

FOREST BIOSECURITY – NEXT STEPS

Purpose

1. To present the results of a scoping exercise, and to provide the Executive Board (EB) with recommendations on how to move forward a more strategic approach to Forest Biosecurity.

Background – where we are now

2. The EB agreed in February 09 (Memo 3/09) that a more strategic approach should be taken to safeguarding the health of our forests, woodlands and trees. It identified that FC currently lacks a holistic view of the extent and nature of the risk from pests and pathogens to the GB forest resource. We also lack a forward view on how this risk will change with future management decisions or environmental scenarios.

3. Biosecurity issues present a significant risk to our trees and forests, which will impact on our capacity to deliver the Country strategies and other key policies. A strategic approach is essential to reduce this risk and the resultant risk to the FC reputation.

Strategic approach – where we seek to be

4. Through development of a biosecurity strategy, the FC will have a co-ordinated and strategic approach to pest risk management and this will underpin other strategy and policy areas, such as those relating to climate change. The FC will be the definitive source of information on the current and future risks to the GB forest, woodland and tree resource from pests and pathogens. A supporting evidence base will be readily available co-ordinating pest information and risk, research findings, monitoring and surveillance information and any actions taken.

Scoping exercise

5. The key issues that have arisen from this scoping exercise are listed below. It is recommended that these form the basis for a series of work programmes required to build up the strategy. These are as follows:

- A Definition and Scope of Forest Biosecurity**
- B Legal and regulatory framework**
- C Pathways for transmission of exotic pests and pathogens**
- D Evidence base and identification of risk**
- E Research**
- F Monitoring and surveillance**
- G Intervention and Response**
- H Communication**

Each of these is discussed in greater depth in the Appendix. The scoping exercise produced the following recommendations.

Summary of recommendations

- 1. The EB agree that the objective for forest biosecurity policy is to: *Preserve the health and vitality of our forests, trees and woodlands through strategies which exclude, detect, and respond to, existing and new pests and pathogens of trees, whether of native or exotic origin.***
- 2. Build on the strategic approach from this work to contribute to the development of the UK position in relation to the EU review of the Plant Health Directive.**
- 3. Ensure that the risk to urban trees, and to forest trees through this pathway, is adequately addressed.**
- 4. Commission a report identifying pathways, associated risks and options for control measures. This work will take 6 months and be funded from within CFS.**
- 5. Commission FR to explore all current information held by the FC and how it could be made available to inform decisions. A system to make such information accessible and searchable should be considered.**
- 6. Review the research programmes in the context of the risk based approach outlined above, and balance needs with a view to taking a more co-ordinated and prioritised approach. Assess the resources required.**
- 7. Develop a more robust and co-ordinated monitoring and surveillance programme.**
- 8. Consider the need for only one robust and generic contingency plan.**
- 9. Develop a communications strategy which will give a more targeted and co-ordinated approach.**

Resource implications

6. Taking forward the recommendations from the scoping paper can be funded by currently agreed funding mechanisms. However, moving to the next phase, implementation, is likely to require greater resources and we will report back to the EB with costed options and likely outcomes.

Main recommendation:

7. The EB to accept the recommendations in this paper.

Next steps

8. Subject to EB agreement, we will set up a group with a representative from each country, CFS and FR to act as a steering group for the development of the work programmes.

Helen Sellars/Wilma Harper
April 2009

DEVELOPING A STRATEGIC APPROACH TO FOREST BIOSECURITY

A Definition and Scope of Forest Biosecurity

1. The objective of the FC biosecurity policy will be to: ***Preserve the health and vitality of our forests, trees and woodlands through strategies which exclude, detect, and respond to, existing and new pests and pathogens of trees, whether of native or exotic origin.***
2. Although the International Plant Protection Convention defines 'Pest' as: *any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products* we do not propose including invasive vertebrate pests or invasive higher plants (weeds) at this time. Nor is it proposed that it should cover any of the wider biosecurity threats in relation to animal or human health. However, the inclusion of urban trees in the scope of this strategy is essential for success and is discussed further below.

Recommendation 1: The EB agree that the objective for forest biosecurity policy is to: *Preserve the health and vitality of our forests, trees and woodlands through strategies which exclude, detect, and respond to, existing and new pests and pathogens of trees, whether of native or exotic origin.*

B Legal and regulatory framework

3. The Plant Health (Forestry) Order 2005, and the EU Plant Health Directive 2000/29/EC on which it is based, exist primarily to prohibit the landing of specified tree pests, specified trees and 'relevant material' (defined as trees, wood and bark, soil or growing medium). We are also bound by the World Trade Organisation agreement. In that context we must balance any measures to reduce risk against any barriers to free trade.
4. Priority setting of the most important exotic pests is currently done at EU level by listing pests of quarantine importance. It can take some time for a new species to be included in the EU list and therefore into the Directive, but individual countries have powers to enforce emergency measures where necessary as, for example, has been done by the FC against Oak Processionary Moth.
5. At national level, the FC focuses on a subset of these pest species that are of particular relevance to GB forest interests (approximately 80 species of which a third could potentially be of high risk). These species are banned from introduction into EU Member States and actions must be taken to ensure their interception and destruction if found. Importation of certain plants and plant products likely to harbour unwanted pests and diseases is also banned.

Limitations

Which pests are covered by the regulations

6. The statutory framework does not adequately address those species which only show themselves as a pest after they have been introduced to a new environment. Recent work from FR on the effects of climate change on insect pests and pathogens identified approximately 50 species likely to cause increased levels of damage under climate change scenarios although this could be much higher. A high proportion of these have the potential to significantly damage trees and woodlands. Similarly, some consideration should also be given to native or established pests and pathogens already present in GB, which could increase in range or virulence under present and future climates. The emphasis on named pests in the regulations makes it more difficult to deal with these emerging problems.

7. A review of the Plant Health Directive is currently underway at EU level to which the Plant Health Service is contributing. This may provide an opportunity to address these issues.

Recommendation 2: Build on the strategic approach from this work to contribute to the development of the UK position in relation to the EU review of the Plant Health Directive.

The FC remit

8. Presently the Forestry Commission has responsibility for 'forest trees' as conferred by the Plant Health Act. However, this is not adequately defined and there is a lack of clarity for where the responsibility lies for 'non-forest' trees in both urban and rural environments. The FC Plant Health Service already carry out some work in this area in relation, for example, to horse chestnut bleeding canker, but do not have a clear remit to do so.

9. Urban trees represent a high-risk pathway for the entry of pests and diseases into GB and a more co-ordinated approach is essential for the success of a biosecurity strategy. We would seek to clarify where the responsibility lies with other departments. This could involve an agreement with the relevant parties and exploration of the practicality of amending legislation. It would also need to define the resource required to adequately address this threat.

Recommendation 3: Ensure that the risk to urban trees, and to forest trees through this pathway, is adequately addressed.

C Pathways for transmission of exotic pests and pathogens

10. An alternative to applying quarantine measures against known and listed pests is to regulate the pathways by which exotic pests can invade GB. The advantage is that this approach would be effective against both known (i.e. listed) and unknown pests. This recognition of the range of pathways by which

pests can be moved between regions and countries, and setting up barriers to eliminate or reduce the risks of carriage, is the critical element of any biosecurity strategy. Barriers can be focussed at three points for a given pathway: at source (i.e. pre-export treatment), at the border and at final destination.

11. For example, the importation of wood products such as Wood Packaging Material (WPM) is known to be a high-risk pathway. Approximately 85% of our non-wood imports are accompanied by WPM and currently <0.5% are inspected on arrival. International regulations require exporters to treat any WPM before it is exported under the International Standards for Phytosanitary Measures (ISPM) No 15¹. If treatment is consistently applied and effective, this should considerably reduce and in theory eliminate all risk. Since the implementation of ISPM15 there has been considerable improvement. However evidence has shown this is not always the case, i.e. Asian longhorn beetle has been discovered in consignments from China. One option is increased inspection of containers holding WPM. Further investigation would be necessary to assess whether effort should be directed at further controls on this pathway or whether there are higher priorities elsewhere.

12. The importation of 'plants for planting' is now recognised as the main pathway for the movement of pests and pathogens into GB. Under informal arrangements, inspections of all 'plants for planting', including forest trees, are carried out by the Plant Health & Seeds Inspectorate of FERA, (the Food and Environment Research Agency) in England and Wales, and SGRPID (Scottish Government Rural Payments and Inspections Directorate) has the same role in Scotland. This is to ensure joined-up government and reduce overall cost of compliance for the plant nurseries in line with Better Regulation initiatives. There may be possibilities for the FC to increase involvement to improve inspections. Another school of thought suggests that the only way we will really reduce risk in this area is by reducing import volumes of plants for planting and anything else is simply delaying the inevitable!

13. Importation of trees and shrubs for planting in the urban environment constitutes another important part within the 'plants for planting' pathway. The huge biological diversity of ornamental tree species introduced for gardens (the Eden project) and landscapes (the upcoming Olympics) contributes significantly to the diversity of pests that could establish in GB. Many of these have not previously been identified as quarantine pests and have not been listed in the Plant Health Directive. Frequently they spread extensively before they are recognised as being considered significant – e.g. horse chestnut bleeding canker.

14. Some examples of other risk pathways include movement of, air-freight, passengers, sea containers, international mail and imported vehicles and machinery. Further work is required to identify the main risk pathways and how they might be better managed to reduce the risk to a level which we deem acceptable at an appropriate cost.

¹ ISPM 15: Guidelines for regulating wood packaging material in international trade

Recommendation 4: Commission a report identifying pathways, associated risks and options for control measures. This work will take 6 months and be funded from within CFS.

D Evidence base and identification of risk

15. Initial studies as part of this scoping exercise and FR work have both indicated that the risk to the health of our trees posed by known pest species (both present and not present) is likely to increase. It should be assumed that the risks from unknown threats will also increase. Further work to build up the evidence base and quantify the risk will enable forest managers to make more informed management decisions.

16. Currently information on the distribution and impact of pests and pathogens is rather disparate. The Pest and Disease Advisory service in FR has the main oversight and builds a record of advisory requests in an Oracle database, but there is no central depository for all information relating to pests and pathogens. Further investigation is required to define the scope, format and relationship to other information sources in the UK and other countries. Potentially this information could be accessible to the general public, forest managers, FERA, the plant health service and FR. Specification development is required on the format this should take and the potential cost and benefits.

17. Economic analysis of the costs and benefits is obviously highly desirable. However this can be extremely problematic due to the lack of information and the high degree of uncertainty regarding likely impacts. A more co-ordinated approach to the evidence base would go some way to improving this.

Recommendation 5: Commission FR to explore all current information held by the FC and how it could be made available to inform decisions. A system to make such information accessible and searchable should be considered.

E Research

18. The current CFS spend on plant health research with FR in 2009/10 is £1.415m (NB – this excludes research on *Phytophthora ramorum* and *P. kernoviae* in England and Wales). Current research has dealt with individual organisms and has tended to be responsive. There is a need to organise the research in a more strategic way and also to build policy and research links. The new Centre for Forestry and Climate Change in FR will go some way to achieving this aim with the incorporation of all plant health programmes within its remit.

19. As shown from the recent Forest Biosecurity conference in New Zealand, there is a huge amount of biosecurity related work being carried out in other countries. There is a need to build on the existing co-operation in Europe and other countries to increase the flow of information and interaction, which would assist in addressing some of the emerging issues.

Recommendation 6: Review the research programmes in the context of the risk based approach outlined above, and balance needs with a view to taking a more co-ordinated and prioritised approach. Assess the resources required.

F Monitoring and surveillance

20. The current level of monitoring and surveillance to detect entry of exotic invasive pests or for spread of pests that are already present is low. FR runs a Pest and Disease Advisory Service that collates data on advisory calls from woodland owners and managers/Local Authorities/the general public/foresters/ arboriculturists, but this is a responsive rather than a purposeful process for capturing data. Currently the Plant Health Service carries out protected zone surveys for a few absent listed species, as well as surveys required by various European Commission decisions prescribing emergency measures, e.g. pine wood nematode.

21. For FC forests, there are requirements in OGB2 for the reporting of any pests and pathogens however the quality and consistency of the data collation is thought to be mixed and there is no central depository. OGB2 originated from the first UKWAS audit and further audits could assess the effectiveness of the implementation. OGB2 should be revisited as part of this work. It should be re-enforced as a surveillance tool and strengthened. Training courses based on OGB2 could be developed and there should be a requirement for all (especially silvicultural) training courses to include biosecurity awareness training.

22. There is some recording of forest crown condition in the National Forest Inventory (NFI) and a new Integrated Forest Monitoring programme (FR) is due to start this year. There could be the potential to include some Plant Health monitoring into the NFI and some scope for further alignment with the Integrated Forest Monitoring programme. This would strengthen the current level of monitoring significantly.

23. Further possibilities to strengthen our monitoring and surveillance by targeting locations at greater risk of new pest incursion or establishment such as airports, ports, transitional facilitates, military bases, and even first night campsites for international visitors, could be a more efficient method. This high-risk site surveillance would target high-risk pathways and associated risk sites.

Recommendation 7: Develop a more robust and co-ordinated monitoring and surveillance programme.

G Intervention and Response

24. Once a more effective monitoring and surveillance strategy is in place, there will be clearer identification of opportunities for intervention. This would form a more robust basis for decisions as biological; chemical and/or management interventions that could be used to eradicate identified pests. Economic analysis should be carried out prior to any intervention although for new outbreaks the necessary information is often lacking.

25. There is also a need to take action to minimise threats more quickly than at present. Along with the £150k contingency fund (CFS) there needs to be a mechanism in the research purchasing process to allow responsiveness to new threats through immediate research effort.

26. The Plant Health Service has developed both generic and pest specific contingency plans to provide a framework for action should emergency action be required. This plan: identifies key responsibilities; establishes key inter-relationships and communication channels; establishes a mechanism for assessing risk, and the cost/benefit of control or eradication; identifies sources of science advice; identifies sources of reliable short term funding mechanisms and identifies potential key service providers.

27. The updated contingency plan/s must form an integral part of the strategy. However, experience shows that it is the generic contingency plan which has been used most regularly. Therefore in many cases a generic contingency approach may be an adequate starting point.

Recommendation 8: Consider the need for only one robust and generic contingency plan.

H Communication

28. Currently, the level of awareness and ownership of responsibility for protecting forest and woodland resources from pest and pathogens is poor. There is potential to reduce the risk posed by some high-risk pathways by raising awareness amongst the plant trade and other key stakeholders where the risk is greatest, and also the general public. For example, current publicity by way of posters and leaflets at ports and airports focuses on prohibited articles, mainly foodstuffs, with relatively little targeting of phytosanitary threats. This is in marked contrast to, for example, Australia and New Zealand where the Better Border Biosecurity programme has a very high and visible profile. Better targeting of visitors travelling to and from other countries could reduce the risk of passenger transportation of pests and pathogens on lorry/car wheels or in luggage. One of the strategic objectives in DEFRA's Plant Health Strategy (2005) was to develop a communications strategy for plant health issues. Dialogue with FERA and the various plant health services will be required to share knowledge and co-ordinate communication activity. There would be significant advantage to joining up with other environmental organisations to raise awareness.

29. The FC website will also be a valuable tool and should be reviewed to make sure it meets the needs of the new strategy. Some of the other work programmes will need to be completed prior to the development of a communication strategy.

Recommendation 9: Develop a communications strategy which will give a more targeted and co-ordinated approach.