



PILOT PROJECT on best practices for animal transport

Final report

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SUMMARY

Background

The European Parliament adopted a pilot project on the development and dissemination of best practices for international and domestic animal transport by road aimed at strengthening the overall level of enforcement within the EU of Council Regulation (EC) No. 1/2005 on the protection of animals during transport. The project had to focus on the main farm species (horses, pigs, sheep, cattle and poultry), and key stakeholders participating in the transport by road of these animals (farmers, specialised transporters, traders, slaughterhouse operators, NGO's and veterinarians). The European Commission was responsible for the implementation of the pilot project and published an open call for tender to perform the project. The 'Animal Transport Guides' consortium responded to this call, aiming to develop Guides to Good Practice on the transportation of livestock species in the European Union. In addition, they proposed different dissemination activities in order to enhance a uniform level of implementation of the legislation. The project started in May 2015.

The Consortium

The Animal Transport Guides consortium consisted of a group of academic partners who worked together previously in two previous projects on Quality Control Posts managed by the Directorate General for Health and Food Safety. They were led by a Core Team consisting of 2 academic partners and 3 NGOs representing groups of stakeholders. The consortium set up Working Groups of end-users at a national level in 9 EU member states spread across Europe, as well as International Focus Groups of stakeholders dedicated to the five animal species. The activities and strategic decisions of the consortium were overseen by a Stakeholder Platform consisting of 10 stakeholder organisation representatives, operating at an international level.

Project aims

The Transport Guides project aimed to:

- collect and collate appropriate best practices implemented and supported by scientific evidence;
- develop practical guidelines with those that will ultimately use it;
- disseminate these guidelines through the networks of the main European stakeholder groups involved;
- and to verify if the new transport guidelines reached the end-users.

Project activities

To achieve the aims, the project activities started with the collection and close examination by all partners of the available literature, knowledge and existing protocols/guides in their own countries and beyond (Task 1). The academic partners then recruited hands-on expertise through Working Groups of national stakeholders to develop species specific guidelines on the basis of this information (Task 2). These were organised per species in so called Duo Countries: 2 countries set up Working Groups for one species. In each Working Group an iterative Delphi procedure¹ was used to reach consensus over the content of the single good practices that compose the draft guides. The drafts developed in collaboration with the Working Groups were evaluated and finalised in Task 3 at a European level, in collaboration with International Focus Groups of relevant stakeholders.

¹ The **Delphi method** is a forecasting process framework based on the results of questionnaires sent to a panel of experts. Several rounds of questionnaires are sent out, and the anonymous responses are aggregated and shared with the group after each round, to improve and produce the subsequent questionnaire in an iterative way.

Through a series of animal species meetings the representatives of international organisations read and improved the draft texts delivered by Task 2. The project then entered a new phase: dissemination (Task 4). The dissemination of the Guides to Good Practice was focussed on end-users in 8 target countries, in their own languages. These 8 countries were the UK, Germany, Italy, Spain, Romania, France, Poland and Greece. The project aimed to bring the information in the Guides to Good Practice as close to the users as possible by organising specific dissemination events called 'Road Shows' in each country. Finally, an impact assessment questionnaire was developed in Task 5. This was done by interviews with Road Show delegates, but also with stakeholders at different levels in the chain in a larger number of other countries. Furthermore, for a true hands-on indication of the impact of the project, five transport companies supported a qualitative 'before and after' test in Task 5.

Main results

Task 1

The objective of the first task was to provide an overview of the technical and scientific literature on good and best practices for the protection of animals during transport. The overview was presented as Deliverable D1 of the project, and consists of an analysis of the collected information for each of five species: cattle, horses, pigs, sheep and poultry. Each species chapter (or 'sub-report') comprises of an analyses of the practices identified, followed by an overview of all available practices presented in tabulated form. The report concludes with a presentation on two specific areas of interest: the costs associated with fitness-to-travel decisions, and a brief state of the art section on satellite navigation systems.

The reference list includes 191 documents relevant to transport practices. The majority of the materials collected is freely available online, and directly accessible to a large international audience. The available guidelines relating to means of transport are often generic, and apply to all species. There is general consensus in terms of vehicle design, particularly in relation to ventilation, but there is a lack of detailed information on how to operate these systems. Other aspects which receive little attention in those documents is the design and use of drinkers on board vehicles for long journeys, emergency situations and driving skills, specific advice on long journeys and the associated rest stops.

Task 2

In Task 2 a consensus on good practices was aimed for via a bottom up approach with National Working Groups, based on the outcomes of Task 1. The information from the existing materials and practical experience from the working group members was used to explain different options, to formulate the texts of good practices and evaluate their advantages and disadvantages for animal welfare. During this process, it was agreed with the Stakeholder Platform that two main outputs with two different target groups should be developed in the project: 1) The Guides (referred to by the consortium as 'encyclopaedias'), which include a great number of practices, tables and reference figures. They are aimed at e.g. transport operators, official veterinarians and competent authorities. 2) The Fact sheets, which consist of single sheets of paper with simple and clear instructions to deal with practical issues, aimed at drivers, farmers and animal handlers. Furthermore, in consultation with the Stakeholder Platform the structure of the Guides was also defined, following the chronological order activities of a journey: planning, preparing, loading, driving and unloading. The basic content of each of the five guides was developed in collaboration with the national working groups. Contentious issues were identified and resolved if possible. This Task did not result in a document fit for publication, as the draft Guides seamlessly developed into the Final Guides of Task 3.

Task 3

The final Guides for each of the five animal species was created with the help of 5 international Focus Groups. They are the principle output of Task 3, and of the Animal Transport Guides project, and form the basis for all other deliverables and results of the project. The Guides can be found on the ATG website². Their structure is similar and includes 5 or 6 main chapters, each divided into several paragraphs with numbered practices. The practices are classed as 'Good' or 'Better' practices.

- 'Good practices' are defined as: procedures and processes that ensure compliance with requirements of legislation or regulations, designed to protect the animals' welfare.
- 'Better practices beyond EU legislation' are defined as providing additional guidance on how procedures and operations can be improved to exceed any legally defined minimum welfare requirement, and to increase the welfare status of the animals during the relevant periods and procedures

Task 4

The Animal Transport Guides project developed a series of dissemination materials. The Transport Guides website went live on June 2016. It contains news items and all documents produced by the project. The website became multi-lingual with all pages translated from English into the other 7 project languages in March 2017 i.e. German, French, Italian, Spanish, Romanian, Greek and Polish. Factsheets were produced to meet the needs of drivers and animal handlers. Originally 5 fact sheets were foreseen: 1 per species. However, during the course of the project it was decided to develop 17 factsheets, as the amount of information was too great to condense in one sheet per species. Their aim was to summarise in short simple wording and with illustrations of the most important Good and Better Practices for the most critical aspects of the journey or for the most vulnerable species (e.g. end-of-lay hens, un-weaned calves). The factsheets were translated from English into the other 7 project languages and also some additional languages (e.g. Russian, by the OIE).

Newsletters and press releases kept interested people informed about the latest developments regarding the project at regular intervals. Fifteen were produced, and reached 701 persons who auto-subscribed to it. The average open rate was 61.4%, average click rate 30.6% (status per August 2018).

Social Media was also used to disseminate project results. Facebook had 112 posts, and reached between 110 and 3105 readers per posting. It has 282 followers. The Twitter account had 72 postings and 167 followers.

To illustrate visually the most important good and better practices, short animated movies were developed for each of the 5 species. All videos were in English, and special versions were produced with subtitles in the 7 different project languages. They are all available on the Project Youtube channel, where they are already viewed more than 9,400 times by August 2018.

Road Shows were organised in 8 countries: France, Germany, Poland, Romania, the UK, Spain, Italy and Greece. They aimed to bring the Guides to the end-users, rather than asking them to come to central location. A roadshow consisted of between one and three main events in one country, and often had some smaller follow-up events in other regions. Each roadshow was aimed at a minimum attendance of 100 participants, representing different categories of stakeholders. However, all Road Shows together reached more than 2,600 delegates.

² <http://animaltransportguides.eu/>

Task 5

Task 5 evaluated the impact of the guides on behaviour of stakeholders, through an ex-ante impact assessment. The results indicate a positive impact of the materials developed in the Animal Transport Guides project and forecast the acceptance of the guides to be moderate to high. This is amongst others supported by the fact that both the direct and indirect evaluations showed a positive trend (scores on second measurement (T1) were higher than scores on the first measurement (T0)) and for several items the difference is significant. The Guides on average are seen as helpful and practical and respondents have positive expectations of the guides and are motivated to use them.

Conclusions and recommendations

The project has delivered a large amount of materials to support actors when implementing Council Regulation (EC) no 1/2005 on the protection of animals during transport. The results appear to be well received. Based on their experiences when developing and applying the guides, the project consortium formulated the following general recommendations: (1) Future projects should promote high stakeholder involvement to be successful; (2) Efforts should be made to reach more end-users with the results of Transport Guides; (3) The Guides should be updated and improved within the next three years; (4) Additional knowledge and tools need to be developed, to resolve some of the remaining issues on the welfare of animals transported in Europe.

INTRODUCTION

1.1 Background

Animal transport attracts a lot of public attention and hence generates political interest. As a consequence, the European Parliament in its budget 2014 adopted a pilot project on the development and dissemination of best practices for international and domestic animal transport. The European Commission was in charge of implementing the project and proceeded to an open call for tender. The project was designed with a particular focus on the main farm species and key stakeholders participating in the transport by road of these animals (farmers, specialised transporters, traders, slaughterhouse operators, NGO's and veterinarians). Based on an analysis of the different practices across the European Union, the activities should bring best practices to light that can support establishment of Standard Operating Procedures (SOPs) for transporting animals. A strategy to disseminate them among stakeholders including the possibility of training courses, if necessary, should be further developed.

The 'Animal Transport Guides' consortium responded to this call, aiming to develop Guides to Good Practice on the transportation of livestock species, such as horses, pigs, sheep, cattle and poultry in the European Union. In addition, they proposed different dissemination activities in order to enhance a uniform level of implementation of the existing legislation. The proposal was granted and the project started in May 2015.

1.2 Consortium

The ATG consortium consists of representatives from European stakeholder groups and academic partners involved in the area of livestock transport.

- The core of the work was carried out by a group of academic partners who worked together in two DG SANTE projects:
 - Renovation and promotion of high quality control posts in the European Union (SANCO/2010/D5/CRPA/SI2.578062)
 - Development of an EU wide animal transport certification system and renovation of control posts (SANCO /2011/G3/CRPA/SI2.610274).
- The consortium worked with Working Groups of end-users at a national level in 9 EU member states spread across Europe.
- The consortium activated International Focus Groups of stakeholders dedicated to the five animal species
- The consortium received support and advice from a Stakeholder Platform consisting of 10 stakeholder representatives, at an international level.
- Finally, the project was coordinated by a Core Team consisting of 2 academic partners and 3 NGOs representing groups of stakeholders.

These four types of project participants are presented below in the following order: the Core Team, the Stakeholder Platform, the Academic Partnership and the Working Groups.

The Core Team

The consortium was led by a Core Team of five partners. Three of the partners represented stakeholders involved in the transport of livestock, and the other two were academic partners with substantial experience in managing international projects and knowledge of animal transportation:

- Wageningen Livestock Research (WLR, coordinator)
- Centro Ricerche Produzioni Animali (CRPA, deputy coordinator)
- Federation of Veterinarians of Europe (FVE)
- IRU Projects ASBL (IRU)

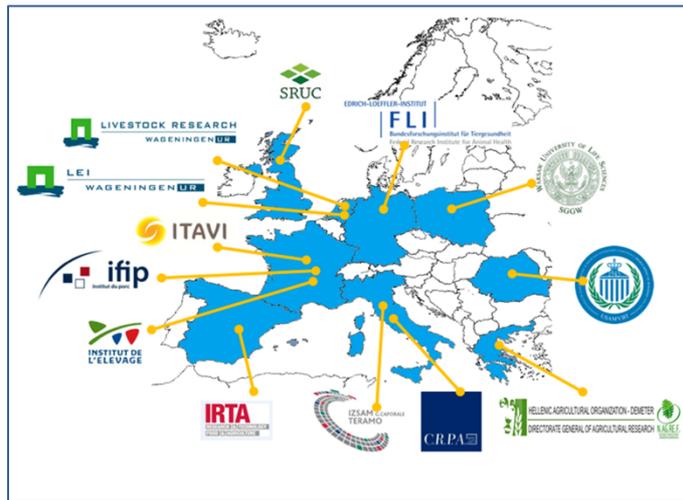
- Eurogroup for Animals (Eurogroup)

The Core Team supervised the activities of the consortium, and made sure that the project's deliverables were of a high standard and submitted to the Commission in time. The Core Team met every month via Skype.

Academic partners

The academic partners in the consortium represent 8 countries in different regions of Europe. They all have substantial experience in research in the area of animal transport:

- Friedrich Loeffler Institut (FLI, Insel Riems, Germany)
- Hellenic Agricultural Organisation – Demeter, Veterinary Research Institute (HAO-VRI, Thessaloniki, Greece)
- Institut d'Élevage (Idele, Paris, France)
- Institut Technique de l'Aviculture (Itavi, Paris, France)
- Institut Technique du Porc (IFIP, Paris, France)
- Institut de Recerca i Tecnologies Agroalimentàries (IRTA, Barcelona, Spain)
- Istituto Zooprofilattico Sperimentale Abruzzo e Molise (IZS, Teramo, Italy)
- Wageningen Economic Research – Wageningen UR (WEcR, The Netherlands)
- Scotlands Rural College (SRUC, Edinburgh, UK)
- Szkoła Główna Gospodarstwa Wiejskiego (SGGW, Warsaw, Poland)
- Universitatea de Științe Agricole și Medicină Veterinară a Banatului „Regele Mihai I al României” din Timișoara (USAMVBT, Timisoara, Rumania)



1.3 Stakeholder involvement

National Working Groups

Even though the consortium itself involved stakeholders in the Core Team and the Stakeholder Platform, it was considered essential that the development of the Guides to Good Practice were supported and 'owned' by the end-users themselves. The **Draft Guides** with their initial design and the basic content was proposed and agreed by people who are ultimately working with it every day. Therefore, Transport Guides set up national Working Groups of end-users for the five different species. To involve these experts it was essential that the meetings and discussions were carried out close to the work floor, and in the language of the experts. Handlers, drivers, welfare officers, and veterinarians were included, as they have practical experience and are best positioned to distinguish sense from nonsense.



For each species, two consortium partners organised their own national Working Groups in the so called 'Duo Countries'.

These partners (and duo countries) were:

- Poultry: Itavi (France) and HAO-VRI (Greece)
- Cattle: Idele (France) and SRUC (UK)
- Horses: IZS (Italy) and WLR (The Netherlands)
- Sheep: USAMVBT (Romania) and IRTA (Spain)
- Pigs: CRPA (Italy) and IFIP (France)

Table 1 – Composition of national stakeholder groups for draft guides

Table	Sheep		Poultry		Pigs		Horses		Cattle		total
	ES	RO	EL	FR	IT	FR	IT	NL	UK	FR	
Farmers	3	1		9	1	1	2	1	1		19
Vehicle manufacturers	2				1	1		1	2		7
Animal traders		1			1			1	1	2	6
Transporters	1	5	1	7	2	6	1		2	2	27
Slaughterhouses	1	1	1	4	3		1		2		13
Official veterinarians			1	2				1			4
Animal scientists		5	1	1		1	2	1			11
Animal welfare organisations	1		1	2	1	2	1		1	3	12
Competent authorities	1		4	5	2	4	3	1	3	4	27
Total	9	13	9	30	11	15	10	6	12	11	126

International Focus Groups

The **Final Guides** for each of the five animal species was created with the help of European focus groups, consisting of animal welfare scientists, official veterinarians, farmers, animal traders and transporters, slaughterhouse operators, vehicle manufacturers and animal welfare organisations. These focus groups had a European basis: the delegates were asked to represent the knowledge, experience and opinions beyond those of their own country.



A total of 72 individuals took part in the focus groups of the 5 species. Details of their composition can be found in Table 2

Table 2 – Composition of European focus groups for final guides (Task 3)

	Sheep	Poultry	Pigs	Horses	Cattle	Total
Farmers	3	5	3	1		12
Vehicle manufacturers			2			2
Animal traders	1				2	3
Transporters		3	2	3	5	13
Slaughterhouses	2	5		1		8
Official veterinarians		2	1	2	2	7
Animal scientists	2	3	2	2	2	11
Animal welfare organisations	2	3	2	4	5	16
Total	10	21	12	13	16	72

Stakeholder Platform

It is very important that the activities of the consortium are supported by those that represent the people who will use the end products. Therefore, every step in the development of the Guides to Good Practice was followed by an advisory board consisting of end-user representatives, called the Stakeholder Platform.

The Stakeholder Platform met 5 times during the project's life time to discuss progress and suggest improvements with the following main objectives:

- to provide the consortium with an outside view from end-users on the way to best conduct the project in order to maximise the outcomes and benefits to society, and
- to advise the consortium on the identification of and how best to transfer and exploit most promising results/technologies emerging from the project.



The Stakeholder Platform consisted of 10 individuals representing various aspects of the transport industry including:

- COPA-COGECA
- Arbeitsgemeinschaft Deutsche Tierzüchter - ADT
- Eyes on Animals
- Pezzaioli Srl, Vehicle manufacturer
- Union Européenne du Commerce du Bétail et de la Viande - UECEBV
- European Forum of Farm Animal Breeders - EFFAB
- Bundesverband Deutsche Tiertransporte - BDT
- Association of Poultry Processors and Poultry Trade in the EU - AVEC
- Animal Welfare Directorate, Ministry of Agriculture of Ireland
- Directorate for Animal Welfare, Veterinary Drugs and Veterinary Applications of Ministry of Rural Development of Greece

The remit was to:

- represent the interests of all relevant stakeholders in the project
- provide the consortium with advice on the relevance of the project outputs
- assist the project in dissemination activities

AIMS AND APPROACH

2.1 Aims of the project

The Transport Guides project aimed to:

- collect and collate appropriate best practices implemented and supported by scientific evidence (**'Collection'; Task 1**),
- develop practical guidelines with those that will ultimately use it (**'Development'; Tasks 2 and 3**),
- disseminate these guidelines through the networks of the main European stakeholder groups involved (**'Dissemination'; Task 4**),
- and to verify if the new transport guidelines reached the end-users (**'Verification'; Task 5**).

2.2 Methodology

Broadly speaking, the project activities started with the collection and close examination by all partners of the available literature and knowledge and existing protocols/guides in their own countries and beyond (Task 1).

In Task 2, the academic partners recruited hands-on expertise through Working Groups of national stakeholders to develop species specific guidelines on the basis of this information. These were organised per species in so called Duo Countries: 2 countries set up Working Groups for one species. In each Working Group an iterative Delphi procedure³ was used to reach consensus over the content of the single good practices that compose the draft guides. Meanwhile, together with representatives from international stakeholder groups, an overall structure for the Guides was developed.

The drafts developed in collaboration with the Working Groups were evaluated and finalised in Task 3 at a European level, in collaboration with International Focus Groups of relevant stakeholders. Through a series of animal species meetings the representatives of international organisations read and improved the draft texts delivered by Task 2. Their aim was to translate the information to the circumstances in their own countries, and to align the guides as much as possible. Subsequently, the academic partners in the duo countries finalised the Guides.

The project then entered a new phase: dissemination (Task 4). The dissemination of the Guides to Good Practice was focussed on end-users in 8 target countries, in their own languages. These 8 countries were the UK, Germany, Italy, Spain, Romania, France, Poland and Greece. The project aimed to bring the information in the Guides to Good Practice as close to the users as possible by organising Road Shows in each country, rather than by inviting drivers and other stakeholders to a central location.

Finally, an impact assessment questionnaire was developed in Task 5. This questionnaire was aimed at the Road Show delegates (Task 4) in each target country. The questionnaire was also aimed at recipients of digital information on the Guides through websites and factsheets. This was done in a larger number of countries, with stakeholders at different levels in the chain. Finally, for a true hands-on indication of the impact of the project, five transport companies supported a qualitative 'before and after' test in Task 5. This provided

³ The **Delphi method** is a forecasting process framework based on the results of questionnaires sent to a panel of experts. Several rounds of questionnaires are sent out, and the anonymous responses are aggregated and shared with the group after each round, to improve and produce the subsequent questionnaire in an iterative way.

insights in what went right, and wrong, in the dissemination of the Guides to the end-users.

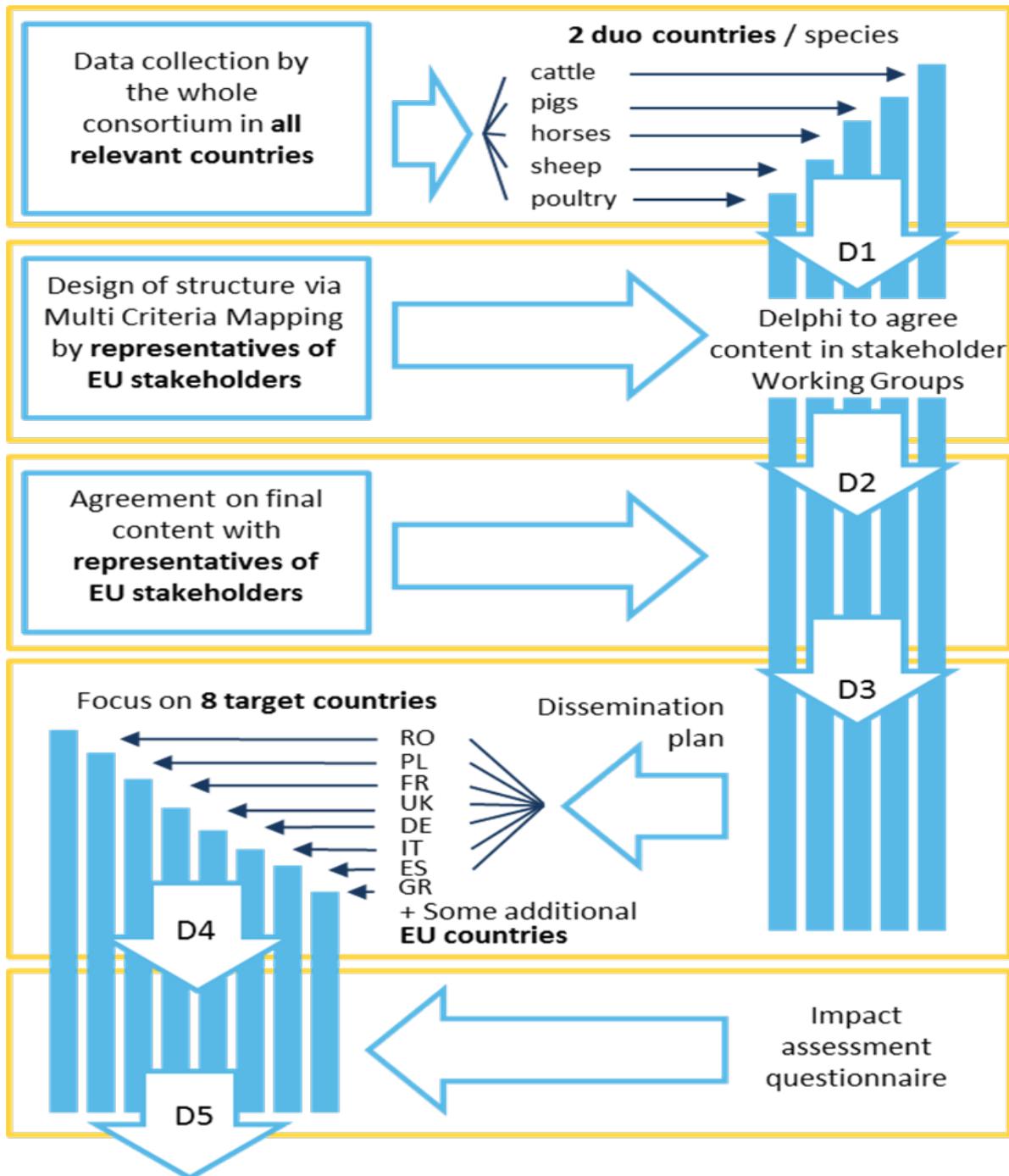


Figure 2 Schematic representation of the various activities and the flow of information in relation to the interaction between consortium partners and the stakeholders of the project.

RESULTS

3.1 Task 1: Desk research on existing materials covering topics related to animal transport

Outline

The objective of the first task was to provide an overview of the technical and scientific literature on good and best practices for animal welfare during transport. 'Good practices' were defined as procedures and processes that ensure compliance with requirements of legislation designed to protect the animals' welfare. 'Best practices' are defined as providing additional guidance on how procedures and operations can be improved to exceed any legally defined minimum welfare requirements.

The overview was presented as Deliverable D1 of the project, which consists of an analysis of the collected information for each of five species: cattle, horses, pigs, sheep and poultry. Each species chapter (or 'sub-report') comprises of an analyses of the practices identified, followed by an overview of all available practices presented in tabulated form. Both the analytical text and overview tables are structured according to the relevant chapters and articles in the Regulation. The report concludes with a presentation on two specific areas of interest: the costs associated with fitness-to-travel decisions, and a brief state of the art section on satellite navigation systems. The reference list includes 191 items, and to the vast majority an active web link is added.

Key results

The majority of recommendations is freely available online, and directly accessible to a large international audience. However, there is hardly any information on the impact of each of the recommendations for animal welfare. The available guidelines relating to means of transport are often generic, and apply to all species. There is general consensus in terms of vehicle design, particularly in relation to ventilation, but there is a lack of detailed information on how to operate these systems. Other aspects which receive little attention in guides and recommendations in all species is the design and use of drinkers on board vehicles for long journeys, emergency situations and driving skills, specific advice on long journeys and the associated rest stops.

Cattle

Thirty documents and sources specifically relating to the **transport of bovines** were identified, most of which concerned guidelines for good practice to ensure compliance with current legislation. Information on categories of vulnerable cattle (e.g. calves, cull cows, pregnant cows) is missing. The topic of 'Fitness for Transport' is covered extensively, but there are no practical recommendations addressing how to take care of animals that are not fit for transport. Loading and handling practices for bovines are well covered by the existing good and best practices, with the exception of calves and individual bulls. Regarding space allowance on board, several sources are available that provide information on the implementation of the legal requirements. Advice on the best way to assess and/or calculate space allowances, taking into account various influencing factors, was not found. There are several documents addressing good practices relating to the watering and feeding intervals for cattle. What appears missing is information regarding implementation, operation and maintenance of watering and feeding systems. The management of the thermal environment by appropriate ventilation is addressed in several documents, but detailed information on fan or system specification and operation in relation to specified temperature limits is often lacking. There are general recommendations on how to minimise the risks of heat stress and cold stress.

Horses

On the transport of **slaughter horses** there is not much information in literature. What is covered quite well is the issue of fitness for travel; although there are no recommendations on how to adjust fitness requirements to the specific travel conditions ahead.

Practices for loading and handling horses are well covered, but specific information on the handling of unbroken horses is missing, in particular during loading. There is general consensus on watering and feeding intervals to be followed during travel. Information is provided concerning the type of drinkers to be used. Information about adequate feed sources is also available.

There are few recommendations on bedding provision, space allowance for horses in individual stalls, the design, structure and use of partitions and conditions concerning the transport of horses over long journeys.

Pigs

A total of 45 documents were identified as information sources for good and best practices specifically for **pig transport**. There are guidelines for the assessment of fitness to travel of pigs. There is not much information on what to do with pigs which are unfit to be transported. There are no specific recommendations on cull animals, breeding sows and piglets. Neither is there clear agreement between the different sources on watering and feeding intervals. Information is provided concerning the type of drinkers to be used but practical guidance as to how to deliver water to pigs is missing. There is no good practice covering the type of feed for the animals during long journeys. There are instead many practical recommendations concerning the proper design and management of temperature and air flow.

Sheep

Regarding **sheep**, there are a limited number of information sources, and most of the documents found explain minimum legal requirements. No guidelines related to fitness for transport of sheep were found. There is a significant amount of information relating to the loading and handling of sheep, addressing several different aspects of the loading process including the behavioural responses of the animals. Regarding space allowances, most of the sources identified present the information contained in the Regulation in a simpler and more understandable form, but do not include any clear guides to best practices. There are no clear recommendations for good or best practice in the area of feed and water provision.

Poultry

There are at least 50 different information sources that deal with **poultry transport** and refer to good practices. Regarding fitness for transport there are few recommendations. They relate to aspects such as definitions, inspection criteria and transport of wet birds. No information was found on the fitness of one day old chicks for transport, or actions to be taken when confronted with unfit birds. The recommendations regarding transport conditions focus on crate dimensions and other crate aspects. Advice on aspects of ventilation during transport is limited and does not provide more details than the Regulation itself. There are many documents that deal with aspects of loading poultry, and the correct way to unload poultry transport vehicles, with considerable attention to climatic circumstances. Information is missing regarding the handling of one day old chicks or pullets when unloading at a rearing farm. Information on how to feed and water poultry during transport is missing. Recommendations regarding the optimal temperature range differ slightly between documents. Information is missing concerning the humidity conditions in the vehicle and especially the link between humidity, temperature and space allowance.

Fitness

In a specific section of the report the **economic aspects of fitness to travel** are discussed. Transport of unfit animals is forbidden, and it is important that they can be identified before loading on to the vehicle. It is essential to have alternative management options to deal with these animals. If unfit cull animals can be treated medically, the benefit/cost ratio can be positive. Euthanasia and emergency killing do not provide financial benefits, but only generate costs, which are partly mitigated by subsidies. Non-compliance creates short term benefits, if the chance of detection, enforcement action and prosecution is low, but will compromise the profitability of farmers and transport companies if enforcement is rigorous and pursued diligently by the Competent Authority.

Satellite Navigation Systems

A second horizontal topic (across species) concerns **satellite navigation systems**. The Regulation requires satellite navigation systems (SNS) to monitor travel and resting times. Different systems required to comply with the legislation are available and have been described in the literature. According to the system providers, the drivers and competent authorities have access to the data. However, there is little use of the data during on-the-spot checks by Competent Authorities. Equipment that goes beyond the minimal requirements of the legislation is available, but hardly used.

Dissemination

For the **effective dissemination of guidelines** it is important to know which method of communication generates the highest impact. The literature analysis indicated that there is hardly any information on this. In an attempt to obtain a better understanding of the requirements of different end users, a survey was conducted among stakeholder groups related to the Transport Guides project, to which 40 stakeholders from different backgrounds responded. They considered hands-on training (on the job, through technical workshops or on-site) to be most effective, and also appreciated guidelines and fact sheets very much, in particular if they are practical and illustrative. Different stakeholders should be targeted with different educational materials. Some stakeholders need to be able to find information on all potential situations, and have the time to look them up. Other stakeholders want quick access to relevant data, to facilitate immediate decision taking.

3.2 Task 2: Draft template guides to good practice addressing the key operational requirements of the Regulation

Outline

In Task 2 a consensus on good practices was aimed for via a bottom up approach with National Working Groups, based on the outcomes of Task 1. The draft Guides to Good Practice were developed in the duo countries at national level with stakeholders discussing transport practices in their mother tongue. In addition to the information from the existing materials, practical experience was used to explain different options, to formulate the texts of good practices and evaluate their advantages and disadvantages for animal welfare.

Key results

The Stakeholder Platform proposed that two main outputs with **two different target groups** should be developed for the transport practices:

- The Guides (referred to by the consortium as 'encyclopaedias'), which include a great number of practices, tables and reference figures. They are aimed at e.g. transport operators, official veterinarians and competent authorities.
- The Fact sheets, which consist of single sheets of paper with simple and clear instructions to deal with practical issues, aimed at drivers, farmers and animal handlers.

This structure was adopted by the consortium, and implemented. Furthermore, in consultation with the Stakeholder Platform the **structure of the Guides** was also defined,

following the chronological order activities of a journey: planning, preparing, loading, driving and unloading.

The **basic content** of each of the five guides was developed in collaboration with the national working groups. Contentious issues were identified and resolved if possible.

This Task did not result in a document fit for publication, as the draft Guides seamlessly developed into the Final Guides of Task 3.

3.3 Task 3: Final Guides to Good Practice

Outline

The final Guides for each of the five animal species was created with the help of 5 international Focus Groups. A first series of meetings was organised at the end of May 2016. In this first series, the draft guides were presented and illustrated by the academic partners, and a road map was designed to rewrite the Draft guides towards their final version. All focus groups held subsequent meetings in Brussels to discuss the wording of and to reach consensus on each single practice. The species groups did not all have the same numbers of meetings. The last ones were held in March 2017. The process was laborious and time consuming, as different views on many issues had to be discussed thoroughly in order to find agreements.

Key results

The 5 Guides to Good Practice are the principle output of this Task 3, and of the Animal Transport Guides project. The Guides are the basis for all other deliverables and results of the project, and can be found on the website www.animaltransportguides.eu. Their structure is similar and includes 5 or 6 main chapters, each divided into several paragraphs.

- 0. Introduction: Aims, Main welfare risks, Animal based measures, Structure, List of definitions
- 1. Competence: Introduction, Competence and training, Responsibilities
- 2. Journey planning and preparation: Introduction, Planning the journey, Journey duration, Contingency plans, Means of transport, Animal related preparation, Administration
- 3. Handling and loading: Introduction, Loading facilities, Handling during loading
- 4. Travelling: Introduction, Driving, Climate control, Water and feed intervals, Care of sick or injured animals, Emergencies
- 5. Unloading: Introduction, Layout of the unloading area, Operating procedure, Care of animals at unloading, Cleaning and disinfection of vehicles after unloading
- 6. Stay at control posts, markets and assembly centres: Introduction, Housing, Feeding and watering, Biosecurity, cleaning and disinfection, Emergency

The finalisation of the guides has taken a year. Long discussions between very different interest groups have led to a **high degree of consensus about each single practice** in each of the five guides. There has been no request for a minority opinion. The outcome of this broad stakeholder consultation can certainly be considered a basis for a broad dissemination of the transport guides, which will contribute to the improvement of animal welfare during transport in the EU.

The focus groups triggered a **discussion on the label 'best practices'**, and after much deliberation it was agreed that the name would change. From that moment onwards the Guides proposed 'Good' and 'Better' practices.

- **'Good practices'** are defined as: procedures and processes that ensure compliance with requirements of legislation or regulations, designed to protect the animals' welfare.

- **'Better practices beyond EU legislation'** are defined as providing additional guidance on how procedures and operations can be improved to exceed any legally defined minimum welfare requirement, and to increase the welfare status of the animals during the relevant periods and procedures. They are abbreviated to 'better practices' throughout the Guides.

For each species there were some controversial issues which had to be overcome. They are listed below.

Cattle

The issues that took the most time to resolve were the **long journey transport of calves** and the problems associated with the provision of feed/water (particularly where milk or milk substitute is the preferable option) to calves on vehicles (drinkers/nipples, troughs etc.). Additionally, the **height of the deck, the space allowance (in particular for resting on the truck), the amount of water provision, the use of electric prods for calves**, etc. were also raised. All these points were summarized in a table presented to the stakeholder during the first focus group meeting.

To resolve the issue of long journeys of calves, the transporters provided the example of calves fed individually in control posts after 9 hours of transport followed by a few hours of rest. Based on this example and considering that, so far, there is no sufficient data available to consider this operating procedure as a good practice, it was decided to insert this example as a "better practice" (219) and to underline the fact, that **transport of unweaned calves over more than 9 hours is not recommended**. Regarding the other controversial points, a compromise was reached by adhering directly to the Regulation (EC) 1/2005, which apparently provided good and shared solutions.

*The **cattle guide** is the largest of the five: it contains 74 pages long and presents 317 Good and Better practices.*

Pigs

A discussion topic raised was the **access to the truck compartment** to allow pigs to be inspected and cared for. This has been discussed carefully: should the access be physical into the compartment (which is dangerous!), or should it be a 'visual access' only allowing drivers and/or attendants to decide on what action to take? Finally **head space allowance in the compartments** was under discussion in relation to the pig needs of movement and ventilation.

At the end of the Focus group meetings, all stakeholders accepted to indicate both keepers, drivers and veterinarians as responsible for the pig fitness to travel. The good practice proposed by an NGO for mandatory access doors to allow drivers and attendants to have physical access to pigs into the compartments was not accepted by all the stakeholders, and not included. A table with recommended heights of the decks, according to five categories of pig size and live weight was agreed by all stakeholders and included in the guide.

*The **guides for pigs** contains 65 pages and has 222 practices.*

Horses

This guide focuses on horses for slaughter, **but it was argued that transport of horses for all other purpose needs attention too**. Compared to the other species, this is a very important part of all transports, and often such transports are carried out by non-professionals. Moreover, at the end of their career also sports and leisure horses usually are slaughtered. There were a lot of discussion on **exemptions in Regulation 1/2005 for 'registered horses'**, e.g. regarding the need for a journey log, navigation system, watering and feeding intervals and journey times. These exemptions are open to abuse, but particularly raise the question why horses are treated differently depending on their designation. Some initially recommended practices that were formulated very specific (e.g. recommended space on each side of the animal, strict temperature ranges) were criticized.

Only some experts had experience with diagonal placement of horses, therefore the benefits were questioned. Finally, the **type of bedding material** was discussed.

To reassure some of the concerns, focus group members have contacted national competent authorities and the Commission with the request to look into the transport of 'end of career' registered horses. The use of targeted animal based parameters has been suggested to monitor animal welfare and to provide provisions in trucks to adjust space per animal. Diagonal placement is mentioned as a recommended practice, and can be applied by those who have vehicles that allow it. It was agreed that the bedding material should absorb moisture and be dust free, and that the final choice can depend on availability and cost of material.

*The **horses guide** is composed of 63 pages with 240 Good and Better practices.*

Sheep

The two topics that took a lot of discussion in the sheep focus group were the **fasting period** and the **space allowances for different categories of sheep**. Regarding the fasting period, transport companies and veterinarians were in favour of a fasting period, while NGOs were against. Arguments in favour of a fasting period are that it helps to reduce the amount of faeces passed during the journey. An appropriate fasting time is important to reduce the respiratory distress of animals during the journey and the faecal contamination of carcasses during the slaughter operations. NGOs argued that a too long fasting will result in hunger and defects on meat quality (DFD, dry firm and dark meat). Regarding space allowance, an NGO proposed to change the recommendation of space allowance using allometric equations as EFSA 2011 recommended instead of square metres/animals.

The solution regarding the fasting period there are two better practices in the guide: "The fasting period should be calculated on the basis of the duration of the driving and the stops (total journey)", and "Fasting before short transports (less than 2 hours) is not necessary. Fasting times at farm should not exceed 12 hours." Regarding space allowance for categories of sheep the Focus Group agreed to use allometric equations, based on animal weight.

*The **sheep guide** has 65 pages and contains 301 practices.*

Poultry

The most contentious issues were **the catching and carrying of poultry in the barn**. To some, birds should be supported by the second hand of the catcher under the breast, so that not all the weight was placed on their legs when handled upside down. In other words, a catcher can catch birds with one hand, but not with his second hand. This hand has to be kept free to support the group hanging in his other hand. This position was supported in particular by the NGOs. After a debate also the representatives of industry accepted this approach. Many stakeholders also argue that **visual inspection was not considered possible**. Everyone agreed that currently many crates and containers are built without the possibility to access the birds inside (to upright them or humanely kill them if seriously injured during transport, for example), but that ideally one should be able to access them and the law does require access to the animals during transport. Making containers with access doors for broilers and making laying hen crates with side-access doors is fully feasible. Everyone agreed that providing **birds with too much headspace** could cause them to smother each other, but according to NGOs and industry enough headspace is still necessary to guarantee good air flow and allow them to move a little bit. It was also found that the so-called **water nipple system was not effective in practice** because not all birds could stand up adequately to actually walk towards the individual nipple per crate. Finally, industry representatives in the poultry focus group were **not convinced of the practical use of animal based parameters** to measure animal

welfare of birds. NGOs insisted on the feasibility and usefulness of animal based parameters.

A compromise on catching birds was found and reiterated by producing a fact sheet about catching birds. Regarding visual inspection the focus group agreed to stress that "what is possible, should be done". Consensus was achieved that the so-called water nipple system was not effective in practice, because not all birds could stand up adequately to actually walk towards the individual nipple per crate. Finally, animal based parameters were included as optional

*The **poultry guide** is the only guide that has 5 chapters, because 'Control posts' are not relevant for transport of the birds. The guide is the smallest with 45 pages, presenting 160 good and better practices.*

3.4 Task 4: Dissemination strategy

Outline

Crucial to the success of the project is clear, relevant and timely communication to get end-users aware of the practices, consider them, adopt and implement the good and better practices in their daily activities.

A full dissemination strategy was prepared before December 2016, and was updated regularly since.

It identified the following target audiences:

- **Primary audiences:** transporters, drivers, organizers, official veterinarians inspecting transports, farmers, keepers and training centres for drivers
- **Secondary audiences:** traders, slaughterhouses, retailers, assembly centres and control posts, truck-, trailer- and equipment building companies, service companies and policy makers

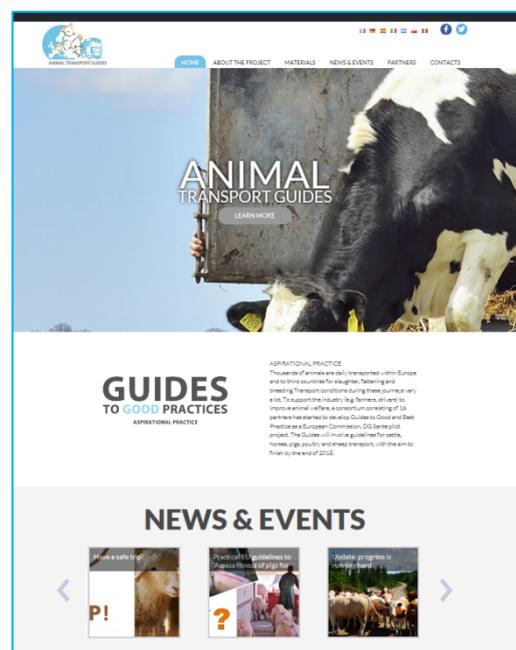
The Guides formed the basis for the development of the following dissemination materials:

- Website
- Factsheets
- Newsletters
- Social Media: Twitter and Facebook
- Short videos
- Roadshows
- Embedding the Guides in existing training
- Conferences/Workshops/Publications
- Liaison with ministries and official veterinarians
- Other tools

Key results

Website

A dedicated project website was developed to easily reach a wide audience. It went live on **June 2016**. It includes a toolbox per species, where all the materials can be easily found, and which acted as a portal to give information on all the roadshow events. It was regularly updated and advertised to our followers via social media. The website became **multi-lingual** with all pages translated from English into the other **7 project languages** in March 2017: German, French, Italian, Spanish, Romanian, Greek and Polish.



The website has two main functions: (1) to be a 'public window' for the communication about the project and (2) to have all materials easily available in one place organized per species ('Knowledge Library').

The website includes pages about the project, the partners and relevant news. All 5 English versions of the Guides to Good Practice were uploaded by August 2017.

Interested persons could subscribe to our ATG Newsletter via the website. The **total number of users up to 15 June 2018: 15,587**, of which 15.8% are returning users. Average pages visited is 2.98. Often users came through Facebook, Twitter or the EC website.

The most popular languages were English, Italian, French, Spanish and German.

Factsheets

The first general factsheet about the project was developed in February 2016 and illustrated the overall aims of the project. It was translated in all project languages in May 2016 and published on the website.

Originally 5 factsheets were foreseen: 1 per species. However, during the course of the project it was decided to develop **17 factsheets**, as the amount of information was too great to condense in one sheet. The focus groups provided advice to the consortium on the topics to be considered. These suggestions were subsequently discussed with the Stakeholder Platform, and a selection of topics was made. The species specialists among the academic partners of the consortium then developed the texts and illustrations of the fact sheets, based on the practices agreed in the Guides. The first factsheets were presented in June 2017. Their aim was to summarise in short simple wording and with illustrations the most important Good and Better Practices for the most critical aspects of the journey or for the most vulnerable species (e.g. end-of-lay hens, un-weaned calves).



The factsheets were translated in the **8 project languages** and also some additional languages such as **Russian**. All are available on the website and were spread extensively. In March 2018, the consortium was asked to move the factsheets from the consortium template into the EC template. This was done for all 136 factsheets (**17 factsheets in 8 languages**).

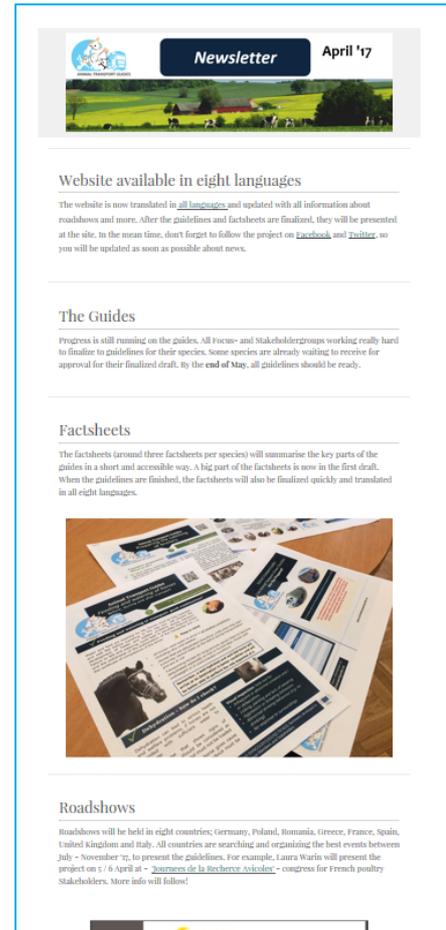
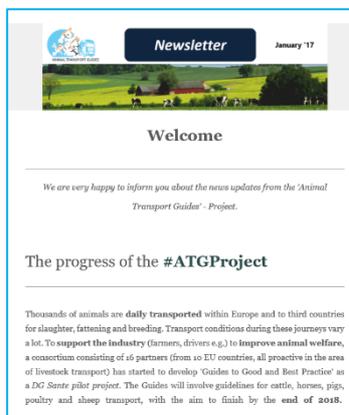
Newsletter

Interested people were kept informed about the latest developments regarding the project at regular intervals via a Newsletter. MailChimp was used to send it around.

The following milestones were achieved:

- Development template April '16
- Launch first Newsletters May '16
- Launch second Newsletter Jan '17
- Launch third Newsletter April '17

- Launch fourth Newsletter June '17
- Press release Guides Aug '17
- Launch fifth Newsletter Oct '17
- Launch sixth Newsletter Nov '17
- Press release pig video Dec '17
- Launch seventh Newsletter Jan '18
- Press release cattle video Feb '18
- Press release horse video March '18
- Launch eight Newsletter April '18
- Press release sheep video May '18
- Press release poultry video June '18



The Newsletter reached a lot of people:

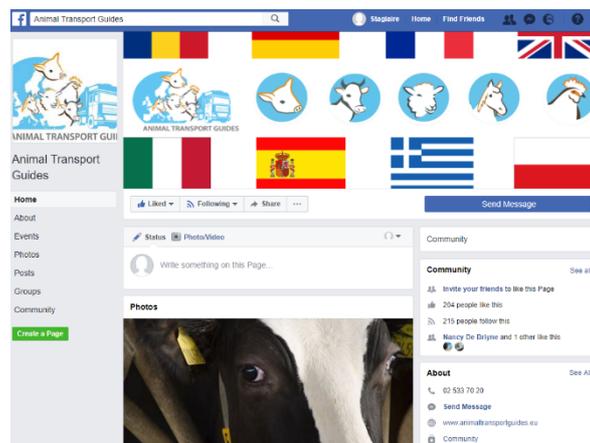
- Persons could subscribe themselves to the Newsletter subscription list. In total, 701 persons auto-subscribed to it.
- Average open rate 61.4%, average click rate 30.6%

Social media

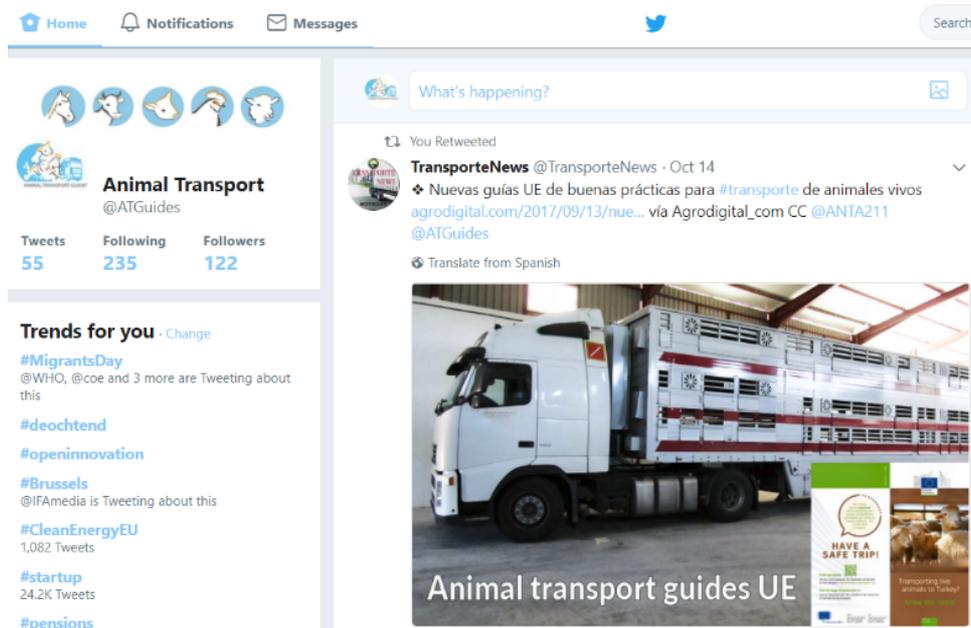
To reach out as far as possible, a lot of time was invested in communication via social media. In this way a large community of followers was built interested in improving animal welfare around transport and an easy way to interact with them.

The main achievements:

- Regularly updated Facebook account
- Regular tweets via Twitter
- A LinkedIn account
- Active links between website, Twitter and Facebook



Facebook had 112 posts, and reached between 110 and 3105 readers per posting. It has 282 followers. The Twitter account had 72 postings and 167 followers.

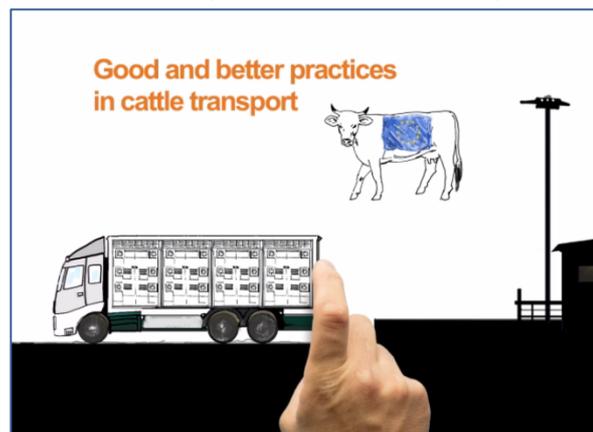


Videos

To illustrate visually the most important good and better practices, **short animated movies were developed for each of the 5 species**. All videos were in English, and special versions were produced **with subtitles in the 7 different project languages**. They are all available on the **Project Youtube channel**. They were shown at many events and the overall feedback on them was extremely positive.

The story board framework was developed in October 2016, and after some trial and error the decision was taken in January 2017 to go to animated drawings instead of filming live situations.

All video storyboards were completed by October 2017, and the 5 videos were published: Pigs (Dec 2017), Cattle (Feb 2018), Horses (March 2018), Sheep (May 2018) and Poultry (June 2018).



The videos were viewed by more than 9,400 persons from the ATG YouTube channel. In addition, they were circulated via other means.

Table3 : The number of times the videos were viewed in the different languages.

	EN	FR	GR	DE	IT	PL	RO	ES
Cattle	341	152	142	25	515	293	72	1610
Pigs	413	119	53	134	236	121	163	2177
Horses	67	15	7	14	18	15	22	48
Sheep	146	81	18	22	169	27	34	1017
Poultry	236	19	27	31	87	21	46	673

Roadshows

The project partners organised 'Roadshows' in **8 EU Member States**, France, Germany, Poland, Romania, the UK, Spain, Italy and Greece, which were coordinated by FVE. A roadshow entailed between one and three main events, and any other follow-up events in different regions of the country. Each roadshow reached a **minimum attendance of 100**

participants, representing different categories of stakeholders: transporters, drivers, organisers, official veterinarians, farmers, driver training centres, traders, slaughterhouse representatives and workers.

The identification of suitable locations and speakers was decided by consortium partners and based on Stakeholder Platform recommendations. All meetings were conducted in the **native language** of the target country. In many countries, the national ministry co-organised the events. Generally, the meetings included an introduction to the project, a presentation of the deliverables, the distribution of factsheets and advertisement of the online availabilities of the deliverables, and an evaluation of the events by the participants. In addition to the roadshows themselves, there were multiple activities whereby the Project and the deliverables were presented to European stakeholders. Through local and national media partnerships, as well as the Project’s own social media accounts, the roadshows and the Project itself achieved an even greater reach.

Table 4: The number of Road Show events, their attendance and visitor satisfaction score.

Country	Main Events	Extra Activities	Attendance	Av satisfaction score (5=max)
France	1	10	~850	-
Germany	2	1	~175	3.7
Greece	1	1	~120	4.8
Italy	3	0	~190	3.6
Romania	2	4	341	4.4
Poland	1	8	~250	4.2
Spain	3	0	102	3.9
UK	3	0	116	4.3
EU level	-	8	~645	-
TOTAL	13	32	~2673	

Other tools

To make the dissemination of the project easier and more attractive, the project also made use of USB’s. The USB’s were given to all participants of the roadshows, and it included the total ‘Knowledge Package’: all Guides of the Animal Transport Project, all factsheets and additional guides (e.g. Fitness guides) and leaflets (e.g. the EC Turkey leaflet) as well.



3.5 Task 5: Impact of the project

Outline

An ex-ante and ex-post impact assessment was used to evaluate the impact of the Guides. Results were compared before and after the Guides were disseminated to respondents. It was assumed that the differences between before and after were the result of the development and dissemination of the Guides. The Task 5 team involved several stakeholders and countries and used repeated cross-sectional studies with open-ended questions in the interviews and close-ended questions in the questionnaires (Likert scale) to find out if there was any observable change in behaviour. The measurements were executed sequentially; before (baseline, T0) and after (T1) the dissemination of the Guides. The period between two measurements was set at 6 weeks. The reason for the relative short period is that respondents need some time to become acquainted with the information received at the roadshows.

This resulted in a design consisting of a direct and indirect evaluation:

Direct evaluation:

- Attendants of roadshows were questioned;
- Transport companies (managers and drivers) were interviewed on the strengths and weaknesses of the materials that support animal welfare during transport;

Indirect evaluation:

- Stakeholders not directly involved in the project were questioned, such as Newsletter recipients;

The consortium then proceeded to propose recommendations during its final meeting in Thessaloniki (Greece) in October 2017, following the initial results of the impact assessments and the personal experience of the partners when disseminating the Guides. They were further elaborated by the Core Team of the project, and presented to the Commission on the 22nd of February in Brussels, during the final Reporting Meeting of the project.

Key results

Impact assessment

Based on the results of this impact assessment general indications for a positive impact of the materials developed in the Animal Transport Guides project were observed and **forecasted the acceptance of the guides from moderate to high.**

Both the direct and the indirect evaluations showed a positive trend (scores on second measurement (T1) were on average higher than scores on the first measurement (T0)) and for several items the difference is significant. All three factors influencing the intention of stakeholders (attitude, norm and behaviour) scored high and slightly increased after the dissemination of the guides.

This is also supported by the fact that the Guides on average are seen as helpful and practical and respondents have positive expectations of the guides and are motivated to use them. In terms of animal welfare during transport, many respondents are interested to do more than their current level of application. The following characteristics of the information provided received a warm welcome:

- In own national language,
- Easily understandable content (concise, simple, pictures, checklist, well-ordered) and
- Dissemination via paper and digitally.

Another benefit of the guides, as perceived by the stakeholders, is the promotion of a level playing field, i.e. a similar interpretation of Council Regulation (EC) 1/2005 across the EU

being discussed. This point had also been advocated by the European Parliament, and was used to ask the Commission in its report on Council Regulation (EC) 1/2005 for the development of the Guides to Good Practice. Finally, during the course of the project the consortium was approached many times by different stakeholders, and the Guides also raised interest from outside the EU (e.g. by the OIE who were interested to translate some of the materials into Russian).

Project recommendations

The following main conclusions and recommendations were presented and discussed with DG SANTE during the final Reporting Meeting.

Future projects should promote high stakeholder involvement

The impact assessment of the project suggests that the Guides were well received by the transport sector. The easy understandable content and availability of both paper and digital versions were key to this success.

- Future projects aiming to produce Guides on any topic, should apply a stepwise consultation process similar to ATG.
- All deliverables should be translated to other languages;
- Key results need to be presented in pictures and not in text;
- Results need to be available in a digital way with the cell phone as the medium;

Efforts should be made to reach more end-users

The project reached many people in the transport sector but also other stakeholders like NGOs, national competent authorities and vets. However: many more people could be informed.

- All deliverables should be considered in future work of the Commission's Network of NCP's on Animal Transport.
- As the guides are translated in eight languages, the guides should be distributed among all the transport companies that are member of national transport organisations
- All deliverables should be used by the Commission initiative BTSF and other training initiatives; in fact, the project should be followed up by an extensive training effort.
- An E-learning tool based on our results should be developed to further support training and education.
- The Guides should be used by the transport companies to create company-specific Standard Operational Procedures (SOP), reaching and committing all the drivers.

The Guides should be updated and improved within the next three years

The guides need to be updated regularly in the light of new transport circumstances and insights on animal welfare.

- There should be a contact point to collect any error or suggestions for improvements for future versions.
- Provisions should be made for an update of the Guides (and other materials) after e.g. one year of use.

Additional knowledge and tools need to be developed

There are welfare issues related to animal transport that cannot be completely resolved at present, due to a lack of knowledge. In this context it is important that innovative and practical research continue exploring and providing workable solutions. The industry has also an important role to play.

Fields of further interest are:

- Planning tools for transporters based on own data, to be made by system providers
- Feed and water provision during poultry transport
- Transport of rabbits
- Space allowances, in particular for pigs and poultry (e.g. cage height)

- Transport of young calves, in particular related to feeding
- Alternatives for animals unfit for transport

DELIVERABLES

The Animal Transport Guides project has produced the following deliverables.

2015

✓ **Minutes of the Kick-off meeting on 19 May 2015**

✓ Including a PowerPoint presentation by dr. Hans Spoolder.

Submitted 17 July 2015

✓ **Minutes of the 2nd Reporting meeting on 6 October 2015**

✓ Including a PowerPoint presentation by prof. Malcolm Mitchell.

Submitted 9 November 2015.

2016

✓ **Minutes of the 3rd Reporting meeting on 15 June 2016**

✓ Including a PowerPoint presentation by dr. Hans Spoolder

Submitted 30 June 2016.

Deliverable 1 "Key references"

Report on key references on the main issues addressed by the EU legislation and possibly other related issues, accompanied for each topic, by a comparative analysis of the range of solutions used by the different sources (one general report + sub-report per species). The report identifies examples of successful solutions as well as failures, along with an evaluation of their content and method of communication.

✓ **D1 Report with Key References**

Submitted 5 Oct 2016, accepted 12 October 2016.

Deliverable 2 "Draft guides of good practice"

Draft series of guides to good practice for each species (possibly with one common one if relevant) after initial consultations with stakeholders to identify the key risks and hazards that need to be overcome. The guides distinguish between compulsory activities and examples of best practice.

× **D2 Draft Reports**

The 5 species drafts were submitted during the Summer of June 2016. There were several versions in an ongoing process of development towards the Final Guides. No single version can be identified as 'the Draft Guide'. Nevertheless, continuation of the process was approved, and the consortium was asked by the Project Officer to proceed with the next stage, Deliverable 3, in an email of 7 July 2016.

2017

✓ **Minutes of the 4th Reporting meeting on 29 May 2017**

✓ Including PowerPoint presentation by dr. Kees de Roest and dr. Nancy DeBryne.

Submitted July 2017. Approved 22 August 2017

✓ **Progress report Month 24**

Submitted 27 June 2017. Approved 22 August 2017

Deliverable 3 "Final guides to good practice"

For each animal species, summary of the debates, main views and controversial issues debated among stakeholders.

✓ **D3 Final Guides to Good Practice for Horses, Pigs, Poultry, Cattle and Sheep**

Five Guides to Good Practice in English.

Submitted June – July 2017. Approved 23 August 2017

✓ **D3 Report on Methods & Debates**

Submitted July 2017. Approved 22 August 2017

2018

✓ **Minutes of the 5th reporting meeting 22 February 2018**

✓ Including PowerPoint presentations by mr. Willy Baltussen, dr. Nancy DeBriyne and dr. Hans Spooler

Submitted in June 2018.

Deliverable 4 "Dissemination of good practices"

Report including all support materials developed and translated, plus a report on each national event which includes the agenda, the number of participants, their profile and their level of satisfaction.

✓ **D4 Dissemination report**

Report presenting all the support materials.

Submitted June 2018.

✓ **Translations of the 5 species Guides to Good Practice**

Thirty five translations of the five Guides to Good Practice into 7 languages: German, French, Spanish, Greek, Romanian, Polish and Italian.

Submitted 10 September 2018

✓ **Animated videos**

Five short YouTube videos in English.

Uploaded between December 2017 and June 2018.

✓ **Translated animated videos**

Subtitled versions of the videos in 7 languages: German, French, Spanish, Greek, Romanian, Polish and Italian.

Uploaded parallel to the English language versions between December 2017 and June 2018

✓ **Fact sheets**

Seventeen factsheets in English.

Submitted in June 2017.

✓ **Translated fact sheets**

One hundred and nineteen fact sheets: the 17 fact sheets translated in 7 languages: German, French, Spanish, Greek, Romanian, Polish and Italian.

Submitted in the EC house style in March 2018.

Deliverable 5 "Evaluation"

Report showing the results from the consultation and analysis of the effectiveness and efficiency of the action performed, plus recommendation for the future.

✓ **D5 Report on the impact of the Guides**

Submitted June 2018.

✓ **D5 Recommendations for the future**

Submitted September 2018.

✓ **Final report month 36**

The final report includes all deliverables (including final Deliverable 4 "Dissemination of good practices" and Deliverable 5 "Evaluation") and describes all the work carried out and

the results obtained under the contract. It contains also a summary of the main results which are translated (after approval) into at least 6 official languages of the EU.

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