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EVALUATION OF THE COMMUNITY PLANT HEALTH REGIME

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Final Report

*Prepared by:
Food Chain Evaluation Consortium (FCEC)
Agra CEAS Consulting - Civic Consulting -
Van Dijk Management Consultants -
Arcadia International*

Project Leader: Agra CEAS Consulting

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Contact for this assignment:

Dr Maria Christodoulou
Agra CEAS Consulting

20-22 Rue du Commerce
1000 Brussels

Phone: +32 2 736 00 88
maria.christodoulou@ceasc.com

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Food Chain Evaluation Consortium
Civic Consulting – Bureau van Dijk – Arcadia International – Agra CEAS



FCEC Expert Team

Agra CEAS Consulting:

Dr. Maria Christodoulou

Conrad Caspari

Lucia Russo

John Nganga

Prof. John Mumford (Imperial
College, London): advisory role

Bureau van Dijk:

Laurence Van Nieuwenhuyse

Sonia Gonzalo

Sylvie Barel

Stephanie Matte

Arcadia International:

Daniel Traon

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Key messages of the Evaluation

- Over the period covered by this evaluation (from the launch of the single market on 1 January 1993 until now), the Community Plant Health Regime (CPHR) has contributed significantly to prevent the introduction and control the spread of pests affecting plant health in the European Union.
- Despite this positive conclusion overall, the objectives of the CPHR, as defined in the EU legal basis (Directive 2000/29/EC and legislation on emergency and control measures), are considered to have been only partially met. A number of shortcomings and weaknesses have been identified, and these point to the need for improvements to the system.
- Over the period under review, and particularly in more recent years, plant health risks have increased while the EU has expanded. New and increased risks are due both to globalisation (including the expansion of trade) and climate change. These challenges call for a review of the current system.
- Options for the future have been developed and a preliminary analysis of these options was undertaken in the course of the evaluation. As a result, key recommendations are made, based on a preliminary analysis of the balance between advantages/disadvantages and anticipated impacts.
- At the core of the recommendations is the need to modernise the system through: more focus on prevention; better risk targeting (prioritisation); and, more solidarity (moving from an MS based to EU approach for more joint action to tackle risks of EU significance).
- In this context, it is recommended to:
 - Include in the scope of the future EU PH regime Invasive Alien Species (IAS) plants with wider/environmental impacts (on habitats and ecosystems) and/or economic impacts on a wider range of stakeholders (*Recommendation 1*).
 - Explicitly include natural spread in the regime, and – where deemed necessary on a case by case basis – cover by the solidarity regime (*Recommendation 2*).
 - Adopt a zero tolerance regime (i.e. including Regulated Non Quarantine Pests with zero tolerance), and further explore potential synergies with S&PM regime (*Recommendation 3*).
 - Take complementary measures on imports, in particular: for emerging risks, e.g. on new trade in plants for planting/propagating material (PM): commodity pathway analysis; strengthen measures for plants for planting/PM via official post entry inspections for latent harmful organisms (HOs) and, on the basis of commodity pathway analysis, proceed to import bans where necessary (*Recommendation 4*).
 - Introduce mandatory general epidemio-surveillance at EC level for priority HOs, after exploring further the process and criteria to be used for the identification and selection of HOs, and scope and method of surveillance; develop common principles and guidelines for harmonized surveillance/reporting; and, introduce co-financing to improve surveillance (*Recommendation 5*).
 - Step up emergency action, via: horizon scanning; compulsory development of contingency plans according to a harmonized framework; and speeding up the process for adoption and adaptation of both emergency and control/eradication measures (*Recommendation 6*).
 - Improve the Plant Passport (PP) system, in particular by revising the scope of application and harmonising the PP document (*Recommendation 7*).
 - Tighten the system of Protected Zones (PZ), in the short term by improving the status quo, and longer term by further examining the implications of applying the IPPC Pest Free Area (PFA) concept (ISPM 4) more widely (*Recommendation 8*).

- Improve incentives throughout the system by extending the current scope of solidarity to: cover the loss of destroyed material for producers/growers; enable co-financing of new measures e.g. surveillance, contingency planning. Carry out further analysis on the possibility of introducing cost-responsibility sharing schemes, in line with the ongoing development of this concept in the animal health field. (*Recommendation 9*).
- Improve support activities in terms of R&D and scientific advice: promote more sufficient and stable EU and MS resources for funding and coordinating research (e.g. structural budget within the CPHR in addition to the FP7); continue EUPHRESKO; identify the appropriate structures to address the economic impact of Pest Risk Assessment (e.g. PRATIQUE follow up; SANCO/EFSA and EPPO cooperation) (*Recommendation 10*). Enhance diagnostic capacity by completing the establishment of National Reference Laboratories in MS and establishing EU-Reference Laboratories for a limited number of priority HOs (*Recommendation 11*). Continue and strengthen training activity for inspectors and extend the training to experts in the diagnostics field (*Recommendation 12*).
- Improve organisational aspects: establish an EU/MS Emergency Team for Plant Health (within DG SANCO supported by an extended network of MS experts), as is practiced for animal health (*Recommendation 13*); developed and implement, both at EU and MS level, public awareness campaigns to improve awareness of plant health issues (*Recommendation 14*).
- This evaluation of the CPHR performance to date, and in particular of the financial framework (solidarity regime) has extensively highlighted the mismatch between currently available resources and targeted objectives and this underpins many of the identified shortcomings and weaknesses. The analysis of options for the future has in all cases pointed to the need to increase resources and/or prioritise to meet the objectives set out in these options. The Commission will have to reflect on the best options to follow. The evaluation results have also confirmed the conclusions of the solidarity regime evaluation, according to which, a financial instrument is needed to ensure better preparedness in case of emergency.
- In this context, the evaluation recommends that the merits of developing a specific financial instrument in this sector, possibly in the form of a Plant Health Fund (drawing a parallel from the Animal Health Fund), is examined further (*Recommendation 15*).

Executive Summary

S.1. Background and scope of the evaluation

This evaluation¹ of the Community Plant Health Regime (CPHR)² was launched by DG SANCO with the support of the Council³. It covers the period from 1993 to date, i.e. since the introduction of the internal market. The basic structure of the current CPHR was established in 1977 (Council Directive 77/93/EEC); since the 2000 codification, the basic legal framework is Council Directive 2000/29/EC⁴.

Since its inception in 1977, various major changes and developments justify a comprehensive evaluation of the regime. Apart from the introduction of the internal market concept in 1993 and its implications in terms of reassessing the balance between intra-Community free trade and prevention of the introduction/spread of Harmful Organisms (HOs), other major developments include: the successive EC enlargements, in particular the addition of 12 new Member States (MS) in 2004 and 2007; the establishment of the WTO - SPS Agreement and the EC accession to the International Plant Protection Convention (IPPC), and the resulting implications for EU policy in terms of aligning with international standards on phytosanitary measures and adjusting to the globalisation and rise in trade; global warming (climate change); changed expectations from society, the changing balance of interests involved in the agricultural system as a whole; decreasing resources for public services; the increasing role of Pest Risk Analysis (PRA) as a foundation for phytosanitary measures and the availability of scientific expertise to develop PRA; the establishment and role of EFSA; and, the evolution of related Community regimes, in particular in the field of seed and plant propagating material (S&PM), and of conceptually parallel EU policy regimes, in particular the new EU Strategy for Animal Health (AHS).

The evaluation had two objectives: a) to analyse the results of the CPHR to date, as compared to the acknowledged objectives that were set out by the Community when it was introduced; and b) to clarify which aspects of the current regime need to be improved and to suggest potential options for improvement. The aim is to feed into the design of future policy in this field and the development by the Commission services of an EU plant health strategy.

The analysis covered all EU 27 MS. MS data, information and views were gathered through a general survey of Competent Authorities (CAs) and relevant stakeholders in the 27 MS, supplemented by in depth interviews with a wide range of stakeholders and experts at EU and international level, field visits in 12 MS and the review of 5 third country plant health policies. For the economic analysis (administrative and other operational costs), a purpose built cost model was developed (on the basis of the EC Standard Cost Model) with data collected via a specific cost survey covering the EU-27 (CAs and stakeholders).

S.2. Evaluation of the performance of the CPHR to date

Although the CPHR's scope and objectives, as they have developed in the period 1993 to date, are considered to continue to be both relevant and appropriate, the general view nonetheless is that the

¹ This evaluation was carried out by the Food Chain Evaluation Consortium (FCEC) under the leadership of Agra CEAS Consulting with the additional technical expertise of Professor John Mumford (Imperial College), and participation of two other FCEC partners Arcadia International and Van Dijk Management Consultants.

² The evaluation refers to the Community Plant Health regime (CPHR), for the historical analysis of the policy since its establishment in 1977.

³ ECOFIN Council Conclusions of 21 November 2008.

⁴ The evaluation covered the entire CPHR policy area. This includes the entire Community plant health *acquis*, its implementation in the Community and the relevant infrastructural and budgetary support. The evaluation also addressed the relationship of the CPHR to related Community regimes.

regime has only partly achieved these objectives and that it has only partly been effective in preventing the entry, establishment and spread of HOs in the EU.

Several of the CPHR measures and provisions are assessed to have only partly been useful or effective and this is attributed to certain key underlying factors. Implementation by MS is incomplete or not harmonised, and these gaps are often due to variability in knowledge, training, interests and perspectives, traditions, administrative structures and capacities as well as resources between MS in the EU-27, but also a lack of clarity in the provisions of the legal base as such (e.g. on Invasive Alien Species - IAS and natural spread). Furthermore, there are significant and growing constraints in the availability of staff and resources devoted to plant health in general (EC, MS, research bodies and diagnostic facilities etc.). Public awareness of plant health issues is generally limited, and consequently political support to finance and enact the policy remains relatively weak, thus reducing the focus on prevention or on drastic measures at the start of the outbreaks. There is lack of incentives and disincentives (including in the form of sanctions/penalties), in the current system, or – where these exist - inadequate enforcement. Thus, for example, a lack of incentives to report and notify findings in a timely manner constitutes a key reason for delays in notifications, which has ramifications on the speed, and thus the effectiveness and efficiency, of action to address outbreaks. In emergency situations, the limited support and lengthy decision-making process results in measures being taken too slowly, too late. In this context, it is argued that a dedicated financial instrument, e.g. in the form of a ‘plant health fund’ would contribute to enabling decision-makers to speed up the process.

In addition, the assessment of the financial framework of the CPHR, which has expanded and updated on the independent evaluation of the Solidarity Fund carried out in 2008⁵, has concluded that a key deficiency of the current system is that it only acts *a posteriori* and does not cover any measures or activities taken on a preventive basis, before or as soon as, outbreaks or new findings occur. This results in a loss of efficiency, as investment on prevention in the longer term ensures greater cost effectiveness than measures to address outbreaks, particularly measures taken at more advanced stages of an outbreak when the targeted HO is established and may be fairly widely spread. Generally speaking, the later action is taken, the more costly and less cost-effective it will be.

The above highlights that the current CPHR does not sufficiently address prevention. Emergency measures are generally adopted too late, and there is no formal framework or support to deal with emergency situations. Contingency plans have not been systematically put in place (either at MS, or at EU level). Furthermore, beyond compulsory surveillance, the efforts for more general surveillance made by MS are relatively limited (with significant variation between MS) and are not systematic or coordinated. The current degree of emphasis of the CPHR on prevention and early response, including the solidarity regime as such, is therefore judged to be largely inadequate.

The evaluation has also addressed the question of the deadweight effects of the CPHR (‘What if no Community financing was in place’). The analysis of the CPHR costs and benefits during the period from 1993 to date demonstrates that: a) the budget devoted to the CPHR to date remains relatively limited; and b) on a case by case basis, the CPHR has had clear benefits (as discussed in particular in the context of 5 HOs: *Anoplophora (chinensis and glabripennis)*, *Ceratocystis (fagacearum and fimbriata)*, *Erwinia amylovora*, *Grapevine flavescence dorée* and *Phytophthora ramorum*). In conclusion, through the measures adopted in all these cases, the CPHR has contributed either to the avoidance of the introduction of potentially injurious HOs or to slow down their spread, resulting in significant overall benefits. Notwithstanding its successes, the CPHR can nonetheless be improved to maximise the effectiveness and efficiency of the measures taken.

The problems identified are compounded by the changing context within which the policy operates, in particular the growing challenges of globalisation and climate change. Moving forward, it is noted that

⁵ This evaluation was carried out by the Food Chain Evaluation Consortium (FCEC) under the leadership of Van Dijk Management Consultants.

these new challenges and new risks arising from them as evidenced by increases in solidarity budget spending in recent years, will require the adjustment of the regime for the future.

S.3. Key findings of the evaluation per thematic area

The results and main findings of the evaluation per thematic area can be reported as follows:

1. Scope of the CPHR

Natural spread

The extent to which the current CPHR scope includes natural spread was examined with regard to the following two aspects:

Inclusion of natural spread in CPHR scope: the current legislation is not explicit on ‘natural spread’ (as opposed to man-assisted spread), leading to considerable confusion and divergence in interpretation amongst MS and stakeholders. From the review of the CPHR legislation, natural spread is covered by Directive 2000/29 Article 16 which requires measures to deal with spread. Article 23 however explicitly excludes natural spread from eligibility for solidarity funding, and past experience has shown the shortcomings of this approach in terms of effectively targeting pests at the start of an outbreak (e.g. *Diabrotica virgifera*). Technically, the strong interaction between the natural spread and movement of plants, and the fact that natural spread is an inherent characteristic of any pest, make the distinction of causal effects on plant health questionable; ISPM 2 includes consideration of natural spread where the pest risk is considered unacceptable and the phytosanitary measures are feasible. Therefore, there is need for clarification of the CPHR rules on natural spread. The potential longer term effects of climate change in terms of altering patterns of natural spread of HOs in the EU also need to be taken into account. In view of these conclusions, options for the explicit inclusion of natural spread in the CPHR were developed and explored.

Suitability of CPHR intervention logic for forestry, public green and natural habitats: the appropriateness of the CPHR to address the control of HOs in these sectors is an issue which goes beyond the clarification of the provisions on natural spread as such. Principally, the CPHR should continue to provide protection against non-EU HOs in these sectors as is currently already the case, and as is the practice in the plant health legislation of third countries. Deciding on the best course of action in case of outbreaks of regulated non-EU HOs in EU forests, public green or natural habitats (e.g. PWN and Anoplophora), however, requires consideration on a case by case basis of whether the potential impact (economic, environmental and social) of the pest in these sectors continues to warrant drastic measures under quarantine regulation (= CPHR) when initial eradication fails. Such decisions may ultimately be political (Commission action vs MS subsidiarity) and need to involve close coordination between plant health and environment protection policy makers.

Invasive Alien Species (IAS)

There is currently a lack of common understanding, leading to considerable confusion, on both the definition of Invasive Alien Species (IAS) and the extent to which IAS are covered by the scope of the Directive. The defining characteristic of IAS, according to the CBD definition, is their wider environmental impact on ecosystems. Historically, this has been considered as an indirect impact for the purposes of Directive 2000/29, but in recent years there has been a *de facto* shift in implementation, due to major pest incursions with significant indirect, non-commercial or purely environmental impacts. In practice, many regulated pests are IAS which are already listed in the Directive (recent examples include *Anoplophora spp.*, *Phytophthora Ramorum*). There have also been international developments in considering IAS at the level of IPPC and EPPO, and a more general EU strategy on Invasive Species (IS), following the CBD definition, has been developed. There are

therefore extensive calls for clarification of the CPHR on this issue. The potential effects of climate change in terms of altering patterns of alien species invasion in the EU also need to be taken into account. Consequently, options for the future regarding the inclusion of IAS in the CPHR were explored.

2. Approach followed for the classification of HOs

The current classification of HOs in Directive 2000/29/EC (several Annexes with lists for which a range of measures are foreseen, 250 HOs in total) is based on the historical approach taken by EU MS and therefore reflects MS and EU historic priorities on risks. Although the number of HOs listed as such is not an issue for effective management at MS CA level in terms of imports from third countries, there is need for revision of the lists (reviewing the approach to Annexes I and II in particular). There is also a need to consider prioritisation of HOs that are of EU-wide concern (e.g. in the context of pathway analysis for import inspections, or for intra-EU surveillance measures); especially as concerns HOs occurring on EU territory. If greater prioritisation is needed, then this could be based on criteria to be developed, and the general survey has already pointed in the direction these could take. The scope for prioritisation is explored further in relation to options for the future to ensure better prevention and to maximise the cost-effectiveness of current measures and resources (in particular for import inspections and for intra-EU surveillance).

Additions to the lists of the Directive, on the basis of PRAs, are constrained by current data availability and methodologies and this delays the process for listing new HOs. Longer term, the EU FP7 funded project PRATIQUE is expected to support the development of generic methodologies with a view to improving PRA availability on a systematic basis and more proactively (before risks emerge). In the meantime, the use of expanded fast-track risk analysis to speed up the adoption of measures (particularly in emergency situations), as well as improving cooperation between all bodies currently involved in PRAs (EFSA, EPPO, MS CAs, stakeholders where possible) should be considered.

More generally, major limitations of the current approach are found to be the lack of horizon scanning and the lack of efficiency in dealing with emerging risks. Approaches to overcome these issues are explored further under the options for the future (prevention at import and emergency action, respectively).

The approach followed for the positioning of Regulated Non Quarantine Pests (RNQPs) was also examined. The question is raised because in the EU, two sets of legislation currently cover the range of regulated pests: the Plant Health Directive 2000/29/EC and the Marketing Directives for Seeds and Plant Propagating Material (S&PM). In conclusion, the results of the evaluation indicate that the major issue of concern is the current overlap between the two sets of legislation rather than inconsistencies, and that a mechanism should be in place to allow careful consideration for transfer of eligible RNQPs between the two sets of Directives. Consequently, options for the appropriate positioning of RNQPs were explored.

3. Implementation of surveillance provisions

Surveillance is currently compulsory only in the case of emergency, control measures and Protected Zones (PZs); the degree of application is variable by HOs (systematically undertaken only for potato diseases). Procedures for surveys (including protocols and reporting formats) are generally not harmonised at EU level (with the notable exception of PWN), leading to varying implementation. In the great majority of cases notification of findings is not done in conformity with legal requirements. This has hindered the possibility for early action against HOs, and delayed communication of information to CAs and stakeholders. There is therefore agreement on the need to introduce a quicker

system for notification of findings and outbreaks (possibly to be developed within current EUROPHYT database).

Other (general) surveillance is carried out by some MS for certain HOs, according to MS priorities and following different procedures and reporting standards. This affects the extent to which comprehensive information on the spread of HOs on the EU territory is available, thus leading to less effective and efficient eradication measures.

The involvement of POs is generally limited, despite the importance of stakeholder involvement in early action.

There is general agreement about the importance and need of more and intensified surveillance, and support for introduction of compulsory general surveillance at EU level for priority HOs, although views on the process and criteria to be used for the identification and selection of HOs to be subject to such surveillance, as well as the scope and method of surveillance, are divergent. The introduction of surveillance on a compulsory basis is associated with general support for introduction of EU co-financing for this measure. Consequently, options for improving surveillance were explored.

4. Implementation of import regime

Overall, the current system of plant health procedures and requirements as applied during the last 15 years for commercial imports of plants and plants products have been largely effective in preventing the introduction of major HO threats into the EU. Nonetheless, the system has some shortcomings as demonstrated by the fact that it not been effective in all cases. A number of weaknesses were identified as follows:

- Effectiveness of plant health border controls is highly variable between MS, and import inspections are focused on regional/national plant health issues rather than pests of EU-wide relevance. Improving the uniformity of import inspections could be addressed by: EU training (e.g. BTSF); networking between inspectors; development of general guidelines;
- Significant delays in notifications of interception at import (EUROPHYT): up to 90 days in certain cases. This, combined with limited processing of notifications in current system to provide targeted information, leads to limitations in use as a risk analysis tool, as evidenced by limited use for risk based inspections at MS level;
- Identification of high risk pathways (in particular plants for planting including ornamentals) indicates scope for a pathway approach on imports in some cases;
- For some specific plants on which latent diseases can be present (particularly plants for planting), the need for more extensive post entry inspections has been identified;
- Current implementation of derogations is considered to present a potential phytosanitary risk, in particular those regarding small quantities not used for commercial purposes, and regarding transit consignments;
- Widespread concern for lack of traceability from Point of Destination (PoD) back to Point of Entry (PoE) as this could in theory pose a problem, due to the complexity of trade patterns (including consignments in transit);
- Use of reduced frequency checks is very mixed between MS and remains rather limited (18 MS have not applied this possibility), although for the 8 MS that apply this system it is considered to have been effective. The limited use of reduced frequency is not necessarily a weakness as such, but suggests that some MS may not be prioritising inspection according to risk possibly leading to weaker focus on risk areas;

- There is scope to improve and strengthen EU emergency measures, with a view to reducing delays and enhancing effectiveness and efficiency;
- Third countries have difficulties understanding EU requirements through the reading of legislation and perceived lack of uniform interpretation between MS inspection services;
- Cooperation between plant health and customs authorities needs to be enhanced, *inter alia* to target consistency of nomenclature and to promote IT system interoperability;
- Lack of sufficient traveller awareness of the phytosanitary risks or private imports poses significant risk in the absence of any measures on passenger transport and divergent policies and practices of MS in this area (passenger transport controls, passengers' personal luggage allowance);
- Underlying the above shortcomings, there is a lack of sufficient staff resources and training for authorities at all levels, to ensure full and satisfactory implementation, particularly within the current economic context.

Moving forward, in the context of the significant expansion in trade volumes and change in trade patterns (new products and sources of supply), the EU is faced both with increasing and emerging risks of introduction of HOs. These trends, which have already been witnessed in the last decade, are occurring in the context of reduced administrative and financial resources at MS level for inspections. In conclusion, therefore, better risk targeting and maximising the effectiveness and efficiency of current resources, as well as improving the availability of staff and resources, are critical success factors and should be the basis for future improvements to address the challenges ahead. Consequently, options for the future import regime were developed and explored.

5. Implementation of intra-EU movement regime (plant passport system)

Overall, while the regime has succeeded in achieving the free circulation of plants and plants products within the EU, there are significant concerns on its effectiveness in terms of addressing plant health problems as such. Perceived inadequacies, related mainly to the implementation of rules, have demonstrated a certain conflict between the two objectives in practice. In particular:

- The producer registration system is generally perceived to work reasonably well. The concerns are mainly related to the issuing of plant passports and the credibility of plant passport documents *per se*;
- Although nearly all MS have implemented the option to delegate the issuing of PPs to registered private operators under official NPPO supervision, the majority of MS CAS has nonetheless expressed concerns on the functioning and reliability of the system. This appears to be partly linked to the resources available to carry out the appropriate level of inspections and controls and to ensure correct implementation. On the other hand, for stakeholders, the delegation of responsibilities to issue PPs to private operators has been a major step forward in terms of facilitating trade and introducing flexibility in the current system.
- Lack of uniformity in the application of the PP system is a particularly significant concern. This is associated with the lack of a standardised format for the plant passport document and divergent practices on the information contained in the document and its attachment to products. Plant passports are difficult to read when too often plant passports information is being mixed with trade information. There is an urgent need for rules/guidelines, including possibly a harmonised plant passport format;
- Although the PP document was not intended by the legislation to be a traceability tool, it can offer certain elements of traceability. However, full traceability cannot be ensured by the PP document alone, as it is often used jointly with trade documents, and there is considerable difficulty combining the plant passport and the physical plant or plant products, particularly with smaller plants such as

ornamentals. The plant passport only provides information on the previous stage in the supply chain and difficulties are being observed when there is a need to further trace back and/or trace forward;

- Six MS have not implemented exemptions for “*small producers serving the local market*” and for “*products destined for final consumption*” due mainly to potential phytosanitary risk, but in those MS that have implemented the exemptions the risk is considered minor relative to the potential burden on these sectors.

In conclusion, by and large, the implementation of the current PP system does not sufficiently take into account risk analysis nor does it provide a sufficient guarantee that products are safe to move within the EU. In many cases, the shortcomings identified in the implementation of the current system have undermined the trust of both MS CAs and stakeholders on some of the provisions, and this is a critical success factor for restoring overall credibility in the system.

The above findings confirm that the situation remains as challenging as highlighted in the FVO Report of 2005 on this subject. These concerns are particularly acute in the case of protected zones (PZs) and call for a significant review of both systems. Consequently, options for improving the intra-Community movement regime were explored.

6. Implementation of the Protected Zones (PZ) system

Overall, while the concept of Protected Zones (PZs) is generally considered to be useful and effective in slowing down the spread of certain HOs, continued persistent variability in implementation at MS level has led to loss of credibility, hence undermining the usefulness of the system as a plant health measure. Despite significant progress in providing technical justification for the current PZs at EU level, the general perception is that PZs were not designated only on technical grounds but that significant commercial/political considerations are also present. The evaluation has found that these concerns are largely linked to an on-going debate on the cost and benefit distribution of the current implementation of the PZ system. Moreover, the distribution of costs and benefits is generally assessed from the perspective of individual MS or regions, largely ignoring the cost-benefit distribution of the current system of PZs for the EU as a whole.

Many of the problems of PZs are due to MS failure to apply the agreed measures and not to flaws in the concept *per se*. There is evidence of MS failure to carry out surveillance and report the results; and, of certain failures in the implementation of the PZ plant passport system (‘ZP’ marking) which is considered to create additional administrative and financial burden for traders.

The consensus view is therefore that controls should be strengthened and legislation fully enforced (e.g. surveillance and reporting obligations) to restore the credibility of the PZ concept. In this context, options to pursue further the IPPC PFA concept, which is the approach followed internationally, could also be explored (the two concepts could potentially be applied in parallel). It is noted, however, that the credibility issue (*vis à vis* third countries) is not unique to the EU PZ system; in the WTO SPS and IPPC context, these are common and relatively frequently occurring problems with the application of the PFA concept. Alternative regionalisation concepts could also be considered, e.g. *Diabrotica virgifera* may be a good example of the need for a concept using definitions of demarcated infested zones and pest-free zones. However this approach should be restricted to limited cases and not be widely applied, to avoid excessive complexity in the implementation of plant health measures. Consequently, options for the future of the PZ system were explored.

Ultimately, a critical success factor for the application of any regionalisation concept will be to ensure a fair balance between the distribution of costs and benefits at MS level and for the EU as a whole. This will need to be determined on a case-by-case basis, considering infested and non-infested MS, and the consequences of potential infestation for the EU as a whole, taking into account liability aspects, incentives, feasibility and proportionality.

7. Implementation of control and emergency measures

Overall, the control and emergency measures have been partly successful in preventing the entry, establishment and spread of HOs in the EU. The effectiveness of the measures taken tends to be specific to the HO being targeted and can vary between regions, and therefore has to be considered on a case by case basis.

Additionally a distinction has to be made between emergency and control measures: while emergency measures are largely considered to have been ineffective on the basis that they are generally adopted too late (despite the fact that the legislative process as such – comitology - is relatively less cumbersome than for a Council Control Directive), control measures are generally considered to have been largely effective (despite the fact that the legislative process in this case – Council approval and since Lisbon Treaty (Dec. 1, 2009) co-decision Council and Parliament - is by definition longer and less flexible).

Control measures for ring rot and brown rot in potatoes are considered to have been most effective. Critical success factors can be summarised as follows:

- Adoption and implementation of very strict measures swiftly after the outbreak, with strict provisions in the infested fields and refined methods for analysis procedures, and movement restrictions (these apply for 4 years);
- Application of common procedures through control Directives with detailed obligations restricting free interpretation;
- A commercial crop and therefore producers/growers and industry are concerned and economically motivated to act;
- Potato sector is of high commercial/trade value and is highly integrated.

Early prevention is considered to remain the most effective and efficient approach for plant health management. Consequently, recommendations for improving emergency response were provided. Options to improve the system include speeding the adoption and adaptation of emergency measures (based on the evaluation of pest situation through PRAs developed step by step), and strengthening emergency approach for outbreak measures *inter alia* via creation of emergency team (SANCO/MS) to coordinate EU response to emergencies (as in animal health sector).

8. Support activities

Research and development and scientific advice

The number of HOs arriving and spreading within the EU is expected to increase in the coming years mainly due to globalisation trends and climate change. Against these trends, it is recognised that the R&D expertise in plant health is declining in the majority of the most important disciplines required for this sector (taxonomy, entomology, diagnosis, etc.), leading to the need to further coordinate R&D activities at EU level. In this context, the use of existing EU R&D programmes (ERA-networking, networks of excellence, etc) is crucial, but currently not perceived to be sufficient.

DG RTD supports the coordination of plant health research activities commissioned under national MS budgets (which roughly account for 90% of all such budgets available in the EU), through the ERA-net EUPHRESKO. The establishment of this network is perceived to be a significant step forward in the direction of establishing a coordinated EU R&D approach and there is wide support for its continuation in future.

EFSA can contribute to the harmonisation of the framework for PRA and the identification and evaluation of risk management options. However, the role of EFSA does not encompass the economic (cost/benefit) analysis required in full PRAs according to ISPM 11 and 21 and WTO-SPS. It is therefore important to find an appropriate platform to carry out this type of analysis, which at present is provided on an ad hoc and exceptional basis through impact assessments. In this context, the outputs of the EU FP7-funded project PRATIQUE are expected to provide generic economic and modelling techniques to support the development of decision support tools for pest management. Finally there is a concern that the PRA process *per se* is becoming increasingly complex and this can inhibit timely decision-making to the detriment of effective and efficient plant health management.

Moving forward, the need to create a more permanent platform to ensure the continuity of the coordination and support of research and development in this field has been identified.

Diagnostic capacity

Overall, in the majority of MS the existing capacity is considered to allow only partially the rapid and reliable diagnosis of all regulated HOs, and this is mostly due to the relatively limited and decreasing financial and human resources. Gaps for the detection (in terms of methods and reference materials) are indicated by several MS, particularly with regards to rare or new HOs, as well as increasing difficulties to find experienced experts in specific fields as expertise is generally eroding especially in classical subjects (as also noted under previous section). Resources for diagnostics are in many cases limited even with regard to HOs for which detection is possible and in terms of activities that the laboratories would technically be able to carry out.

The divergence in diagnostic capacity across the EU is largely due to the inherent characteristic of research on plant health which explains the difficulties of attracting financial support in this field: plant science is not a high priority compared to other scientific fields such as nanotechnology, engineering etc., and commercial interest remains limited. In those MS where plant health is important for trade and production, the diagnostic sector is more developed, with significant resources devoted to research, a clear structure and organisation in place, and there is additional funding by industry. However, only a minority of MS are in this situation.

There is lack of cooperation and networking among MS, although this is considered crucial for overcoming current deficiencies. The contribution of EU Projects, particularly EUPHRESKO, is generally recognised for having a positive impact on networking between research bodies and laboratory experts, but this needs to be further strengthened. Experts stress the fact that coordination among activities at MS level remains the main weakness for research and diagnostics at EU level.

A particularly weak aspect is the development of diagnostic methods, for which funding is not always available. There are several EU funded projects to improve diagnostic methods/protocols and update with latest technology in this field (including DIAGPRO (Diagnostic Protocols), QAMP (whole genomic DNA amplification methods), QBOL (DNA bar coding) and Q-DETECT). At EU level, binding protocols for diagnostic methods do not exist (with the exception of some HOs for potato diseases under control measures), but for a range of HOs, the EPPO and IPPC have issued standards for diagnostic methods and procedures (some 97 protocols to date). Many laboratories are currently in the process of preparing for accreditation, and EPPO is working to share the experience gained between laboratories.

Moving forward, the need to establish reference laboratories (NRLs and EU-RLs) was identified, in order to provide guidance on diagnostic methods and training, as well as to provide maintenance of reference collections.

Training

The evaluation highlighted the reduced availability of training and significant variability among MS in the level and quality of resources for training activities. Coupled with the lack of communication and cooperation among inspectors of different MS, this contributes to the limited harmonisation of inspection practices and the variability in the effectiveness of import inspections among MS. Some EU-funded training in the field of plant health to EU NPPO services was provided in 2008 and 2009 under the BTSF (Better Training for Safer Food) program. Moving forward, it is recommended that this training is strengthened and continued, and that it is provided both for inspectors and diagnosticians.

9. Organisational aspects

Distribution of responsibilities

The NPPO is the Single Authority and the Responsible Official Body within the meaning of Article 1.A of Directive 2000/29 in the majority of MS; the current legal framework is considered to be adequate.

As foreseen in the legal framework, delegation of certain tasks is possible under the authority and supervision of the responsible official bodies. This is currently done by approximately half of the MS and mainly concerns the conducting of official checks, control and inspections and the conducting of official laboratory analysis; these tasks are delegated mainly to public bodies. Although the majority of MS CAs consider that the public resources devoted in their country to the duties and tasks derived from the CPHR are insufficient, in the context of the present evaluation the majority view has been that there is limited need or opportunity for further delegation of tasks to other bodies or legal persons. However, in view of the recent amendment of Dir. 2000/29 with regard to delegation of laboratory testing, it is recommended that further study is undertaken on this issue. This would be particularly relevant in view of the resource constraints extensively reported and identified throughout this evaluation, and the need for increased collaboration and responsibility sharing among CAs and stakeholders. Delegation should be carefully examined considering the different capacities existing in the MS, to ensure a high degree of quality, independence and impartiality. The evaluation highlights the general lack of incentives as regards the timely reporting of outbreaks and the effective implementation of control measures, and the limited current availability of mechanisms that would act as incentives, both for private operators and CAs (e.g. compensation schemes, solidarity regime). Options to improve these aspects were explored.

FVO activities

The role and functions of the FVO are considered highly useful and important for monitoring and contributing to harmonising the implementation of the CPHR in the MS and for the improvement of compliance with EU import requirements from Third Countries (TCs). It is however noted that the follow-up of missions is as important as the missions, and therefore measures to ensure implementations of recommendations should be in place. The main constraint to the work of the FVO is the limited availability of resources; an increase in FVO resources would enable some of the suggestions made for future improvement (e.g. missions to TCs, as these are considered to be highly useful).

EUROPHYT

EUROPHYT has proved to be a useful tool for the exchange of information among MS on interceptions of HOs. However, this mainly applies to imports, as there is no legal obligation in place

for systematic reporting of findings in plant material from other MS. It is recommended therefore that the use of EUROPHYT for compulsory notification should be extended from trade with third countries to intra-Community movements.

Another set of improvements is suggested in order to make the system more user-friendly (e.g. improved search engines), to increase readability and usability of data for inspection targeting (e.g. data elaboration) and to increase the usefulness for signalling upcoming threats (e.g. modification of information required).

Communication and consultation

The current communication activities around the CPHR are generally perceived to be limited, and confined mainly at public authority level (between COM and MS authorities). There are significant calls for more transparency in the decision-making process (based upon risk analysis) and the communication of actions to stakeholders.

The current level of consultation in CPHR decision-making is generally perceived by stakeholders to be relatively limited, with traders seen as more represented via their organisations than producers/growers (in part due to less divergence of interests within the representative organisations). It is generally acknowledged that the CPHR has to seek a fine balance between conflicting interests (i.e. trade interests versus production interests, divergent interests across MS depending on production and trade interests). Furthermore, it is stressed that the interests of stakeholders may not fully correspond to plant health protection objectives. Plant health encompasses significant public good components and, in this context, plant health authorities consider that the interests of stakeholders should be taken into account insofar they are in line with plant health objectives, which are considered the overriding priority for policy making in this field. On the other hand, stakeholders call for a proportionate and balanced approach in deciding on plant health measures, based on appropriate PRA. More generally, the need for raising public awareness on plant health was also identified.

10. Costs and benefits of the CPHR

The impacts of plant diseases can be as devastating as animal diseases. Based on existing studies, past cases of HOs introduced and established in the EU, as well as estimates of potential impacts, the costs associated with plant diseases can be substantial, and ultimately the scale of the impact can potentially reach those recorded in the case of animal diseases. For example, in the case of *Bursaphelenchus xylophilus* (PWN) the control costs of the disease in PT have reached some 40 million € in the period 1999-2008 (including solidarity funding); the potential economic impact of failure to act could reach some 5 billion €/year from the potential destruction of some 10-13 million ha of susceptible coniferous trees (50-90% mortality rate). Other cases not specific to the EU, but that have occurred elsewhere, are an example of the potential scale of impact that could be reached. Ultimately, in value terms, in the EU, the share of production and exports of plants and plant products in the total value of agricultural production and exports is comparable to that of animals and animal products.

The actual and potential scale of impacts also highlights the extent of the benefits where the CPHR has effectively contributed both to avoiding the introduction of potentially injurious HOs and to slowing down their spread. A case study of 5 HOs (*Anoplophora (chinensis and glabripennis)*, *Ceratocystis (fagacearum and fimbriata)*, *Erwinia Amylovora*, *Grapevine Flavescence dorée* and *Phytophthora ramorum*⁶) demonstrates substantial benefits.

⁶ HOs selected out of a total 203 combinations (MS x HO) for which the benefits of the CPHR were widely attributed by respondents to the specific cost survey, although not necessarily representing absolute success cases across the EU-27.

The overall benefits of avoiding or delaying the introduction and spread of any HO in the EU include not only the avoidance or reduction of agricultural losses and gain in competitiveness for which the private sector is the main beneficiary, but extend to the avoidance or reduction of damage to ecosystems, biodiversity and rural communities from which the wider society benefits. **The strong public good components of the CPHR are therefore highlighted.**

The CPHR is considered to have been partly successful in preventing the introduction and spread of HOs, with success highly dependent on the targeted HO. The main lesson drawn from the cases of failure or partial failure (e.g. PWN; *Rhynchophorus ferrugineus* - red palm weevil; *Tuta absoluta*) is the need to act quickly and decisively in case of introduction. Currently, the evaluation of the situation before taking measures is, sometimes, too slow or not decisive enough in responding to phytosanitary emergencies. A critical factor, in this context, for determining the success or failure of phytosanitary measures taken in any sector will be the availability of incentives for action at all levels.

CPHR provisions have provided the most effective protection as regards the HOs covered by the EU Control Directives (e.g. potatoes) for a range of reasons, mainly relating to the focus of the measures in a specific sector and the availability of incentives. By contrast the least effective protection appears to be provided in sectors where there is currently lack of clarity in measures and which are highly complex with a broader spectrum of affected stakeholders and potentially conflicting interests; this includes both some commercial production sectors and public / private green space.

The evaluation has confirmed the results of the earlier (2008) evaluation of the solidarity regime, in that the incentives provided by the regime remain relatively limited in a number of areas (intervention ex-post; exclusion of production losses; difficulty of assigning responsibility, particularly in cases of natural spread; lack of disincentives; non effective enforcement of penalties); in all these areas there is considerable room for improvement of the solidarity regime. A major gap is considered to be the exclusion of coverage of costs and losses incurred by private operators. However, there is a lack of data on the extent and scale of these costs, for which further cooperation with stakeholders is needed, as this is a crucial element for examining any revisions to the current system.

Costs and responsibility sharing schemes are generally considered to be the appropriate tool to provide incentives for government and private operator enforcement and compliance. The choice of tools (government contributions; private sector based) needs to be pursued on a case by case basis, where feasible. The generalised application of private sector schemes is constrained by industry specificities and structures and where the plant health threat has an environmental, public good component. In such cases, there are strong arguments for government supported compensation schemes.

The total administrative and other operational costs of the CPHR were estimated on the basis of a purpose-built cost model (applying the methodology of the EC Standard Cost Model), with data provided by MS through the specific cost survey. In total, based on the data provided for 24 MS⁷, the total costs associated with the 13 CPHR obligations selected for the analysis amount to €148,799,204 on average per year, of which €57,191,859 are administrative costs and €91,607,345 are compliance costs. The total average annual costs for the 24 MS CAs amount to €59,218,314 (net of fees), of which 8.5% are administrative costs). These costs cover the three most important obligations of the CPHR, which are: import inspections. inspections at the place of production; and, the compulsory annual surveys of HOs regulated under the emergency measures and the Control Directives. The total amount recovered by the 24 MS CAs through fees charged to the private operators pursuant to Article 13d(1) of Directive 2000/29/EC is estimated at €36,914,993. In addition to the above costs, based on data provided by 18 MS CAs, the costs of eradication and control measures amounted to €132,139,696 in total during 1993-2008. The total administrative costs for private operators (same 24 MS) amount to €51,445,518 on average per year, with the obligation to keep records representing 80.42% of the total.

⁷ Of the 25 MS that responded to the specific cost survey, the analysis was only possible for 24 MS, as in the case of 1 MS the response was incomplete.

Finally, the total cost on average per year for the European Commission is estimated at €1,881,066, of which 38.3% is the administrative cost.

The evaluation has highlighted a number of areas where opportunities for cost reduction exist, including the quicker adoption measures, the swifter adaptation of measures taken to the evolving situation, and the provision of incentives through responsibility sharing and the solidarity funding. More generally, enhancing prevention and the prioritisation of measures present opportunities for improving the cost effectiveness of the current system. These aspects have been built into the options that have been developed for the future (e.g. prevention: options on imports and on intra-EU surveillance; incentives).

S.4. Conclusions and options for the future

This evaluation of the various measures implemented under the CPHR indicates that, in the last 15 years, the policy has only partially been effective in preventing the entry and establishment, or where this has already occurred, in containing the spread of major pest incursions of significant potential economic, social and environmental impact in the EU.

The analysis of the regime's costs and benefits since 1993 demonstrates that the budget devoted to the CPHR to date remains relatively limited and, on a case by case basis, the CPHR has had clear benefits (e.g. *Anoplophora*, *Ceratocystis*, *Erwinia amylovora*, *Grapevine flavescence dorée* and *Phytophthora ramorum*, as well as potato brown and ring rot). Through the measures imposed in these cases, the CPHR has contributed either to avoiding the introduction of potentially injurious HOs or to slow down their spread, resulting in significant overall benefits and cost prevention.

Despite success in some cases, the regime overall has not been fully effective in meeting its objectives and, in its current form, was found to have both some stronger and some weaker aspects. A number of areas were identified where improvements are needed.

The identified weaknesses and shortcomings are partly due to the fact that the regime has been in place for a long period and the world has changed. The current regime is the product of a series of ad hoc, rather than strategic or systemic, adjustments to the various developments in the context the regime has operated in (notably: the introduction of the Single Market in 1993; successive EU enlargements in 1995, 2004 and 2007; EU international and bilateral relations). This is the first time that an opportunity exists to develop this policy area on the basis of a more complete and coherent strategy. A larger EU of 27 MS has meant that there is a more diverse range of climatic and pest situations to address than ever before, and trade is now truly global with new origins and products being continuously introduced, often with very short timescales. Evidence of failure of the current regime to respond to new challenges is the fact that it has not prevented some major new pests from entering the EU (e.g. *Anoplophora* sp., *Rhynchophorus ferrugineus*, PWN), in many cases largely due to the fact that new pathways that pose plant health risks have been discovered too late.

Several measures were assessed to have only partly been useful or effective. This is mostly attributed to a number of underlying factors including: implementation gaps and the lack of a harmonised approach between MS; significant constraints in the availability of staff and resources devoted to plant health at all levels (EU, MS, research bodies and diagnostic facilities etc.); the lack of clarity in certain legislative provisions (including on IAS and natural spread); lack of risk-based prioritisation of HOs and lack of targeted, risk-based prioritisation in the use of scarce resources; limited visibility and public awareness and thus political support to finance and enact the policy; lack of incentives and disincentives (including in the form of sanctions/penalties) or – where these exist – lack of enforcement; and, the limited support and lengthy decision-making process in emergency situations, which results in measures being taken too slowly and too late. These factors often lead to poor implementation. It is noted that the extensive identification of shortcomings in MS enforcement was due to a combination of the above factors, in particular insufficient resources/capacity, lack of clarity

in some provisions of the legal base, but also the fact that infringement provisions are not effectively pursued against MS.

Overall, the current level of emphasis of the CPHR on prevention and early response was found to be largely inadequate. This lack of a pro-active approach manifest itself at various levels: the CPHR financial framework (Solidarity Fund) only acts *a posteriori* and does not cover any measures or activities taken on a preventive basis, before or as soon as, outbreaks or new findings occur; emergency measures are generally adopted too late, and there is no formal framework or support to deal with emergency situations; contingency plans are not systematically put in place (either at MS, or at EU level); efforts to undertake more general surveillance (beyond compulsory surveillance) are relatively limited (with significant variation between MS) and are neither systematic or coordinated. In conclusion, therefore, the current policy has clearly shown some limitations.

Moving forward, the more general conclusion that can be drawn from the analysis of future challenges points to the evolving nature of risks, particularly in the context of climate change and increasing trade, and their potential far reaching impact on both commercial agriculture and forestry but also on the society as a whole (ecosystems, biodiversity and rural communities). It is generally acknowledged that globalisation is the overriding challenge, with climate change adding to the complexity and range of potential impacts. These challenges are not unique to EU plant health policy, but exert a wider impact on countries around the world. At the same time, MS CAs (National Plant Protection Organizations - NPPOs) are increasingly confronted with recurrent obstacles at different levels, including the lack of resources and insufficient knowledge on emerging pests.

In view of the relative success of the regime so far, the majority of MS CAs and stakeholders believe that the CPHR scope and objectives, as reflected in the development of the intervention logic in the period 1993 to date, are still being met and are still appropriate. At the same time, the majority of MS CAs and stakeholders considered the current CPHR to be only partly suitable to mitigate risks introduced by new challenges, in particular by climate change. On balance, the general view would be that the plant health regime needs to respond to the new challenges, by building on those stronger aspects of the regime that have been proven to work well and addressing the weaker areas: evolution rather than revolution is needed. A key feature of the new intervention logic developed by the FCEC on this basis is that it proposes an ***adaptation to the current regime rather than a complete change***.

The identified weaknesses and shortcomings, as well as future needs and challenges (opportunities and threats), point in the direction of potential options for improvement and these have been developed and assessed on the basis of the wide consultation carried out by the FCEC.

At a conceptual level, the various options aim to respond to the need for:

- ***More prevention;***
- ***Better risk targeting (prioritisation);***
- ***More solidarity: moving from MS to EU approach for more joint action to tackle risks of EU significance.***

S.5. Recommendations

The preliminary analysis of the options has highlighted those that represent the best balance of advantages/disadvantages against anticipated impacts. It is noted that options are complementary (can be pursued in parallel) and, in all cases, the assumption is made that the improvements suggested in relation to the status-quo (option i) will be taken on board. The options are supplemented by a number of additional recommendations on possible improvements to the regime. As a result of this process, this evaluation provides a total of 15 recommendations, as follows:

Recommendation 1: IAS

Based on an analysis of the scope of the IPPC and the consensus view as it emerged in the process of the evaluation and the FCEC analysis, the explicit inclusion of IAS plants with wider/environmental impacts (habitats and ecosystems) and/or economic impacts on wider range of stakeholders (**option iii**) is recommended.

Recommendation 2: Natural spread

The evaluation results, confirmed by the outcome of the conference of February, indicate that in the context of increased demand for better prevention and timely action against outbreaks, but also to improve the consistency of the current approach, natural spread needs to be explicitly included in the regime (option ii), and covered by the solidarity regime (option iii), in order to maximise the relevance, effectiveness and efficiency of this approach (costs and benefits of the approach to be established on a case by case basis). On this basis, **option ii** is generally recommended, with consideration of **option iii** recommended in certain specific cases.

Recommendation 3: RNQPs

From the analysis of the options, the adoption of a zero tolerance approach to the regime covering both quarantine and non quarantine pests for which tolerance is zero (PH: RQPs + RNQPs; tolerance = 0) (**option ii**) is the most recommended. It is noted that this includes the improvements suggested in the status-quo (option i).

It is also recommended that the potential benefits of synergies between the CPHR and S&PM are further explored.

Recommendation 4: Prevention strategies at import

Based on the consensus view as it emerged in the process of the evaluation and the FCEC analysis, it is recommended that complementary measures, are taken. These measures include: for emerging risks, particularly new trade in plants for planting/ propagating material (PM), commodity pathway analysis (**option iii**); for plants for planting/PM, official post entry inspections for latent HOs (**option iv(a)**); and, for plants for planting/PM, on the basis of commodity pathway analysis, the introduction of import bans where necessary (**option iv(c)**). It is noted that this includes the improvements suggested in the status-quo (option i).

Depending on severity of non-compliance or infractions (both at the level of individual traders and at the level of the CAs involved), sanctions could be introduced in the system. This issue is more broadly considered under the options regarding incentives.

Recommendation 5: Intra-EU surveillance

The evaluation results, confirmed by the February conference, identified significant support for general epidemio-surveillance for priority HOs, although the process and criteria to be used for the identification and selection of HOs to be subject to such surveillance, as well as the scope and method of the surveillance, remain to be discussed.

Considering the views of MS CAs, stakeholders and experts, and taking into account the Council conclusions of 2009, the following options are recommended: the development of common principles and guidelines for harmonized surveillance and reporting (**option ii**); the introduction of mandatory general surveillance at EC level for priority HOs (**option iii**); and, the introduction of co-financing for surveillance (**option iv**). It is noted that this includes the improvements suggested in the status-quo (option i).

Recommendation 6: Emergency action

Based on the analysis of the options for emergency action, the following options are recommended: horizon scanning (**options ii**); the compulsory development of contingency plans according to a harmonized framework (**option iii**); and, speeding up the process for adoption and adaptation of both emergency and control/eradication measures (**option v**). It is noted that these options are complementary (i.e. can be adopted in parallel), and that, in all cases, they include the improvements suggested in the status-quo (option i).

Recommendation 7: Plant Passport (PP) system

From the analysis of options for the future of the PP system, revising the scope of application (**option ii**) and harmonising the PP document (option **iii**) are the most recommended options. It is noted that these options are complementary (i.e. can both be adopted), and that, in both cases, they include the improvements suggested in the status-quo (options i).

Recommendation 8: Tightening the system of Protected Zones (PZ)

The analysis of options for tightening the PZ system suggests that improving the status quo (**option i**) is the most recommended starting point, on the basis that it represents the best balance of advantages/disadvantages against anticipated impacts while being the most acceptable. Longer term, there is also a need to further examine the implications of applying more widely the PFA concept (ISPM 4).

Recommendation 9: Incentives

On the basis of the evaluation results, confirmed by the February conference, and the results of the evaluation of the solidarity regime, the most recommended options for incentivising the current system are to extend the current scope of solidarity to: cover the loss of destroyed material for producers/growers (**option i(a)**); and, co-finance certain measures which contribute to better prevention e.g. surveillance, contingency planning (**option i(c)**).

It is also recommended to carry out further analysis of the possibility to introduce cost-responsibility sharing schemes, in line with the ongoing development of this concept in the animal health field.

Recommendation 10: Research and development and scientific advice

The definition of a structural role for EUPHRESKO-like coordination of national research funding is recommended, with the establishment of a specific budget for this purpose.

The evaluation highlighted a strong need for sufficient and stable EU and MS resources for funding research projects; for short term research needs, a structural budget within the CPHR could be established in addition to the FP7.

It is recommended that discussions and cooperation between SANCO/EFSA and EPPO continue with a view to identifying complementarities to cover the economic impact of the EU PRAs, complementing the EFSA role.

Recommendation 11: Diagnostics

To enhance the diagnostic capacity in this sector in the EU, it is recommended to complete the establishment of NRLs in MS and to establish EU-RLs for a limited number of HOs. Longer term, EU-RLs could be established for each of the disciplines (nematology, entomology, acarology, mycology, bacteriology, virology), and subset of disciplines, so that they should be able to detect all the 250 HOs.

Recommendation 12: Training

It is recommended to continue and strengthen training activity in the plant health sector for inspectors and to intensify efforts by extending the training also to experts in the diagnostics field.

Recommendation 13: EU/MS emergency team

The establishment of an EU/MS Emergency Team (within DG SANCO and supported by extended network of MS experts) for Plant Health is recommended, in line with the existing emergency preparedness approach in the animal health field.

Recommendation 14: Communication and transparency

The need for an increased public and political awareness was a clear outcome of the evaluation. It is therefore recommended that both at EU and MS level public awareness campaigns are developed and implemented.

Recommendation 15: Financial Framework

The evaluation of the CPHR performance to date, and in particular of the financial framework (solidarity regime) has extensively highlighted the mismatch of currently available resources to objectives, which underpins many of the identified shortcomings and weaknesses. The above analysis of options for the future has in all cases pointed to the need to increase resources and/or prioritise to meet the objectives set out in the options. The Commission will have to reflect on the best option to follow.

The evaluation results have also confirmed the conclusions of the solidarity regime evaluation, according to which, a financial instrument is needed for better preparedness in case of emergency. In this context, the evaluation recommends that the merits of developing a specific financial instrument in this sector, possibly in the form of a *Plant Health Fund* drawing a parallel from the Animal Health Fund, need to be examined further.

The contribution of the various options and recommendations towards the various identified needs and objectives is depicted in Table 0-1. The priority assigned to each option and need for further assessments are also highlighted. The overarching objective in all cases is to improve prevention.

Table 0-1: Key recommendations for the future and their contribution to achieving the identified needs and objectives

Options (most recommended)	<i>Specific objective: better prevention</i>							Priority	Need for further assessment
	<i>Operational objectives:</i>								
	Early detection	Early response	Risk basis	Definition of responsibilities	Incentives	Clarification ⁸	Public/political awareness		
<i>1. Explicit inclusion of IAS plants with wider environmental impacts and/or economic impacts on wider range of stakeholders</i>	✓	✓				✓ (a)		Medium	
<i>2. Inclusion of natural spread in solidarity regime⁹</i>		✓		✓		✓	✓	Medium	To enquire feasibility of pursuing implementation of sanctions/penalties.
<i>3. Zero tolerance regime</i>			✓			✓ (b)		Low	A separate impact assessment is recommended in order to examine scope of HOs involved and to ensure coherence with S&PM legislation
<i>4. Imports</i>									
<i>For emerging risks: commodity pathway analysis¹⁰</i>	✓		✓			✓ (a)		High	A cost-benefit analysis may be required
<i>For plants for planting/PM strengthen measures:</i>	✓							Medium	A cost-benefit analysis may be required
<i>a. Official¹¹ post entry inspections for latent HOs</i>			✓					High	Acceptability of ban needs to be further assessed
<i>b. Introduce import bans where necessary</i>			✓					High	Acceptability of ban needs to be further assessed
<i>5. Surveillance</i>									
<i>Development of common principles and guidelines for harmonized surveillance and reporting</i>	✓					✓	✓	High	
<i>General surveillance mandatory at EC level for priority HOs¹²</i>	✓	✓		✓			✓	High	Prioritisation criteria to be defined.
<i>Introduction of co-financing for surveillance</i>	✓	✓	✓	✓	✓		✓	High	Assessment to be conducted under solidarity funding scope

⁸ Where appropriate, clarification is further indicated in terms of: (a) alignment to international standards; (b) better coordination of EU policies

⁹ Consideration of solidarity funding for natural spread to be addressed on a case by case basis (e.g. in line with conclusion of 2008 solidarity regime evaluation).

¹⁰ This concerns particularly new trade in plants for planting/ propagating material (PM).

¹¹ “Official” refers to form of inspection and not agent (the issue of whether the agent would be a CA or licensed private sector inspector is not addressed here).

¹² Other than Emergency Measures, Control Directives and PZ

	<i>Specific objective: better prevention</i>							Priority	Need for further assessment
	<i>Operational objectives:</i>								
Options (most recommended)	Early detection	Early response	Risk basis	Definition of responsibilities	Incentives	Clarification ⁸	Public/political awareness		
<i>6. Emergency actions</i>									
<i>Horizon scanning</i>			✓					High	
<i>Compulsory development of contingency plans according to harmonized framework</i>		✓		✓	✓		✓	High	To be analysed whether these should be general or pest specific; degree of involvement of stakeholders
<i>Speed up process for adoption and adaptation of both emergency and control/eradication measures</i>		✓		✓				High	
<i>7. Plant Passport system</i>									
<i>Clarify the scope and level of PP application, in terms of: a. Plants; b. Marketing stage</i>			✓			✓		Medium	Further detailed analysis of scope required
<i>Harmonise PP document</i>						✓		Medium	A separate study is recommended in order to examine scope for harmonisation
<i>8. Protected zones</i>									
<i>Status quo (with improvements) of PZs: a. Improve surveillance targets, b. Involve stakeholders, c. Harmonised eradication programmes, d. ending status on time</i>				✓	✓	✓		Medium	More detailed analysis needed of implications of moving to PFA and possible coexistence of PZs and PFAs
<i>9. Incentives</i>									
<i>Extend current scope of solidarity: <u>Eradication measures (current scope)</u>: a. Extend (within current scope) to cover loss of destroyed material</i>			✓		✓		✓	High	Further detailed analysis of scope required
<i>Extend current scope of solidarity: <u>New measures</u> Measures for co-financing consideration may include e.g. surveillance, contingency planning, prevention of emerging risks and emergency actions.</i>	✓	✓		✓	✓		✓	High	Further detailed analysis of scope required
Further recommendations									

	<i>Specific objective: better prevention</i>							Priority	Need for further assessment
	<i>Operational objectives:</i>								
Options (most recommended)	Early detection	Early response	Risk basis	Definition of responsibilities	Incentives	Clarification⁸	Public/political awareness		
10. Research & Development	✓	✓	✓			✓	✓	High	
11. Diagnostic laboratories	✓	✓	✓	✓		✓		High	
12. Training	✓		✓					High	
13. EU/MS Emergency Team		✓		✓		✓	✓	High	
14. Communication and transparency							✓	Medium	
15. Financial framework	✓	✓			✓		✓	High	

High: action recommended within the following year

Medium: action recommended within 1 to 5 years