compliance is driven by market access considerations and that impacts on production costs are mainly a constraint on their domestic market (Fig. 10.2).

Figure 10.2 Reasons for not certifying non-EU Countries slaughterhouses for export to the EU

***Question**: Why did your company decide not to certify its slaughterhouse(s) for export to the European Union?*



Source: survey of Non-EU Countries operators

Table 10.8 Positive impacts of the certification for exports to the EU

***Question**: Which of these positive impacts of certification for exports to the European Union (equivalence at slaughter) have been experienced by your company? Can you rate the intensity of the impact?*

	My company has increased the revenues from export sales thanks to the access to a premium market like the European Union				Certification for exports to the European Union has helped my company to gain access to other export markets with similar animal welfare requirements				Certification for exports to the European Union has helped my company to gain access to premium segments of the national market characterised by higher consumer attention to animal welfare				Other positive impacts			
	No impact	Moderate positive impact	Strong positive impact	I do not know	No impact	Moderate positive impact	Strong positive impact	I do not know	No impact	Moderate positive impact	Strong positive impact	I do not know	No impact	Moderate positive impact	Strong positive impact	I do not know
Beef & Live bovines	2/11	4/11	3/11	2/11	6/11	2/11	2/11	1/11	7/11	3/11	1/11	0/11	3/11	0/11	0/11	8/11
Pig meat & Live Swine	2/5	1/5	2/5	0/5	2/5	2/5	1/5	0/5	4/5	1/5	0/5	0/5	5/5	0/5	0/5	0/5
Poultry meat & Live poultry	3/7	4/7	0/7	0/7	2/7	3/7	1/7	1/7	3/7	3/7	0/7	1/7	1/7	1/7	0/7	5/7
Sheep and goat meat & Live sheep and goa	0/3	3/3	0/3	0/3	0/3	3/3	0/3	0/3	0/3	3/3	0/3	0/3	1/3	0/3	0/3	2/3
Total	**7/26**	**12/26**	**5/26**	**2/26**	**10/26**	**10/26**	**4/26**	**2/26**	**14/26**	**10/26**	**1/26**	**1/26**	**10/26**	**1/26**	**0/26**	**15/26**

Source: survey of non-EU Countries operators

Table 10.9 Negative impacts of the certification for exports to the EU

Question: Which of these negative impacts of certification for exports to the European Union (equivalence at slaughter) have been experienced by your company? Can you rate the intensity of the impact?

	The competitiveness of my company on the national market has decreased				The competitiveness of my company in export markets other than the European Union has decreased				Other negative impacts			
	No impact	Moderate negative impact	Strong negative impact	I do not know	No impact	Moderate negative impact	Strong negative impact	I do not know	No impact	Moderate negative impact	Strong negative impact	I do not know
Beef & Live bovines	5/11	3/11	1/11	2/11	4/11	2/11	1/11	4/11	4/11	0/11	0/11	7/11
Pig meat & Live Swine	2/5	1/5	0/5	2/5	3/5	0/5	0/5	2/5	3/5	0/5	0/5	2/5
Poultry meat & Live poultry	6/7	0/7	1/7	0/7	5/7	1/7	0/7	1/7	0/7	0/7	1/7	6/7
Sheep and goat meat & Live sheep and goa	0/3	1/3	1/3	1/3	1/3	0/3	1/3	1/3	2/3	0/3	0/3	1/3
Total	**13/26**	**5/26**	**3/26**	**5/26**	**13/26**	**3/26**	**2/26**	**8/26**	**9/26**	**0/26**	**1/26**	**16/26**

Source: survey of non-EU Countries operators

10.3. Impact on Cost Competitiveness of EU and non-EU operators

Evidence from the Literature and the Interview Programme. Even if not up-to-date and referred to EU operational conditions in a pre-regulation 1099/2009 environment, a number of elements from a 2007 study carried out for DG SANTE[178] suggest that – based on the experience in the implementation of AW standards for stunning/killing practices in EU slaughterhouses dealing with red meat (***beef, pig and sheep meat***) – the cost implications of achieving compliance with regulation 1099/2009 were unlikely to be substantial. The cost of stunning was found to be negligible if measured against the wholesale value of beef carcasses (0.02%) and of pig carcasses (0.10%). Also the costs for training were found to be negligible if measured against the total operational costs of a mid or large size slaughterhouse. The conclusions of the study on the implications of stunning and killing costs on the competitive position of the EU red meat sector provide useful insights on the implications of achieving compliance with regulation (EC) No. 1099/2009 on cost competitiveness, and also on the likely extent of the expected impacts. The study concluded that the EU cattle and sheep sectors were already relatively uncompetitive and therefore were likely to be sensitive to any increase in production costs.

The pig sector was instead considered to be much more competitive. The main cost areas of concern to the industry were identified by the 2007 study in feed costs, costs of compliance with legislation and the cost of labour. The cost of *stunning and killing* was not seen as being significant in this context. As for *training*, the 2007 study found evidence that "improving animal handling could result in significant economic gains at the slaughterhouse level, due to increased revenue from higher-quality meat. Economic gains could be enough to compensate costs associated with training of employees handling animals. This is largely the view of slaughterhouse operators, with a minority indicating that there was even a positive impact of training on production costs".[179] As for *revenue-side implications*, the study concluded that there was "a strong consensus by slaughterhouses, competent authorities and animal welfare organisations that the implementation of a quality assurance scheme with an emphasis on animal welfare and the presence of an animal welfare officer employed by the slaughterhouse are the two most beneficial operational procedures in terms of animal welfare. The costs of the measures seem to be more than compensated by potential benefits, as a large majority of slaughterhouses that have implemented the measures see an increase of competitiveness of their operations".[180] All in all, the 2007 study concluded that any voluntary changes in the stunning methods were unlikely to have any appreciable impact on the final consumer price for red meat.

As for ***poultry meat***, more up-to-date evidence and equally useful insights are provided by a 2012 study carried out for DG SANTE[181] (always with the caveat that they derive from the experience in the implementation of AW standards for stunning poultry in the pre-regulation 1099/2009 EU operational environment). The study estimates the costs of different methods for stunning poultry in slaughterhouses of different capacity, and under different operational conditions (high/low labour, water and electricity prices), also including labour costs. In the "high labour, water, electricity prices" scenario, costs per bird are significant, but it is worth noting that inclusion of labour inflates the costs considerably, and might be questionable.[182] The study reports that electrical waterbath

[178] FCEC for DG SANCO (2007), *Study on the stunning/killing practices in slaughterhouses and their economic, social and environmental consequences - Final Report Part I: Red Meat*.
[179] FCEC for DG SANCO (2007), p. 51.
[180] FCEC for DG SANCO (2007), p. 51.
[181] FCEC for DG SANCO (2012), *Study on various methods of stunning for poultry*.
[182] The birds would need to be shackled on the line anyway for de-feathering and further processing. No "extra shackling" is applied for stunning.

stunning is the most common method used for stunning poultry in commercial systems around the world, and that EU equipment manufacturers are the only companies producing controlled atmosphere stunning (CAS) systems globally. According to these manufacturers, a small number of CAS systems has been sold in the USA, Canada, Australia, South Korea and Russia; however, the use of CAS systems on any appreciable scale is essentially confined to the EU. As for the implications on cost competitiveness, the study makes a comparative analysis focusing on the Netherlands, Germany, France, United Kingdom and Poland (for the EU) and on the USA, Thailand and Brazil, adding to the cost of broiler production the cost of slaughter. As for *broiler production cost*, the study concludes that the main cost component is represented by feed, and that lower feed prices in the US and Brazil, resulting from their proximity to large supplies of feed raw ingredients, largely explain the lower production costs in these countries. It also underlines that other significant cost advantages in Brazil and Thailand derive from favourable climatic conditions and lower labour costs, together with a less costly legislative environment. The latter disadvantage for EU operators is however linked to the EU prohibition on the use of antimicrobial growth stimulators, and of meat and bonemeal as a feed ingredient, not to differences in AW-related requirements. The study concludes that in absolute terms, *slaughter costs* are around half as much in Thailand and Brazil as they are in the Netherlands, Germany and France, although the difference is less significant for the UK and, especially, Poland. The study underlines that slaughter costs are largely determined by labour cost, which is the key element determining the advantage of Thailand and Brazil. All in all, the 2012 study concludes that[183] "assuming the Regulation (No 1099/2009) is fully implemented in Third Countries, there is likely to be little, if any distortion between EU and Third Country operators on the EU internal market", and also that "while EU operators are not likely to be significantly disadvantaged vis-à-vis Third Country operators on the EU domestic market, they are likely to become less competitive on export markets, primarily for reasons of market access rather than increased costs".

Also insights from interviews suggest that adaptation costs to achieve compliance with regulation (EC) No. 1099/2009 are unlikely to be substantial (especially for mid/large scale operations), and should not constitute a major factor in determining differentials in cost competitiveness between non EU operators and EU operators. One interviewee (an independent consultant which has cooperated with FVO in auditing activities in non EU Countries) underlined that proper training of animal welfare officers is one of the key elements in achieving compliance with Regulation 1099/2009. He also suggested that cost differentials between EU slaughterhouses and non EU slaughterhouses should mainly derive from differentials in such factors as cost of labour, cost of energy, and cost of live animals, and that adaptation costs to achieve compliance with Regulation 1099/2009 are not critical in this respect.[184]

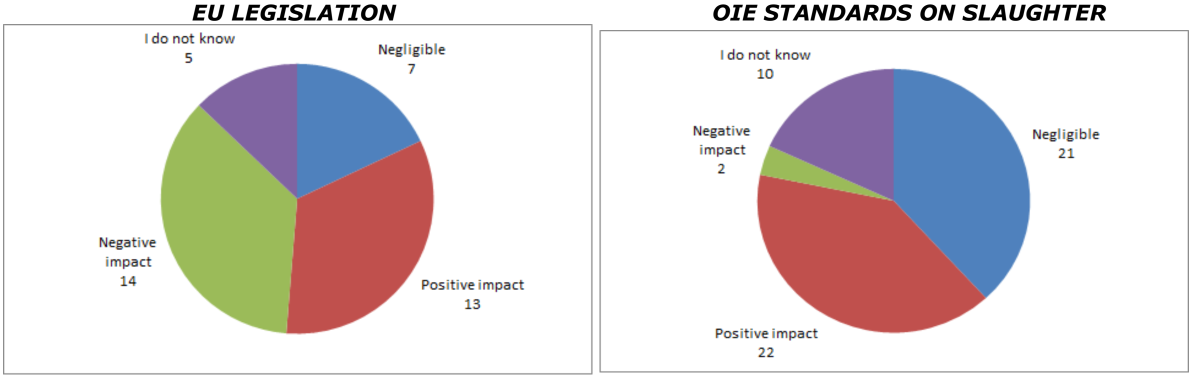
[183] FCEC for DG SANCO (2012), pp. 71-72.

[184] Information collected in Brazil through stakeholder interviews suggests that the rise of animal welfare demand in the EU was first felt by slaughterhouses in the beef and poultry meat sectors, due to the entry into force of EU Regulation No 1099/2009 with new provisions for the protection of animals at the time of killing. Several respondents confirmed a strong initial concerns due to the anticipation of increase of production cost and possible loss of market shares in the EU.
But then it was also confirmed that the cost for implementing animal welfare requirements, especially in pre-slaughter handling of cattle, were compensated by a significant reduction in carcass losses. In addition, there was some consensus that the adoption of animal welfare practices would bring an added value for the product, and thus the industry should see this rather as an investment, than a cost. Since the entry into force of regulations aimed at ensuring equivalence at slaughter in Chile in 2013, the operators in the concerned supply chains (especially in the cattle, sheep, poultry and pig sectors), have made a series of adaptations to comply with the requirements imposed by these regulations. More specifically, companies have had to modify their systems for moving live animals, animal restraints and practices in the human-animal interaction between workers and animals. The slaughtering plants have also had to modify the unloading sites and the design of the waiting pens (which must provide minimum conditions: availability of water and protection against inclement weather). Another aspect that the slaughter

Evidence from the Survey. It emerged from the survey that non-EU Countries operators see EU AW legislation (with which they must align to obtain the certification for exports to the EU in the framework of provisions on equivalence at slaughter) as a more serious cause of negative impacts in terms of competitiveness than OIE standards on slaughter of animals. This especially applies to the beef sector (see Figures 10.3-4 below). This is not surprising if one considers that the beef meat industry is probably the least vertical integrated meat industry and is therefore more prone to be affected by cost impacts on pure slaughtering operations, strictly speaking, which translates in an impact on perceived competitiveness.

Figure 10.3 AW legislation/standards as factors having an impact on the competitiveness of non-EU Countries operators: all sectors

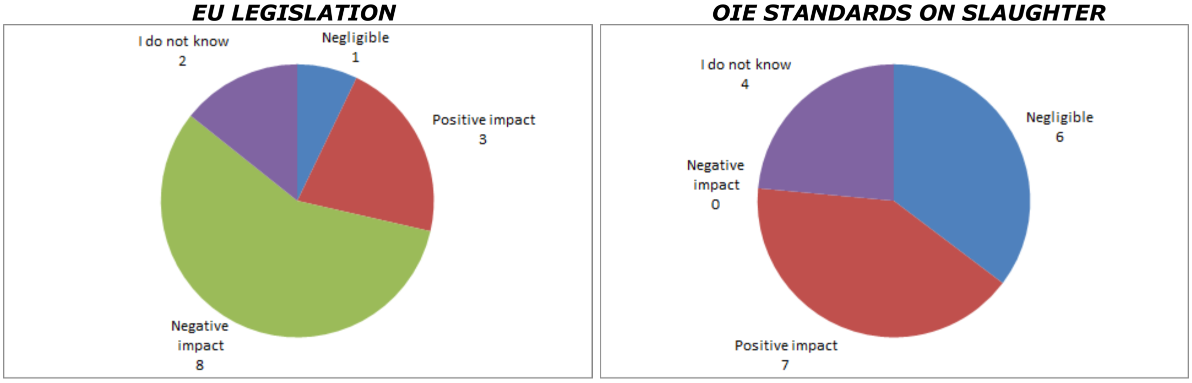
Question: *Only with regards to legislation/standards you are aware of, can you indicate whether they have an impact on the competitiveness of your company against foreign operators?*



Source: survey of non-EU Countries operators

Figure 10.4 AW legislation/standards as factors having an impact on the competitiveness of non-EU Countries operators: beef and live bovines sector

Question: *Only with regards to legislation/standards you are aware of, can you indicate whether they have an impact on the competitiveness of your company against foreign operators?*



Source: survey of non EU Countries operators

The survey highlighted "adaptation of facilities", "development and implementation of standard operating procedures for stunning (including monitoring procedures)" and "training of personnel to achieve adequate competence levels" as the most common adaptations to be introduced in non-EU Countries operators' organisation and management to obtain the certification for exports to the EU (Table 11.10), even if also other adaptations had significant diffusion. No significant differences across sectors emerged from the survey as far as the need for adaptations is concerned.

plants had to standardize according to the recommendations of the OIE are the methods of stunning.

The ***extent of the related adaptation costs emerged as moderate*** (increase of less than 10% of total slaughtering production cost) for most of the required adaptations (Table 10.11). "Organisational" adaptation targeting know how and procedures generally emerged as requiring lower additional costs than adaptation of facilities / equipment (which implied investments). It is worth highlighting that in a non-negligible number of cases, no adaptations had to be introduced, as the non-EU operator's organisation and management maintained that they were already compliant with the requirements for certification.

Table 10.10 Adaptations to obtain the certification for exports to the EU

***Question**: Which of the following adaptations had to be introduced in your company's organisation and management to obtain the certification for exports to the European Union (equivalence at slaughter)? Please focus on adaptations introduced to meet requirements concerning live animals (excluding other requirements, e.g. those concerning animal by-products)*

	Adaptation of facilities (e.g. in the layout)	Investment in new facilities (specialised facilities for exports to the European Union)	Adaptation of equipment	Investment in new equipment (specialised production lines for exports to the European Union)	Adaptation of processes / techniques (e.g. changes in input type/quantity, switch from continuous to batch production, additional steps in the process, etc.)	Development and implementation of standard operating procedures for stunning (including monitoring procedures)	Designation of an animal welfare officer	Training of personnel to achieve adequate competence levels	Hiring of personnel with adequate competence levels	No adaptation had to be introduced: my company's organisation and management were already compliant with the requirements for certification
Beef & Live bovines	7/10	5/10	5/10	5/10	5/10	6/10	6/10	6/10	5/10	4/10
Pig meat & Live Swine	2/3	1/3	1/3	1/3	2/3	2/3	1/3	2/3	1/3	2/3
Poultry meat & Live poultry	6/6	4/6	4/6	5/6	3/6	5/6	4/6	6/6	3/6	1/6
Sheep and goat meat & Live sheep and g	1/1	0/1	1/1	1/1	1/1	1/1	0/1	0/1	1/1	2/1
Total	**16/20**	**10/20**	**11/20**	**12/20**	**11/20**	**14/20**	**11/20**	**14/20**	**10/20**	**9/20**

Source: survey of non-EU Countries operators

Table 10.11 Adaptation costs to obtain the certification for exports to the EU

Question: What was the extent of the adaptation costs which you had to incur for introducing each of the following adaptations to obtain the certification for exports to the European Union (equivalence at slaughter)? Please focus on adaptations introduced to meet requirements concerning live animals (excluding other requirements, e.g. those concerning animal by-products)

Total sectors	Adaptation of facilities (e.g. in the layout)	Investment in new facilities (specialised facilities for exports to the European Union)	Adaptation of equipment	Investment in new equipment (specialised production lines for exports to the European Union)	Adaptation of processes / techniques (e.g. changes in input type/quantity, switch from continuous to batch production, additional steps in the process, etc.)	Development and implementation of standard operating procedures for stunning (including monitoring procedures)	Designation of an animal welfare officer	Training of personnel to achieve adequate competence levels	Hiring of personnel with adequate competence levels
1%-5%	3/16	5/10	4/11	4/12	7/11	7/14	9/11	9/14	8/10
6% - 10%	8/16	2/10	5/11	6/12	2/11	4/14	1/11	2/14	1/10
11% - 20%	2/16	1/10	0/11	0/12	1/11	0/14	1/11	1/14	1/10
21% - 30%	2/16	0/10	1/11	0/12	1/11	1/14	0/11	0/14	0/10
More than 31%	1/16	2/10	1/11	2/12	0/11	2/14	0/11	2/14	0/10
Total	**16**	**10**	**11**	**12**	**11**	**14**	**11**	**14**	**10**

Source: survey of non-EU Countries operators

On the other side, it has to be underlined that the extent of the required adaptation costs, when measured against the expected benefits (additional revenues from access to the EU market), prevented a significant number of surveyed non-EU Countries operators from applying for the certification for exports to the EU as mentioned above and was deemed to be greater than additional revenues from quality increases on their domestic market.

Evidence from Trade Flows. No evidence of specific and measurable impacts on trade flows attributable to differentials in cost competitiveness related to compliance with EU AW equivalence at slaughter emerged from desk research, from case studies on Brazil and Chile, and from the survey of EU and non-EU Countries operators. It is anyway important to underline that whereas a significant number of surveyed non-EU Countries operators has mentioned access to new export markets as a positive effect of obtaining certification for exports to the EU, the majority of surveyed EU operators, on the other side, has included differences in AW standards between the EU and non-EU Countries as a cause of serious competitive disadvantage for them on both the EU and the international market. Even if such differences should not concern the slaughtering stage of the supply chain and the export of raw meat in the framework of Regulation 1099/2009 (inasmuch it requires equivalence of AW standards at slaughter between the EU and non-EU Countries), it is anyway worth underlining that concerns about the actual enforcement of this Regulation in non-EU Countries (with special reference to the actual "equivalence" of specific stunning and slaughtering methods applied in non-EU Countries , and of the related implications in terms of competitiveness) were expressed by some of the interviewed EU business associations.

10.4. Final Considerations on Perceived Comparative Advantages and Disadvantages for EU and non-EU Operators

Survey results highlighted ***significant differences between EU and non-EU Countries operators in the appraisal of specific competitiveness factors***, as will be discussed more in detail in Section C below. With the caution required by the limited number of respondents, it emerged that EU operators tend to see the extent of their cost disadvantage as wider than the extent of the cost advantage appreciated by non-EU operators, and this applies to competition both in the EU and in the international market. EU operators also see differences in animal welfare legislation or standards between the EU and non-EU Countries as a cause of serious competitive disadvantage, whereas non-EU Countries operators tend to consider such differences as neutral in this respect (or at best as a source of moderate competitive advantage). Non-EU Countries operators attach to other factors - natural resources, feed cost, price of live animals, labour cost - greater importance in terms of cost advantage over EU operators. This diverging appraisal has again emerged with reference to both the EU market and the international market.

This said, the use by non-EU Countries operators of facilities, equipment, techniques and operating procedures which would not be compliant with Regulation 1099/2009, for production destined to export markets *other than the EU* can enhance existing cost advantages over EU operators in these markets, thanks to ***avoided adaptation costs, but also to better inherent cost effectiveness*** of such structures/techniques. Conversely, EU operators would feel damaged by the need to make capital intensive investments in largely mature markets with limited perspectives for growth. It is also worth observing that an additional competitive advantage for non-EU Countries operators using non-compliant facilities, equipment, techniques and operating procedures can also derive from ***avoidance of quality***

issues, as shown by the controversy on electrical parameters applied in waterbath stunning for poultry. Moreover as highlighted above, over 50% of surveyed non-EU operators which are certified for exports to the EU see compliance with Regulation 1099/2009 as a source of (moderate or strong) positive impacts in terms of ***access to premium export markets other than the EU*** requiring similar AW standards[185]. Such advantages compound those deriving from the most straightforward export opportunities for certified non-EU Countries operators, which are provided by ***access to the EU market***. The majority (65%) of such operators reported increased revenues from export sales to EU customers.

[185] Some insights on potential opportunities on international markets from compliance with EU AW equivalence at slaughter also emerged from the case study on Chile. Some interviewees suggested that equivalence with EU animal welfare standards might ultimately be valued as a plus also in foreign countries other than the EU.

11. THE IMPACT OF THE COOPERATION FORUM WITH NEW ZEALAND

11.1 Introduction

The primary goal of this case study is to identify and analyse activities carried out within the framework of the EU AW Cooperation Forum (the 'Forum') with the Competent Authorities of New Zealand, with the purpose of assessing their ultimate impact on the competitiveness of the EU and New Zealand producers and operators. The case study is divided into six parts. The first section puts the cooperation forum into context and summarizes the main features and most relevant changes of the New Zealand animal welfare legal framework during the period under review. The second part provides a more detailed review of the results of the activities carried out under the Forum, and their impact on the progress of AW legislation and standards in the Country. The third part focuses on other drivers of animal welfare in the Country with reference to collaboration with OIE and AW research. The fourth part review the local demand for animal welfare friendly products, with particular reference to the pig industry. The fifth and the sixth parts respectively summarise the main findings on the ultimate impact of these activities on the competitiveness of EU and New Zealand producers and operators and some final considerations. This case study has been mainly based on a review of secondary sources listed in annex A.

11.2 Background

New Zealand is among the countries generally recognized with the most advanced AW standards in the world. Not only a humane treatment of animals has traditionally represented a founding element of the New Zealander culture, but it is also looked at as a key element in terms of reputational effect, especially given the prominent role of animal-related exports. New Zealand is actually one of the only four countries in the world ranked with "A" by the Animal Protection Index 2014, and the only one outside the European continent.[186]

During the period under review, ***New Zealand has substantially reformed its animal welfare governance system*** and moved from a system purely based on voluntary codes of conduct to a two-tier system also inclusive of mandatory public enforcement of AW aspects and related sanction system. In particular,

- from a structural point of view, ***relevant national counterparts have undergone a*** *merging and restructuring* ***process***. In 2011, the Ministry of Agriculture and Forestry (MAF) amalgamated first with the New Zealand Food Safety Authority and then with the Ministry of Fisheries. The merging process of these three institutions was successfully completed in the following year, with the setting up of a new organizational structure, i.e. the Ministry of Primary Industries (MPI);

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[186] The Animal Protection Index (API) ranks 50 countries around the world according to their commitment to protect animals and improve AW legislation. In particular, the assessment is based on five themes (i) Recognizing animal protection; (ii) Governance structures and systems; (iii) Animal welfare standards; (iv) Providing humane education; and (v) Promoting communication and awareness; each detailed against specific indicators. The API was designed by a grouping of NGO including World Animal Protection; RSPCA; Eurogroup for Animals; IFAW; HSI; CIWF, under the auspices of the OIE (see, http://api.worldanimalprotection.org/about, last accessed on November 4, 2011). The country report for New Zealand can be accessed at: http://api.worldanimalprotection.org/sites/default/files/api_new_zealand_report_0.pdf

- In May 2013, the MPI announced the launch of ***New Zealand's first animal welfare strategy***[187], supporting the 'fine-tuning' process of the national regulatory architecture and setting out a formal foundation and direction for New Zealand's AW system;
- finally, in the same year, the MPI announced the introduction of the Animal Welfare Amendment Bill to make changes to the Animal Welfare Act issued in 1999[188] to enhance the transparency and regulatory status of the New Zealand AW system and support the creation of a more flexible and easily applicable range of enforcement tools and is no longer based on voluntary industry code of compliance standards and criminal prosecution for extreme instances of maltreatment, as was the case before. In May 2015 the New Zealand Parliament unanimously passed the ***Animal Welfare Amendment Act (No. 2) 2015*** (the Amendment Act). The key changes brought about by this new piece of AW legislation have included, among others, (i) the explicit recognition of animals as sentient beings in line with the provision of the EU Treaties;[189] (ii) the empowerment of MPI to issue regulations setting mandatory animal welfare standards and introducing new enforcement tools to better deal with low-to-medium level offending, and (iii) the reinstatement in the newly approved legislation of the ban on live animal exports intended for slaughter from the Customs Regulation to the AW legislation (see Box 11.1 below).

Box 11.1 – The New Zealand Ban on Live Animal Exports for slaughter

Since 2007, the Government of New Zealand reviewed the national policy for exports of livestock for slaughter in order to minimize the risks to country's reputation as a responsible exporter. The Government issued a Customs Exports Prohibition Order[190] under the Customs and Excise Act 1996 that ***prohibited the export of livestock for slaughter***, except where the risks can be managed to an acceptable level. In these situations, exporters could apply for an exemption, to be approved on a case-by-case basis at the discretion of the Director-General of the MAF taking into consideration different factors, such as the importing country's compliance with the OIE Guidelines at slaughter and during transport, the pre-shipment audit of slaughter facilities by inspectors nominated by MAF and the importing country's compliance with the pre-slaughter stun requirement (for cattle only). This order came into force on 21 December 2007 and was repeatedly extended for a three-year period in 2010 and 2013, and, as indicated above, following the Amendment Act, export provisions on livestock for slaughter are controlled under the Animal Welfare Act rather than the Customs legislation. As ***no application for the export of livestock for slaughter*** was reportedly made or approved since 2007, it appears that all the livestock exported from the Country over the last 10 years is not directly intended for slaughter, but for breeding purposes in the Country of destination, as also indicated by its average weight. Nonetheless, during the period under review, New Zealand exports of live animals were seemingly only marginally affected in terms of quantities involved (see Section 12.5 below).

Following the revision of the AW regulatory framework, the MPI has engaged in process of suite of welfare regulations for live animal exports, care of and conduct towards animals, and surgical and painful procedures, through a broad, public consultative process (some 1,500 submissions were received during consultations in 2016)[191]. The ***regulations specifically relating to the management and***

[187] MPI, Animal welfare matters - New Zealand Animal Welfare Strategy, May 2013.
[188] This act was already largely regarded as world leading legislation and repeatedly amended during the first half of 2000s (in 2000, 2001, 2002 and 2005).
[189] Previously, animals were explicitly referred to as sentient in the national Animal Welfare Strategy, but not in the legislation (see, MPI, *Animal Welfare Matters: New Zealand Animal Welfare Strategy*, May 2013).
[190] Customs Export Prohibition (Livestock for Slaughter) Order 2007 (SR 2007/400).
[191] For more information, see MPI, 2015/2016 Annual Report.

treatment of young calves and export of live animals were prioritized. Seven young calf regulations were developed to target specific areas of noncompliance or known risks to animal welfare.[192] Some of them reflect existing minimum standards in the current codes of welfare (see below), but are now directly enforceable by public authorities; while some others introduce requirements going beyond the previous minimum standards (either more specific or updating requirements to a higher standard). Four regulations[193] took effect from 1 August 2016, while the remaining three proposals[194] have been delayed commencement to allow farmers, transporters and processors in the supply chain to adjust their practices. The Animal Welfare (Export of Livestock for Slaughter) Regulations 2016 endorsing and reiterating the prohibition on exporting livestock for slaughter came into force in December 2016.

Furthermore, changes to ***live animal export provisions*** inserted in the Amendment Act (sections 23 to 26) and expected to come into force in May 2020 were given early effect (on 25 August 2016) by a recent Order in Council[195]. These changes aim at further enhancing existing safeguards by allowing the MPI's Director General to (i) require the exporter to provide a report on the welfare of animals exported during the journey and for up to 30 days after arrival under the animal welfare export certificate (AWEC)[196]; and (ii) take that information into account when considering an application for a new AWEC. This Order also repeals section 41 of the 1999 Act relating to the issuance of the Guidelines for issue of AWEC in order to provide administrative clarity, without affecting current practice and the MPI's work on the development of guidance material conducted in consultation with stakeholders. For instance, since March 2014, the MPI Standard for the Transport of Cattle by Sea from New Zealand replaced the MPI Guidance Material for the Transport of Cattle by Sea, providing the exporter with a comprehensive set of technical specifications, as well as a step by step process to follow in order to obtain an AWEC.

As indicated above, besides the specific and enforceable mandatory standards set by regulations, minimum standards and recommended best practices have long been outlined in a set of ***codes of welfare***. These codes are based on scientific-evidence and have been drafted by National Animal Welfare Advisory Committee (NAWAC), whose members come from the scientific community, the private sector, as well as the civil society and which was entrusted with advising the MPI on both scientific and legislative aspects, already under the under the 1999 Animal Welfare Act. At the beginning of the period under review, four codes of welfare of relevance for the present Study had been issued: laying hens, broilers, pigs and painful husbandry procedures. In 2010 three new (relevant) codes of welfare were issued (Commercial

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[192] MPI, Mortality rates in bobby calves 2008 to 2016, MPI Information Paper No: 2017/01, February 2017.

[193] These four regulations: (i) prohibit killing calves by blunt force to the head, (ii) require young calves fitness for transport (they must be at least 4 full days of age and physically fit before they are transported off farm for sale or slaughter or as a result of sale); (iii) set the maximum duration of transport (i.e. up to a 12 hours' journey time); and (iv) prohibit the transport by sea across Cook Strait.

[194] These four regulations: (i) set the maximum time off feed before slaughter (within 24 hours of the last feed on farm); (ii) require that appropriate loading and unloading facilities are provided and used when young calves are transported off farm for sale or slaughter or as a result of sale; and (iii) require that suitable shelter is provided before and during transportation and at points of sale or slaughter.

[195] Animal Welfare Amendment Act (No 2) 2015 Commencement Order 2016 (2016/172).

[196] The 1999 Act required that all live animals be exported in accordance with the conditions of an AWEC issued by the Director-General of the MPI (unless exempt under law). An AWEC is granted on a case by case provided that any risks to AW and New Zealand's reputation associated with the export can be adequately managed. The Director-General grants an AWEC and can impose conditions as part of it.

Slaughter, Sheep and Beef Cattle, and Dairy Cattle), while the Pigs code of welfare was reissued. Transport within New Zealand code was issued in September 2011, while in the following year, the Goats code of welfare was released and the Laying Hens and Meat Chickens codes were revised. In the following year, an amendment has been made to the 2012 Laying Hens Code to extend transitions for phasing out battery cages by two years. Finally, four codes were re-issued in December 2016 to incorporate reference to the above new regulations.

Table 11.1 – Relevant Codes of Welfare, change during the period under investigation

Area	Key Dates
Broiler Chickens	• Issued in 2003 (fully housed) • Replaced by a new code in July 2012
Painful Husbandry Procedures	• Issued in 2005
Pig	• Issued in 2005 • Re-issued in December 2010
Laying hen	• Issued in 2005 • Replaced by a new code in December 2012 • Amended in 2013
Commercial slaughter code	• Issued in May 2010 • Re-issued in December 2016 to incorporate reference to the regulations
Sheep and Beef cattle	• Issued in June 2010 • Re-issued in December 2016 to incorporate reference to the regulations
Dairy Cattle	• Animal Welfare (Dairy Cattle) Code of Welfare came into force in February 2010 • Amended in June 2014 • Re-issued in December 2016 to incorporate reference to the regulations
Transportation within New Zealand	• Issued in September 2011 • Re-issued in December 2016 to incorporate reference to the regulations
Goat	• Issued in March 2012

Source: Consultants' elaboration based on information from the MPI website

During the period under review, different mechanisms have been set up to ***enhance compliance with and enforcement of the AW legislation***. In July 2010, the *Safeguarding our Animals, Safeguarding our Reputation – Improving Animal Welfare Compliance in New Zealand* programme was finalised.[197] This programme aimed at achieving voluntary compliance with AW legislation and codes of welfare, focusing on stakeholders' involvement through the development of effective partnerships between Government and industry groups. Memorandums of Understanding (MOU) between the MAF and AW stakeholders (such as the New Zealand Pork Industry Board) have been developed to formalise an intention to work in partnership, and clarify respective roles and responsibilities in relation to specific animal welfare initiatives. The Primary Industries Chief Executives Animal Welfare Forum, comprising of Chief Executives and senior management across livestock industry groups and government, acts as the oversight body for the livestock production sector. This forum encourages collaboration and information sharing on AW initiatives and complaints, and provides advice to MAF (MPI) on the strategic direction and implementation of the Compliance and Enforcement Programme. This oversight forum is supported by an operational

[197] See MAF, *Safeguarding our Animals, Safeguarding our Reputation – Improving Animal Welfare Compliance in New Zealand*, July 2010.

reference group, called the Farm to Processors Animal Welfare Forum, which represents the point of coordination and information sharing for AW related initiatives across the pastoral livestock production sector.

As mentioned above, the ***introduction of the Amendment Act also aimed at address key enforceability issues***, and namely (i) the fact that the codes of welfare did not have the status of primary/secondary legislation, and were, thus, not directly enforceable, and, also as a result of that (ii) the lack of enforcement tools to deal with low-medium offending (the only option available to MPI being a prosecutable criminal offence with a high threshold). Currently, new regulations are directly enforceable and introduce appropriate penalties for low to medium offending, such as infringement notices suitable for minor offences (with penalties in the US$ 300 – US$ 500 range) and fines up to US$ 5,000 (for an individual) or US$ 25,000 (for a body corporate with no criminal conviction), in the case of a prosecutable offence.

Furthermore, the ***On Farm Verification (OFV) audit programme has been amended in 2016.*** This programme was launched in 2003 to familiarise farmers with their legal responsibilities related to the Animal Status Declaration (ASD) that is required to be completed for movements of livestock from farm to farm, or to sale yard or to slaughter and involves visits to selected farms and sale yards by veterinarians from MPI Verification Services[198]. Last year, the scope of the programme has been expanded (the numbers of farms to be audited increased by 300, covering for the first time dairy farm suppliers, although key target remains suppliers of bobby calves) and greater emphasis was placed on compliance with the codes of welfare (previously regarded as a voluntary and largely educational activity). From now on, during the on-farm verification visit, verifiers may exercise their inspection powers under the Animal Welfare Act. In case of evidence of a breach of the Animal Welfare Act (the Calf Regulations included), further action may be taken, including possible referral of the case to MPI's Compliance team for investigation.

11.3 The Results of the Cooperation Forum

Bilateral relationships between the EU and New Zealand date back to 1961, and since then have progressively strengthened and deepened. Given the prominence of the trade in animal production-related goods, it is of no surprise that some of the earliest agreements have covered matters such as sheep meat (1980) or trade in live animals (1997). Also in 1997, the EU and New Zealand signed a Veterinary Agreement, in the framework of which a Joint Management Committee (JMC) was established. In 2007, relationships were further strengthened with comprehensive a Joint Declaration.[199] Although the Joint Declaration does not refer explicitly to AW, it "encouraged the EC and New Zealand to establish an animal welfare forum to improve standards in the mutual treatment of animals."[200] Indeed, the ***Animal Welfare Cooperation Forum of the European Commission and the Competent Authorities of New Zealand*** was established in the same year with the purpose of providing a platform to exchange information on AW issues. The scope of the activities of the AW cooperation forum is threefold, and namely (i) the review of AW issues of operational and strategic importance to both participants (including in relation to production animals); (ii) the

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[198] The legal basis for this programme was defined in May 2009, when the Animal Products (Regulated Control Scheme-On- Farm and Stock Sale-yard Verification) Notice was published.
[199] http://eeas.europa.eu/archives/docs/new_zealand/docs/joint_declaration_2007_en.pdf
[200] The European Union and New Zealand 2007 Joint Declaration on Relations and Cooperation, Achievements in the first two years, October 2009 (https://eeas.europa.eu/sites/eeas/files/joint_declaration_on_relations_and_cooperation_2007.pdf, last accessed on November 07, 2016)

exchange of information, and (iii) investigate opportunities for cooperation, such as research projects, secondment opportunities, etc.

Between 2007 and 2015, ***nine annual meeting of the Cooperation Forum have been organized***. Participants have included representatives from the Commission (from DG SANTE, as well as representatives of other relevant DG such as TRADE, AGRI, RTD, etc.) and from New Zealander institutions (from the Government in Wellington and from the New Zealander mission to the EU, as well as representatives of scientific institutions, particularly Massey University). In parallel with the nine 'official' meetings, some informal or *ad hoc* meetings were organized in 2009 and 2010, while in 2014 a specific Science and Research Meeting was held in addition to the official meeting to exchange information on the state of scientific research. ***Overall, the Cooperation Forum seems to have been very successful in allowing an exchange of scientific as well as policy information, with possibly some positive influence results on policy dialogue. As for other, more operational, forms of collaboration, results seem to have been comparatively less substantial, with some good results obtained under the BTSF program, and much less under other initiatives not directly run by DG SANTE***.

The most significant results were obtained in the field of equivalence at slaughter. Since the first meetings of the cooperation forum, the issue was extensively discussed, and the exchange increased in parallel with the approval of Regulation 1009/2009. The 2010 meeting of the Cooperation Forum hosted a detailed presentation of the Regulation, after which the participants agreed to develop "a work plan to first study possible discrepancies in legislation and further assess them in the field".[201] In 2011, the FVO conducted a field mission to New Zealand to gather information to compare New Zealand's approach to the EU AW standards at slaughter. After a couple of year of intense bilateral interaction, full equivalence of New Zealand's requirements for exports to Regulation 1009/2009 was agreed in 2013.[202] In 2014, following a request from the Commission, such a recognition was reciprocated, achieving a ***reciprocal equivalence agreement on AW at the time of slaughter between the EU and New Zealand***. Despite possibly not particularly relevant from the point of view of trade relations, the political importance of such an agreement was explicitly underlined by the Commission representatives.[203] Notably, during the Ninth Meeting of the Cooperation Forum held in 2015, a representative of the Ministry for Primary Industry of New Zealand proposed "as future relevant priority action to initiate discussions to assess equivalence also on animal welfare standards on the farm and during transport."[204]

More in general, the Cooperation Forum allowed a ***continuous and reciprocal update on the policy developments and scientific research progresses*** on both sides, which is likely to have facilitated and informed not only the above-mentioned equivalence but, more in general, bilateral relations and policy dialogue. The extent to which this exchange translated into actual opportunities for collaboration, however, seems rather limited. ***Some positive results were obtained under the BTSF program***. New Zealand representatives participated in BTSF AW trainings in Europe in 2006, 2008, 2009, and 2010, while, according to the Minutes of various meeting of

[201] Minutes of the Fourth Meeting of the Animal Welfare Cooperation Forum of the EU Commission and the Competent Authority of New Zealand, 28 May 2010, p. 3.
[202] See Minutes of the Seventh Meeting of the Animal Welfare Cooperation Forum of the EU Commission and the Competent Authority of New Zealand, 5 June 2013, p.2.
[203] See Draft Minutes of the Eight Meeting of the Animal Welfare Cooperation Forum of the EU Commission and the Competent Authority of New Zealand, 26 May 2014, p. 2.
[204] Minutes of the Ninth Meeting of the Animal Welfare Cooperation Forum of the EU Commission and the Competent Authority of New Zealand, 27 May 2015, p.9.

the Cooperation Forum, New Zealander contributed in several cases to the delivery of BTSF trainings both in Europe and in non-EU countries.[205] Another issue that was discussed since the establishment of the Cooperation Forum was the possibility to organize ***staff visits and secondment opportunities***. However, up until 2015, only one secondment of an EU staff in the Ministry for Primary Industries could be organized, which was widely regarded as a successful example of cooperation. Notably, virtually no New Zealand research institutions have taken part in RTD-financed Research Projects covering AW.

Notably, there are at least two areas in which the potential of the Cooperation Forum remained somehow uncapped. The first concerns New Zealand experts' participation (either as observers or attendees) in EFSA AHAW meetings, which was repeatedly discussed during Cooperation Forum's meetings, but seemingly never put in practice. The second concerns ***Animal Welfare Labelling***, which was extensively discussed in the first meetings of the Forum. As discussed in the part A of this Study, the issue was a key area of interest for the EU under its AW Strategy, but was progressively abandoned due to a variety of political issues. The issue has known a similar trend under the Cooperation Forum, especially since, as seen in the case of pig farming, it represented a key area of development for New Zealand over the same period. Unfortunately, as a consequence of the abandonment at EU level, the issue stopped being the object of discussions under the Forum as well, although it remained a key interest of New Zealand.

11.4 Other drivers of changes in AW standards

In the 1990s, activities promoting AW were seemingly largely driven "from the top" by exporters into overseas markets, where consumer concern over the treatment of animals was rapidly growing.[206] However, in the last decade, ***civil Society has been a (if not* the*) major driver of progress in the field of Animal Welfare in New Zealand***. A number of AW NGO operate in the country, both advocating for improved AW, and actively collaborating with the Government through several activates. Some NGO appear to be eminently dedicated to the former, as in the case of SAFE, the oldest AW NGO in the country, which campaigns against factory farming, as well as against live animal exports.[207] In other cases, NGO have taken an active role in the implementation and enforcement of AW provisions in the country. The most prominent example is the New Zealand Society for the Prevention of Cruelty on Animals (NZSPCA), which has assumed an increasingly important role in supporting the Government's activities in the enforcement of AW provisions.[208] NZSPCA has also had a key role in the development and promotion of private sector-led AW standards and labelling, launching the SPCA Blue Tick ® standard. The standard was launched in 2001 for eggs, and was then extended in 2009 to pork products, in 2011 to chicken, and in 2012 to turkey.[209] Overall, ***pressure through the media by animal welfare organizations still maintains a major role***. For instance, the Bobby Calf Action

[205] This is not explicitly reported in BTSF Annual Reports, which only include information on the nationality of attendees.
[206] See, for instance, Alison Loveridge, Changes in Animal Welfare Views in New Zealand: Responding to Global Change, Society & Animals 21 (2013) 325-340.
[207] See, for instance, http://safe.org.nz/ecards/tell-government-ban-all-live-exports (last accessed on April 13, 2017).
[208] See Animal Welfare Directorate, Ministry of Agriculture and Forestry, Safeguarding our Animals, Safeguarding our Reputation - Improving Animal Welfare Compliance in New Zealand, July 2010.
[209] http://spcabluetick.org.nz/About-us/What-is-the-SPCA-Blue-Tick

Group[210] was set up in November 2015 to develop and deliver various initiatives to ensure best practice handling and management of bobby calve in response to publicity highlighting cruel and illegal practices associated with bobby calf handling.

On the other hand, ***New Zealand's participation in OIE activities has been more devoted to promoting AW worldwide, and particularly in the region, rather than a driver of change in the country***. The country is, in fact, a very active OIE member both at central and at regional level, having also filled the presidency. New Zealand's proactive rola has materialized in the chairing of several key committees and expert groups, and the country's commitment to engage with OIE is also included and described in the AW national strategy. New Zealand is also a very active member of the OIE Regional Commission for Asia, the Far East and Oceania, having supported, also financially, the implementation of RAWS.[211] The country also ***hosts the Zealand/Australia Collaborating Centre for Animal Welfare Science and Bioethical Analysis*** at the Institute of Veterinary, Animal and Biomedical Sciences at Massey University. Since its establishment in 2007, the Collaborating Centre at Massey University has supported the activities of the OIE Regional Commission, and has extensively engaged in research activities on the issue, with some 20 key research projects in 2011.[212] Research activities have also been carried out in partnership with other institutions in the region, to promote AW standards and their implementation. For instance, in 2015, the Centre had a cooperative project ongoing with the University of Putra Malaysia with the aim of implementing OIE AW standards, especially transport and slaughter, in Vietnam, Malaysia, China and Thailand. Finally, coherently with the interest in the development of private AW standards and labelling schemes, New Zealand has also collaborated with ***ISO Working Group on Technical Specifications for AW***.[213]

11.5 The Demand for AW Friendly Products in the Country

The significance of local society concerns on animal welfare and domestic demand for AW-friendly products is further confirmed by recent developments in the New Zealand commercial pork industry. Indeed, although New Zealand's pork production is sold domestically only (actually, around 58% of pig meat consumed by New Zealanders is imported), an animal based welfare assessment programme PigCare™ has been operational since 2010. PigCare™ is an on farm accreditation programme (in addition to an assessment of the minimum standards in the Pigs Code of Welfare) set up with input from a number of stakeholders including farmers, veterinarians, Government representatives, University personnel, NZPork (the farmer-funded industry-good body), and New Zealand Society for the Prevention of Cruelty to Animals. This programme currently covers the whole commercial industry and applies across all types of production systems, both fully housed systems and farms practising outdoor breeding. Following concerted commitment from NZPork, it is now supported by all the major wholesalers, it covers New Zealand's commercial production of an annual kill of 625,000 pigs (2015-2016). Besides, there are also some niche brands differentiated by particular production systems. For example, RNZSPCA run a 'blue tick' programme for free range pigs and pigs raised in open

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[210] This group is led by representatives from MPI, DairyNZ, Dairy Companies Association of New Zealand, Meat Industry Association, Federated Farmers, New Zealand Petfood Manufacturers Association, Road Transport Forum, and New Zealand Veterinary Association.

[211] For instance, according to the minutes of the 2015 Meeting of the Animal Welfare Cooperation Forum, New Zealand had committed an additional € 30,000 for this purpose.

[212] See Minutes of the 5th meeting of the AW Cooperation Forum, 2011.

[213] See Minutes of the Ninth Meeting of the Cooperation Forum.

sheds on straw or sawdust bedding, which is licensed on a commercial basis. Local demand is limited: free range pork comprising about 1.5% of the weekly kill.

11.6 Impact of EU Animal Welfare Activities on Competitiveness

(i) What is the impact on the competitiveness of the EU producers and operators of the cooperation within the framework of the Cooperation Forum

Production costs

All Meats. Since equivalence at slaughter has been reached between the EU and New Zealand, EU producers and operators are at a level playing field with their counterparts from New Zealand, although the matter is not generally deemed significant in competitiveness terms.

Livestock*.* AW standards differences in the field of maritime transport of live animals are unlikely to have had an impact on production costs to put EU exporters at a competitive disadvantage. In fact, requirements on the stocking density of live bovine transported by sea seems to be somehow stricter in New Zealand (based on the comparisons of relevant legal texts), as illustrated in the table 11.2 below.

Table 11.2 – Minimum pen area (m²) per head for cattle exported by sea

Live weight in kg	New Zealand	EU
200 — 300	0.90 – 1.18	0.81 — 1.0575
300 — 400	1.18 – 1.45	1.0575 — 1.305
400 — 500	1.45 – 1.79	1.305 — 1.5525
500 — 600	1.79 – 2	1.5525 — 1.8

Sources: New Zealand - Guidance Material for the Transport of Cattle by Sea; EU Council Regulation (EC) No 1/2005

Market access

All Meats. Achieving full equivalence at slaughter has not had notable impacts in terms of facilitated access to the EU market for New Zealand operators. As also confirmed by local counterparts, the equivalence at slaughter has had no material effect on the EUs' trade with New Zealand. New Zealand producers play a major role as exporters of sheep and goat meet and dairy products because of the TRQ regime they operate within.

Local Demand. The volume of New Zealand imports of pig meat largely increased between 2004-06 (around 23 million Kg) and 2013-15 (around 39.6 million Kg), and a major share of this increase has come from the EU (from less than 10% to about half of total imports). A high proportion of imported pig meat is produced in countries that have far more intensive systems than New Zealand's standards. For example, in New Zealand, from December 2013 gestation stalls are not used <u>at all</u> during pregnancy. This is the whole pregnancy including the first 4 weeks. New Zealand does not consider AW standards in setting trading conditions for imports. The local market for AW-friendly pig products is mainly catered by local schemes and does not represent a market opportunity for EU exporters. Actually there are disagreements on what should be meant for AW-friendly in the different markets[214].

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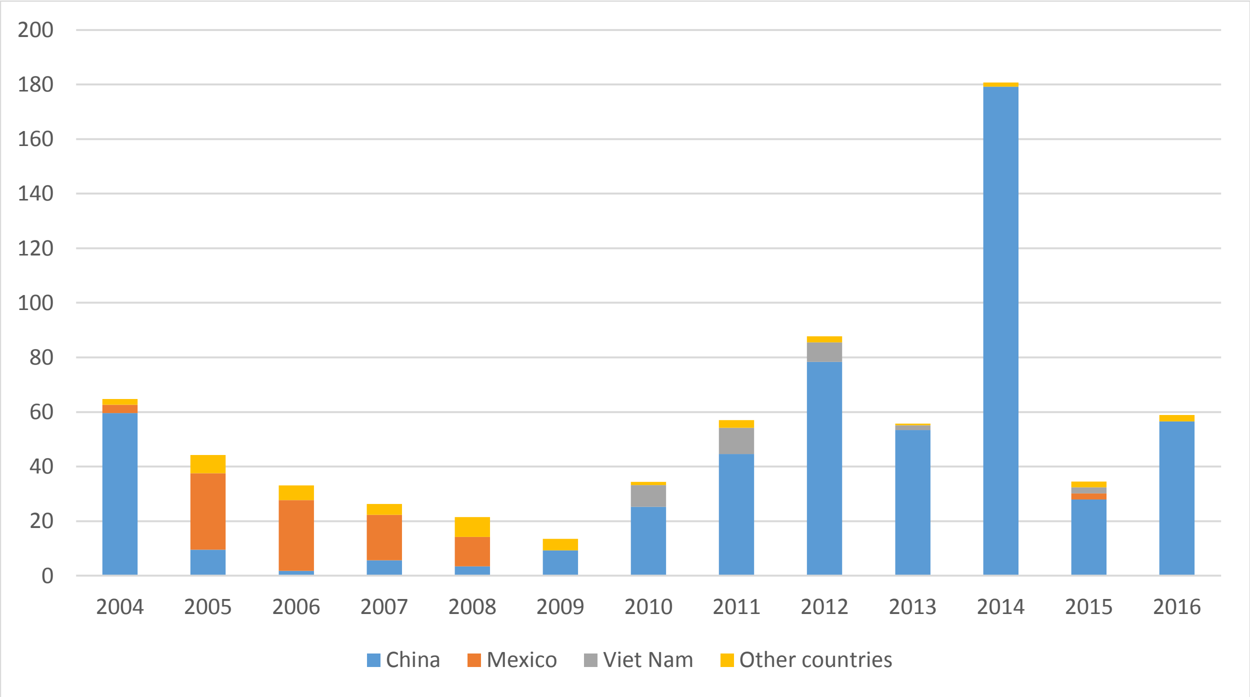
[214] *For example, reference to gestation stall-free (contrast the EU and New Zealand); use of the term 'free range' (contrast the New Zealand definition and that developed by Finland in Denmark, and recommended by the Danish Animal Welfare Society, where grower pigs must have access to an outdoor concreted area).*

(i) What is the impact on the competitiveness of the non-EU producers and operators of the cooperation established within the framework of the cooperation forum?

Market access

Livestock. The EU does not enforce provisions banning the export of livestock for slaughter into non-EU Countries, which could represent a source of competitive advantage. It is a fact that NZ exports of livestock have increased less than those of the EU overall. However, ***the impact of the prohibition on exporting livestock for slaughter on the competitiveness of New Zealand operators vis-à-vis the EU operators is not immediately apparent***. First of all, the New Zealand exports of live bovine show an oscillating trend between 2004 and 2016. Even if in the years right after the ban (2008 and 2009), the value of exports declined to minimum values (US$ 21 and 13 million, respectively), in previous years, exports already showed a declining trend, and starting from 2010, exports recorded substantial increases. Thus, even if present, the effect of the ban was only temporary. ***Second, and even more importantly, the New Zealand exports largely concentrate on markets different from those targeted by the EU exporters*** and the latter have hardly represented a substitute for the first. As illustrated in the figure below, since 2009, the vast majority of New Zealand exports of live bovine went to China (from 70% up to 99% of the total in different years) that until recently bassed EU beef meat on SPS issues. In fact, in the period reviewed here (actually, since year 2000 until recently), the China market was not accessible for EU bovine and products thereof, because of an import ban imposed by the Competent Authority due to bovine spongiform encephalopathy (BSE) and Transmissible Spongiform Encephalopathy (TSE).

Fig. 11.1 – New Zealand Exports of Live Bovine Animals, by major destination (2004-2016, in US$ mn)



Source: Consultants' elaborations on Comtrade data

11.7 Final Considerations

Impact of EU cooperation with New Zealand on the competitiveness of EU and local producers and operators can be considered as very limited, because the two set of AW standards already largely converged and the practical impact of recognising full equivalence at slaughter has been negligible. Moreover the markets catered by EU and NZ producers have largely been complementary in terms of species and countries of destination in the period reviewed here.

Most of the impact of this policy dialogue can be seen at the political and administrative level in the growing approximation between the two AW legal systems. Examples of this range from New Zealand adopting the definition of animals as sentient beings in its legislation, to – and much more significantly – moving from a system based on voluntary self-policing of codes of conduct to a control system more closely resembling the official controls carried out in the EU Member States, and interaction with DG SANTE and the former FVO has played a major role in driving this evolution. This, however, has been in place for too short a period for allowing any reasonable assessment of possible impact on practices and operators' behaviours. At the international level the EU and New Zealand strictly cooperated in advancing the OIE agenda and supporting its implementation among non-EU Countries, particularly in South Asia.

As already reported for Brazil there is on the New Zealand side an untapped demand of being more involved in basic research on AW issues and in the scientific dialogue underlying regulatory aspects (including secondment of experts and observers to EFSA decisions). There are preliminary indications that cooperation at that level might have suffered from the lack of dedicated facilities to further spur dialogue. Much in the same vein, the diminished emphasis given to labelling of animal welfare practices has left unsolved issues of mutual recognition of more advanced private AW standards and created the conditions for different understandings given to similar concepts for marketing purposes, which does not contribute to market transparency. This applies both to EU pigmeat exporters to New Zealand and New Zealand exports of dairy products to the EU that in most cases could qualify as "free range" according to the standards promoted in certain EU MS.

PART C

ANALYSIS OF THE IMPACT ON COMPETITIVENESS

12. ANALYSIS OF COMPETITIVENESS- INTRODUCTION

The present section is structured on five Sections illustrating the evidence collected through desk research, in-depth structured interviews and a survey of EU and non-EU operators on:

- A ***general appraisal of international competitiveness of EU-28 sectors affected by AW International Activities***, based on a set of market performance indicators, an appraisal of the evolution of international trade and an analysis of the revealed comparative advantage (Section 14)
- An appraisal of the ***impact*** of compliance with AW legislation/standards applying in different competitive arenas, as well as of differences between the EU and non-EU Countries in the related AW requirements, on ***four key dimensions of competitiveness***, namely:
  - Productivity and cost competitiveness (Section 15).
  - Market access (Section 16).
  - Trade distortions (Section 17).
  - Capacity to innovate, i.e. market opportunities related to AW aspects (Section 18).

Conclusions on the impacts on the above four key dimensions of competitiveness are drawn at Section 19. Further details on the analysis of trade flows and international competitiveness are included in Annex F.

13. GENERAL APPRAISAL OF INTERNATIONAL COMPETITIVENESS OF EU-28 AFFECTED SECTORS

13.1. Overall appraisal of market performance of the affected sectors in the EU

The meat sector has a lower apparent labour productivity (i.e. value added per employee) with respect to the food industry and the general manufacturing industry; this is mainly due to the nature of products, consisting for a large part of fresh meat with minimal processing activity and not requiring complicated production processes. For the same reason, also the ratio "value added on turnover" results to be lower than the other considered industries.

The meat sector, however, grew faster in the 2011-14 period than the average food industry and the general manufacturing industry both in terms of apparent labour productivity and in value added, accounting in 2014 for around 19% of total EU food industry's value added.

Table 13.1 - Overview of EU market performance indicators for the meat sector

	Meat sector	Food industry	Manufacturing industry
Apparent labour productivity ('000 € per employee)	37	44	57
Growth (2011-2014)	5.0%	2.4%	1.8%
Value added (€ bn)	34	181	1,710
Growth (2011-2014)	3.7%	2.4%	1.2%
Value added / Turnover	15.3%	19.2%	24.1%

Source: Eurostat Structural business statistics

The dairy sector is characterised by a very high apparent labour productivity, almost double than that of the meat sector and higher than the average of food industry as a whole. Value added grew at almost the same pace of the food industry, while the overall share of value added on turnover was below the average. All in all, the dairy sector accounted in 2012 for around 10% of the EU food industry's value added.

Table 13.2 - Overview of EU market performance indicators for the dairy sector

	Dairy sector *	Food industry	Manufacturing industry
Apparent labour productivity ('000 € per employee)	60	44	57
Growth (2011-2014)	4.2%	2.4%	1.8%
Value added (€ bn)	20	181	1,710
Growth (2011-2014)	2.5%	2.4%	1.2%
Value added / Turnover	14.3%	19.2%	24.1%

* *value added and turnover data refers to 2012*
Source: Eurostat Structural business statistics

13.2. Evolution of international trade and revealed comparative advantage

13.2.1. Beef meat

Evolution of international trade. The EU is a net importer of beef meat, and has remained a minor player in the global export market over the observed period (accounting for just 2-3% of total global exports). All the leading competitors – especially India and the US, but also Australia and Brazil – have instead recorded an impressive growth in exported volumes between 2004-06 and 2013-15 (with two and even three-digit % increases). Safe remaining the EU trade deficit in beef meat, it is important to note that the EU has greatly reduced its imports over the observed period (-43%). EU imports from Brazil and Argentina have greatly decreased (-72% and -53%, respectively), with Uruguay and Australia recording substantial gains on the EU market. Bosnia Herzegovina has become the key destination market for EU exports of beef meat, following the sharp decline of exports towards Russia (also in this case, this development has mostly to be related to the import restrictions imposed by the country in reaction to the sanctions applied for the Ukrainian crisis). The EU has greatly improved its competitive position in the leading world destination market: the US, but still plays a minor role as supplier there (less than 2% of US beef imports in 2013-15 came from the EU).

Revealed comparative advantage. The Revealed Comparative Advantage (RCA) index for beef meat indicates that in Australia and Brazil exports have a role on total countries' trade; also in India exports of beef meat have some importance, accounting for around 1.5% of total exports. RCA index for the US and especially for the EU is on the opposite extremely limited.

Table 13.3 - Revealed Comparative Advantage for main exporters and the EU

Beef meat	Revealed Comparative Advantage (avg 2013-15)
India	1.457%
Australia	2.867%
Brazil	2.402%
US	0.350%
EU	0.031%

Source: UN Comtrade

13.2.2. Pig meat

Evolution of international trade. The EU has strengthened its position as leading exporter of pig meat at world level over the observed period. The US represent the main competitor of the EU on a global scale and in the second destination market for importance, i.e. in Japan. China has become the key destination market for EU exports of pig meat, thanks to an impressive export performance: nearly 60% of Chinese imports of pig meat in the 2013-2015 period come from the EU. Important increases have also been recorded in EU exports to South Korea and Australia. The EU has instead reduced its exports towards Russia (also because of import restrictions imposed by Russia in reaction to the sanctions applied for the Ukrainian crisis), but its market share in the country has remained basically stable (around 30%). The EU market share has also remained stable in Japan (35-36%). EU imports of pig meat remain negligible among the non-EU countries analysed in the study, both Chile and the US have reduced their exports to the EU: Chile is now the leading foreign supplier of pig meat, and has replaced the US.

Revealed comparative advantage. The appraisal of Revealed Comparative Advantage is calculated as the share of one country's exports in the observed sector divided by country's total manufacturing exports. The analysis shows that the exports of pig meat have a limited weight on total exports for all the top exporters, despite this, Canada and Brazil have a RCA index almost double than that of the EU and the US.

Table 13.4 - Revealed Comparative Advantage for main exporters and the EU

Pig meat	Revealed Comparative Advantage (avg 2013-15)
EU	0.214%
US	0.284%
Canada	0.568%
Brazil	0.584%

Source: UN Comtrade

13.2.3. Poultry meat

Evolution of international trade. The EU is a net exporter of poultry meat; with a share of 12-13% of global exports, it ranks third among the leading exporters at world level, far behind Brazil and the US. All the top-3 exporters have lost market shares over the observed period, to the advantage of China (which remains however a net importer of poultry meat, and the most important destination market at world level), Ukraine, Thailand and South Africa (each of these countries still accounts for less than 2% of global trade in poultry meat, however). The export performance of the EU poultry meat sector has been boosted by an impressive growth in the key destination markets, especially in South Africa, Benin, Saudi Arabia and China. The EU competes with Brazil and the US in China (where imports from the EU have grown by 154%, against a growth of 32% of imports from Brazil and of just 13% of imports from the US), and with Brazil in Saudi Arabia (where, differently from what happened in China, the competitive position of the EU has worsened). The limited EU imports of poultry meat (which have decreased by nearly 60% over the observed period) mostly come from Brazil, which however has lost market shares (together with the US, which are now a marginal supplier), to the advantage of Ukraine, Chile and Thailand. The growth recorded by Ukraine on the EU poultry meat market has been especially impressive: it has gone from being a marginal supplier (less than 27 tonnes) to being the second-ranked foreign supplier (14,500 tonnes, i.e. 9.5% of EU total imports of poultry meat).

Revealed comparative advantage. Brazil is the only country among the world's top exporters for which poultry meat has a significant weight on total exports; on the other side, the importance of poultry meat for European and Chinese total trade in particular is negligible.

Table 13.5 - Revealed Comparative Advantage for main exporters and the EU

Poultry meat	Revealed Comparative Advantage (avg 2013-15)
Brazil	3.133%
US	0.285%
EU	0.089%
China	0.043%

Source: UN Comtrade

13.2.4. Sheep and goat meat

Evolution of international trade. World trade in sheep and goat meat is dominated by Australia and New Zealand, which hold a combined share of nearly 90% of total exports. Australia has replaced New Zealand as leading exporter over the observed period. The EU currently holds a very distant third position in the global ranking (with just 2.5% of total exports), but has anyway greatly improved its competitive position, recording an impressive growth in exports (+614%). China has replaced Switzerland as the key destination market for EU exports of sheep and goat meat. China has also become the leading importer at global level, replacing the EU, which remains however a net importer of sheep and goat meat. The importance of the EU as supplier of sheep and goat meat to China has greatly increased, but remains still marginal if compared with the weight of New Zealand and Australia. EU imports of sheep and goat meat mainly come from New Zealand (around 84%), with Australia being the only other significant supplier (its share increased from 8% to over 10%).

Revealed comparative advantage. For the EU and India, the RCA index is extremely low, indicating a negligible weight of exports of sheep and goat meat on countries' total trade. On the opposite, around 6% of New Zealand's total exports is represented by sheep and goat meat while for Australia, the importance of this sector appears of a certain importance, weighting for around 1% on total exports.

Table 13.6 - Revealed Comparative Advantage for main exporters and the EU

Sheep and goat meat	Revealed Comparative Advantage (avg 2013-15)
Australia	0.978%
New Zealand	5.962%
EU	0.006%
India	0.041%

Source: UN Comtrade

13.2.5. Live bovines

Evolution of international trade. In general, international trade in live animals has rather limited economic importance, if compared with global trade in animal products. Exports of live bovines see Canada at the top, but the distance of the other main competitors is limited, and has been decreasing for Australia and the EU over the observed period. The US are by far the leading importers of live bovines, but their weight on world total imports has decreased over the observed period. The EU exports live bovines mainly towards Lebanon, Turkey, Algeria and Libya. EU exports of live bovines have increased by 251% over the observed period. EU imports of live bovines have very limited importance, and mainly come from Switzerland.

Revealed comparative advantage. In general terms, the importance of live bovine exports is negligible in comparison with total exports of the top countries; despite this, Canada and Australia result to have a relative advantage with respect to the EU and Mexico.

Table 13.7 - Revealed Comparative Advantage for main exporters and the EU

Live bovine	Revealed Comparative Advantage (avg 2013-15)
Canada	0.337%
Australia	0.434%
EU	0.037%
Mexico	0.188%

Source: UN Comtrade

13.2.6. Live swine

Evolution of international trade. Exports of ***live swine*** are dominated by Canada, but the EU (together with Indonesia and Thailand) has gained market shares. The US are the leading importer, but their importance has decreased over the observed period. The EU exports live swine mainly towards Serbia, Albania, Ukraine and China, and imports live swine from Canada, Norway and the US.

Revealed comparative advantage. For all the top four exporters of live swine, the sector results to have a marginal importance on total trade.

Table 13.8 - Revealed Comparative Advantage for main exporters and the EU

Live swine	Revealed Comparative Advantage (avg 2013-15)
Canada	0.086%
EU	0.005%
Indonesia	0.038%
Thailand	0.031%

Source: UN Comtrade

13.2.7. Live poultry

Evolution of international trade. The EU is the leading exporter of live poultry, even if its share of world trade has slightly decreased over the observed period. Singapore is the leading importer; Ukraine ranks second, and has doubled its share of the global imports; it is also the leading destination market for EU exports of live poultry. The EU is a marginal importer of live poultry: the US have strengthened their position as leading foreign supplier to the EU over the observed period.

Revealed comparative advantage. As already observed for live swine and live bovine, also the exports of live poultry result to have a negligible importance on the top exporters’ trade; in terms of relative comparison, Malaysia has the highest RCA index while the EU and the US have the lowest.

Table 13.9 - Revealed Comparative Advantage for main exporters and the EU

Live poultry	Revealed Comparative Advantage (avg 2013-15)
EU	0.018%
Malaysia	0.090%
US	0.012%
Brazil	0.025%

Source: UN Comtrade

13.2.8. *Live sheep and goat*

Evolution of international trade. World export trade of live sheep and goats currently sees the EU in the top position. The EU recorded an impressive growth, moving on top from a marginal position as exporter at the beginning of the observed period. The top-4 importers of live sheep and goats are Middle Eastern countries (Saudi Arabia, Kuwait, Jordan, Oman); together, they account for nearly 80% of global imports of live sheep and goats. Libya is currently the key destination market for EU exports, with Jordan also playing an important role; on the opposite, Lebanon has greatly lost importance. The extremely limited imports of live sheep and goats of the EU come for their near-totality from Switzerland and New Zealand.

Revealed comparative advantage. The RCA index indicates high values for the smaller countries, where the importance of exports of live sheep and goat is much higher than in the EU and in Australia. For Sudan, in particular, it accounts for around 9% of total country's exports.

Table 13.10 - Revealed Comparative Advantage for main exporters and the EU

Live sheep and goat	Revealed Comparative Advantage (avg 2013-15)
EU	0.011%
Jordan	2.585%
Australia	0.086%
Sudan	8.900%

Source: UN Comtrade

13.2.9. *Eggs and egg products*

Evolution of international trade. Global export trade in eggs and egg products sees the EU and the US in the top positions, with similar market shares (23-25%). Both the EU and the US have lost market shares over the observed period, mainly to the advantage of Turkey and Ukraine, which have recorded impressive performances on the export market. Russia and Mexico are currently the leading importers (EU imports of eggs and egg products have decreased over the observed period). Russia has replaced Switzerland as key destination market for EU exports. Also EU exports to Iraq and the US have greatly increased between 2004-06 and 2013-15. The most important export market which sees competition between the EU and the US – i.e. the two leading exporters - is China: the US have held their position as leading foreign supplier of eggs and egg products to China, while the EU has experienced a sharp decrease in market shares in that country. However, China can be deemed an export market of secondary importance for both the EU and the US. In general, the EU and the selected non-EU countries tend to export eggs and egg products towards different markets. The only exception is represented by Iraq, where the EU and Ukraine are the leading suppliers with similar shares, and a value of around 47 million dollars each. Both the EU and Ukraine have recorded an impressive growth in exports of eggs and egg products to Iraq over the observed period, moving from zero or near-zero values in 2004-06 to the current situation. EU imports of eggs and egg products are rather limited: the US have strengthened their position as leading foreign supplier to the EU, but Ukraine has recorded the most impressive growth, even if its role as supplier to the EU remains limited (around 2.5% of total EU imports of eggs and egg products came from Ukraine in 2013-15).

Revealed comparative advantage. For all the countries analysed, the RCA index presents law values in absolute terms, only Turkey reveals a relative importance of eggs and egg products for country's total exports.

Table 13.11 - Revealed Comparative Advantage for main exporters and the EU

Eggs and egg product	Revealed Comparative Advantage (avg 2013-15)
EU	0.029%
US	0.038%
Turkey	0.239%
Malaysia	0.062%

Source: UN Comtrade

13.2.10. Dairy products

Evolution of international trade. The global export of dairy products is rather concentrated, with the top four exporters - New Zealand, the EU, the US and Australia - accounting for nearly 70% of total exports; within this group, New Zealand and the US have recorded the highest growth rates over the observed period (around +130% for both countries). New Zealand has replaced the EU as leading exporter of dairy products. The geography of world imports of dairy products is much more fragmented, with the four leading importers (Russia, Japan, Saudi Arabia and the US) accounting for less than 40% of total world imports. Fragmentation characterises also the geography of EU exports of dairy products, as no top destination market (Algeria, China, Russia and the US) accounts for a share that goes beyond 9% of total exports. China is the main destination market where the EU directly competes with all the other three leading exporters. The EU is by far the leading foreign supplier of dairy products to the US, and its share of total US imports has greatly increased over the observed period (which saw a decrease in US imports of dairy products). The EU has remained the leading foreign supplier of dairy products also in Russia, but it has lost market shares to the advantage of Belarus (which replaced Ukraine as second most important foreign supplier). These developments have to be related to the consequences of the international crisis between Russia and Ukraine. EU imports of dairy products are very limited, and mostly come from Switzerland. New Zealand is the only other significant foreign supplier of dairy products to the EU.

Revealed comparative advantage. The RCA index shows how the dairy sector is of paramount importance for New Zealand's economy, accounting for around 20% of total country's trade. On the other side, it has a negligible weight for three other main exporters, with the Australia in advantage over the EU and the US.

Table 13.12 - Revealed Comparative Advantage for main exporters and the EU

Dairy products	Revealed Comparative Advantage (avg 2013-15)
New Zealand	19.799%
EU	0.357%
US	0.226%
Australia	0.724%

Source: UN Comtrade

14. IMPACTS ON PRODUCTIVITY AND COST COMPETITIVENESS

14.1. Key competitiveness factors

14.1.1. In the EU market

The majority of EU respondents indicated a substantial disadvantage in the EU market vis-à-vis non-EU operators on a wide number of elements. All variable cost factors (feed cost, labour cost, etc.) were identified as having a negative impact on competitiveness, while fixed costs were mainly indicated as having a neutral or positive impact. The largest part of survey respondents reported a negative impact of regulatory requirements (including legislation and standards related to AW) on their competitiveness; with special reference to AW legislation or standards, 66% of respondents indicated a negative impact (moderate or substantial disadvantage) and 44% a substantial disadvantage against non-EU operators.

Table 14.1 -Impacts of different elements on competitiveness in the EU market for EU survey respondents

All sectors	Substantial advantage over NON-EU operators	Moderate advantage over NON-EU operators	Neutral	Moderate disadvantage against NON-EU operators	Substantial disadvantage against NON-EU operators
Natural resources (e.g. availability of land for free range animal farming)	1	7	10	11	8
Feed cost	0	0	7	17	19
Price of live animals	0	3	12	11	13
Labour cost	0	1	1	10	29
Other input costs (e.g. energy)	0	0	5	17	18
Fixed costs (e.g. plant/equipment depreciation)	0	2	8	12	16
Cost of logistics	1	6	12	10	9
Geographical position	2	20	13	1	4
Marketing costs	2	4	22	5	3
Price of fresh and/or processed products used as ingredients (e.g. carcasses, meat cuts, fresh eggs, milk, etc.)	1	1	11	7	13
Differences in environmental legislation	2	4	3	12	20
Differences in sanitary and phytosanitary legislation	2	5	7	11	17
Differences in food safety legislation	3	7	6	8	16
Differences in animal welfare legislation/standards	5	4	5	9	18
Differences in tax regimes	0	4	12	4	16
Border protection (e.g. import tariffs, tariff rate quotas)	1	12	15	6	4
Exchange rates	1	4	22	3	5
Other elements	0	0	4	1	1
	21	**84**	**175**	**155**	**229**

Source: elaboration of survey results

Replies from operators in selected non-EU countries provide a different appraisal, where the advantage over EU operators is deemed to be moderate by the majority of respondents, and limited to the availability of natural resources, feed cost, price of live animals and labour cost. The main difference between EU and non-EU respondents can be found in the appraisal of the impact of differences in legislation and standards: for the largest part of non-EU survey respondents these elements – including those referring to AW – have a neutral impact on their competitiveness in the EU market, whereas they are deemed to cause substantial disadvantages against non-EU operators by EU-based survey respondents.

Table 14.2 - Impacts of different elements on competitiveness in the EU market for survey respondents in selected non-EU countries

All sectors	Substantial advantage over EU operators	Moderate advantage over EU operators	Neutral	Moderate disadvantage against EU operators	Substantial disadvantage against EU operators	Non-relevant / non-applicable for my business
Natural resources (e.g. availability of land for free range animal farming)	5	12	2	1	0	3
Feed cost	3	11	4	4	0	1
Price of live animals	1	11	8	2	0	1
Labour cost	4	9	7	2	1	0
Other input costs (e.g. energy)	1	8	9	5	0	0
Fixed costs (e.g. plant/equipment depreciation)	0	3	16	3	1	0
Cost of logistics	0	3	6	7	7	0
Geographical position	0	2	3	5	12	1
Marketing costs	0	4	6	7	6	0
Price of fresh and/or processed products used as ingredients (e.g. carcasses, meat cuts, fresh eggs, milk, etc.)	0	6	8	4	1	4
Differences in environmental legislation	0	4	11	6	1	1
Differences in sanitary and phytosanitary legislation	0	3	17	2	1	0
Differences in food safety legislation	0	2	19	1	1	0
Differences in animal welfare legislation/standards	1	6	13	1	2	0
Differences in tax regimes	0	2	17	3	1	0
Border protection (e.g. import tariffs, tariff rate quotas)	0	4	15	3	1	0
Exchange rates	0	3	11	8	1	0
Other elements	0	2	15	0	0	6
	15	**95**	**187**	**64**	**36**	**17**

Source: elaboration of survey results

14.1.2. In the international market

With reference to the competitiveness in the international arena, EU respondents generally indicated moderate or substantial disadvantage against non-EU operators for many elements, similarly to what indicated for the EU market. In particular, the number of respondents indicating moderate or substantial disadvantage due to differences in AW legislation and standards is even higher than those of respondents indicating the same impact in the EU market, thus suggesting that EU operators are even more concerned by the negative implications of such differences for their international competitiveness.

Table 14.3 - Impacts of different elements on competitiveness in the extra-EU market for EU survey respondents

All sectors	Substantial advantage over NON-EU operators	Moderate advantage over NON-EU operators	Neutral	Moderate disadvantage against NON-EU operators	Substantial disadvantage against NON-EU operators
Natural resources (e.g. availability of land for free range animal farming)	2	4	12	10	4
Feed cost	1	0	5	15	14
Price of live animals	0	3	6	13	13
Labour cost	1	1	3	7	23
Other input costs (e.g. energy)	0	0	2	16	13
Fixed costs (e.g. plant/equipment depreciation)	0	1	7	14	10
Cost of logistics	1	5	5	14	6
Geographical position	1	13	12	3	4
Marketing costs	1	4	15	5	2
Price of fresh and/or processed products used as ingredients (e.g. carcasses, meat cuts, fresh eggs, milk, etc.)	1	3	4	9	10
Differences in environmental legislation	0	3	3	9	21
Differences in sanitary and phytosanitary legislation	0	3	5	9	17
Differences in food safety legislation	2	7	3	8	13
Differences in animal welfare legislation/standards	1	3	3	7	22
Differences in tax regimes	0	2	6	9	10
Border protection (e.g. import tariffs, tariff rate quotas)	1	3	7	9	6
Exchange rates	1	4	9	9	2
Other elements	0	1	4	0	0
	13	**60**	**111**	**166**	**190**

Source: elaboration of survey results

Generally speaking, respondents from selected non-EU countries were slightly more pessimistic in the appraisal of their competitiveness in their respective national markets than in the EU market. More specifically, they reported moderate disadvantages due to a number of variable and fixed cost items, while they continued to consider the impact of differences in legislation (including AW-related legislation) as having a neutral impact on their competitiveness.

Table 14.4 - Impacts of different elements on competitiveness in their respective national markets for survey respondents in selected non-EU countries

All sectors	Substantial advantage over EU operators	Moderate advantage over EU operators	Neutral	Moderate disadvantage against EU operators	Substantial disadvantage against EU operators	Non-relevant / non-applicable for my business /
Natural resources (e.g. availability of land for free range animal farming)	2	6	2	6	1	3
Feed cost	2	4	1	7	4	2
Price of live animals	1	5	1	9	1	3
Labour cost	1	5	1	10	2	1
Other input costs (e.g. energy)	0	3	6	8	2	1
Fixed costs (e.g. plant/equipment depreciation)	0	3	4	10	1	2
Cost of logistics	0	6	3	9	1	1
Geographical position	0	8	4	1	4	3
Marketing costs	0	7	3	8	1	1
Price of fresh and/or processed products used as ingredients (e.g. carcasses, meat cuts, fresh eggs, milk, etc.)	0	4	4	9	2	1
Differences in environmental legislation	0	3	11	5	0	1
Differences in sanitary and phytosanitary legislation	1	3	9	5	1	1
Differences in food safety legislation	0	4	10	5	0	1
Differences in animal welfare legislation/standards	1	3	10	4	0	2
Differences in tax regimes	0	1	13	5	0	1
Border protection (e.g. import tariffs, tariff rate quotas)	0	3	9	6	1	1
Exchange rates	0	2	8	9	0	1
Other elements	0	1	13	1	1	4
	8	**71**	**112**	**117**	**22**	**30**

Source: elaboration of survey results

Non-EU respondents generally reported competitive advantages over EU operators when competing in the international market (i.e. neither in the EU nor in their respective national markets). In this case, a substantial advantage is recognized by the relative majority of respondents in the availability of natural resources, in feed cost, in labour cost and in the price of ingredients. Once again, for what concerns differences in regulatory requirements, the relative majority of respondents deemed them as having a neutral impact on their competitiveness, even if it should be noted that a comparable number of respondents indicated a substantial advantage due to differences in AW legislation or standards.

Table 14.5 - Impacts of different elements on competitiveness in the international markets for survey respondents in selected non-EU countries

All sectors	Substantial advantage over EU operators	Moderate advantage over EU operators	Neutral	Moderate disadvantage against EU operators	Substantial disadvantage against EU operators	Non-relevant / non-applicable for my business
Natural resources (e.g. availability of land for free range animal farming)	20	13	6	0	2	5
Feed cost	18	10	8	4	2	4
Price of live animals	14	15	10	4	0	3
Labour cost	17	13	9	7	0	0
Other input costs (e.g. energy)	1	10	21	10	3	1
Fixed costs (e.g. plant/equipment depreciation)	1	10	26	6	3	0
Cost of logistics	1	14	11	10	9	1
Geographical position	1	12	11	5	16	1
Marketing costs	0	14	14	9	8	1
Price of fresh and/or processed products used as ingredients (e.g. carcasses, meat cuts, fresh eggs, milk, etc.)	12	11	9	5	2	7
Differences in environmental legislation	12	5	17	2	6	4
Differences in sanitary and phytosanitary legislation	12	5	21	5	2	1
Differences in food safety legislation	12	4	21	5	3	1
Differences in animal welfare legislation/standards	13	10	14	3	5	1
Differences in tax regimes	2	10	21	7	5	1
Border protection (e.g. import tariffs, tariff rate quotas)	0	6	28	5	4	3
Exchange rates	1	5	24	11	4	1
Other elements	0	5	16	0	0	25
	137	**172**	**287**	**98**	**74**	**60**

Source: elaboration of survey results

14.1.3. *Overall impacts on productivity*

Comparing the replies of EU operators with those of non-EU respondents, the most evident difference refers to the higher share of non-EU operators reporting a higher productivity resulting from compliance with AW legislation; on the opposite, most EU respondents lamented a lower productivity due to AW legislation. For what concerns quality, both EU and non-EU respondents generally deemed that compliance with AW legislation positively affected product quality.

Sectorial differences are discussed in Sections 14.2 to 14.7.

Table 14.6 - Impacts of AW legislation/standards on productivity for EU survey respondents

	Higher productivity	Lower productivity	Better product quality	Worse product quality
Beef & Live bovines	3	7	8	1
Pig meat & Live Swine	3	6	3	1
Poultry meat & Live poultry	0	4	2	0
Eggs and egg products	1	2	1	0
Sheep and goat meat & Live sheep and	0	1	2	0
Dairy products	0	1	4	0
Total	**7**	**21**	**20**	**2**

Source: elaboration of survey results

Table 14.7 - Impacts of AW legislation/standards on productivity for survey respondents in selected non-EU countries

	Higher productivity	Lower productivity	Better product quality	Worse product quality
Beef & Live bovines	6	2	11	0
Pig meat & Live Swine	5	0	10	0
Poultry meat & Live poultry	4	3	12	0
Eggs and egg products	0	1	0	0
Sheep and goat meat & Live sheep and	3	1	3	0
Dairy products	4	0	6	0
Total	**22**	**7**	**42**	**0**

Source: elaboration of survey results

14.1.4. Overall impacts on cost competitiveness

The majority of the existing literature on cost competitiveness in the meat industry with specific reference to AW aspects focuses on the poultry sector, which seems to be facing the highest costs to implement stricter AW requirements, together with the pig sector. The production costs of selected EU MS vis-à-vis non-EU countries were analysed in a 2011 study carried out by CRPA for the Commission.[215] The study provides both a general comparison of production costs for different product categories (calculated in statistically representative "theoretical model farms" whose standard costs were based on expert estimates) and considerations on the impacts of EU legislation on food safety, animal welfare and environment on such costs. The table below summarizes the average total production costs for EU and non-EU countries.

Table 14.8 - Average production costs (2010) for a sample of EU and non-EU farms

	Unit	EU	Extra-EU
Dairy (1)	€/100 Kg	45.8	21.8
Beef (2)	€/100 Kg	483.0	225.8
Sheep (3)	€/100 Kg	347.7	137.0
Pork (4)	€/100 Kg	140.0	98.4
Broiler (5)	€ cent/kg	89.2	70.7

[215] Centro Ricerche Produzioni Animali in association with Thünen Institute of Farm Economics, International Farm Comparison Network on Dairy and University of Ghent (2011), *Assessing farmers' cost of compliance with EU legislation in the fields of environment, animal welfare and food safety*.

(1) EU farms: Finland (2), Germany (3), Ireland (2), Netherland (1), Poland (2)
Extra-EU farms: Argentina (2), New Zealand (1)
(2) EU farms: France (1), Italy (1), UK (2)
Extra-EU farms: Argentina (2), Brazil (3)
(3) EU farms: France (2), UK (2)
Extra-EU farms: Australia (2), New Zealand (1)
(4) EU farms: Denmark (1), Germany (1), Netherlands (1), Poland (1)
Extra-EU farms: Brazil (2), US (1)
(5) EU farms: France (2), Germany (2), Italy (1)
Extra-EU farms: Brasil (2), Thailand (1)

Source: elaboration from CRPA et al. for the European Commission (2011).

Generally speaking, the impact of AW legislation on EU farms varies according to the sector: for the dairy, beef and sheep sectors the impact results to be rather low, with only some Member States (e.g. Germany for the dairy sector) facing minimal increases in their production costs. On the other side, the ***pig sector results more affected by the EU legislation***, with compliance extra-costs for Polish farms of around 3.5% and of 2.2% for German ones. Finally, for the ***broiler sector*** the impacts greatly depend on the Member State considered, with Italy having an advantage of around -1% in production costs (due to higher density allowed by climatic conditions) and Germany with extra-costs estimated between 0.6% and 1.4% of total.

As will discussed in the sections below dedicated to specific sectors, results from the available literature on the impact of AW requirements on cost competitiveness seem to converge on the fact that existing cost advantages in some non-EU countries are mainly due to factors like feed and labour costs, availability of natural resources, etc.. Differences in AW standards seem to have a much lower impact even for the sectors theoretically more affected by such issue vis-à-vis non-EU countries.

Whatever the extent of AW-related additional costs, the results of the surveys of EU and non-EU operators suggest that the application of AW legislation/standards does imply higher production costs for operators, regardless of their geographical position. The vast majority of surveyed producers both in the EU and in non-EU countries indeed highlighted an increase in their production costs to achieve and maintain compliance with AW legislation/standards.

Table 14.9 - Impacts of AW legislation/standards on production costs for EU survey respondents

	Higher production cost	Lower production cost
Beef & Live bovines	13	0
Pig meat & Live Swine	10	0
Poultry meat & Live poultry	4	0
Eggs and egg products	3	0
Sheep and goat meat & Live sheep and goats	2	0
Dairy products	6	0
Total	**38**	**0**

Source: elaboration of survey results

Table 14.10 - Impacts of AW legislation/standards on production costs for survey respondents in selected non-EU countries

	Higher production cost	Lower production cost
Beef & Live bovines	16	2
Pig meat & Live Swine	11	0
Poultry meat & Live poultry	11	0
Eggs and egg products	1	0
Sheep and goat meat & Live sheep and goats	4	0
Dairy products	4	1
Total	**47**	**3**

Source: elaboration of survey results

On the EU market. Despite the remarkable difference in the number of survey respondents between EU and non-EU operators – also due to the specific structure of the survey sample – the majority of EU respondents indicated substantial or moderate disadvantages in total production costs, while most of non-EU respondents pointed out negligible advantages/disadvantages or moderate ones.

Table 14.11 - Cost advantages/disadvantages experienced by EU operators vis-à-vis non-EU operators on the EU market

	Total thid countries				
	NEUCost = less than 80% of EU Cost Substantial disadvantage	NEUCost = 80%-94% EUCost Moderate disadvantage	NEUCost = 95% - 105% EUCost Negligible advantage / disadvantage	NEUCost = 106%-120% EUCost Moderate advantage	NEUCost = more than 120% of EUCost Substantial advantage
Beef & Live bovines	32	15	22	5	2
Pig meat & Live Swine	17	6	12	0	1
Poultry meat & Live poultry	5	3	2	1	0
Eggs and egg products	16	2	1	0	0
Sheep and goat meat & Live sheep and goats	2	4	0	0	2
Dairy products	2	5	11	2	15
Total	**74**	**35**	**48**	**8**	**20**

Source: elaboration of survey results

Table 14.12 - Cost advantages/disadvantages experienced by non-EU operators vis-à-vis EU operators on the EU market

	CCost = less than 80% of EU CostSubstantial advantage	CCost = 80%-94% EUCostModerate advantage	CCost = 95% - 105% EUCostNegligible advantage / disadvantage	CCost = 106%-120% EUCostModerate disadvantage	CCost = more than 120% of EUCostSubstantial disadvantage
Beef & Live bovines	0	2	3	3	0
Pig meat & Live Swine	0	2	4	0	0
Poultry meat & Live poultry	0	0	4	1	1
Eggs and egg products	0	0	0	0	1
Sheep and goat meat & Live sheep and g	0	0	0	2	0
Dairy products	0	0	0	0	0
Total	**0**	**4**	**11**	**6**	**2**

Source: elaboration of survey results

The vast majority of EU respondents reported cost disadvantages deriving from differences in AW legislation and standards. In particular, a relative majority quantified them as accounting for over 20% of their total cost disadvantages.

Table 14.13 - Cost advantages/disadvantages specifically due to different AW legislation/standards experienced by EU operators vis-à-vis non-EU operators on the EU market

	Total thid countries					
	Share of total cost advantage specifically due to different animal welfare legislation/standards in EU vs. non-EU countries			Share of total cost disadvantage specifically due to different animal welfare legislation/standards in EU vs. non-EU countries		
	Less than 10%	10-20%	More than 20%	Less than 10%	10-20%	More than 20%
Beef & Live bovines	1	2	3	6	9	26
Pig meat & Live Swine	0	0	0	1	5	17
Poultry meat & Live poultry	0	0	0	8	0	0
Eggs and egg products	0	0	0	0	13	5
Sheep and goat meat & Live sheep and goa	0	1	0	2	4	0
Dairy products	4	2	1	3	0	2
Total	**5**	**5**	**4**	**20**	**31**	**50**

Source: elaboration of survey results

On the international markets. Generally speaking, the relative majority of EU respondents reported a (substantial or moderate) disadvantage on selected non-EU markets, although a significant number also indicated a negligible advantage/disadvantage. On the other side, the replies collected among non-EU operators are much more balanced, with similar shares of operators indicating advantages (both substantial and moderate) and disadvantages on their respective national markets, and a relative majority indicating a negligible advantage.

Table 14.14 -Cost advantages/disadvantages experienced by EU operators vis-à-vis non-EU operators on selected non-EU countries' markets

	Total thid countries				
	NEUCost = less than 80% of EU Cost Substantial disadvantage	NEUCost = 80%-94% EUCost Moderate disadvantage	NEUCost = 95% - 105% EUCost Negligible advantage / disadvantage	NEUCost = 106%-120% EUCost Moderate advantage	NEUCost = more than 120% of EUCost Substantial advantage
Beef & Live bovines	36	9	31	2	0
Pig meat & Live Swine	11	6	10	1	0
Poultry meat & Live poultry	0	2	0	0	0
Eggs and egg products	2	2	0	0	0
Sheep and goat meat & Live sheep and goats	0	4	0	1	1
Dairy products	3	11	13	4	5
Total	**52**	**34**	**54**	**8**	**6**

Source: elaboration of survey results

Table 14.15 - Cost advantages/disadvantages experienced by non-EU operators vis-à-vis EU operators on their national markets

	CCost = less than 80% of EU CostSubstantial advantage	CCost = 80%-94% EUCostModerate advantage	CCost = 95% - 105% EUCostNegligible advantage / disadvantage	CCost = 106%-120% EUCostModerate disadvantage	CCost = more than 120% of EUCostSubstantial disadvantage
Beef & Live bovines	1	1	3	1	0
Pig meat & Live Swine	2	2	1	1	0
Poultry meat & Live poultry	0	0	2	1	4
Eggs and egg products	0	0	0	0	0
Sheep and goat meat & Live sheep and g	0	0	0	1	0
Dairy products	0	0	0	0	0
Total	**3**	**3**	**6**	**4**	**4**

Source: elaboration of survey results

Similarly to what already observed for the EU market, the vast majority of EU respondents reported cost disadvantages due to different AW legislation and standards in selected non-EU markets; within this group, almost two thirds of respondents indicated an AW-related impact of over 20% on total cost disadvantages.

Table 14.16 - Cost advantages/disadvantages specifically due to different AW legislation/standards experienced by EU operators vis-à-vis non-EU operators on selected non-EU countries' markets

	Total thid countries					
	Share of total cost advantage specifically due to different animal welfare legislation/standards in EU vs. non-EU countries			Share of total cost disadvantage specifically due to different animal welfare legislation/standards in EU vs. non-EU countries		
	Less than 10%	10-20%	More than 20%	Less than 10%	10-20%	More than 20%
Beef & Live bovines	0	2	0	6	5	28
Pig meat & Live Swine	0	0	0	0	5	12
Poultry meat & Live poultry	0	0	0	2	0	0
Eggs and egg products	0	0	0	0	3	1
Sheep and goat meat & Live sheep and goa	0	0	0	4	0	0
Dairy products	1	5	1	2	0	2
Total	**1**	**7**	**1**	**14**	**13**	**43**

Source: elaboration of survey results

The majority of respondents in both the EU and selected non-EU countries reported no experience of lower adaptation costs on foreign markets for reasons related to AW; however, the share of operators reporting some benefits in terms of lower adaptation costs is higher among non-EU respondents. The most common reason for these lower adaptation costs was identified by non-EU respondents in the compliance with a combination of mandatory and voluntary AW standards for their sector of interest.

Table 14.17 - EU operators experiencing lower adaptation costs on the market of non-EU countries for reasons related to AW

	yes	no
Beef & Live bovines	3	13
Pig meat & Live Swine	1	11
Poultry meat & Live poultry	1	3
Eggs and egg products	0	4
Sheep and goat meat & Live sheep and goats	0	2
Dairy products	0	7
Total	**5**	**40**

Source: elaboration of survey results

Table 14.18 -Non-EU operators experiencing lower adaptation costs on foreign markets other than the EU for reasons related to AW

	Yes	No
Beef & Live bovines	0	14
Pig meat & Live Swine	1	5
Poultry meat & Live poultry	6	7
Eggs and egg products	1	3
Sheep and goat meat & Live sheep and goats	3	3
Dairy products	0	3
Total	**11**	**35**

Source: elaboration of survey results

Table 14.19 - Reasons for lower adaptation costs related to AW for non-EU operators

	Thanks to compliance with animal welfare legislation applying in my country for the sectors of interest for my company	Thanks to compliance with OIE standards for the sectors of interest for my company	Thanks to compliance with voluntary animal welfare standards for the sectors of interest for my company	Thanks to compliance with a combination of mandatory and/or voluntary animal welfare standards for the sectors of interest for my company	For other reasons related to animal welfare
Beef & Live bovines	0	0	0	0	0
Pig meat & Live Swine	1	1	1	1	0
Poultry meat & Live poultry	4	3	2	6	0
Eggs and egg products	0	0	0	1	0
Sheep and goat meat & Live sheep and g	1	0	0	2	0
Dairy products	0	0	0	0	0
Total	**6**	**4**	**3**	**10**	**0**

Source: elaboration of survey results

14.2. Beef meat & live bovines

14.2.1. Impacts on productivity

Only one third of surveyed EU operators reported higher productivity due to compliance with AW legislation; on the contrary, a clear majority (six out of eight) of non-EU operators reported the same impact. EU and non-EU respondents are instead basically aligned in their appraisal of impacts of compliance with AW legislation on product quality, which they report as increased (only one EU respondent out of nine reported worsened product quality).

14.2.2. Impacts on cost competitiveness

On the EU market. The survey results showed a clear prevalence of EU operators reporting moderate to substantial cost disadvantages against non-EU ones. The appraisal by non-EU operators of their competitiveness on the EU market was instead more pessimistic (split between negligible advantage/disadvantage or moderate disadvantage), but it has to be considered with great prudence in the light of the limited number of respondents. A clear majority of surveyed EU operators reported that more than 20% of the cost disadvantage had to be related to differences in AW legislation/standards between the EU and non-EU Countries.

The EU reference study on the subject[216] focused on the farming stage of the supply chain. It concluded that there was no additional cost implied for complying with EU AW regulation in the farms analysed, observing that recourse to straw or to a concrete, non-slatted floor was already common practice in cow-calf operations where calves are kept either on pasture or in straw-bedded barns during wintertime in the EU. No additional costs to achieve compliance were hence estimated.

All in all, the available evidence is mixed and rather scarce, and does not allow to draw a clear conclusion on the impact of differences in AW legislation/standards on the competitiveness of EU operators in the beef sector vis-à-vis non-EU operators.

On the international markets. The appraisal by surveyed EU operators of their competitiveness on the market of selected non-EU countries is somewhat less pessimistic than the appraisal of their competitiveness on the EU market. Indeed, 36 respondents reported a substantial cost disadvantage, but 31 respondents reported a

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[216] CRPA for DG AGRI (2012), *Assessing farmers' cost of compliance with EU legislation in the fields of environment, animal welfare and food safety.*

negligible advantage/disadvantage; the majority of the number of surveyed non-EU operators also reports a negligible advantage/disadvantage against EU operators on their respective national markets. This said, the clear majority of EU respondents reporting a cost disadvantage related more than 20% of it to differences in AW legislation/standards between the selected non-EU countries and the EU.

14.3. Pig meat & live swine

14.3.1. Impacts on productivity

EU and non-EU respondents to the survey showed an even more diverging appraisal of impacts of compliance with AW legislation on productivity than what observed for beef (see Section 15.2.1). No respondent in non-EU country reported decreased productivity, whereas the clear majority (two/thirds) of EU respondents reported such impact. EU and non-EU respondents were also slightly less aligned in their appraisal of (positive) impacts of compliance with AW legislation on product quality than in the case of beef.

14.3.2. Impacts on cost competitiveness

Research carried out in the framework of the EU Econwelfare project[217] concluded that increasing animal welfare in both fattening pigs and sows beyond the regulatory minimum standards is in general very costly as compared to other species, and can lead to potential cost increases of 25% to 40%, depending on the country. This would require high price premiums on the market for related animal welfare-friendly products and would be more difficult to justify in cost-benefit terms than in other sectors, although the pig meat market is characterised by a strong segmentation and some of its products are of high added value (e.g. Parma ham, Jamon Serrano, etc.).

A synthesis of different studies collected by CIWF[218] reports that the cost of changing US pig meat production from sow stalls to group housing would be limited, with additional costs of 9% at farm level and of 2% at the retail level (if all additional costs were passed on to the final consumer).

Similar results were achieved by the Farm Animal Welfare Committee,[219] which indicates that that the 5% increase in pig meat production cost arising from the banning of gestation stalls in the UK would translate in a 1% increase only of the retail product price.

Finally, a 2011 study by Promar International[220] on the US market estimated that the additional costs for increasing space allowances for pigs and for complying with pig housing requirements are between 5% and 10%, with much lower additional costs in case of new facilities (around 1%-2% increase of production costs).

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[217] David Harvey, Carmen Hubbards, Edward Majewski Agata Malak-Rawlikowska, Mariusz Hamulczuk, and Monika Gębska, (2013), "Impacts of Improved Animal Welfare Standards on Competitiveness of EU Animal Production", in *System Dynamics and Innovation in Food Networks*, University of Bonn.
[218] Compassion in world farming - *Economic implications of moving to improved standards of animal welfare*.
[219] *Economics and Farm Animal Welfare – FAWC*, December 2011.
[220] *Consumer and Food Safety Costs of Offshoring Animal Agriculture – a report prepared for United Soybean Board*, Promar International, September 2011.

On the EU market. The results of the survey of the EU and non-EU operators have to be read in the proper context, which sees the EU as the leading exporter of pig meat at world level. EU imports of pig meat are rather modest, so competition with non-EU operators on the EU market is likely to concern only a part of EU operators in the sector.

The appraisal by EU survey respondents is again rather pessimistic (clear prevalence of substantial cost disadvantages), and is not in line with the appraisal by non-EU respondents (the majority of which sees a negligible cost advantage/disadvantage against EU operators on the EU market).

Similarly to what observed for beef meat, a clear majority of surveyed EU operators reported that more than 20% of the cost disadvantage had to be related to differences in AW legislation/standards between the EU and non-EU countries.

A possible explanation of the apparent inconsistency between the strengthened role of the EU as leading exporter of pig meat and the difficulties emerging from the survey results can be related to profitability issues, rather than to loss of market shares in the EU. In other terms, it is plausible that operators in the EU pig meat sector have suffered a reduction in their margins because of increased production costs, with a portion of such increase related to compliance with AW requirements applying in the EU, which can imply non-negligible additional costs (as suggested by the results of research carried out on the topic: see the introduction to § 3.1.4 and § 3.3.2).

On the international markets. Again with the prudence dictated by the low number of survey respondents, the appraisal of cost competitiveness on selected non-EU markets by EU operators appears to be slightly less pessimistic than the one by EU operators in the beef meat sector for the same markets. The few surveyed non-EU operators, in this case, are more in line with EU operators in their appraisal, as they see a moderate to substantial cost advantage over EU operators on their respective national markets.

Similarly to the case of the beef sector, the clear majority of EU respondents reporting a cost disadvantage related more than 20% of it to differences in AW legislation/standards between the selected non-EU countries and the EU.

The possible explanation of the apparent inconsistency between the strengthened role of the EU as leading exporter of pig meat and the difficulties emerging from the survey results in selected non-EU markets is the same provided at above, i.e. a problem of margins rather than of loss of market shares.

14.4. Poultry meat & live poultry

14.4.1. Impacts on productivity

Poultry meat is the sector with the highest prevalence of non-EU respondents reporting negative impacts of compliance with AW legislation on productivity (three out of seven). All EU respondents reported lower productivity.

As far as impacts of compliance with AW legislation on product quality are concerned, EU and non-EU respondents are unanimous in reporting positive impacts. It is however worth recalling that the case study on equivalence at slaughter highlighted that Brazilian operators in the poultry meat sector were unwilling to apply EU-compliant electrical parameters for stunning because of quality-related issues.

14.4.2. *Impacts on cost competitiveness*

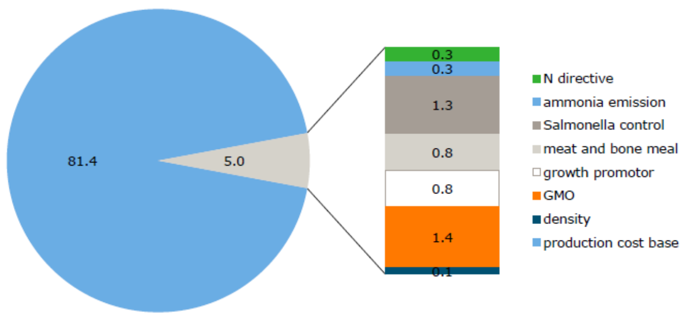
Operators in the EU poultry sector have to comply with regulations on animal welfare, food safety and environmental protection; on the other side, non-EU competitors generally do not have to comply with comparably extensive legislation and to bear the related extra costs.

In a 2017 study by Wageningen UR[221] for the Association of Poultry Processors and Poultry Trade (AVEC), the additional costs for compliance with EU legislation at farm level were estimated to be 5.0 eurocents per Kg of live weight (equal to 5.8% of the total production costs in 2015). In the same report, also the role of import levies is taken into account, concluding that despite high duties imposed to imports from various countries (e.g. Brazil and Thailand), poultry meat from some non-EU countries is nevertheless competitive with respect to EU producers because of much lower production costs.

Production costs of poultry in the EU result to be, on average, 86 eurocents per Kg live weight; after slaughter, the average production cost is 152 eurocents per Kg carcass weight. In all the non-EU countries covered by the study, production costs result lower than EU ones: Brazil (70% of the EU average), Ukraine (74%), US (81%), Argentina (81%), Thailand (83%).

With specific reference to AW regulation, the highest impact on production costs comes from stocking density requirements, which result in additional housing costs to regulate the maximum live weight allowed per square meter. Despite this, the weight of density requirements on the total additional costs due to EU regulation is negligible, as illustrated in the figure below.

Figure 14.1 – Poultry sector: production costs in eurocents per kg of live weight directly related to EU legislation in 2011



Source: Horne P.L.M. (2017), Wageningen UR.

Rather limited additional elements can be drawn from survey results, due to the very limited number of respondents in the poultry meat sector among both EU and non-EU operators.

With reference to competition on the EU market, the situation already observed in the beef and pig meat sectors emerges also for the poultry sector, with a more pessimistic appraisal by EU respondents. In this case, however, the share of cost disadvantage related by EU respondents to differences in AW legislation is more limited (less than 10%) than for the beef and pig meat sectors.

221 Horne, P.L.M., 2017. *Competitiveness of the EU poultry meat sector, base year 2015; International comparison of production costs*. Wageningen UR (University & Research centre).

As for competition on the markets of selected non-EU countries, the very limited number of surveyed EU operators does not allow a comparative assessment vis-à-vis non-EU operators: the majority of the surveyed non-EU operators reported substantial cost disadvantages against EU operators.

14.5. Sheep and goat meat & live sheep and goat

It is worth underlining that the sheep and goat meat sector has marginal importance in the EU, even if it is of some economic significance in the UK and Spain. Flocks have been steadily decreasing over the last few years, together with apparent consumption. Due to high production costs and very limited opportunities for economies of scale, the profitability of the sector in the EU is generally deemed as low[222]. It emerged from the assessment that the economics of the sector have somehow been affected by the development of the OIE international standards on long distance transport of live animals[223]. New Zealand, in particular, has included provisions banning the export of live sheep and goats for slaughter under a 2007 Customs Export Prohibition Order, although the prohibition is not absolute and individual consignments may be allowed. According to one study[224], exporting live animals provides less benefits in terms of employment and value added in the exporting country.

14.5.1. Impacts on productivity

With the prudence dictated by the very low number of EU and non-EU survey respondents for the sheep and goat sector, a diverging appraisal of impacts of compliance with AW legislation on productivity between the two groups emerged also in this case (positive impacts for the majority of non-EU respondents versus negative impacts for the sole EU respondent). On the contrary, EU and non-EU respondents were unanimous in relating compliance with AW legislation with improved product quality.

14.5.2. Impacts on cost competitiveness

A very limited number of operators in the sheep and goat sector took part in the survey, both in the EU and (especially) in the selected non-EU countries. Considerations on survey results have hence to be made with extreme prudence. On the EU market, the majority of surveyed EU operators sees a moderate cost disadvantage against non-EU competitors. The share of such disadvantage related by EU respondents to differences in AW legislation is somewhat smaller (less than 20%) than for the beef and pig meat sectors. The majority of surveyed EU operators reported a similar situation (moderate cost disadvantage) also on the market of selected non-EU countries, in this case relating an even smaller share (less than 10%) of the cost disadvantage to differences in AW legislation.

[222] Proceedings of the First Workshop: *The EU Sheep Sector: Assets and Perspectives.* Brussels 12 November 2015. http://ec.europa.eu/agriculture/sheep-goats/forum/workshop-1/index_en.htm
[223] http://www.oie.int/doc/ged/D6546.PDF
[224] Agra CEAS Consulting (2008), *Economic aspects of global live animal transport*.

14.6. Eggs and egg products

14.6.1. Impacts on productivity

The very low number of EU and non-EU survey respondents for the eggs and egg products sector warrants caution in commenting the outcomes: this said, the sector is the only one where EU and non-EU respondents converge in relating compliance with AW legislation with negative impacts on productivity. No considerations can be made on the impacts of compliance with AW legislation on product quality, since only one EU operator provided a reply.

14.6.2. Impacts on cost competitiveness

According to an industry-funded study on the competitiveness of the EU egg industry,225 producers in countries like India and Ukraine where there is no domestic legislation on AW can operate conventional cages with a space allowance of 300 to 400 cm2 that would allow the highest income for producers. This accounts for some one third of the total cost advantage these producers have for other reasons (feed and labour costs). The study claims that in the absence of tariff protection, Ukraine could be a threat for EU egg producers, but also that such protection prevents Ukraine and other non-EU countries from exporting shell eggs, end even more so white egg powder, to the EU.

In a 2013 study226 it was estimated that production costs in enriched cages are 7% higher than in conventional (barren) battery cages stocked at 550 cm2 per hen (the minimum space allowance in the EU from 2003 until the ban on barren cages came into force in 2012); in the aviary system the increase amounts to 22%. If a comparison is made with battery cages stocked at 450 cm2 per hen, production costs in enriched cages are 11% higher and those in aviaries 26% higher.

In a 2011 study by Promar International227 focusing on the US, the impact on the egg industry was estimated as a 25% cost increase for the conversion to cage-free production (from $ 1.68 /dozen eggs to $ 2.10), primarily due to significantly higher feed requirements, labour requirements, and lower egg yields; the overall cost for consumers would amount to $2.66 billion annually.

As for elements coming from the survey results, an overwhelming majority of surveyed EU operators (16 out of 19) reported substantial cost disadvantages on the EU market against non-EU competitors (only one non-EU respondent was active on the EU market: a comparative assessment proved thus unfeasible). According to the majority of EU respondents, the share of such cost disadvantage related to differences in AW standards fell between 10 and 20%.

No elements on relative cost competitiveness on selected non-EU markets can be drawn from survey results, due to the extremely limited number of surveyed operators (four EU ones and zero non-EU ones).

[225] Horne, P.L.M. van. *Competitiveness of the EU egg sector; International comparison base year 2013*. Wageningen, LEI. Wageningen UR (University & Research centre), LEI Report 2014. See http://edepot.wur.nl/328247. Study commissioned by EUWEP (European Union of wholesale eggs, egg products, poultry and game).
[226] Van Horne P. (2013), *Production costs of eggs: analysis and trends*. International Egg Commission conference, Sepember 2013.
[227] *Consumer and Food Safety Costs of Offshoring Animal Agriculture – a report prepared for United Soybean Board*, Promar International, September 2011.

14.7. Dairy products

According to research carried out in the framework of the EU Econwelfare project,[228] the dairy sector is one of the few areas where enhanced AW standards at the EU level could result in higher yields and decreased costs per litre. These have been variously estimated in the different country settings as ranging from a 1% to 3% milk yield increase, and from a 2% to 10% cost saving.

14.7.1. Impacts on productivity

The diverging appraisal of impacts of compliance with AW legislation on productivity applies also in this sector (positive impacts reported by all non-EU operators, negative impacts reported by the only EU respondent). EU and non-EU respondents were instead unanimous in relating compliance with AW legislation to better product quality.

14.7.2. Impacts on cost competitiveness

On the EU market. The dairy sector is the only one in which sees a prevalence of surveyed EU operators reporting a substantial cost advantage against non-EU operators (15 respondents, against 11 respondents indicating a negligible advantage/disadvantage, and 7 respondents indicating a disadvantage). No surveyed non-EU operators were active on the EU market. Less than 10% of the cost advantage or disadvantage was related by the majority of surveyed EU operators to differences in AW legislation.

On the international markets. The appraisal of cost competitiveness on selected non-EU markets by surveyed EU operators sees a relative majority of respondents (13) reporting a negligible advantage/disadvantage, with 11 respondents reporting a moderate disadvantage (no surveyed non-EU operators were active in the dairy sector). Nine respondents reported moderate to substantial cost advantages over non-EU competitors on their respective national markets. Between 10% and 20% of such cost advantage was related by the surveyed EU operators to differences in AW legislation.

[228] E. Majewski, M. Hamulczuk, A. Malak-Rawlikowska, M. Gębska, D. Harvey (2012), *Cost-effectiveness assessment of improving animal welfare standards in the European Agriculture* - Selected Paper prepared for presentation at the International Association of Agricultural Economists (IAAE) Triennial Conference, Foz do Iguaçu, Brazil, 18-24 August, 2012 http://ageconsearch.umn.edu/bitstream/126741/2/Majewski%20et%20al.pdf

15. IMPACTS ON MARKET ACCESS

15.1. Overall impact on market access

The majority of both EU and non-EU survey respondents reported about access to new market outlets thanks to compliance with AW legislation and standards, although with a higher prevalence among non-EU operators. A lower number of respondents also indicated, on the opposite, the loss of traditional market outlets due to compliance with AW standards and legislation.

The only notable specificity at sector level emerges for the beef sector, where the share of survey respondents reporting loss of traditional market outlets is higher among both EU and non-EU surveyed operators.

Table 15.1 - Impacts of AW legislation/standards on access to market outlets for EU survey respondents

	Loss of traditional market outlets	Access to new market outlets
Beef & Live bovines	4	5
Pig meat & Live Swine	2	4
Poultry meat & Live poultry	0	2
Eggs and egg products	1	1
Sheep and goat meat & Live sheep and goats	0	0
Dairy products	0	3
Total	**7**	**15**

Source: elaboration of survey results

Table 15.2 - Impacts of AW legislation/standards on access to market outlets for survey respondents in selected non-EU countries

	Loss of traditional market outlets	Access to new market outlets
Beef & Live bovines	4	7
Pig meat & Live Swine	1	5
Poultry meat & Live poultry	0	7
Eggs and egg products	0	0
Sheep and goat meat & Live sheep and goats	1	5
Dairy products	0	0
Total	**6**	**24**

Source: elaboration of survey results

As for access to non-EU markets due to AW-related factors, the vast majority of EU respondents indicated that they did not get improved access; on the opposite, more than half of non-EU respondents reported an improved access to international markets other than the EU thanks to AW-related factors. Some notable specificities emerge at sector level, i.e. a less negative appraisal by respondents in the EU poultry sector, and a negative appraisal by non-EU respondents in the beef, dairy products and (especially) pig meat sectors.

With reference to non-EU respondents, the two most important reasons behind improved access are the compliance with a combination of mandatory and/or voluntary AW standards for their sector of interest and the compliance with AW legislation applying in their country (compliance with national legislation emerged as the most important reason in the beef sector only).

Table 15.3 - EU operators experiencing improved access on the market of non-EU countries for reasons related to AW

	Yes	No
Beef & Live bovines	2	14
Pig meat & Live Swine	0	12
Poultry meat & Live poultry	2	2
Eggs and egg products	0	4
Sheep and goat meat & Live sheep and goats	0	2
Dairy products	0	7
Total	**4**	**41**

Source: elaboration of survey results

Table 15.4 - Non-EU operators experiencing improved access on foreign markets other than the EU for reasons related to AW

	Yes	No
Beef & Live bovines	6	8
Pig meat & Live Swine	1	5
Poultry meat & Live poultry	9	4
Eggs and egg products	3	1
Sheep and goat meat & Live sheep and goats	4	2
Dairy products	1	2
Total	**24**	**22**

Source: elaboration of survey results

Table 15.5 - Reasons for improved access related to AW for non-EU operators

	Thanks to compliance with animal welfare legislation applying in my country for the sectors of interest for my company	Thanks to compliance with OIE standards for the sectors of interest for my company	Thanks to compliance with voluntary animal welfare standards for the sectors of interest for my company	Thanks to compliance with a combination of mandatory and/or voluntary animal welfare standards for the sectors of interest for my company	For other reasons related to animal welfare
Beef & Live bovines	6	2	2	2	0
Pig meat & Live Swine	1	0	0	1	0
Poultry meat & Live poultry	4	4	5	8	1
Eggs and egg products	0	0	0	3	0
Sheep and goat meat & Live sheep and goa	2	1	0	2	0
Dairy products	0	0	0	1	0
Total	**13**	**7**	**7**	**17**	**1**

Source: elaboration of survey results

16. TRADE DISTORTIONS

Two cases of trade distortions deriving from differences in the AW legislation / standards applied in the EU and in non-EU countries were detected in the assessment: however, while the interpretation is clear for one case, it is much less so for the other

The first case concerns ***trade in eggs and egg products***: the related evidence and emerged from interviews with the concerned business associations, case study work and bibliography. Non-EU producers of eggs and egg products exporting to the EU, particularly those located in neighbouring countries and benefiting from the provisions of bilateral trade agreements, can benefit of major cost differentials. In the case of Ukraine, these have helped an impressive growth in exports towards the EU, even if the role of Ukraine as supplier to the EU remains limited. Elements from interviews, the case study on IFI/ECA, and a recent study on the subject[229] suggest that – at least in past years – part of the increased exports of eggs and egg products from Ukraine came from facilities (some of them funded by IFI/ECA) which applied rearing systems for laying hens that were non-compliant with EU requirements. However, other interviewed stakeholders have substantially played down the actual significance of the matter, maintaining that, since IFI operations have aligned to EU AW standards, such trade distortions belong to the past.

The second, more controversial case concerns ***trade in live bovines for slaughter*** towards Middle Eastern markets (e.g. Lebanon, Turkey). One interviewed business association reported anecdotal evidence of higher numbers of heads per ship allowed in sea transportation moves of live animals between Australia and Middle Eastern destinations than those allowed in sea transportation moves of live animals between the EU and the same destinations. However, sea transportation moves of live animals from another important supplier to the region, i.e. Brazil, have been reported to apply even lower densities than those that should be applied in moves from the EU.[230] It is also important to underline that no evidence from the case study on Lebanon could confirm reported complaints by EU operators about their possible displacement from Middle Eastern markets due to less stringent implementation of OIE AW standards for long haul transportation by non-EU competitors. Indeed, EU exports of live bovines to destinations in the area (Lebanon and Turkey) and to Northern Africa (Algeria, Libya) have recorded an impressive growth over the observed period.

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[229] Humane Society International et al., *International Finance Institutions, Export Credit Agencies and Farm Animal Welfare*, November 2013, available at http://www.hsi.org/assets/pdfs/investments-in-suffering.pdf.

[230] European Union and Instituto Brasileiro de Informação em Ciência e Tecnologia (IBICT) (2016), *Bem-estar animal no transporte maritimo ou fluvial de animais vivos*.

17. IMPACTS ON THE CAPACITY TO INNOVATE: AW-RELATED MARKET OPPORTUNITIES

17.1. The market of animal welfare friendly products

17.1.1. EU demand

While very few data are available on the actual dimension of the demand and the market of AW-friendly products in the EU, a large bibliography exists on the perceived importance by EU consumers of this kind of products.

The most complete and updated source in this context is represented by the 2016 survey requested by the European Commission and carried out by TNS Opinion & Social for the *Special Eurobarometer* 442, [231] whose main results are reported in the box below.

Box 17.1 – Main results of 2016 survey promoted by the European Commission

The survey – carried out between November and December 2015 – is an update and an extension of a previous survey conducted in 2006 with the objective to appreciate the attitudes and the knowledge of EU citizens towards AW.

The survey's results show that the vast majority of EU citizens (94%) believe that the protection of farmed animals is important, and that 82% of them believe that the welfare of animals should be better protected than it is now.

For what concerns the communication on this topic, 87% of respondents indicated information campaigns as having a positive influence on the attitudes of children and young people towards animals.

The survey also investigated the portion of citizens looking for labels referring to AW friendly products in their purchasing habits: what emerged is that 25% of EU citizens look for these labels most of the times, while another 27% look for them just sometimes. The emerging picture shows an increasing interest for this kind of products in the EU and, especially in some Member States, a specific market for AW friendly products which either exists or is about to develop.

In the same context, 47% of EU citizens think that there is currently not a sufficient choice of AW friendly products, and 59% of respondents declared to be ready – at least to some extent – to pay more for this kind of products, while 37% of respondents would not be willing to pay an extra-price.

The results of the 2016 survey seem to confirm that the general attitude of EU consumers towards AW friendly products is improving, and that there is room for a market, even though a niche one.

The main difficulty in appraising the size of the market is represented by the unclear boundaries of AW with other elements driving consumer's choices. In particular, it is a common understanding that a percentage of people buying natural and organic products might also be interested in/driven by AW reasons; it is however hard to discern these people from those buying the same products for other reasons (e.g. healthiness, concerns on the environment, etc.).

[231] Special Eurobarometer 442 - *Attitudes of Europeans towards Animal Welfare*. March 2016

Another important aspect refers to the difference between the willingness to pay which consumers declare in in the surveys, focus groups and interviews, and the actual willingness to pay higher prices for AW friendly products in their daily purchases. One interviewee indicated that estimates from industries showed that a minimal share of EU consumers are actually willing to pay a price premium for products which are produced according to high AW standards, while on the other side the vast majority of consumers declared their willingness to pay a price premium for such products. The interviewee concluded that, in spite of the apparently high attention of the general public for the welfare of farmed animals, AW is by no means a significant factor in the purchase of meat and animal products.

It also emerged from interviews that the only actual market segment for AW friendly products existing in the EU is that of free-range eggs, while for meat products the situation is less clear, and marketing strategies and initiatives from large operators and retailers are fewer. Free-range eggs, however, represent a niche market in the EU (see also Section 13.2).

The Netherlands were cited as the Member State where the market for slow growth poultry meat is expanding quite fast. This process is mostly led by large retailers trying to offer differentiated products to their customers; on the other side, demand from non-EU countries of slow growth poultry meat is virtually absent, according to insights provided by interviewed business associations.

As for meat processed products, one interviewee indicated that, even though the market in third country markets of key importance for EU products is currently driven mainly by such features as organoleptic quality and origin (which allow EU products to benefit from premium prices), it is probable that in the near future the demand for AW friendly products will increase. The same interviewee suggested that the importance of AW as driver of demand and as factor of competitive advantage will increase when producers will be able to communicate effectively the actual level of AW contained in a product.

The role of larger meat companies in driving consumer demand has been highlighted more than once in the course of interviews; these companies are more exposed to public attention and in recent years some of them started to promote AW communication campaigns to respond to criticism from consumers and AW NGOs. As far as multinational companies are concerned, schemes are usually promoted on a global basis and regardless of differences in AW legislation in place in the various countries in which they operate; their policies are usually in line with the highest AW standards of the countries where they operate.

For what concerns dairy products, the EU market is characterised by the strength of origin-labelled products (PDO/PGI) and is driven by the perceived quality of products. Interviewees from business associations suggested that there is a perception among consumers (both in the EU and in the extra-EU markets) that the EU products are more respectful of the environment and of animal welfare, in particular compared to similar products of non-EU countries. However, according to one interviewee, consumption patterns are scarcely influenced by this perception, neither in the EU nor in other markets. Some quality schemes for dairy products exist in Germany and in other Nordic countries, where fresh milk can be labelled as “milk from pasture-based farming systems”; although no evidence exists on the (possible) price premium paid for these products, the very existence of these schemes and the participation of a number of farmers to them should reveal a certain interest for AW friendly products in the concerned Member States.

Another interviewee reported that in the dairy industry the respect of high AW standards in itself - i.e. as a "stand alone" argument - is rarely used as a marketing tool, as AW-related considerations have very limited (if any) importance in the EU consumers' purchasing decisions. Also in this case, the market seems mainly driven by factors such as price, organoleptic quality, origin of product, cultural heritage, organic certification and GM-free certifications; even in products targeting specific market niches, higher AW standards are always combined with one or more of the above elements.

Interviewed AW organisations are more confident in indicating a growing market segment for AW friendly products both in the EU and in some non-EU countries; in this context, they stressed the importance for a correct communication to consumers, which should be implemented in their views through mandatory labelling.

17.1.2. Demand in selected non-EU countries

Most interviewees indicated that if in the EU the current market of AW friendly products has a negligible size (with the only exception of free-range eggs), outside the EU this market is even less developed or does not exist at all; almost no organic poultry meat is exported outside the EU, and quality schemes comparable to the European ones with a certain emphasis on AW-related aspects are rare.

According to some interviewees, compliance with the strict AW standards applied in the EU results in extra costs and in no significant advantage for EU producers when they export to non-EU countries. This applies to raw meat (used as ingredient for processed products or intended for final consumption) and also to processed meat products, including quality/typical products. Consumers in non-EU countries pay attention to aspects such as price, quality, origin, tradition when they purchase meat and animal products; they are willing to pay a premium price for certain EU products because they regard them as high quality products, not because they are obtained by applying stricter AW requirements.

For what concerns the dairy market, one interviewee reported a general lower interest of consumers in non-EU countries with respect to those in the EU for AW friendly products, even more so in the case of dairy products used as ingredients in processed food, where price, quality and safety remain the most important aspects.

The crucial element for the competitiveness of EU meat products on the global market seems to be – according to one interviewee – the possibility to clearly differentiate products on the basis of their quality and origin, rather than by communicating to consumers their "higher AW content". In this context, brand reputation of famous PDO/PGI products drives the exports, and in the case of worsened organoleptic quality resulting from AW friendly practices (e.g. the issue of "boar taint" in pig meat as a result of non-surgical castration), importers from non-EU countries would simply substitute these products with others.

One interviewee reported that in the ***US*** less than 1% of the demand for processed meat products might be somehow related to AW, while the largest portion of the market is mainly price-driven. A study carried out in 2011[232] indicated that US consumers would be willing to pay extra prices for eggs produced in pasture-based

[232] F.Bailey Norwood, J.L. Lusk, *A Calibrated Auction-Conjoint Valuation Method: Valuing Pork and Eggs Produced under Differing Animal Welfare Conditions in* Journal of Environmental Economics and Management (vol. 62), July 2011.

systems vs. cage systems, and for pork chops from pigs raised in a pasture-based system as opposed to a crate system. More recently, the Animal Welfare Institute[233] summarised the results of a number of questionnaire-based surveys on such topics addressed to consumers to highlight how US consumers are increasingly concerned about treatments on animals used in food production.

AW NGO indicated that not only in the EU and in the US the demand of AW friendly products is growing, but also in countries like Mexico and Brazil, especially for what concerns eggs from free-range systems, and also for pig meat. In addition, one AW NGO pointed out that there is generally a wrong perception in the EU about the situation in some non-EU countries: by a way of example, ***Thailand*** was cited as a country where standards for broiler meat (e.g. in terms of density) are already as good as those existing in the EU. According to the same interviewee, AW standards applied in ***China*** are still lagging behind, but some interesting developments are taking place, for example the granting of awards to companies applying stricter AW standards, as well as attempts at launching animal-welfare premium brands[234].

In **Brazil** the market for AW friendly products is still negligible in size, although it is expected to increase in the near future. The main driver of change are large pork processors (BRF, JBS and Aurora) which announced that they will phase out the use of sow gestation crates as a response to increasing commitments in terms of AW standards by large multinational customers like McDonalds, Nestlé and Wal-Mart. It has to be noted that changes in the Brazilian market as far as AW-related aspects are concerned can hardly be attributed to the demand side. There is a lack of information among consumers about how farmed animals are raised, and even if the topic of AW is perceived as important by Brazilian consumers, they have difficulties in associating their purchasing habits with AW concerns. Some AW NGO in the country are pushing to raise attention on AW by promoting talks with leading food producers and political bodies; their objective is to make animal welfare a priority corporate social responsibility issue.

In ***Chile*** there is currently no evidence of specific consumer demand for products with high AW content; despite this, an increase in the consumption of organic and environmentally friendly products has been recorded in recent years. On one side, the large majority of Chilean consumers appears unwilling to pay premium prices for AW friendly products. On the other side, smaller groups of consumers – mainly represented by young people – manifested an increasing interest for this kind of products as well as for the origin and production systems of animal products (sometimes also minimising or ceasing consumption of such products for ethical reasons). As already noted for the EU, the most significant example in Chile is represented by free-range eggs, which are more expensive and for which a niche market exists; however, this trend has not emerged yet for other typologies of animal products (meat; dairy).

In ***Australia*** the attention towards animal welfare grew in the last years also through the activities carried out by RSPCA;[235] the organisation started a farming scheme nearly twenty years ago, with the objective to promote animal welfare on farms and is now the leading independent accreditation scheme dedicated to improving farm animal

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[233] *Consumer Perceptions of Farm Animal Welfare*, Animal Welfare Institute.
[234] Wageningen University *Creating a potential market for animal welfare-friendly products in China*, April 2013. http://edepot.wur.nl/257860
[235] https://www.rspca.org.au/

welfare in the country. On the retail side, Aldi Australia[236] committed to an AW certification system, only selecting certified suppliers for beef, lamb and pork.

Almost the totality of EU operators reported no higher revenues in the international market due to reasons related to AW; this result – with minor exceptions in the poultry and dairy sectors – further confirms that international demand for AW-friendly products is perceived as negligible by EU operators.

Table 17.1 - EU operators experiencing higher revenues on the market of non-EU countries for reasons related to AW

	yes	no
Beef & Live bovines	0	16
Pig meat & Live Swine	0	12
Poultry meat & Live poultry	2	2
Eggs and egg products	0	4
Sheep and goat meat & Live sheep and goats	0	2
Dairy products	1	6
Total	**3**	**42**

Source: elaboration of survey results

Differently to what reported by EU operators, around one third of non-EU respondents indicated higher revenues in foreign markets other than the EU for reasons related to AW. The sectors which appear to be more positively affected are dairy, poultry meat, sheep and goat meat and eggs and egg products.

Table 17.2 - Non-EU operators experiencing higher revenues on foreign markets other than the EU for reasons related to AW

	Yes	No
Beef & Live bovines	4	10
Pig meat & Live Swine	0	6
Poultry meat & Live poultry	5	8
Eggs and egg products	2	2
Sheep and goat meat & Live sheep and goats	3	3
Dairy products	2	1
Total	**16**	**30**

Source: elaboration of survey results

The vast majority of respondents indicating higher revenues attributed them to a contemporary growth of volumes and selling prices in market segments characterised by higher consumer attention to AW.

[236] https://corporate.aldi.com.au/en/corporate-responsibility/resources/animal-welfare

Table 17.3 - Non-EU operators experiencing higher revenues on foreign markets other than the EU for reasons related to AW

	Thanks to a growth in marketed volumes (no variation in prices) in market segments characterised by higher consumer attention to animal welfare	Thanks to an increase in selling prices (no variation in marketed volumes) in market segments characterised by higher consumer attention to animal welfare	Thanks to the combined effect of a growth in marketed volumes and of an increase in selling prices in market segments characterised by higher consumer attention to animal welfare	Thanks to other reasons related to animal welfare: please specify
Beef & Live bovines	1	1	2	0
Pig meat & Live Swine	0	0	0	0
Poultry meat & Live poultry	0	0	5	0
Eggs and egg products	0	0	2	0
Sheep and goat meat & Live sheep and (	0	0	3	0
Dairy products	0	0	2	0
Total	**1**	**1**	**14**	**0**

Source: elaboration of survey results

17.2. Animal welfare schemes

Given the increasing attention towards the issue of animal welfare, a number of schemes have been developed in order to adequately inform consumers on how a product is made. In fact, on the production side, there is an incentive in providing consumers with information on the products that they purchase only if consumers are willing to pay more for products which have certain features. On the consumer side, an increasing number of consumers are becoming more interested in products which comply with stricter animal welfare standards, and are asking for a way to recognise such products.

According to a 2009 study carried out for the Commission,[237] there are three different forms of animal welfare labelling schemes:

- schemes that are focused only on AW;
- schemes that are focused on a number of requirements, including AW;
- schemes that are not focused on AW but on other aspects that have positive side-effects on AW.

Regarding schemes focused only on animal welfare, even if consumers are increasingly interested in information on animal welfare, there is no harmonised system of animal welfare standards for labelling purposes in the EU. The only notable exception to the absence of EU-level labelling systems related to animal welfare is the compulsory labelling for table eggs, which is integrated with the laying hens legislation. The classification of eggs is based on farming methods; there are four allowed production systems: organic (code 0), free range (code 1), barn (code 2) and cage (code 3).

However, it should be considered that only shelled fresh eggs are included in the compulsory labelling and have to report the code of identification of the farming system used. Food products which contain eggs as ingredient do not have to report this information. For example, according to RSPCA, in the UK around 60% of eggs are used as ingredients. Consumers are rarely informed on the farm methods used for these eggs.

[237] FCEC for DG SANTE, Feasibility study on animal welfare labelling and establishing a Community Reference Centre for Animal Protection and Welfare, 2009.

In 2013, around 42% of laying hens in the EU were not housed in cages, a share that rose to 44% in 2015. In 2015, 168.3 million hens where raised with cage-alternative methods (barn, free range, organic): 100.1 million in barn (26% of total hens), 51.9 free range (13.6%) and 16.2 million organic (4.2%).

Germany is the Member State with the highest number of laying hens raised with alternative farming methods, namely 46.5 million: around 90% of the total number of hens raised in this country. On the other side, Spain and Poland have the highest number of hens raised in cage, namely around 37 million in each country. In Spain, only 8.3% of laying hens are raised with alternative methods and only 0.4% follow the organic method. In Poland, 12.6% of laying hens are raised with alternative methods but only 0.2% is raised with the organic method. The Member States with the higher number of laying hens raised in organic farms are Denmark (26.3% of total hens) Sweden (16.1%) and Austria (10.7%).

Table 17.4 - Housing systems for laying hens in the EU

	Total Production	Cage (3)	Alternative Production				% of Alternative Production 2015 on total production	% of Alternative Production 2013 on total production
			Barn (2)	Free range (1)	Organic (0)			
BE	8,892,670	4,602,508	2,741,913	1,368,796	179,453		48.2%	39.4%
BG	4,307,583	2,221,471	1,959,116	126,996	0		48.4%	47.2%
CZ	5,254,636	4,381,135	842,216	15,635	15,650		16.6%	16.2%
DK	3,403,084	1,521,968	827,360	157,761	895,995		55.3%	46.1%
DE	51,791,275	5,283,381	31,978,688	9,414,757	5,114,449		89.8%	88.7%
EE	1,011,638	901,182	44,250	31,954	34,252		10.9%	9.2%
IE	3,268,064	1,877,594	36,660	1,274,715	79,095		42.5%	43.0%
ES	41,265,898	37,845,702	1,169,228	2,082,180	168,788		8.3%	7.1%
FR	46,769,770	32,360,692	2,704,202	8,455,900	3,248,976		30.8%	30.5%
HR	1,786,662	1,394,080	370,886	21,546	150		22.0%	14.4%
IT	48,199,175	31,945,613	13,097,046	1,677,609	1,478,907		33.7%	32.1%
CY	439,840	305,560	84,250	43,650	6,380		30.5%	28.1%
LV	2,660,057	2,283,794	333,685	42,578	0		14.1%	14.3%
LT	2,569,645	2,559,651	5,024	490	4,480		0.4%	4.5%
LU	100,430	0	90,200	1,000	9,230		100.0%	100.0%
HU	8,210,932	5,875,975	2,225,627	93,860	15,470		28.4%	25.6%
NL	32,838,000	6,026,000	20,270,000	4,990,000	1,552,000		81.6%	84.5%
AT	6,333,137	129,942	4,263,193	1,265,350	674,652		97.9%	96.9%
PL	41,915,622	37,075,186	3,804,329	945,043	91,064		11.5%	12.6%
PT	8,769,770	8,237,458	375,003	124,611	32,698		6.1%	6.5%
RO	7,833,368	3,979,516	3,693,161	55,391	105,300		49.2%	24.3%
SI	1,318,179	685,660	606,088	12,894	13,537		48.0%	53.2%
SK	3,050,259	2,665,517	359,528	19,880	5,334		12.6%	11.7%
FI	4,157,420	2,759,996	1,159,740	39,977	197,707		33.6%	31.9%
SE	7,735,757	1,274,502	4,988,933	230,284	1,242,038		83.5%	75.6%
UK	38,991,216	16,361,340	2,114,928	19,443,461	1,071,487		58.0%	55.7%
EUR 28	**382,874,087**	**214,555,423**	**100,145,254**	**51,936,318**	**16,237,092**		**44.0%**	**42.4%**

Source: European Commission, CIRCABC database.

With the exception of eggs, for all other animal products consumers can only rely on voluntary schemes developed by the industry or by national authorities.

Quality schemes on animal welfare exist in Germany, in the UK, in Ireland and in other Member States; a study made for the Commission in 2010[238] counted 67 schemes covering AW in the EU. However, such schemes were not exclusively dedicated to AW: they also covered AW among other aspects. Germany (seven schemes) United Kingdom (12 schemes), Italy (10 schemes) and Germany (seven schemes) were the Members States with the higher number of such schemes. In these "combined" schemes it is extremely difficult to understand the specific importance for consumers of AW-related aspects vis-à-vis the other aspects covered.

Interviewees reported that there are currently no quality schemes focused specifically on AW for poultry meat; on the contrary, a number of schemes exists mixing AW elements with other product requirements (e.g. organic, GM-free, etc.). A major example in this context is the "Label Rouge" quality scheme in France, which holds a considerable market share (62% in the whole chicken market in 2006) but which is not specifically focusing on AW.

Some evidence was also found that multinationals are introducing compliance with private AW standards for dairy cows as parts of their global procurement policy[239].

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[238] Areté for DG AGRI, Inventory of certification schemes for agricultural products and foodstuffs marketed in the EU Member States, 2010.

[239] The *Danone Dairy Animal Welfare Programme*, for instance, is currently implemented into sixteen countries with a view to extending it to twenty by the end of 2020.

The table below reports some examples of voluntary schemes covering AW implemented in the EU. These schemes are both schemes that focus *exclusively* on AW and schemes that have *also* requirements on AW.

Scheme	Main features
Freedom Food - UK	This labelling scheme is widely used in the UK and was developed by the RSPCA in 1994. The scheme covers farming but also transport and slaughter and it is available for farmers, processors and abattoirs. Species-specific guidelines are available and include requirements on density, lighting, bedding, environmental enrichments and shelter. In the UK the scheme is widely adopted: according to RSPCA, currently 25% of UK pig production and 50% of laying hens are farmed under RSPCA standards of AW. Part of the work of the RSPCA is lobbying retailers and restaurant food chains to include Freedom Food certified producers among their suppliers. For instance, McDonald's agreed to use 100% RSPCA pig meat in its restaurants in the UK.
KRAV Standards - Sweden	KRAV standard is a Swedish scheme to promote extra requirements for a certain number of products, including extra requirements on animal welfare for dairy products, eggs and egg products, beef, pig and poultry meat. KRAV is composed by 27 associations representing farmers, processors, trade, consumers and environmental and animal welfare interests. KRAV standards are not exclusively focused on animal welfare but include extra requirements on this issue. Requirements on animal welfare for beef include access to pasture during the day. For poultry, AW requirements include access to sand baths and access to pasture during the day. Only free range farming systems are allowed for laying hens. Around 4,000 farmers and approximately 2,000 companies in processing and trade are certified according to KRAV´s standards. At present there are more than 6,200 KRAV-certified products.
Animal welfare associations' animal welfare label – Germany	The German two-level AW label is promoted by the Federal Ministry of Food and Agriculture and implemented by the German AW Association in alliance with partners from industry and research centres. There is a two-level animal welfare label: basic level and premium level. The Ministry of Agriculture supports the label and is favourable to its development and extension. The German AW Association's label is used - now throughout Germany - to label products of animal origin. The labelling is based on high standards that provide enhanced AW conditions for housed animals. In January 2016, the label has been launched also for eggs and, for this product category, it includes for both levels the access to manipulable materials, the ban of beak trimming, a stocking rate of seven animals (instead of nine) per square meter. At the basic level, a so-called winter garden (an uninsulated roofed area with litter as a transition to the free range area) is required, while at premium level an outdoor area of four square meters per bird is also required.

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http://www.danone.com/uploads/tx_bidanonepublications/Danone_Animal_Welfare_Position_Paper_03.pdf;
http://www.danone.com/fileadmin/user_upload/Sustainability/Danone_Dairy_Animal_Welfare_Guide.pdf.

Scheme	Main features
Three stars - Denmark	The Danish Ministry of Environment and Food launched a new AW label for pigs in October 2016. The scheme should be implemented starting from summer 2017, and foresees the use of up to three stars on the label of pig meat and pig meat products according to the AW standards followed by producers. One star indicates that the basic requirements of the label have been met while two and three stars indicate that supplementary requirements for increased space and outdoor areas have been met. This scheme has been developed with the objective of making more attractive for farmers the introduction of stricter AW standards. The Danish government[240] currently estimates that 2-3% of Danish pig production is under conditions to use two or three stars. The Government expects an increasing in this quota when consumers will be able to identify the production method behind each product thanks to the three-star labelling system. Also products produced outside Denmark will be able to receive the label, if compliant with the scheme.
Board Bia Quality Assurance Schemes – Ireland	The Irish Food Board (Bord Bia) has developed a quality mark based on voluntary standards developed in beef, pig meat, eggs, lamb, poultry products, and dairy products in Ireland. The criteria of the scheme have been agreed upon by a technical advisory committee that included representatives from Bord Bia, farmers and processors. The quality mark covers several aspects such as food safety, animal health and welfare, environment and has a strong geographical component, being available only for Irish farmers. Currently over 42,000 farmers and over 150 food processors and packers are members of the Bord Bia Quality Assurance Schemes.
Label Rouge - French	Also the French "Label Rouge" scheme by the French Ministry of Agriculture focuses on various aspects *including animal welfare*. "Label Rouge" was created with the objective of identifying quality meat produced in accordance with several technical requirements, including specifications on AW conditions of animals (i.e. stock density, form of farming, etc.). However, it is mainly linked with geographical origin and small-scale local productions. Around 450 products are produced in accordance with the "Label Rouge" schemes, most of them in France but a few also in other EU Member States. Around 95% of French consumers are aware of the scheme, are able to recognize the "Label Rouge" on the product.[241]

Regarding schemes that are focused on various aspects *including AW*, the most relevant one is the organic farming scheme, which includes some provisions for each individual species also on AW-related aspects, including open air, low density, restricted mutilations and several other requirements, which are differentiated according to species. According to the European Commission[242] statistics on organic animals in the EU are currently incomplete. This said, it is anyway evident that the organic sector is developing at a fast pace, as shown in table below.

Table 17.5 - Evolution of the number of certified organic animals in the EU (heads)

	2000	2005	2010	2015	Trend
Cattle	228,202	1,311,335	2,157,205	3,709,233	
of which dairy cows	94,088	381,622	607,157	864,142	
Pigs	113,693	412,514	697,125	978,559	
Sheep	45,847	2,249,195	3,147,534	4,485,075	
Goats	18,693	470,629	425,709	718,094	
Poultry	1,561,078	8,695,705	15,113,326	31,667,375	
of which laying hens	947,842	5,893,347	9,837,409	13,856,636	

Source: European Commission, Facts and figures on organic agriculture in the European Union, 2016

240 http://en.mfvm.dk/news/news/nyhed/new-animal-welfare-label-to-keep-piglets-tails-curly/
241 https://www.labelrouge.fr
242 European Commission, *Facts and figures on organic agriculture in the European Union*, 2016.

Finally, there are some schemes that have some positive effects on AW, but which are not focused on AW. The most important among these schemes are the EU Protected Designation of Origin and Protected Geographical Indication. These schemes, as well as other similar private or national/regional quality schemes, are often based on traditional products and less intensive production systems, which can be somehow linked with higher standards of AW.

More than two thirds of survey participants in selected non-EU countries reported compliance with voluntary AW standards; among them, the poultry sector and the sheep and goat sector are those with the highest share of respondents compliant with these schemes. In addition, more than half of non-EU respondents compliant with voluntary AW standards reported to have also developed their own standards in this field.

Table 17.6 - Non-EU operators compliant with voluntary standards of AW

	Yes	No
Beef & Live bovines	11	12
Pig meat & Live Swine	10	5
Poultry meat & Live poultry	19	3
Eggs and egg products	3	2
Sheep and goat meat & Live sheep and goats	7	3
Dairy products	3	1
Total	**53**	**26**

Source: elaboration of survey results

Table 17.7 - Non-EU operators who developed voluntary standards of AW

	Yes	No
Beef & Live bovines	5	18
Pig meat & Live Swine	8	7
Poultry meat & Live poultry	11	11
Eggs and egg products	3	2
Sheep and goat meat & Live sheep and goats	3	7
Dairy products	3	1
Total	**33**	**46**

Source: elaboration of survey results

17.3. Price premium and willingness to pay for AW friendly products

The price premium that producers could earn for products advertised and labelled as "AW friendly" is a monetary incentive for the development and the implementation of such schemes. No clear evidence is currently available about the extent of the price premium that producers can gain for products with "higher animal welfare content". Furthermore, all interviewees agreed on the fact that it is not possible to isolate the component *specifically related to AW* in any price premium gained for products which comply with schemes that are focused on a number of requirements including AW, and even more so for products complying with schemes focusing on aspects other than animal welfare, that can anyway have positive side-effects on AW.

As reported in the cited 2009 study for the Commission, the main visions are two. Some producers underline that the introduction of AW standards generates additional costs in the supply chain that inevitably will be passed on to consumers. On the other side, another group of producers argues that such additional costs cannot be reflected into higher prices for labelled products due to strong market competition. In general, the degree of price transmission from producers to consumers will vary also depending on the strategies of retailers, which can decide to absorb part of the additional costs through a reduction in their margins.

In certain cases producers are pushing towards the application of stricter voluntary AW standards for reputation-related reasons rather than for gaining a price premium or for targeting a niche market. Reputation is a particularly sensitive issue for big multinational companies, which are generally more exposed to the critiques of consumers and NGO. These companies want to be considered as socially responsible, thus avoiding any potential scandals at local level, which will affect their business at international level. For this reason, certain multinational companies implement contractual forms with their suppliers which identify good practices on AW to be implemented at farm level. Farmers need to be compliant with these codes of conducts in order to become suppliers of such companies.

Finally, a third reason for producers to introduce and advertise to consumers their achievements in terms of AW is that the compliance with such standards can also open new markets or gaining market shares in already consolidated markets.

Labelling is linked with information to consumers, but also informed consumers can decide not to purchase products labelled as "more animal friendly" because they do not recognize the higher value (and price) of these products compared to non-labelled products. While labelling is useful to deal with the information to consumers it is not an answer to the lack of awareness and/or of relevance of AW in a society.[243] Furthermore, consumers could not have the necessary technical knowledge to understand the meaning of logos and labels available on AW, and the difference between labelled and non-labelled products would remain undetected.

In general, willingness to pay more for a product with AW standards can vary a lot within different groups of consumers and different countries. In most of the cases, consumers declare a considerable willingness to pay for AW friendly products. However, at the same time, consumers' replies to these questionnaires can be distorted because of social pressure and the self-image of consumers that want to show concern about the welfare of animals. The issue of discrepancy between the declared willingness of consumers to pay a price premium for AW friendly products, and the actual dimension of the related market and extent of the price premium has been discussed in several studies[244], and also clearly emerged from interviews with stakeholders. According to one study, the price premium that consumers are available to pay is between 5% and 20% (FCEC for DG SANTE, 2009). Freedom Foods declares to obtain, on average, around 10% of price premium, but the extent varies with the specific product. Other studies confirm that consumers can pay more for certain products[245] but not for others.

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[243] L. Mitchell, *Impact of Consumer Demand for Animal Welfare on Global Trade,* in Changing Structure of Global Food Consumption and Trade, Economic Research Service – USDA, 2001.

[244] L. Elbakidze, R.M. Jr Nayga. "The effects of information on willingness to pay for animal welfare in dairy production: application of nonhypothetical valuation mechanisms", *Journal of Dairy Science*, 2012 Mar; 95 (3)

[245] A. Gracia et al, "Valuing an EU Animal Welfare Label using Experimental Auctions", *Agricultural Economics* 42 (2011), 2011.

Even if the issue is quite controversial, from interviews with business associations it emerged that, with the exception of quality products, price is still the main driver for most animal products, and that for most of the industry AW concerns of consumers do not constitute a driver of demand. In general, business associations are pessimistic on the actual willingness of consumers to pay more for AW friendly products. Nonetheless, the development of AW schemes and the participation to them of livestock farmers is a signal of the presence of a niche market for products marketed under such schemes. This said, the quantification of the size of such niche market, and insights on whether it will grow and at what pace, are still mostly unexplored topics.

Furthermore, other trends are emerging, which can be in a certain way linked with AW, i.e. the 'buy local' trend. It is possible that among consumers there is the underlying common assumption that quality products and local products have relatively high standards of AW.

18. ANALYSIS OF COMPETITIVENESS- CONCLUSIONS

18.1. Productivity and cost competitiveness

The appraisal of the evolution of international trade and of revealed comparative advantage highlighted a strengthened position of the EU as leading exporter of pig meat at world level. An impressive growth of EU exports was also recorded for poultry meat and for sheep and goat meat, but the importance of the EU in the international trade of these products is still rather limited. As for beef meat, the EU has remained a net importer (although with a reduced trade deficit) and a minor player on the international market, while an impressive growth of export volumes was recorded by its main competitors (India, US, Australia, Brazil). The importance of the EU as a player in global trade has instead decreased in the eggs and egg products market, and in the dairy products market, even if the EU has remained among the leading exporters at world level. As for international trade in live animals (which has rather limited economic importance), the EU holds leading positions as exporter of live poultry and live sheep and goat.

Elements from literature review and from interviews basically converge in suggesting that:

1. ***Adaptation costs*** to achieve compliance with stricter AW requirements tend to be higher in the pig sector and in the poultry sector. There is paucity of data in the literature on the impact of the implementation given to Council Directive 98/58 - with special reference to the bovine sector and the beef meat industry - as this probably also depends on national (or even regional/local, in certain Member States) interpretations. Results from the survey of EU operators suggest that this impact might have been more substantial than generally reported.
2. ***AW-related costs*** (additional costs to achieve compliance with AW requirements; cost advantages or disadvantages stemming from differences in AW legislation/standards between the EU and non-EU competitors) are not critical in determining the relative cost competitiveness of EU operators vis-à-vis non-EU operators. Other factors, such as availability of natural resources (allowing free range, pasture-based animal farming), feed cost, labour cost, and cost of live animals, have emerged as playing a critical role in this respect.

The relevance of elements coming from the results of the survey of EU and non-EU operators suffers from limitations deriving from the very low number of respondents, especially among EU operators. For this reason, caution has been applied whenever survey results were considered in the assessment. With the exception of the dairy sector, surveyed EU operators made a very pessimistic appraisal of their cost competitiveness against non-EU operators both on the EU market and on international markets, and related a significant share of their cost disadvantage to differences in AW legislation/standards. This is however in conflict with the findings of the appraisal of the role played by the EU in the international trade of the concerned products, and also with the appraisal by the surveyed non-EU operators, which are not so optimistic about their relative cost competitiveness against EU operators both on the EU market and on their respective national markets, and which attach much lesser importance to differences in AW legislation/standards as a source of competitive advantage/disadvantage.

A tentative explanation of the apparent inconsistency between the strengthened role of the EU as exporter for some of the concerned products, and the difficulties emerging from the survey results, can be related to ***profitability issues, rather than to loss of market shares*** in the domestic and/or export markets. In other terms, it is plausible that some EU operators have experienced a reduction in their margins because of increased production costs, with a portion of such increase related to compliance with AW requirements applying in the EU, which can imply non-negligible additional costs (as suggested by the results of research carried out on the topic).

18.2. Market access

Specific evidence for the assessment of the impact of AW-related factors on market access mainly comes from the results of the survey of EU and non-EU operators. This implies that ***caution must be applied in drawing general conclusions*** in this respect, due to the already mentioned limitations.

The majority of both EU and non-EU survey respondents reported about access to new market outlets (irrespective of their geographical position) thanks to compliance with AW legislation and standards (although with a higher prevalence among non-EU operators).

A diverging appraisal between EU and non-EU surveyed operators emerged instead with respect to access to international markets thanks to AW-related factors. Whereas the vast majority of EU respondents indicated that they did not get improved access, more than half of non-EU respondents reported an improved access to international markets (other than the EU) thanks to AW-related factors.

18.3. Trade distortions

Two cases of trade distortions deriving from differences in the AW legislation / standards applied in the EU and in non-EU Countries were detected in the assessment. While the case of trade in eggs and egg products, mainly concerning exports from Ukraine, did not pose interpretation issues and has been successfully addressed, the case of trade in live bovines for slaughter towards Middle Eastern markets (e.g. Lebanon, Turkey) appears to be rather controversial.

18.4. Capacity to innovate – AW-related market opportunities

The assessment, based on elements from desk research, interviews and the survey of EU and non-EU operators, revealed that:
An exact quantification of the economic importance of the market of AW-friendly products presents serious challenges, mainly deriving from lack of data and also from the fact that elements other than AW (e.g. healthiness, environmental sustainability, tradition/origin, etc.) are often combined with AW-friendly elements both in the marketing of products and in the perception of potential consumers.
This notwithstanding, a number of elements from literature review, from interviews and from the survey of EU and non-EU operators converge to suggest that:
The economic importance of the market of AW-friendly products is still very limited both in the EU and in the analysed non-EU countries.
In spite of the great interest of the general public for the theme, animal welfare in itself is not a critical factor in influencing consumer purchasing decisions, if compared against other factors such as price and organoleptic quality.
There is a very limited number of food quality schemes which are solely or mainly focused on AW, both in the EU and in the analysed non-EU countries. All the most notable examples of food quality schemes covering animal welfare also cover other aspects (organic, GM-free, origin-related, etc.).

As for the actual willingness to pay a price premium for AW-friendly products, the elements illustrated under points 1 to 3 above converge in suggesting that:
such willingness to pay has not yet emerged in practice;
even if present, the component of a price premium paid for a certain product which can be specifically related to animal welfare would be impossible to disentangle from the components related to other features of the product (healthiness, environmental sustainability, tradition/origin, etc.).

19. CONCLUSIONS

Overall limited impact of AW as determinants of EU competitive position on World markets*.* Evidence from this study confirms the findings already reported in the literature[246] of a limited impact of AW standards overall as determinants of the competitive position of the EU producers and operators on world markets. In fact, while cost of compliance with regulation may be higher in agriculture than in other manufacturing sectors, they remain very low when compared to other production costs (feed and labour above all) to influence World trade patterns. The egg and egg products market is the only one for which available evidence suggests that differential in AW standards could cause trade diversion and product relocation. However, this has hardly materialized yet, at least as far as imports into the EU are concerned, because of concurrent SPS factors acting as temporary trade barriers. The egg and the egg products market is the only sector where AW standards have triggered both requirements for additional operational and investment costs. A convincing case can be built that AW standards could also heavily impact and therefore distort the long (particularly marine) transport of animals, but this study could find no conclusive evidence that different AW standards on maritime transport have concretely and specifically impacted on trade flows, or otherwise damaged the EU competitive position in the case studies analysed more in detail. This is partly attributable to the peculiarities of the maritime animal transportation market and the different practices implemented by the large exporting Countries.

Distributional Impacts along the Food Chain*.* In all other markets, the impact of the EU AW standards on operational costs and the final cost of production can be deemed marginal overall, and at any rate too small to affect world competitiveness. However, AW-related investment adaptation requirements can have negatively impacted the profitability of EU producers and operators, particularly in mature industries in structural crisis. Since AW standards unevenly affect different phases of the production chain, segments of industries that have not undergone notable consolidation and vertical integration are more likely to have been disproportionally negatively affected in their operational margins in a one-to-one comparison with their non-EU counterparts. This is particularly so for producers at the farm level and transport operators whose increased AW-related investment costs to finance adaptation of production facilities have not necessarily translated into higher prices due to their limited bargaining power. However, all these domestic distributional impacts cannot be appreciated at the international level.

Impact of the EU Animal Welfare International Activities. The EU, through its various AW international activities, has clearly played a very prominent and decisive role in raising awareness about AW standards in the global agenda, starting a policy dialogue on the subject and increasing the standing of AW policy among Government institutions. It has also been successful in facilitating incorporation of AW standards in in the legislation of many non-EU Countries across the globe. The process, however, has been necessarily slow and progress uneven in the different areas. Progresses are more evident for AW standards at slaughter, where much of the effort was concentrated over the last decade, while they are slightly less evident for AW standards at transport, and much less so for AW standard at farm where important OIE AW standards have only recently been adopted and others are still under preparation and should be released in the near future. There is clearer evidence that

[246] Anna Anderson, *Societal Concerns - Domestic policy choice and international competitiveness*, Lund University, 2012 http://www.agrifood.se/Files/AgriFood_Rapport_20112.pdf.

the EU AW standards have played a lighthouse effect and often represented a source of inspiration for the various pilot and voluntary industry initiatives that have been proliferating on AW standards at farm in the recent past. This is particularly true as far as pig raising and laying hens are concerned – which are also the areas where OIE reference AW standards are currently under development. In some cases these developments were also clearly assisted and supported by EU targeted interventions.

Trade-offs of AW Cooperation Under Bilateral Agreements. The EU has consistently included AW standards in the provisions of its recent bilateral trade treaties and referenced OIE AW standards as a tool for cooperation and mutual understanding. Notably, these standards have been developed mostly in areas with relatively limited impact on the production costs of EU producers and operators and, most importantly, trade agreements have been signed with Countries with a limited role in terms of global trade flows. Since inclusions of AW has always been upon EU request, ways had to found during negotiations to win partner countries' resistances to include these items in these agreements. Related benefits are mainly of a non-economic nature and concern likely improvements in the welfare conditions of farmed animals in the Countries concerned. So far these benefits have mainly materialised in terms of more humane conditions at slaughtering and, to some more limited extent, better animal welfare at transport globally.

Limitations to Direct Referencing of EU AW Standards. Deep and comprehensive free trade agreements that include provisions on approximation with EU AW legislation have appeared as more effective instruments to ensure a level playing field in terms of AW-related increase in production costs particularly in sensitive markets like those for eggs and egg products affected by geographical proximity considerations. However, in the vast majority of cases non-EU producers and operators appear bound to remain more competitive even if EU AW standards were applied. This is because of more favourable structural conditions (cost of feed and cost of labour), that more than compensate for the capital requirements triggered by the implementation of AW standards and for the additional costs caused by shortage of AW-skills in many non-EU Countries. Therefore, no level playing field on AW standards could compensate for lack of tariffs and quotas in protecting EU producers and operators. While in the Neighbourhood Region geographical proximity could represent a sufficient market incentive to make approximation with EU AW requirements a realistic policy option, in other regions the feasibility in terms of legitimacy and appropriateness of referencing EU AW standards in the trade agreements appears dubious even to local AW experts.

Impact on Development and Uptake of OIE Standards. The EU has played an outstanding pivotal role in promoting and supporting OIE activities and in helping with the AW standard setting process and with standard dissemination and implementation. It is widely recognised as a key driving force behind the progress of the OIE AW agenda internationally. It has also been very active in fostering OIE Members' participation to OIE activities including promoting their more pro-active approach to standard-setting. Its role in influencing the agenda setting process has been necessarily more limited, as this depends on the priorities of the other Member Countries that do not necessarily coincide with those of the EU. Furthermore, it could do little to meet the non-EU Countries demand of getting more involved into basic research on AW standards to ensure that these are adapted to local conditions. Evidence from this Study points to a growing demand coming from non-EU Countries for shared basic research underlying the standard setting process, to verify the appropriateness of EU AW standards to the various market, sanitary and climatic conditions.

Usefulness of EU Delivered Training and Technical Assistance*.* EU AW international activities have managed to reach thousands of professionals and substantially contributed to increase knowledge about AW standards and fill the gap in the availability of related skills. Both BTSF and TAIEX are highly regarded and unanimously appreciated instruments among non-EU Countries. However, their ultimate impact presupposes the existence of knowledge dissemination mechanisms in the Countries concerned, minimum AW educational infrastructure, and faces at any rate notable language barriers. Beneficiaries have included official veterinary services, while involvement of business associations has been uneven in the different regions concerned and more notable in Asia and Latin America than elsewhere. Both BTSF and TAIEX have intrinsic limitations in their legal basis and could not cover the demand needs in terms of scope and size of activities. There is some evidence that at least in one occasion BTSF had to be outstretched to act as a substitute for a larger RTD project. At present one of the most successful tools was the dedicated TA projects implemented in the frame the memorandum of understanding with Brazil that could be flexibly adapted to the needs of the policy dialogue outside the areas covered by current OIE AW standards and mandatory EU AW requirements for imports. A notable lack of project facilities in between short term missions and very large cooperation projects or twinning has also been reported.

Ensuring Equal Conditions of Access to the EU Market. The implementation of Council Regulation 1099/2009 in non-EU Countries and related support activities have successfully managed to ensure equal conditions of access to the EU market of meat products. Their broader impact in changing global practices has been limited by the shrinking size of imports of animal products in the period reviewed here that has decreased incentives to comply. Water-bath stunning of poultry is confirmed as a particular controversial issue hindering more widespread acceptance and impact of EU AW standards at slaughter for a combination of quality, capital investment and other reasons.

Market Access Affected by Lack of Mutual Trust and Poor Signalling of Compliance. The current governance of world AW standards is characterised by notable lack of mutual trust on compliance and poor signalling mechanisms to smooth access to markets. On the one hand, EU producers and operators complain that, apart from the EU AW at slaughter regulation, the current cooperation mechanisms lack credible provisions to verify actual compliance with AW standards abroad. On the other hand, non-EU producers and operators' remark the difficulties they face in having their AW practices recognised when they differ from those officially enacted in their own Countries. Evidence from this study shows that EU certification of compliance with EU AW standards at slaughter, as well as partnerships with IFI are used as spurious proxy mechanisms to gain credibility in the market and overcome mistrust about official veterinary controls in the Country of residence.

Skewed Impact of Consumer Demand for Animal Welfare*.* So far, demand for AW in non-EU countries has mainly emerged in North American and Oceanian Countries. EU AW standards on pigs and laying hens have been used as a source of inspiration to steer developments, mainly in Countries where some demand for AW exists. There is, however, some evidence that EU AW international activities have been contributing to spread these practices also in Latin America, and this can be considered among their biggest successes so far. This probably also partly depends on the more flexible forms of TA instruments available there. In areas where there is no real demand for AW, EU AW standards through the mediation of OIE have greatly impacted on AW practices at slaughter and – slightly less so – at transport and on AW conditions for broilers.

Impact on Product Quality. When accompanied by proper management techniques and investments in human capital, good implementation of AW standards has the potential to result in increased productivity or better product quality, more than compensating for increased production costs or physical investment requirements. This appears to be particularly the case in the dairy, pig and poultry industries. Whether these benefits materialise or not depends on a number of external conditions. There is preliminary evidence – deserving further empirical investigation and confirmation – that some of these conducive conditions might positively correlate with the degree of concentration and vertical integration of an industry. Since these are often higher outside the EU than within the EU, it is possible that further uptake of AW standards at farm among non-EU Countries might eventually result in the long run in an increased competitive advantage for operators in these countries, in terms of profitability of operations. EU livestock producers and operators, on the contrary, face more structural difficulties to take advantage from AW.

Increasing Appearance of Two-Tiered AW Systems in non-EU Countries. For the reasons mentioned above, there is preliminary evidence that uptake of AW standards in non-EU Countries goes together with increasing market consolidation and vertical integration. This contributes to create a two-tiered environment, where small operators lag behind and are left to cater the domestic market. This results in an incentive for local Governments to implement a de facto double AW standard system, one for the domestic market and one for exports, and to delay formal alignment with international standards.

Impact of IFI and ECA. There is consisting evidence that IFI, particularly EBRD and IFC, have contributed to foster the implementation of EU AW standards particularly in Eastern Europe and raise their status to common industry practice. Their degree of leverage on other markets is much more limited. Evidence as far as other institutions are concerned is more opaque, particularly in the market for egg and egg products where some IFI and ECA might have contributed to create the conditions for trade diversions because of the provisions on AW standards

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