Discussion Document on Strategic Issues associated with Pest Diagnosis

*Prepared by EPPO*

Background

1. In the IPPC call for topics in 2013, EPPO proposed that there should be an ISPM on *General principles for operation of laboratories*. The purpose was to identify general principles to ensure that by implementing them, test results could be accepted by importing countries with confidence as dependable and comparable.
2. In November 2013, the SC decided that there was no need for a harmonised approach to the operation of official laboratories. It was noted that some contracting parties already used existing systems for laboratory accreditation (e.g. ISO 17025). As such laboratory accreditation systems are used and these systems are controlled by national accreditation bodies, setting up an internationally harmonised system for laboratory accreditation under the IPPC could involve a duplication of resources and would therefore not be appropriate for the IPPC. In addition, the CPM has previously stated that there is no requirement to adopt ISO standards in order to implement the Convention.
3. However, there remains an issue that importing countries do not always have confidence in the methods or procedures being used by exporting countries. In such cases, it may be appropriate for countries to agree to a common approach for diagnostic methods and accreditation for their laboratories. More guidance on sample handling and pest diagnostic procedures in official laboratories may be useful for contracting parties to ensure all countries agree about the types of procedures that should be used.
4. Apart from the specific aspect of operation of laboratories, IRSS surveys have been identifying that there is a wider capacity issue associated with the ability of countries to undertake pest diagnosis. This may involve not only a lack of laboratory resources (trained lab staff and scientists, rooms, equipment, reagents) but also a lack of reliable inspections (including sampling) by independent trained inspectors. These aspects are very relevant to the issue of building and maintaining confidence between trading partners and also relate to the ability of countries to undertake core activities under the Convention.
5. CPM-9 (2014) requested that the SPG have a discussion on strategic issues associated with pest diagnosis.

Problems associated with diagnostic support

1. Results from the IRSS general survey of implementation of the Convention and ISPMs indicate that whilst countries are implementing standards directly related to imports and exports, they reported difficulties in implementating standards relating to pest status, pest risk analysis and pest management. These activities rely not just on inspection and sampling procedures but also on having adequate expertise in pest diagnosis and access to appropriate laboratory facilities. The lack of implementation of standards underpinning phytosanitary systems may undermine confidence in ability of countries to meet export requirements and set meaningful import requirements.
2. According to the results of the IRSS general survey published in January 2014 (page 3), countries are unable to update or make available pest status information due to lack of:

* well-trained scientific professionals,
* physical infrastructure,
* financial resources.

1. For diagnostic protocols (page 4) results indicated that 43% of respondents strongly implemented ISPM27, but a significant number (37.5%) were only weakly implementing this standard.
2. The results of the general survey and other IRSS surveys indicate that there may be a general problem with access to diagnostic support. This would undermine the ability of some countries to undertake surveillance, determine pest status, undertake pest risk analysis etc. This is a fundamental issue that countries should address.
3. Additionally, many regions have identified a general trend in reduced expertise in core scientific disciplines, the taxonomy of pests and classical diagnostic skills, for example see EPPO’s statement in 2004 (https://www.eppo.int/STANDARDS/position\_papers/madeira.htm).
4. There may be many reasons for the problems with pest diagnosis, for example:

* Lack of political awareness of importance of phytosanitary issues and therefore lack of priority given to phytosanitary activities
* Lack of funding for infrastructure and staff
* Lack of availability of training for staff
* Rapid turn-over of trained staff
* Focus on expertise associated with particular commodities for export and consequent lack of infrastructure for other crops/plants
* Lack of feedback from potential trading partners of problems with regulations or pest status data
* Focus on specific tests for specific pests, rather than ability to do a broad range of diagnoses
* Increased importance of molecular tests and lack of availability of such technology in all laboratories.

Activities to address the problem

1. This is not a new problem; the Capacity Development Committee identified pest diagnosis as an area requiring increased capacity. However, there are some positive aspects; the phytosanitary community has been involved in a number of initiatives relating to pest diagnosis. Examples include:

* Pests selected for the preparation of diagnostic protocols have been adopted by the CPM and reflect the most urgent priorities for countries. The process for adopting these protocols has been steamlined to speed up the development and adoption of standards.
* Diagnostic protocols adopted by the IPPC contain methods that can be used by contracting parties to identify regulated pests. As IPPC protocols have been through the standard setting process, these methods are accepted as being appropriate for diagnosis of pests nationally and in international trade.
* National and regional diagnostic protocols have been published on the phytosanitary resources pages and there is a list of experts, which should enable countries to find relevant experts.
* RPPOs are also involved in knowledge exchange and facilitating the development of expertise in diagnostics. EPPO, for example, has adopted many diagnostic protocols, created a database of diagnosticians and published a database of validation data for diagnostic methods. Conferences are also held regularly relating to pest diagnosis.
* Companies such as CABI have set up diagnostic networks to help with field diagnosis (e.g. Plantwise).
* The national reporting obligations advisory group will be addressing issues associated with pest reporting.

What could IPPC do?

1. *Consider* a CPM decision on the importance of pest diagnosis in underpinning phytosanitary activites. EPPO/EU could draft a statement that could be used to encourage contracting parties to devote appropriate resources to pest diagnostic activities.
2. *Consider* how to address pest diagnosis issues in the proposed implementation programme on surveillance.
3. *Urge* contracting parties to participate in the development of diagnostic protocols by nominating experts and reviewing drafts.
4. Endorse initiatives such as:

* Establishment of mechanisms to support developing countries to establish functioning labs with appropriate resources and staff.
* Sharing of information on pest distribution.
* Training courses for diagnosticians, including remote training courses.
* Creation of networks of diagnosticians.
* Remote identification via digital microscopy.
* Low cost rapid diagnostic methods.
* Establishment of proficiency testing arrangements with inclusion of labs run by NPPOs in developing countries.

1. *Consider* whether it would be appropriate to develop a standard on requirements for diagnostics for NPPOs.
2. *Consider again* the development of a general IPPC standard on laboratory requirements including quality assurance, taking account of possible regional Standards that may have been developed.