In response to information provided by the Competent Authority, any factual error noted in the draft report has been corrected.
Executive Summary

This report describes the outcome of an audit carried out by the Directorate General Health and Food Safety of the European Commission in France from 3 to 12 February 2016. The objective of the audit was to evaluate the plant health situation and control measures applied for Xylella fastidiosa in the two regions of France where there are outbreaks of the bacterium.

In 2015 France carried out a comprehensive and risk based Xylella fastidiosa survey at country level and ran an intensified awareness raising campaign. The high level of alert and awareness promoted by the French authorities ensured the prompt finding and identification of the outbreaks.

Measures were implemented quickly within and outside the demarcated areas. Additional human and financial resources were mobilised, a network for large-scale sampling and laboratory testing was established and the relevant stakeholders were sufficiently informed and involved.

The demarcation, insect vector treatment, removal and destruction of host and symptomatic plants within the 100m radius of the infected plants were carried out fully in line with the provisions of Commission Decision 2015/789/EU.

However, the intensity of the surveys carried out within the buffer zones is significantly lower than that required by Commission Decision 2015/789/EU. Sampling and testing of specified plants within a radius of 100m around the plants confirmed to be infected is also not in line with the Decision. This does not allow the accurate determination of the spread of Xylella fastidiosa. In the case of outbreaks where the eradication work was completed, the sites were not revisited to remove newly identified host plants which could be infected.

Nurseries located in demarcated areas are allowed to move specified plants outside those areas without fulfilling all requirements of the Decision. It increases the risk of the movement of the pathogen to new areas.

Due to the number of recent outbreaks and the size of the demarcated area the French authorities were still implementing a large part of the measures at the time of the audit.

France has taken a number of measures showing its commitment to eradicating Xylella fastidiosa. However, the non-compliances detected reduce the efficiency and effectiveness of the eradication efforts. The risk of spread with human assistance is mitigated to some extent by that all outbreaks of Xylella fastidiosa to date have been recorded in areas with no large-scale production of plants for planting of the major hosts. The eradication efforts are further compromised by the high number of outbreaks and level of spread, particularly in Corsica. This is compounded by the multitude of identified host plants, the inaccessibility of risky areas and by uncertainties about hosts and the mode of transmission.
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<tr>
<td>ANSES</td>
<td>French Agency for Food, Environmental and Occupational Health and Safety (<em>Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail</em>)</td>
</tr>
<tr>
<td>ANSES-LSV</td>
<td>Plant Health Laboratory of ANSES (<em>ANSES - Laboratoire de la santé végétaux</em>)</td>
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<tr>
<td>BNEVP</td>
<td>National Veterinary and Plant Health Investigation Unit (<em>Brigade nationale d'enquêtes vétérinaires et phytosanitaires</em>)</td>
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<tr>
<td>BSV</td>
<td>Plant Health Bulletin (<em>Bulletin de santé du végétal</em>)</td>
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<tr>
<td>CA</td>
<td>Competent Authority</td>
</tr>
<tr>
<td>CNOPSAV</td>
<td>National Board of Animal and Plant Health Policy (<em>Conseil national d’orientation de la politique sanitaire animale et végétale</em>)</td>
</tr>
<tr>
<td>CROPSAV</td>
<td>Regional Council of Animal and Plant Health Policy (<em>Conseil régional d’orientation de la politique sanitaire animale et végétale</em>)</td>
</tr>
<tr>
<td>DA</td>
<td>Demarcated area</td>
</tr>
<tr>
<td>DDCSPP</td>
<td>Departmental Directorate for Social Cohesion and for the Protection of the Population (<em>Direction départementale de la cohésion sociale et de la protection des populations</em>)</td>
</tr>
<tr>
<td>DGAL</td>
<td>Ministry of Agriculture Agri-food and Forestry; Directorate General for Food (<em>Ministère de l’agriculture, de l’agroalimentaire et de la forêt Direction générale de l’alimentation</em>)</td>
</tr>
<tr>
<td>DG Health and Food Safety</td>
<td>European Commission, Directorate General for Health and Food Safety</td>
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<tr>
<td>DRAAF</td>
<td>Regional Directorate of Food and Feed, Agriculture and Forestry (<em>Direction régionale de l’agriculture, de l’alimentation et de la forêt</em>)</td>
</tr>
<tr>
<td>ECOPHYTO</td>
<td>National Action Plan on the sustainable use of pesticides, which includes epidemiological surveillance of harmful organisms</td>
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<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EPPO</td>
<td>European and Mediterranean Plant Protection Organisation</td>
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<tr>
<td>FREDON</td>
<td>Federation for the Protection Against Harmful Organisms (<em>Fédérations régionales de défense contre les organismes nuisibles</em>)</td>
</tr>
<tr>
<td>Host plants</td>
<td>As defined by Article 1(b) of Decision 2015/789 as amended by Decision 2015/2417 and listed in a Commission database</td>
</tr>
<tr>
<td>INRA</td>
<td>French National Institute for Agricultural Research (<em>Institut National de Recherche Agronomique</em>)</td>
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<tr>
<td>IPPC</td>
<td>International Plant Protection Convention</td>
</tr>
<tr>
<td>ISO</td>
<td>International Standards Organisation</td>
</tr>
<tr>
<td>IZ</td>
<td>Infected zone as defined by Article 4 of Decision 2015/789/EU</td>
</tr>
<tr>
<td>MAAF</td>
<td>Ministry of Agriculture, Agri-food and Forestry (<em>Ministère de l’agriculture, de l’agroalimentaire et de la forêt</em>)</td>
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<tr>
<td>MS</td>
<td>Member State of the European Union</td>
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<td>NPPO</td>
<td>National Plant Protection Organisation</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Explanation</td>
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<tr>
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</tr>
<tr>
<td>NRL</td>
<td>National Reference Laboratory</td>
</tr>
<tr>
<td>PACA</td>
<td>Region Provence-Alpes Côte d'Azur</td>
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<tr>
<td>PCR</td>
<td>Polymerase chain reaction</td>
</tr>
<tr>
<td>PHYTOPASS</td>
<td>National technical and administrative system and database for plant health issues</td>
</tr>
<tr>
<td>Pm</td>
<td><em>Polygala myrtifolia</em></td>
</tr>
<tr>
<td>Specified plants</td>
<td>As defined by Article 1(c) of Decision 2015/789 as amended by Decision 2015/2417 and listed in Annex I of the same Decision</td>
</tr>
<tr>
<td>SIVEP</td>
<td>Veterinary and Phytosanitary Border Inspection Service (<em>Service d'inspection vétérinaire et phytosanitaire aux frontières</em>)</td>
</tr>
<tr>
<td>SRAL</td>
<td>Regional Food Service of the DRAAF (<em>Services régionaux de l'alimentation de la DRAAF</em>)</td>
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<tr>
<td>Xf</td>
<td><em>Xylella fastidiosa</em></td>
</tr>
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1 INTRODUCTION

This audit took place in France from 3 to 12 February 2016 and was undertaken as part of the planned audit programme of the Directorate General for Health and Food Safety of the European Commission (DG Health and Food Safety).

The audit team consisted of two auditors of DG Health and Food Safety and one National Expert from a European Union (EU) Member State (MS). Representatives of the National Plant Protection Organisation (NPPO) accompanied the team during the audit.

An opening meeting was held on 3 February 2016 at the Directorate General for Food of the Ministry of Agriculture, Agri-food and Forestry (DGAL) headquarters in Paris, during which the objectives and itinerary for the audit were confirmed and additional information necessary for the conduct of the audit was requested.

Unless specified otherwise, the data quoted in the following sections and elsewhere in the report were provided by DGAL.

2 OBJECTIVES AND SCOPE

The objective of the audit was to evaluate the plant health situation and control measures applied for Xylella fastidiosa (Well and Raju) (Xf) and in particular, the implementation of Commission Decision 2015/789/EU and the associated French national measures. To meet this objective the following meetings and visits were carried out:

<table>
<thead>
<tr>
<th>Meetings, visits</th>
<th>No.</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competent Authorities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>1</td>
<td>Ministry of Agriculture Agri-food and Forestry; Directorate General for Food (DGAL)</td>
</tr>
<tr>
<td>Regional</td>
<td>2</td>
<td>Regional Directorate of Food and Feed, Agriculture and Forestry in the regions of Corsica and Provence Alpes Côte d'Azur (PACA)</td>
</tr>
<tr>
<td>Plant health control sites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outbreak sites</td>
<td>5</td>
<td>Three in Corsica; two in PACA</td>
</tr>
<tr>
<td>Producers and traders of specified and host plants of Xf</td>
<td>3</td>
<td>Corsica - a nursery (retailer) within one of the infected zones; PACA - two nurseries – one large retailer in one of the buffer zones; one wholesaler outside the demarcated areas</td>
</tr>
<tr>
<td>Survey sites</td>
<td>2</td>
<td>Corsica - one site with symptomatic host plants; PACA - one site with host plants</td>
</tr>
<tr>
<td>Plant health laboratories</td>
<td>2</td>
<td>Plant Health Laboratory of the French Agency for Food, Environmental and Occupational Health (ANSES-LSV); Approved laboratory in Marseilles</td>
</tr>
</tbody>
</table>
3 **LEGAL BASIS**

The audit was carried out under the general provisions of the EU legislation, in particular Articles 21 and 27(a) of Council Directive 2000/29/EC, and in agreement with the NPPO.

3.1 **RELEVANT EU LEGISLATION**

Council Directive 2000/29/EC provides for protective measures against the introduction into and spread within the EU of organisms harmful to plants or plant products (HOs).

Commission Implementing Decision 2015/789/EU of 18 May 2015, as regards measures to prevent the introduction into and the spread within the Union of *Xf*, provides for detailed rules related to findings or outbreaks of the pathogen.

All EU legislation referred to in this report is listed in Annex 1. References to legislation are to the latest amended version, where applicable.

4 **BACKGROUND**

4.1 **FRENCH NATIONAL MEASURES RELATED TO XYLELLA FASTIDIOSA BEFORE THE OUTBREAKS WERE DETECTED**

In 2012, France detected *Xf* in an imported coffee plant. The French Agency for Food, Environmental and Occupational Health (ANSES) prepared a pest risk assessment and based on its recommendations, certain import control measures were implemented and information was distributed to professional organisations and to the public.

After reports of *Xf* outbreaks in Apulia Italy, a strong public awareness campaign was launched and specific import control and surveillance measures were implemented to prevent the introduction of *Xf* and to ensure the earliest possible detection of any outbreak. Professional organisations and other stakeholder groups were especially concerned about the introduction of the bacterium and in particular about the potential impact on French olive and other horticultural production. Awareness of *Xf* was especially high in Corsica.

4.2 **XYLELLA FASTIDIOSA OUTBREAK IN FRANCE**

In July 2015, France notified the European Commission and MS about the first finding of *Xf* in Corsica. The bacterium affected *Polygala myrtifolia (Pm)* plants. There were further findings of the disease in October 2015, also on *Pm* plants, in PACA.

Laboratory analysis confirmed that the bacterium found in France was a different sub-species, *Xf* subsp. *multiplex*, to that found in Italy, where only subsp. *pauca* has been found to date.

Investigations carried out by the French authorities have indicated a number of possible sources for the plants involved, including other MS but also infected wild plants of *Pm* which may have been affected for a prolonged period of time.
4.3 Hosts and vectors of Xylella fastidiosa subsp. multiplex in France

At the time of the audit, plants of the following species and genera, sampled in the demarcated areas (DAs) of Corsica, had tested positive for Xf subsp. multiplex: Acer pseudoplatanus, Artemisia arborescens, Asparagus acutifolius, Cistus monspeliensis, Cistus salvifolius, Coronilla valentina, Cytisus racemosus, Genista ephedroides, Hebe sp., Lavandula angustifolia, Lavandula dentata hybr., Lavandula stoechas, Myrtus communis, Pelargonium graveolens, Pm, Prunus cerasifera, Quercus suber, Rosa x floribunda, Rosmarinus officinalis, Spartium junceum. The host plants are listed in a Commission database in line with provisions of Article 1(1) of Decision 2015/2417/EU. In PACA only Pm has been found infected.

There is no reliable scientific information about the insect vectors of Xf subsp. multiplex in France. The meadow froghopper Philaenus spumarius, which is considered as the main vector of Xf subsp. pauca, CoDiRo strain in the Apulia region of Italy, is widespread in the Mediterranean area of France. Numerous other species of the taxonomic category Cicadomorpha (cicadas, leafhoppers, treehoppers and spittlebugs) are also part of the French fauna. At the time of the audit, no Cicadomorphas collected in the vicinity of infected areas had tested positive for Xf subsp. multiplex and no transmission experiments had yet been carried out.

5 Findings and Conclusions

5.1 Organisational Aspects of Plant Health Controls

Legal requirements

Articles 1 and 2 of Directive 2000/29/EC include requirements relating to the organisational aspects of plant health controls including the official services and the cooperation between them.

Article 13a of Decision 2015/789/EU requires MS to carry out targeted awareness campaigns for Xf.

Findings

5.1.1 Competent authorities

1. The organisational aspects of plant health controls in France are described in section 2.11. of the DG SANTE country profile for France (http://ec.europa.eu/food/fvo/country_profiles/details.cfm?co_id=FR). The relevant competent authority (CA), the Single Authority in terms of Council Directive 2000/29/EU is the DGAL.
The National Veterinary and Plant Health Investigation Unit (BNEVP) of the DGAL is entitled to carry out national level investigations, related to plant health and veterinary issues, including intelligence methods as appropriate. The Veterinary and Phytosanitary Border Inspection Service (SIVEP), which is attached to the DGAL is responsible for controls of imports of plants and plant products from non-EU countries.

2. The competent authority at regional level in metropolitan France is the director of the Regional Directorate for Food, Agriculture and Forestry (DRAAF) acting under the authority of the Prefect of the region. The Regional Food Service (SRAL), which is part of the DRAAF is charged with plant health issues. On 1 January 2016 the Metropolitan France had 22 SRALs. In Corsica, the Social Cohesion and Protection of the Population Directorates of the two administrative departments (DDCSPP) are also involved in the implementation of tasks related to Xf outbreaks under the supervision of the SRAL of the region.

3. Plant health measures in forest areas are implemented by the five inter-regional centres of forest health.

4. By means of a framework agreement, the Ministry of Agriculture, Agri-food and Forestry (MAAF) delegated certain plant health issues to the National Federation for the Protection Against Harmful Organisms (FREDON), which is a non-governmental organisation. SRALs conclude annual agreements with the relevant regional FREDON about the delegated tasks. In the two regions with Xf outbreaks, FREDONs are involved in the surveillance activities, including visual inspection and sampling for laboratory analysis. FREDON experts may also assist in the implementation of eradication measures in infected zones.

5.1.2 Relevant national and regional legislation

5. The CA stated that the relevant provisions of Directive 2000/29/EU are transposed by the French Rural and Maritime Fishing Code and by the MAAF Decree of 31 July 2000, establishing the list of organisms harmful to plants, plant products and other objects subject to compulsory control measures. In addition, MAAF Decree of 15 December 2014 categorises Xf as a pest of first category hazard for plants.

6. MAAF decree of 23 December 2015, as amended, on measures to prevent the introduction into and the spread within the union of Xf ensures the immediate application of the provisions of Decision 2015/789/EU. It requires the Prefect of the region to determine the borders of the DAs, including the establishment of the list of affected municipalities.

7. In Corsica regional prefectural rules were developed, in line with the outbreak situation. At the time of the audit, three decrees of the Prefect were in force. Decree No 15-580 of 30 April 2015 (as amended) deals with measures aimed at preventing the entry of Xf
through trade from the European mainland. Decree 15-0886 of 25 September 2015 defines the control measures, while Decree No 15-0887 of 25 September 2015 orders a targeted inventory of \( Pm \) plants and allows their destruction after advance notification is provided to the municipalities. The decrees regulate \( Xf \) outbreaks as follows.

- The entry of planting material of specified plants is prohibited. However, professional operators may be authorised to import it for direct plantation and marketing purposes through the ports of Ajaccio and Bastia provided the plants originate outside DAs and outside non-EU countries, where \( Xf \) is present or its status is not known. The plants have to be accompanied by a document certifying their origin and must be treated with insecticides prior to arrival. Traders have to request authorisation at DDCSPP five days in advance of arrival, submitting information about the imported species, quantities, origin, their destination in Corsica and means of transport.

- The regional legislation interprets the term 'infected zone' as a 100m radius around plants which tested positive for \( Xf \). In this zone, the decree requires the following measures: insecticide treatment of all plants; sampling all symptomatic specified plants in the 15m vicinity of the infected plant(s) and all \( Pm \) plants as well as other plants which share the same origin as the infected one in the 100m zone; removal and incineration of the positive tested plant(s), all host plants of \( Xf \) subsp. \( multiplex \) and all symptomatic plants of other species.

- The legislation provides for 100m x 100m grid-based surveys on specified plants and insect vectors in buffer zones (BZ) of 10 km around the infected zones. It bans the movement of specified plants within and from the BZ, however it provides for derogation for professional operators under specific conditions and it refers to Article 9(2) of Decision 2015/789/EU;

- With respect to \( Pm \), the legislation prohibits their planting, multiplication and dissemination until 30 September 2016, orders stakeholders and private persons to notify the municipalities about the plants they possess and, as of 1 January 2016, allows the destruction of any plant, but only after a notification has been submitted to the town hall.

8. In PACA, Decree No 2015-970 of 16 October 2015 of the Prefect defines the applicable measures for controlling \( Xf \) in a perimeter of 100m around the infected plants identified in Nice. Decree of 5 November 2015 of the Prefect lays down control measures applicable in the case of \( Xf \) outbreaks. The provisions are nearly identical to those introduced by Corsica, related to the demarcation, ban of planting host plants in the infected zone, eradication, surveillance and movement controls. PACA did not restrict the introduction of host plants to the region. The SRAL in PACA informed the audit team that after the publication of the recent amendment of the national decree of 23 December 2015, the Prefect intends to repeal his decrees on \( Xf \).

9. The audit team noted that certain provisions, set by the regional decrees are not in line with the EU legislation in general and with the specific provisions of Decision 2015/789/EU. In particular:
• The import ban and pre-import authorisation is not in line with the provisions of Directive 2000/29/EC;
• Inspection, sampling and removal of host and specified plants are not in line with Article 6(2) and 6(3) of Decision 2015/789/EU (see also chapter 5.3.2).

5.1.3 Planning and organisation of the controls, contingency plan

10. The French CAs responded to the first confirmed outbreaks promptly and professionally, DGAL and DRAAFs quickly mobilised the necessary resources. Additional staff were allocated at central and regional levels and extra financial resources were provided for enhanced FREDON involvement. According to the DGAL, at the time of the audit, 172 full or part time state agents dealt with Xf (including laboratories). In Corsica 23.5 and in PACA 12 staff of DRAAF/SRAL deal full or part time with the dossier. FREDON provided 4 permanent and 6 temporary staff in Corsica and 6 persons in PACA for Xf related tasks.

11. In December 2015, France notified the Commission and MS of its National Action Plan for the prevention and control of Xf. The Plan is based on four points: I. - Prevent the introduction and detect as quickly as possible any outbreaks; II. – Preparedness to manage new positive cases; III. – Eradicate any outbreaks; IV. – Improve knowledge about Xf and its vectors and adapt the control strategy accordingly. The following specific actions are planned:
• Point I. Prevent the introduction of Xf from non-EU countries with strengthened import controls at national and European level concerning both commercial goods and passenger luggage; strengthening the surveillance of the whole territory of the country; development of adequate analytical methods, particularly on insects
• Point II: Implementation of adequate legislation; development of contingency plans; enhanced communication and awareness campaigns.
• Point III. Continuous implementation of the eradication measures in Corsica and PACA in accordance with EU legislation; better understanding of the mode of transmission and the dynamic of spread; identification of the strains which are present; mobilisation of additional funds.
• Point IV: Better understanding the characteristics of the strains present in France; identify and promote the implementation of medium and long term research topics.

12. DGAL is responsible for coordinating the control activities, developing national rules and instructions to DRAAFs. The SRAL of each DRAAF plans and organises controls at regional level, including the preparation of a regional action plan and contingency plans. Both regions with Xf outbreaks have developed action plans which aim to implement EU legislation and measures in the National Action Plan.

13. DGAL informed the audit team that a national contingency plan for Xf was under preparation. It is expected to be published as a DGAL service note in spring 2016.
A first outline was drafted on the basis of the existing rules, experience in animal health and experience of previous outbreaks in plant health;

- It was amended taking into consideration the experience gained during the current Xf outbreaks;
- The relevant stakeholders, who would be involved in the implementation of the plan, were identified and consulted. Their comments were taken on board;
- The plan was being tested with the ongoing actions in Corsica and PACA.

14. There is a regional contingency plan in force in Corsica. It was developed on the basis of previous animal and plant health outbreaks (e.g. *Anoplophora glabripennis*). Provisions of the *Bursaphelenchus xylophilus* contingency plan were also taken into consideration. All relevant stakeholders were consulted about the plan and it was validated by the Prefect on 31 July 2015. It was being modified in light of recent experience with Xf outbreaks. The audit team noted that the plan lists all the authorities to be involved, the measures to be implemented and contains numerous technical files about detailed implementation. The audit team was informed that a plan was under development in PACA and the 2016 actions will be based on that plan.

5.1.4 Communication and cooperation within and between competent authorities

15. DGAL carries out direct supervision of the activities of DRAAF/SRALs, related to Xf outbreaks in Corsica and PACA. The Plant Health Bureau and the Urgent Missions Unit of DGAL maintains daily contact with their regional counterparts. DGAL service notes ensure that a common approach is taken nationally to the implementation of measures related to Xf, such as sampling and data collection.

16. DRAAF/SRALs continuously supply DGAL with information about the development of the situation in their region. The audit team noted that DRAAF/SRALs always consult DGAL before the implementation of a new legislation, regional prefectural rules in Corsica or any specific control measure.

17. The audit team noted that there had been direct information exchange between DGAL/SRALs of the two regions with Xf outbreaks. Corsica provided assistance to PACA especially in trace-back actions and in designing the relevant regional measures.

18. In Corsica, DDCSPPs of the two departments are also involved in the implementation of outbreak related tasks and DRAAF and SRAL ensure continuous information exchanges with the departmental services. There are scheduled and ad-hoc meetings to discuss Xf related issues.

19. SIIVEP maintains daily contact with the French Customs about the implementation of the import ban of plants for planting in the luggage of the passengers (*see chapter 5.2.1*). DRAAF in Corsica provided information and training to Customs officers at the main ports of the island on the implementation of the trade restrictions (*see chapter 5.1.2 and 5.5.1*).
20. DRAAF/SRALs of the two regions have close working relations with the relevant services of the municipalities, which provide assistance with the surveillance and eradication work.

5.1.5 Communication with competent authorities of other countries

21. DGAL provided detailed information to the Commission and MS about the outbreaks. In the case of new developments, such as new outbreaks or newly identified hosts, updates were issued, as required by Directive 2000/29/EC.

22. In PACA, one of the 10km BZs extends into the territory of Italy, Liguria Province. After the outbreak was confirmed, DRAAF informed the Plant Health Service of Liguria. Liguria delimited its BZ and introduced legal measures, which were notified to the Commission and MS. The audit team noted, however, that despite the efforts of SRAL, there is no cooperation and exchange of information between the CAs of Liguria and PACA. Another BZ includes the territory of Monaco. DRAAF informed the Plant health Service of Monaco about the outbreak and offered them assistance in the implementation of appropriate measures. Although Monaco applies EU plant health law, at the time of the audit, there was no information available about the measures implemented or planned to be implemented in that principality. It might compromise the efficiency of official controls.

5.1.6 Communication with the relevant stakeholders

23. In France there is a specific forum, the National Board of Animal and Plant Health Policy (CNOPSAV), for discussion of plant health issues between the CAs and stakeholders. All relevant non-governmental organisations representing the interested stakeholders in the sector, such as the Chamber of Agriculture, Growers' Associations, and research organisations are members of CNOPSAV. Immediately after the first outbreak, DGAL informed CNOPSAV about the situation and the measures to be implemented. In the future, this forum will be used as often as necessary for information distribution and discussion about relevant national policy.

24. In Corsica, the Prefect organised regular meetings for the relevant institutions and professional organisations. The Regional Council of Animal and Plant Health Policy (CROPSAV), in which all relevant regional professional organisations and stakeholder associations are represented, held several meetings to discuss Xf issues. Training events were organised for members of the Regional Chamber of Agriculture and for nursery representatives. Information was distributed directly to the municipalities and to interested stakeholders in the form of regional plant health bulletins (BSVs) (see chapter 5.2.2).

25. In PACA there were also meetings of the CROPSAV. DRAAF and SRAL organised several information meetings with relevant professional organisations and distributed
information to the municipalities. Nurseries, garden centres and horticultural organisations were specifically targeted.

26. The audit team noted that in both regions with *Xf* outbreaks, DRAAF/SRAL maintain close contact with the Chamber of Agriculture and other relevant professional organisations. These organisations are fully aware of the *Xf* risk and they are committed to assist the CAs in distributing and collecting information and in the implementation of control measures.

5.1.7 Information and publicity, awareness raising

27. At national level, DGAL has placed educational information concerning *Xf* on its website aimed at informing the general public about the disease and raising awareness. It highlights the economic importance of the disease and ways to prevent its introduction. DGAL also ensures that CNOPSAV members and relevant national bodies of the professional organisations (e.g. Chamber of Agriculture, France AGRImer) receive updated information about the *Xf* situation. A large number of subscribers receive general information about *Xf* via the BSVs at least twice a year.

28. In 2015, DGAL produced posters and fliers for travellers about the import ban on plants for planting in luggage of travellers from non-EU countries. These were distributed in ports and airports and at the level of departments and regions via DRAAFs and the departmental directorates for social cohesion and protection of the population.

29. Press releases at national and regional level were made on the day that *Xf* was first confirmed in Corsica. The outbreaks in Corsica and PACA received national media coverage. MAAF and DGAL gave interviews, participated in numerous debates and ensured that the media received information about significant developments. A video was also published on the website of the Ministry of Interior. Several articles were published in different professional papers.

30. Several professional organisations including the Chamber of Agriculture and the National Federation of Garden Centres placed alert messages and explained the *Xf* issue on their websites.

31. In Corsica, the Prefect initiated a large scale communication campaign, including a video on the website of the Prefect, press releases, papers summarising the implemented regional measures, interviews, television discussions, and continuous information updates.

32. In PACA, DRAAF and SRAL issued several press releases, organised press conferences, placed information brochures on the websites of their organisations and of the Prefecture.
Conclusions on the organisational aspects of the plant health controls

33. The clear structure and division of responsibilities between the competent authorities dealing with issues related to Xf outbreaks, including the delegation of certain tasks to a non-governmental organisation facilitates the implementation of the control measures.

34. While the French national law provides for measures to implement Decision 2015/789/EU, decrees of the Prefects, especially in Corsica, contain provisions which are not in line with the provisions of the EU legislation.

35. The system of planning at national and regional level and the additional resources and funding made the quick implementation of a series of control measures possible.

36. The good system of communication within the Plant Health Service and with relevant stakeholders facilitate the controls, however the efforts are compromised by the lack of continuous cooperation with the Plant Health service of Liguria and Monaco.

37. Considerable measures were implemented at national and regional level to distribute information and raise the level of public awareness about the risk of Xf which contributed to the detection of the outbreaks.

5.2 SITUATION OF XYLELLA FASTIDIOSA OUTSIDE THE DEMARCATED AREAS

Legal requirements

Article 1 of Decision 2015/789/EU defines the terms 'host plant' and 'specified plant' in relation to Xf.

Articles 2(3) and 3 of the same Decision include provisions for Member States to conduct annual surveys for Xf and to take all necessary measures to confirm any presence or suspected presence of Xf.

Findings

5.2.1 Import controls

38. In 2015, DGAL issued instructions for SIVEP to sample and test risky consignments for Xf beyond the provisions of Article 17 of Decision 2015/789/EU. At the time of the audit, DGAL service note of 18 December 2015 regulated Xf related import controls as follows:
  - If during any import inspection symptomatic host or specified plants are identified it is obligatory to take samples and to hold the consignment until the laboratory result is available;
  - Reinforced controls are applied in the case of planting material of host and specified plants from Argentina, Brazil, Canada, Costa Rica, Ecuador, Honduras, Mexico,
Paraguay, Venezuela, Taiwan and the USA and, for *Phoenix* sp., leaves from Costa Rica. Each consignment is sampled for $X_f$;

- For planting material from the countries of the American continent, not subject to reinforced controls, a surveillance regime is applied which requires samples to be taken from 10% of the consignments.

39. MAAF Decree of 21 January 2015 prohibits the introduction of plants for planting in the luggage of travellers returning from non-EU countries and does not allow any exemption for small quantities. These provisions are enforced by Customs in the framework of a cooperation agreement with DGAL.

5.2.2 National surveys for $X_f$

40. In line with the provisions of Decision 2015/789/EU, DGAL Service Note of 13 May established the principles and rules of $X_f$ surveys in France in 2015. This comprised a combination of event and risk-based surveys, programmed surveillance and territorial monitoring. The service note contains detailed rules for the selection of survey sites, description of the cases where sampling is necessary and sampling methodology, including sample registration. An ANSES document is annexed to the service note which describes $X_f$ symptoms on different species in detail.

41. The event-based surveillance means that services react immediately to information received from private persons, municipalities and professionals about suspect sightings of $X_f$ infected plants. DRAAF or FREDON inspectors visit the site and take samples if symptomatic plants are identified. The audit team noted that the first outbreak in Corsica and several other infected sites in the two regions were detected based on information received from the municipalities or the public.

42. The risk-based programmed surveillance is aimed at detecting infection in susceptible plants of economic importance at high-risk sites. Annual plant passport inspections at nurseries included checks of host and specified plants of $X_f$. Other retailers of host and specified plants were also inspected. In addition, reinforced, targeted controls were carried out in vineyards, olive plantations, and certain ornamental plants considered as risky crops. These inspections were carried out by SRAL and FREDON inspectors.

43. For territorial monitoring purposes, the national system for epidemiological surveillance of pests (ECOPHYTO) and the official forest epidemiological surveillance systems were used. ECOPHYTO was launched in 2009 as one of the measures of the National Action Plan on the sustainable use of pesticides, in line with provisions of Directive 2009/128/EC. ECOPHYTO deals with each possible aspect of the reduction of pesticide use in agricultural production. One of its elements is an epidemic surveillance network, dealing with each pest affecting the quality of crops, including emerging and regulated harmful organisms. About 13,000 observation parcels in agricultural and non-agricultural areas cover the entire territory of France, where approximately 4,000
observers continuously check the health status of plants according to harmonised protocols. Observation data are collected in the national database EPIPHYT. Crop related reports are produced weekly and distributed in the form of BSVs to a large number of subscribers. The forest epidemiological surveillance system collects data on the general health of the forests. Observers are obliged to report any unusual sightings or changes in the general health status of the forest (possibly) caused by natural or biological impact. In 2015 $Xf$ was integrated into the ECOPHYTO and forest epidemiological surveillance systems. DGAL and SRALs informed observers about the host and specified plants and associated symptoms. Observers are obliged to report symptomatic plants or susceptible cases to the SRAL.

44. Before the first outbreak in Corsica, survey activity concentrated on known hosts of $Xf$ subsp. pauca, having specific agricultural and economic importance for France. Subsequently the main hosts of subsp. multiplex were added to the survey scope but the focus was on finding symptomatic $Pm$ plants. The audit team noted that the majority of the subsp. multiplex hosts in France, other than $Pm$, were identified recently; therefore the 2015 surveys could not be adapted accordingly.

45. In 2015, in the French regions other than Corsica and PACA, 2,606 sites were inspected, of which 2,306 were nurseries, garden centres and retailers and 300 were other sites (vineyards, olive groves, ornamentals, urban areas, natural sites etc.). 495 samples were taken as result of these inspections, 13 of which tested positive for $Xf$ (all taken from imported coffee plants). The infected lots were destroyed.

5.2.3 Surveys in the Regions of Corsica and Provence-Alpes Côte d'Azur

46. The audit team noted that in 2015, before the outbreaks were discovered, the general surveillance approach was applied in Corsica and PACA. After the outbreaks, targeted surveys were carried out as part of trace-back and trace-forward activities in order to identify other possibly infected sites.

47. During the period of July 2015 – February 2016 more than 4,700 samples were collected in Corsica and more than 550 in PACA. Figure 1. shows their distribution.
Figure 1. Distribution of the sampling sites in Corsica and PACA

Source: SRAL Corsica and PACA
48. Particularly in Corsica, numerous new areas were demarcated as a result of the surveys, no precise figures are available about the number of inspections and samples taken in or outside the DAs.

49. The majority of the samples were taken from \textit{Pm} plants. In Corsica numerous samples were taken from other identified host plants as indicated in the next table:

<table>
<thead>
<tr>
<th>Plant species sampled</th>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer pseudoplatanus</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Artemisia arboreaescens</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Asparagus acutifolius</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Cistus monspeliensis</td>
<td>36</td>
<td>11</td>
</tr>
<tr>
<td>Cistus salviifolius</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Coronilla valentina</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cytisus racemosus</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Genista ephedroides</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hebe sp.</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Lavandula angustifolia and \textit{L. stoechas}</td>
<td>71</td>
<td>27</td>
</tr>
<tr>
<td>Myrtus communis</td>
<td>134</td>
<td>3</td>
</tr>
<tr>
<td>Pelargonium graveolens</td>
<td>79</td>
<td>18</td>
</tr>
<tr>
<td>Polygala myrtifolia</td>
<td>742</td>
<td>424</td>
</tr>
<tr>
<td>Prunus cerasifera</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Quercus suber</td>
<td>86</td>
<td>2</td>
</tr>
<tr>
<td>Rosa x floribunda</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Rosmarinus officinalis</td>
<td>265</td>
<td>2</td>
</tr>
<tr>
<td>Spartium junceum</td>
<td>26</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: SRAL Corsica, Sampling period 21 June 2015 – 4 February 2016

50. Outside the DAs, surveys in the two regions targeted nurseries and public places, where there were reports about the presence of \textit{Pm} plants or symptomatic plants. The audit team was informed that in both regions, there are numerous private properties where \textit{Pm} and other host plants are present. Accessing these properties for surveillance purposes is very difficult. In Corsica many private properties are second homes of residents in continental France and the owners are not present for much of the year. Therefore in many cases it is difficult to obtain the consent of the owner/tenant for the survey.

51. In some areas, especially in Corsica, \textit{Pm} has become part of the wild flora and is commonly found in scrublands (\textit{in French - maqui}). The audit team was informed that there are signs that some of these wild plants exhibit symptoms of \textit{Xf}. However, the majority of these plants are located in sites that are difficult to access in order to take samples and practically inaccessible for the implementation of eradication measures, if necessary. SRAL Corsica surveyed some scrublands with a drone and confirmed the presence of symptomatic \textit{Pm} plants. SRAL intends to contact the National Botanical Conservatory of Corsica, who are involved in flora mapping of wild areas, in order to collect information about the spread of \textit{Pm} and to involve them as appropriate in surveillance activity.
52. In PACA, the first outbreak was detected late in 2015 and so there was no time to adapt the surveys outside the DAs to the new situation, beyond certain trace-back activities. The audit team was informed that the 2016 surveys will be planned according to the new situation.

53. The surveys and sampling were carried out by FREDON and SRAL inspectors and in Corsica, DDCSPP is also involved. The selection of the survey sites and sampling was carried out according to a detailed protocol, developed by DGAL and ANSES. After consultation with DRAAFs, the regional FREDONs elaborated protocols for their inspectors, which are practically identical to those used by SRALs. The protocols include details on the identification of symptomatic plants (per host species), as well as sampling methodology (size, collection and dispatch of samples). The preferred sampling period is the growing season (June-September). From a woody plant, at least four twigs need to be taken from different parts of the plant, ideally with healthy and symptomatic material. The size of the sample has to enable the laboratory to harvest at least 1g of petioles. The audit team noted that FREDON and SRAL inspectors carry out inspections and take samples according to the protocols.

54. Where a sample is taken, the plant is officially labelled. All data necessary for the proper identification of the sample and for possible follow-up (including GPS coordinates), are recorded electronically and later uploaded to a central database. SRALs developed IT applications which enable the analysis of the survey data for risk assessment purposes. Each laboratory sample contains parts of the same plant. No aggregate samples from different plants are taken for laboratory analysis.

5.2.4 Movement control of specified plants

55. No movement control measures are applied outside the DAs in the two regions, beyond the controls of the rules concerning planting material entering Corsica and those related to the implementation of the plant passport system (see chapters 5.1.2 and 5.3.5).

56. The audit team was informed that France has implemented the plant passport system for specified plants of *Xf* as required by Article 9(8) of Decision 2015/789/EU.
Conclusions on Xylella fastidiosa situation in France outside of the demarcated areas

57. As a national measure related to \(X_f\), France applies reinforced import controls and prohibits the import of plants for planting in personal luggage with the aim of minimising the risk of further introduction of the bacterium.

58. In 2015 France carried out a comprehensive and risk based \(X_f\) national survey as required by EU legislation. The surveys outside the DAs in Corsica took into consideration the new risk elements identified as a result of the outbreaks. In PACA, as the outbreaks were detected recently, there was no time for comprehensive surveys outside the DAs. In both regions, the limited accessibility of private properties, scrublands or other natural sites compromise the surveys. The lack of movement controls of specified plants beyond the controls related to the implementation of the plant passport system outside the DAs does not increase the risk of spread substantially as there is limited trade of plants outside those areas.

59. The measures enabled the CAs to detect \(X_f\) in imported coffee plants and to find the outbreaks in Corsica and PACA.

5.3 MEASURES IN THE DEMARCATED AREAS

Legal requirements

Article 1 of Decision 2015/789/EU defines the terms 'host plant' and 'specified plant' in relation to \(X_f\).

Article 4, 6 and 14 of the same Decision set detailed rules for creation of demarcated areas surveys, eradication measures and notification of the measures to the Commission and other Member States.

Findings

5.3.1 Demarcation of the infected and buffer zones

60. At the time of the audit, there were 237 outbreaks in Corsica and 9 in PACA. The audit team noted that immediately after \(X_f\) is confirmed in plant samples by the laboratory, the DA is established. DRAAF/SRAL delimit the infected zone (IZ) and the BZ. The relevant municipalities are informed about the delimitation, the measures implemented and road signs are placed at the borders of the DA as appropriate.

61. In both regions, SRALs consider the IZ as being the plants tested positive and the 100m area surrounding them. The BZ is delimited as an area of 10km radius around the IZ. BZ borders are not adjusted to the administrative borders of the municipalities involved. In both regions, certain BZs overlap municipal boundaries, especially in Corsica. Figure 2 indicates the existing DAs in the two regions with \(X_f\) outbreaks.
Figure 2. Demarcated areas in Corsica and PACA

Source: SRALs Corsica and PACA
5.3.2 Eradication measures

62. The audit team noted that, immediately after the presence of *Xf* in a sample is validated by the NRL, the following measures were implemented:

- In the radius of 100m of the infected plant(s) FREDON or SRAL carried out an inventory and clearly marked each host plant and any other plant with symptoms;
- The owners of the infected, host and symptomatic plants received official notification that the plants must be removed and incinerated within five days;
- In the 100m radius all the plants were treated with insecticides and then all the host and symptomatic plants were removed. (The audit team noted that in the case of an outbreak in PACA there was an ongoing legal case, which hindered the removal of a host tree.);
- The removed plants were incinerated in an appropriate site within or as close as possible to the 100m zone. If immediate incineration was not possible it was permitted to keep the plants under a protective cover;
- The insecticide treatment and the removal and incineration of plants was usually carried out by operators contracted by the SRAL or by municipality services under supervision of SRAL inspectors;
- Around the IZs of Corsica and PACA, several hundred *Pm*, woody and herbaceous host plants were removed and incinerated.

63. In the case of the first three outbreaks in Corsica it was assumed that the infection was caused by *Xf* subsp. *pauca*, therefore in the 100m area around the IZ, hosts plants of that subspecies and all symptomatic plants of other species were removed. Later, based on the assumption that *Pm* was the prominent source of infection, each plant of this species was removed. The audit team noted that due to capacity problems, Corsica SRAL could not return to all the outbreak sites where removal had been completed, to check for the presence and order the removal of plants of newly identified host species. For all outbreaks in PACA, immediate removal of host plants (known to be hosts at the time that the infected plants were detected) was ordered in the 100m zone and this had been implemented at the time of audit.

5.3.3 Surveys for Xf in the DAs

64. The audit team noted that due to sampling and laboratory capacity problems, especially immediately after the first outbreaks, it was not possible to sample and analyse all the specified plants in the 100m area around the IZ. Instead, the area of 15m around each IZ was prioritised. In this area the specified plants were sampled and tested in line with provisions of the Decision.

65. In PACA the majority of the outbreaks were discovered in the last months of 2015 or in 2016, therefore no surveys had been carried out in the BZs at the time of the audit, which is not in line with the provisions of the Decision. In Corsica, due to the numerous recent outbreaks, the CA stated that it was not in a position to carry out surveys in line with the provisions of the Decision (i.e. visual inspections and sampling of plants with
symptoms based on a 100m x 100m grid). At the time of the audit, the entire BZ area was 380,100 ha; therefore the same number of visual inspections would be required annually to fulfil the requirements of the Decision.

66. The audit team was informed that visual inspections were and will be carried out in the BZs based on a grid split into 1km x 1km squares. The CAs noted that the proper implementation of the plan could be hindered by the inaccessibility of some areas.

5.3.4 Tracing back and forward of infection sources

67. For each outbreak, a detailed trace back and forward activity was carried out as required by the Decision. It concentrated on \( Pm \) plants and on the following aspects:

- Identification of the supplier and the entire trade chain of the plants back to the propagation nurseries in France or in other MS;
- Inspection of each nursery involved in the trade chain, or informing the CA of the MS in the case of a foreign supplier;
- Identification of sites where plants from the same lot were planted;
- Inspection at sites where plants of the same lot were planted.

68. In relation to the trace activity, the audit team noted that:

- The origin of the plants could not always be identified. It was particularly difficult tracing back individual plants to nurseries because they were often sourced from multiple suppliers;
- Due to the time factor, it was difficult to establish any link between \( Pm \) plants in the nurseries at the time of the inspection and the plants subject to the trace-back;
- Plants of the same lot could only be partially traced forward. If the nursery could provide information about the destinations of plants of the same lot, inspections were carried out. The majority of those plants which were traced tested negative for \( Xf \);
- During the official trace-back inspection symptomatic \( Pm \) plants were detected in three nurseries in Corsica, which were then tested positive.

69. BNEVP inspectors conducted a targeted survey in nurseries producing \( Pm \) plants in the PACA region. In total 90 samples were taken, 17 from symptomatic plants and 73 from asymptomatic plants and only one of them tested positive for \( Xf \).

70. BNEVP carried out a study on the cultivation and trade patterns of \( Pm \) in order to assess the risk of human assisted spread of \( Xf \) subsp. \( multiplex \) in nursery stock. It was found that \( Pm \) is popular in the Mediterranean region and used as border plants in public and private gardens. In Northern France \( Pm \) is cultivated as an indoor plant. Nursery stocks originate mainly from Italy, Spain, Portugal and the Netherlands or from other regions of France. Plants are sold to the final users mainly by specialised nurseries; however also by garden centres, flower shops and do-it-yourself retail outlets. Usually intermediary traders are also involved. In PACA, final customers are also supplied directly cross-border by Italian companies. The majority of the plants planted in open spaces have a limited lifespan. A large proportion of plants have to be renewed after the
first vegetation season, the average lifespan is five years; however plants can live much longer if the conditions are favourable.

5.3.5 Movement control of specified plants

71. According to a survey carried out by SRALs, at the time of the audit there were 50 nurseries, garden centres, flower shops and do-it-yourself outlets etc. in the DAs of Corsica and 98 in PACA. The audit team was informed that the vast majority of these are not typical nurseries, i.e. they do not deal with the propagation of plants. They usually market plants for planting, seeds and flowers. They buy plants from propagating nurseries in France or in other MS and keep them on their premises until they are sold to their customers. The plants, usually in pots, are sold quickly (within weeks), however some of them may remain at the premises during the entire vegetation period, or even for years.

72. DGAL stated that it interprets the provisions of Article 9 of Decision 2015/789/EU as providing the possibility to grant three different types of derogations to nurseries in the DAs. SRAL authorises the movement of host and specified plants within and outside of the DAs according to the scheme outlined in paragraphs 72-75 below. In general, the applicable derogation depends on the type of plants and the length of time they spend in the DA.

- **Derogation A** is applied to nurseries who deal with marketing of plants which are in pots or containers and the premises are not considered as growing fields (i.e. plants are not multiplied and kept on solid surface). It is granted for non-host specified plants which were in stock in the nursery at the time of demarcation;

- **Derogation B** is applied for the same type of nurseries as derogation A. It is granted for non-host specified plants, which enter the nursery from outside the DAs after demarcation and which do not spend more than one vegetation period at the premises;

- **Derogation C** is applied to nurseries which deal with host plants or propagate and/or keep stocks of specified plants at the premises, in containers or on the open field longer than one vegetation period.

73. Derogation A is granted if the nursery

- Carries out an inventory on the stocks;
- Carries out permanent insecticide treatment of the plants against insect vectors;
- Keeps a record on sales and keeps a register of observations any disease symptoms;
- Receives prior authorisation of the stocks from SRAL;
- Subscribes for the BSV and follows training on Xf organised by an expert body.

74. Derogation B is granted if the nursery

- Keeps a record on entries (date, supplier, quantities) per plant species;
- Carries out permanent insecticide treatment of the plants against insect vectors and keeps a record of the treatments;
• Keeps a record on sales (date, client, quantities) per plant species and keeps a register of observations of any disease symptoms;
• Subscribes for the BSV and follows training on Xf organised by an expert body.

75. Derogation C is granted if all the conditions listed in Article 9(2) of Decision 2015/789/EU are fulfilled. The CA noted that several nurseries had applied for this type derogation, however none of them could fulfil the conditions. In particular, the requirements relating to the 200m zone surrounding the nurseries could not be implemented. The nurseries are usually located in densely populated urban areas therefore the required inspections and insecticide treatments cannot be carried out.

76. The audit team noted that derogations A and B are not in line with provisions of Decision 2015/789/EU. However, DGAL stated that based on the French language version of the Decision, it interprets that the movement ban of Article 9 refers to plants which have been cultivated in the DAs and does not include those that are kept on premises for wholesale and retail purposes only. The CA considers that the measures, linked to derogation A and B provide the necessary guarantees of not distributing the pest through sales of planting material. The CA has also emphasised that the approach was developed based on the need to allow trade of planting material without pronounced risk while taking efforts to prevent the spread of Xf.

77. The audit team visited nurseries in the DAs in Corsica and PACA, to whom derogation B had been granted and noted:
• They keep records on entries and sales. In the case of private clients the name, address and telephone number is recorded;
• Plants are treated with pesticides at least once a month;
• They are inspected by the SRAL regularly;
• In the nursery in Corsica, host plants (Lavandula sp.) were present, although this species was not considered as a host plant at the time of the demarcation. SRAL informed the audit team that the lot was put on hold and sampled, and that destruction was planned in the case of positive results;

5.3.6 Other measures to prevent the spread of Xf

78. In Corsica the order of 25 September 2015 of the Prefect introduced the following specific measures to combat the outbreaks
• Until 30 September 2016, the propagation and planting of Pm on the territory of the island is banned;
• Owners had to declare each Pm plant to the municipal authorities by 31 October 2015, whether symptomatic or not. As a result, municipalities received 155 declarations, 89 plants were found to be symptomatic. All symptomatic plants were tested and 18 were found positive resulting in the declaration of new outbreaks;
• Pm plants may be voluntarily destroyed after the municipalities are informed.
79. Corsica only allows the entry of planting material of specified plants to the island if advance approval has been obtained, specific conditions must be met and only plants traded by professional operators are eligible (see chapter 5.1.2).

Conclusions on measures in the demarcated areas

80. The measures taken in the DAs show the commitment of the French CAs to eradicating Xf in order to protect major crops and environmentally and economically important areas. Specific efforts were made to implement appropriate measures. The demarcation of the affected areas, the eradication of infected plants and hosts (known at the time of detection) in the 100m radius and the trace back and forward of the infections was carried out in line with the provisions of Decision 2015/789/EU. However, as outbreak sites where eradication activity had been completed were not revisited after new hosts were identified, there is a risk that infected plants remain in those areas.

81. No surveys were carried out in 2015 in the BZs in PACA. In Corsica the intensity of the surveys in the BZs is lower than that required by Article 6(7) of Decision 2015/789/EU. As a result there is no comprehensive information available about the infection status of the BZs.

82. The sampling and testing practice within a radius of 100m around the infected plants is not in line with the provisions of Article 6(3) of Decision 2015/789/EU. Therefore, the real extent of the spread of infection is not known in each outbreak site.

83. Nurseries located in DAs are allowed to move non-host specified plants outside their DA without fulfilling all requirements of Article 9(2) of Decision 2015/789/EU. It creates a potentially high risk as the plants spend time in the nursery, surrounded by potentially infected plants without any protection against transmission by vectors.

84. The risk of non-compliance is mitigated to some extent by the fact that all outbreaks of Xf have been recorded in areas with no large-scale production of plants for planting of the major hosts (i.e. they there were outbreaks are either in suburban areas or on an isolated island predominated by natural vegetation). In continental France only Pm has been found to be infected and the nursery stocks of Pm are mainly imported from EU MS and presumed to be planted mainly within and in the proximity of the DAs after they are moved from the nursery (Nice is bordered by mountains and Corsica by the sea).

85. The eradication efforts are compromised by the level of spread and the number of outbreaks, particularly in Corsica. This is compounded by the multitude of identified and possible host plants, the limited accessibility of private and natural areas for surveillance purposes (in and outside the buffer zones) and by uncertainties on the vectors and the source of the outbreaks.
5.4 LABORATORIES AND TESTING FOR XYLELLA FASTIDIOSA

Legal requirements

Articles 3, 4, 6 and 8 of Decision 2015/789/EU require *inter alia* laboratory test of plant samples for the detection of the presence of *Xf*.

Findings

5.4.1 National Reference Laboratory

86. France uses exclusively molecular (polymerase chain reaction - PCR) methods for the analysis of official samples for the presence of *Xf*. ANSES-LSV is the NRL for *Xf*. Since the first detection of the pathogen in coffee plants in France in 2012, it has been involved in development and verification of the test methods. In the period 2012-2014 it optimised, evaluated and validated molecular methods for *Xf* detection in different host plants.

87. The NRL elaborated a detailed test protocol. For the analysis petioles of the plants are used and the presence of *Xf* at species level is detected with real time polymerase chain reaction (PCR). According to the NRL the level of detection varies between $10^2$ and $10^5$ bacterium/ml, depending on the plant species.

88. Until October 2015 the NRL was the only laboratory, which carried out *Xf* tests in France. At the time of the audit the NRL was responsible for the development and validation of the *Xf* test method, for the coordination and supervision of the activity of the approved laboratories and for the validation of positive and undetermined test results obtained by the approved laboratories, including the identification of the subspecies and strain of the bacterium. In 2015 the NRL carried out analysis of over 4,000 samples for *Xf*.

89. The NRL identifies the subspecies and the strain in positive samples with PCR and/or with number sequence analysis.

90. The NRL detected in plant samples from Corsica and PACA only *Xf* subsp. *multiplex*. Based on entire genome sequencing two distinct isolates have been identified, both have been found in Corsica and PACA. Therefore it is considered that there were at least two different introductions of the bacterium to Corsica and/or to PACA.

91. The Surveillance Coordination and Support unit of ANSES established a central database, which contains information about the test *Xf* results of the NRL and the approved laboratories, including the status of sample, test results, host plant, GPS coordinates and prepares weekly report about the testing activity for DGAL.

92. The FVO team visited the NRL and noted that it is accredited according to ISO 17025, has excellent facilities and equipment and staff with high level general and *Xf* related analytical experience.
5.4.2 Laboratories involved in official testing for Xf

93. In order to strengthen the official test capacity DGAL issued in May 2015 a service note for the state owned departmental laboratories to express interest in Xf analysis. Twelve laboratories applied. ANSES assessed the equipment, the relevant skill and knowledge of the staff and the analytical capacities of the applicants. Five laboratories were selected for training and then each of them completed proficiency tests for Xf analysis successfully. In November, DGAL authorised these 5 laboratories for testing official plant samples for Xf.

<table>
<thead>
<tr>
<th>Approved laboratory</th>
<th>Analytical capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Laboratory 76, Chemin boudo CS 50013 31140 Launaguet</td>
<td>400 samples per month</td>
</tr>
<tr>
<td>Zoopôle labocea Ploufragan, 7 rue du hoof CS 30054 22440 Ploufragan</td>
<td>1000 samples or 125 per month between March and October</td>
</tr>
<tr>
<td>Departmental laboratory analyses 29 Rue Joliot Curie 13013 Marseille</td>
<td>500 per month</td>
</tr>
<tr>
<td>Departmental laboratory analysis 2 Place of the slaughterhouse 67200 Strasbourg</td>
<td>150 samples per month</td>
</tr>
<tr>
<td>Departmental laboratory analyses 71 267 rue des Epinoches 71009 Mâcon Cedex</td>
<td>Extraction: 200 samples per day; Real time PCR 200-400 per day.</td>
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94. In the period of 5 November 2015 – 5 February 2016 the approved laboratories tested 1,834 samples. The audit team was informed that, if necessary, their capacities can be increased or additional departmental laboratories may be approved.

95. For quality check purposes during the first three months after the approval the NRL duplicates some of their analyses. Each approved laboratory is obliged to send to ANSES-LSV monthly 30 negative samples for re-testing, including the plants, the macerate and the DNA extract. The repetition of the proficiency tests is also planned in 2016.

96. For each positive and undefined test results, the NRL carries out the validation. The approved laboratories have to provide the plant samples, the macerates and the DNA extracts.

97. The audit team visited the approved departmental laboratory in Marseilles and noted that the laboratory

- has excellent facilities and equipment for handling plant samples which are potentially infected by a quarantine pest and for the satisfactory isolation of the steps of the analysis. The staff has long-term experience in analysis of plant samples with the PCR method for certain harmful viruses, bacterial and fungi;
- applies a computerised, barcode based sample registration and test result administration system;
- handles the samples in a way which excludes any possibility of contamination or spread of the harmful organism;
carries out the analysis, strictly following the methodological guidelines of ANSES-LSV.

Conclusions on laboratories

98. France uses molecular (PCR) methods for testing official samples for \(Xf\). The CAs made specific efforts to develop comprehensive test methods and to establish appropriate laboratory capacities. Approved laboratories who are supervised by the NRL carry out the tests with a validated method. Each positive or undefined sample is re-tested by the NRL for verification. The laboratories have good facilities and experienced staff. The testing system ensures the technically possible highest level of reliability.

5.5 ADDITIONAL MEASURES RELATED TO XYLELLA FASTIDIosa OUTBREAKS

Findings

5.5.1 Research and development

99. Directly after the first outbreaks of \(Xf\) in Corsica, DGAL and the French National Institute for Agricultural Research (INRA) made considerable efforts to grant additional financial sources and determine short term priorities for \(Xf\) research.

100. The following short term 2015-2017 research priorities were identified:

- Development and adaptation of molecular test methods for the identification of the potential vectors and their infection status, including the establishment of DNA barcode database and reference collections of vector species;
- Improvement of the knowledge of different isolates and \(Xf\) (sequencing, strain collection);
- Pathogenicity tests with various host plant and bacterium strain combinations;
- Development of forecast models and simulations taking into consideration factors such as climate, landscape, host plant dispersion, vector occurrence for risk assessment and for the identification of appropriate control measures.

101. The work started in 2015 with close cooperation between INRA and ANSES. A real-time PCR method is being developed and tested on 300 potential Cicadomorpha vectors, collected in Corsica and PACA, however no positive result was obtained. Pathogenicity tests started or will start soon on the local French varieties of \textit{Olea europea}, \textit{Vitis vinifera}, \textit{Nerium oleander}, \textit{Citrus clementina}, \textit{Citrus medica}, \textit{citrus maxima}, \textit{Coffee Arabica}, \textit{Malus domestica}, \textit{Pyrus communis}, \textit{Prunus armeniaca}, \textit{Prunus domestica} and \textit{Polygala myrtifolia} with strains of the four known subspecies of \(Xf\), isolated in France, Italy and in the USA. The plants were selected taking into consideration the potential economic risk of new outbreaks and spread. The NRL made efforts to improve the genome sequencing of the \(Xf\) isolates. They will start testing \textit{Myrtus communis} and \textit{Spatium junceum} seeds collected from infected plants in Corsica because
epidemiological observations cannot exclude the possibility of the transmission of the pathogen by seeds. In 2016 a national project will start for determining the dominant potential vectors in vine plantations. INRA started modelling the spread of \(X_f\) with adapted mathematical tools using the surveillance data and information about outbreak management.

102. DGAL informed the audit team that by the end of May 2016 the long term (5 years) national research priorities will be elaborated and discussed at CNOPSAV level. Efforts will be made to ring-fence additional financial sources for \(X_f\).

103. French researchers are involved in different programmes, related to \(X_f\), such as the ongoing European programme on epidemiology and integrated pest management of harmful bacteria. INRA and ANSES are involved in the development of a consortium under the Work Programme 2016-2017 of EU Horizon 2020 for \(X_f\) research. ANSES was member of the team, which prepared the Laboratory Analysis Protocol of the European and Mediterranean Plant Protection Organisation (EPPO) for \(X_f\). The protocol is going to be published in spring 2016. It is planned to strengthen the cooperation with Italian colleagues, who are involved in \(X_f\) research.

### Conclusions on additional measures

104. The short term national research priorities aim to obtain scientific evidence for the proper assessment of the risk which is related to the outbreaks of \(X_f\) subsp. \(multiplex\) in France and for the improvement of detection methods. This would enable the authorities to fine tune and optimise their eradication and surveillance effort.

### 6 Overall Conclusions

In 2015, France carried out a comprehensive and risk based \(X_f\) survey at national level and ran an intensified awareness raising campaign. The high level of alert and awareness promoted by the French authorities ensured the prompt finding and identification of the outbreaks.

Measures were implemented quickly within and outside the DAs. Additional human and financial resources were mobilised, a network for large-scale sampling and laboratory testing was established and the relevant stakeholders were sufficiently informed and involved.

The demarcation, insect vector treatment, removal and destruction of host and symptomatic plants within the 100m radius of the infected plants were carried out fully in line with the provisions of Commission Decision 2015/789/EU.

However, the intensity of the surveys carried out within the BZs is significantly lower than that required by Commission Decision 2015/789/EU. Sampling and testing of specified plants within a radius of 100m around the plants confirmed to be infected is also not in line with the
Decision. This does not allow the accurate determination of the spread of $Xf$ in the DAs. In the case of outbreaks where the eradication work was completed, the sites were not revisited to remove newly identified host plants which could be infected.

Nurseries located in DAs are allowed to move specified plants outside those areas, without fulfilling all requirements of the Decision. It increases the risk of the movement of the pathogen to new areas.

Due to the number of recent outbreaks and the size of the demarcated area the French authorities were still implementing a large part of the measures at the time of the audit.

France has taken a number of measures showing its commitment to eradicating $Xf$. However, the non-compliances detected reduce the efficiency and effectiveness of the eradication efforts. The risk of spread with human assistance is mitigated to some extent by that all outbreaks of $Xf$ to date have been recorded in areas with no large-scale production of plants for planting of the major hosts. The eradication efforts are further compromised by the high number of outbreaks and level of spread, particularly in Corsica. This is compounded by the multitude of identified host plants, the inaccessibility of risky areas and by uncertainties about hosts and the mode of transmission.

7 CLOSING MEETING

A closing meeting was held on 12 February 2016 at the headquarters of DGAL in Paris, during which the main findings and preliminary conclusions of the audit team were presented. The CA accepted the majority of the findings and preliminary conclusions and provided additional information for clarification and for justification of its position.

8 RECOMMENDATIONS

The NPPO of France is recommended to:

<table>
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<tr>
<th>No.</th>
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| 1.  | Ensure that monitoring for *Xylela fastidiosa* in the buffer zones in Corsica and PACA is implemented in line with Article 6(7) of Decision 2015/789/EU.  
   *The recommendation is based on conclusions No. 81 and 82.*  
   *Associated findings No. 64, 65 and 66.* |
| 2.  | Ensure that eradication measures are implemented following the confirmation of the presence of *Xylella fastidiosa* in line with Article 6(2) and 6(3) of Decision 2015/789/EU in particular concerning the removal of all host plants and the required testing of specified plants.  
   *The recommendation is based on conclusion No. 80.* |
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<tr>
<th>No.</th>
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<td></td>
<td>Associated findings No. 63 and 77.</td>
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| 3.  | Ensure that the movement out of a demarcated area of specified plants which have been grown for at least part of their life in that area, is only allowed when the plants have been grown in a site which meets all the requirements of Article 9(2) of Decision 2015/789/EU.  
The recommendation is based on conclusion No. 83.  
Associated findings No. 72, 73, 74, 76 and 77. |
| 4.  | Ensure that surveys in and outside the demarcated area take into consideration the presence and biology of the specified plants as required by Article 3 of Decision 2015/789/EU, in particular relating to the accessibility of hosts in private gardens and in remote areas.  
The recommendation is based on conclusion No. 58.  
Associated findings No. 50, 51 and 66. |

The competent authority's response to the recommendations can be found at:

## ANNEX 1 – LEGAL REFERENCES

<table>
<thead>
<tr>
<th>Legal Reference</th>
<th>Official Journal</th>
<th>Title</th>
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<tr>
<td>Dec. 2015/789/EU</td>
<td>OJ L 125, 21.5.2015, p. 36–53</td>
<td>Commission Implementing Decision (EU) 2015/789 of 18 May 2015 as regards measures to prevent the introduction into and the spread within the Union of Xylella fastidiosa (Wells et al.)</td>
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