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**Concept of emerging pests and emergency issues - (Draft) - role of the
IPPC in relation to Plant Health emergencies and emerging pests**

Agenda item 8.8

Prepared by the CPM Bureau

I. Purpose

1. Recently, representatives of contracting parties have raised several concerns and engaged in discussions at various venues regarding the IPPC's role in relation to plant health emergencies and/or emerging pest situations faced by individual contracting parties and their regions. To date, there has been no firm or comprehensive decision by the Commission on Phytosanitary Measures (CPM) on this subject. This paper is intended to summarise recent discussions, elaborate on the potential role of the IPPC Secretariat in relation to plant health emergencies and/or emerging pests, explain limitations in the Secretariat's resources and mandate, and also to clarify the roles and responsibilities of individual contracting parties and prospective roles for regional plant protection organisations (RPPOs) within their regions and at CPM. The paper is intended to stimulate further, structured discussion on this subject at CPM-14. It also includes proposals for certain preliminary decisions for contracting parties to take at CPM-14.

II. Benefits of further, structured discussion at CPM-14

2. Further CPM discussion oriented around the determination of a clear direction on the identification and management of emerging pests and emergency plant health situations will:

- provide for the development and use of defined criteria and a transparent process for the identification of emerging pests and emergency plant health situations;

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- help with the clear identification of roles and responsibilities of the IPPC Secretariat, RPPOs and contracting parties regarding management of emerging pests and emergency plant health situations;
- enable effective allocation and use of resources, including those of the IPPC Secretariat, as appropriate, in order to assist and improve the management emerging pests and emergency plant health situations.

III. Background

3. Discussions that took place at CPM-11 and CPM-12 on emerging issues were considered further by the CPM Bureau in 2016 and the Strategic Planning Group (SPG) during its 2016 meeting. Concerns raised at CPM-13 on the fall armyworm (*Spodoptera frugiperda*) were considered by the CPM Bureau in June and October 2018, and by the SPG in October 2018. Among the outcomes of these discussions was identification of the need for clarity in regard to the role of the CPM and the IPPC Secretariat in relation to emergency plant health situations.

4. Discussion at CPM-13 and in meetings of subsequent governance bodies has included suggestions on, and considerations of, how the CPM and the Secretariat should respond to emergency and emerging pest situations, what the mandate of the IPPC is with respect to such situations, and how or whether resources could or should be made available to assist contracting parties in responding to such emergencies. In particular, there has been in-depth discussion on the role of the IPPC Secretariat and the use of its resources in such situations. It has also been felt important to define what constitutes an emergency and the role of the IPPC Secretariat in such cases.

5. At the 2018 SPG meetings, while it was again recognized that emerging pests can present a significant threat to food security, it was also reiterated that the IPPC Secretariat's funds are presently extremely limited and fully allocated, and that the FAO is positioned to allocate resources for targeted pest-related actions and activities. In this regard, an SPG participant emphasized that it is essential to obtain a full understanding of the FAO's roles and activities relating to emerging pests and how the IPPC's and FAO's complementary roles can be best supported and clarified. Equally, the need to define what constitutes an emerging pest of concern to the IPPC was stressed.

6. During their October 2018 meeting, the Bureau decided to pursue further CPM discussion on the IPPC Secretariat's role in relation to plant health emergencies and potential broader IPPC activities relating to emerging pests as one combined subject. The Bureau also indicated that first the SPG, then the Bureau, and finally, the CPM, should provide a clear position and decision on how the Secretariat could be involved in responding to emergencies. At this October Bureau meeting, members also felt that the CPM should consider both short- and long-term aspects in relation to plant health emergencies and emerging pests, as well as ensuring that any proposals or decisions are linked to the IPPC's Strategic Framework.

7. Accompanying these various discussions has been a consistent concern over the extent to which IPPC Secretariat resources are limited with respect to all purposes and activities, and recognition that this must be taken into account in considering whether or how to allocate any of these resources to activities relating to emergencies and emerging pests.

IV. Roles and responsibilities

8. In addition to damaging impacts on plant resources, crop production, forestry and food security that may be experienced by contracting parties and regions due to emergency plant health situations and emerging pests, these situations may also have a significant impact on international trade in the plants and plant products produced in affected areas. The IPPC has a fundamental role in the facilitation of

safe trade, and has recognized this in the draft revised strategic framework. As such, the potential impediments to trade related to emergency plant health situations and emerging pests provide a relevant factor in considering the broader IPPC community and IPPC Secretariat's role in relation to this subject.

9. In 2018, the Bureau reiterated the fact that the Convention places an obligation on contracting parties to coordinate and cooperate with each other to deal with the spread of pests, if necessary, and also to share information in this regard^[1]. During the 2018 SPG, it was noted by participants that, despite the IPPC obligations, as fall armyworm initially began to spread no official reports were made by contracting parties, although concerns were raised during CPM-12. A participant noted that it is essential to identify what can be learned from the fall armyworm situation, including how communications occurred, and apply this to future considerations and decisions.

10. Earlier, in June 2017, the Bureau had proposed that a new arrangement for sharing information on emerging pests would be for RPPOs to have a quarterly conference call, coordinated by the Secretariat, to discuss emerging pests, to decide if they are global or regional in nature, to identify possible actions and provide recommendations to contracting parties.

V. Considerations

11. Annex I contains excerpted articles, or parts thereof, from the IPPC's New Revised Text that relate to plant health emergencies, emerging pests, and prospective responses to them..

12. It should be emphasized that the IPPC Secretariat's resources are very limited and are widely recognized by contracting parties to be insufficient to continue core work on a sustainable basis. There are, therefore, no Secretariat resources immediately available to be allocated towards assisting contracting parties with responding to emergency pest situations. Any funds allocated towards such activities would require that existing core work be delayed or discontinued.

13. During the 2018 TC-RPPO meeting, viewpoints expressed on emerging pests included that:

- the focus of the work on emerging pests should be on prevention;
- work on this subject is an important initiative that offers a platform for RPPOs to develop and test further;
- the minimum activity on something determined to be an emerging pest should be coordination;
- this subject allows for synergies to be created between RPPOs and other institutions, in particular research institutions;
- there could be differing, complementary roles for the IPPC Secretariat and RPPOs;
- the RPPOs should continue active sharing of information among themselves on emerging pests while the debate on appropriate respective roles continues;
- the subject should be on the agenda for the 2019 TC-RPPO meeting.

14. A paper on emerging pests that was prepared for the 2018 TC-RPPO meeting, and updated in light of comments made by TC-RPPO participants, is attached as Annex II. The annexed emerging pests paper should be read in conjunction with this CPM paper as it contains important context on the potential definitions of relevant terms and includes considerations relating to the scope of IPPC and RPPO work oriented towards emerging pests. Of particular note in the emerging pests paper are the comments on the co-ordination of activities, which is cited as the minimum response relating to emerging pests and which need not necessarily be led by the IPPC Secretariat.

15. Developing a definition for "emerging pest" is now on the work programme of the Technical Panel for the Glossary (TPG). During its 2018 meeting, the TPG developed a draft definition on

^[1] Articles VII and VIII of the International Plant Protection Convention

“emerging pest”, which will be presented to the SC. The TPG took into account the draft definition on “emergency plant health situation” developed by the Bureau.

VI. Activities, suggestions and proposed approaches

16. One suggestion made at the 2018 SPG meeting was to take a more ambitious view and consider re-branding the IPPC as the “World Organization for Plant Health” accompanied by the IPPC taking on a broader mandate, e.g., by taking responsibility for the specific pest activities currently served by the FAO and, of course, attracting the requisite resources. However, it was recognised that this would be a very significant change in function and role, and that the IPPC has not in its current form pursued specific pest response activities. Such a proposal would, therefore, require much more debate, analysis and consideration. If there is a desire to pursue this further, it was noted that the planned Ministerial CPM in 2020 to be held in conjunction with the expected International Year in Plant Health would present an ideal venue.

17. During 2018, the Bureau recalled that the issue of emerging pests and IPPC actions had been discussed by the Bureau in 2017 and that the TC-RPPOs was requested to develop a process for identifying and coordinating response to new and emerging pests. This work is progressing and includes defining the scope of what constitutes an emerging pest for which global action may be warranted. It should also be noted that, recently, the Technical Consultation among RPPOs has included “emerging pests” as a standing item on its annual meeting agenda.

18. In relation specifically to the fall armyworm situation, following CPM 13 it became clear that other areas in FAO were fully aware of the issue and had mobilised resources to assist regional responses. A Bureau member indicated that the IPPC Secretariat should undertake a study of which other divisions within the FAO are involved with emergency situations that could be of concern to contracting parties, but which are not necessarily fully within the mandate of the IPPC, thereby ensuring that the full range of FAO resources and activities can be communicated to contracting parties.

19. The Bureau considered that, regarding the situation surrounding the fall armyworm raised during CPM-13, the Secretariat was not equipped to respond immediately to the concerns raised by contracting parties, and the need for contracting parties to report such situations at early stages and in accordance with the Convention should be highlighted. In this regard, the Bureau felt that adding emergency and/or emerging pests as a standing CPM agenda item would be useful and important.

20. In relation to the Secretariat’s potential involvement in emergencies and emerging pests and any related use of Secretariat resources, the Bureau has indicated that it should be involved in any decision that would require the re-allocation of funds or a re-prioritization of activities that may be proposed to respond to an emergency. In such situations, an ad hoc meeting of the Bureau could take place (physically or virtually, depending on the nature of the situation) to ensure that time or funds are appropriately used.

21. With respect to international trade, the WTO is currently undertaking a project focused on the impacts of natural disasters on trade. The broad aim of the project is to understand the impact of geophysical and meteorological events on trade, and the types of trade issues that may affect disaster response, recovery and resilience (including risk prevention). The phytosanitary risks that can also arise through the provision of relief goods and replacement propagative material are also recognised. Market access restrictions on exports of plants and plant products from disaster-affected countries are also included in the project. Depending on the findings and outcomes of the WTO project, and the viewpoints of the CPM, there may be opportunities to pursue collaborative work with the WTO in advancing the debate on the subject of plant health emergencies and emerging pests and developing the IPPC’s potential role in this regard.

22. Further on this subject, as part of the 2018 Joint Call for Topics, the Task Force proposed the development of a CPM Recommendation on the topic of management of phytosanitary risk associated with natural disaster aid.

23. Clear terminology is important in advancing deliberation on this topic. During the 2018 SPG meeting, it was also reiterated that definitions of the relevant terms are required and that the process of developing definitions may in itself add clarity regarding the role of the IPPC in relation to plant health emergencies and emerging pests and ensure that any decisions taken relating to this situation will have clearer meaning and intent. In this regard, in 2016, the Bureau had recommended that a glossary definition for “emergency plant health situation” be developed, although this does not appear to have been pursued further at the time. Following discussion during CPM-13, the Standards Committee added the development of a definition for “emerging pest” to the work programme of the TPG. During its 2018 meeting, the TPG developed a draft definition on “emerging pest”, which will be presented to the SC.

VII. Proposed focal points for discussion at CPM-14

24. Based on earlier meetings of the CPM, Bureau, TC-RPPOs, and the Strategic Planning Group, the following subjects may be useful focal points for CPM-14 discussion:

- What types of emergency situations potentially warrant consideration of the use or reallocation of IPPC Secretariat resources? What should potential allocation of resources be limited to? In this regard, earlier suggestions included limiting use of the IPPC Secretariat’s resources to:
 - the mandate of the Convention and activities within the Secretariat’s available resource and technical capacity;
 - supporting or resolving an activity or system for which the IPPC Secretariat is responsible, that fails unexpectedly and could negatively impact the IPPC work programme;
 - an emergency or emerging pest situation that is causing damage to contracting parties’ plant resources or threatening their endangered areas, nationally and/or regionally, for which the IPPC Secretariat could provide a function of facilitating sharing of information or coordination of activities; and/or
 - developing and implementing a new system related to a regional emergency pest situation, if approved by the CPM, for which the IPPC Secretariat would be responsible.
- In such emergency situations, should the Secretariat convene an ad-hoc meeting of the Bureau to discuss and, if required, approve, the reallocation of funds and/or re-prioritization of activities of the Secretariat to respond to the matter? If not what governance model would be appropriate?
- Should situations outside the Secretariat’s resource capacity and the IPPC’s mandate be considered at all for reallocation of funds or re-prioritization of activities?
- Are there non-Secretariat, or collaborative, approaches that could be considered? For example, is pursuing coordination activities to assist regions in responding to emergency situations and emerging pests something that RPPOs would be best placed to lead or collaborate in? (Note, in this regard, the related provisions of Article IX of the Convention and the attached paper from the 2018 TC-RPPO meeting.)
- Similarly, what opportunities may exist for further collaboration with other international bodies, such as the FAO and the WTO?

VIII. Recommended decisions for CPM-14

25. Subject to any additional proposals for decisions that may result from plenary discussions, the CPM is invited to take the following preliminary decisions that improve the sharing of information relating to emerging pests and in so doing, help meet the requirements of Article VIII of the Convention:

- 1) *Request* that the IPPC Secretariat engage with the division(s) of the FAO responsible for emergency situations and emerging pests to clarify what type and level of support is presently available for contracting parties.
- 2) *Confirm* that updates on emerging pest situations be added to the CPM agenda as a standing item.
- 3) *Clarify*, however, that reports submitted and statements made as part of this standing CPM agenda item should:
 - be oriented towards pest outbreaks that are regional in nature or have the potential to have regional impacts;
 - identify the nature of the damage caused or expected, plant resources at risk, the endangered area(s) and other relevant potential plant health, environmental or economic consequences;
 - describe what measures if any, have been taken and what the results of these efforts have been;
 - indicate, if known, what role the FAO and any other international organizations are playing, or are planning, in relation to the outbreak;
 - clarify precisely what role the FAO, IPPC Secretariat or RPPOs could play in helping contracting parties respond to the outbreak.
- 4) *Note* that contracting parties may donate targeted extra-budgetary funds through the multi-donor trust fund to support Secretariat activities identified through this standing agenda item.

ANNEX I: Articles in the IPPC's New Revised Text relating to plant health emergencies, emerging pests, and prospective responses to them:

ARTICLE IV General provisions relating to the organizational arrangements for national plant protection

2. The responsibilities of an official national plant protection organization shall include the following:
 - b) the surveillance of growing plants, including both areas under cultivation (inter alia fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a);

ARTICLE VII Requirements in relation to imports

6. Nothing in this Article shall prevent any contracting party from taking appropriate emergency action on the detection of a pest posing a potential threat to its territories or the report of such a detection. Any such action shall be evaluated as soon as possible to ensure that its continuance is justified. The action taken shall be immediately reported to contracting parties concerned, the Secretary, and any regional plant protection organization of which the contracting party is a member.

ARTICLE VIII International cooperation

1. The contracting parties shall cooperate with one another to the fullest practicable extent in achieving the aims of this Convention, and shall in particular:
 - a) cooperate in the exchange of information on plant pests, particularly the reporting of the occurrence, outbreak or spread of pests that may be of immediate or potential danger, in accordance with such procedures as may be established by the Commission;
 - b) participate, in so far as is practicable, in any special campaigns for combatting pests that may seriously threaten crop production and need international action to meet the emergencies; and
 - c) cooperate, to the extent practicable, in providing technical and biological information necessary for pest risk analysis.
2. Each contracting party shall designate a contact point for the exchange of information connected with the implementation of this Convention

ARTICLE IX Regional plant protection organizations

2. The regional plant protection organizations shall function as the coordinating bodies in the areas covered, shall participate in various activities to achieve the objectives of this Convention and, where appropriate, shall gather and disseminate information.
3. The regional plant protection organizations shall cooperate with the Secretary in achieving the objectives of the Convention and, where appropriate, cooperate with the Secretary and the Commission in developing international standards.
4. The Secretary will convene regular Technical Consultations of representatives of regional plant protection organizations to:
 - b) encourage inter-regional cooperation in promoting harmonized phytosanitary measures for controlling pests and in preventing their spread and/or introduction.

ARTICLE XI Commission on Phytosanitary Measures

1. Contracting parties agree to establish the Commission on Phytosanitary Measures within the framework of the Food and Agriculture Organization of the United Nations (FAO).
2. The functions of the Commission shall be to promote the full implementation of the objectives of the Convention and, in particular, to:
 - a) review the state of plant protection in the world and the need for action to control the international spread of pests and their introduction into endangered areas;

ARTICLE XX Technical assistance

The contracting parties agree to promote the provision of technical assistance to contracting parties, especially those that are developing contracting parties, either bilaterally or through the appropriate international organizations, with the objective of facilitating the implementation of this Convention

ANNEX II: Emerging pests: paper prepared by the Director General of the European and Mediterranean Plant Protection Organisation and amended following 2018 TC-RPPO meeting

1. Summary

[1] There is a gap between ambitions for a world plant health organisation and the current reality of small teams working with limited resources to develop and implement international and regional standards for phytosanitary measures. The questions around emerging pests - what they are and who should be doing what about them - must be answered at a global level if we are to decide whether and how to fill that gap. This paper will suggest that:

- The CPM Bureau has previously proposed useful criteria for defining emerging pests but the interaction between these criteria needs to be further discussed to see if it is possible to identify a limited list of a few ‘priority emerging pests’ at global level;
- A pest may be an emerging pest independently of whether, where and how it is regulated;
- The remit of the IPPC, and most RPPOs and NPPOs, extends beyond regulated pests and in principle may include emerging pests which are not regulated;
- In the absence of substantial additional resources, if those bodies take responsibility for emerging pests they risk spreading their efforts too thinly and being able to do nothing well;
- Not all emerging pests can have the same priority for co-ordinated action at global or regional level
- Even with limited resources, a process analogous to a simple form of Pest Risk Analysis could be used to identify ‘priority emerging pests’, and suggest appropriate risk management actions, responsible partners for those actions and potential coordinators.
- Expert judgement will remain an important part of deciding whether a pest is likely to become an increasing problem and whether co-ordinated action against it (globally or regionally) is required.

2. Background

[2] The terms ‘emerging pest’, ‘emerging risk’ and ‘emerging pest risk’ are being used increasingly in the IPPC community. However there is no agreed-upon definition, nor a common understanding of the role with regard to such pests of the IPPC, RPPOs and NPPOs. At the 29th (2017) TC, it was agreed that NAPPO (on behalf of all RPPOs) would prepare a request to the TPG for developing a definition of ‘emerging pest’ and that RPPOs would share at the 30th TC their thoughts and experience on methods which might be used to assess whether organisms qualify as emerging pests. The IPPC Secretariat asked for a paper to be developed on the issue of emerging pests for discussion at the SPG in October 2018. The concept of ‘emerging pest risks’ also appears in the draft IPPC Strategic Framework for 2020-2030, which will be discussed at the same meeting.

3. Definitions

[3] The TPG has been asked to consider developing a definition for ‘emerging pest’ for inclusion in the Glossary of Phytosanitary Terms. Some points can be made even before there is an agreed definition.

[4] ‘Emerging’ is an inherently temporary status and logically cannot continue indefinitely. However, a pest may ‘emerge’ in a region long after it has finished ‘emerging’ in another region and has become a routine problem managed by routine controls. For example when EPPO was developing recommendations for Japanese beetle (*Popillia japonica*) to address a recent outbreak in Europe, reference was made to experience in North America nearly a hundred years previously. So, an organism may be an ‘emerging pest’ nationally, regionally or globally.

- [5] Another important point is that an emerging pest may or may not qualify as a regulated pest. The criteria are independent and have a different conceptual basis. It would therefore be possible to propose and populate a matrix as follows, with some organisms in each of the six cells:

	Quarantine Pest	RNQP	Not QP or RNQP
Emerging Pest			
Not Emerging Pest			

- [6] This could be done for any geographical area, except that in principle an organism is unlikely to be a quarantine pest in its area of origin.

- [7] In developing a paper for the 27th TC, EPPO and NAPPO concluded that the linked term ‘priority pests’ is only meaningful in relation to the resources for which such a pest has priority. Without resources there is no point in priorities. The combined term ‘priority emerging pests’ has been introduced in this paper.

- [8] The concept of ‘emerging risks’ is broader than emerging pests, and relevant in many disciplines. The European Food Safety Agency defines an ‘emerging risk’ to human, animal and/or plant health as ‘a risk resulting:

- (i) from a newly identified hazard to which significant exposure may occur or
- (ii) from an unexpected new or increased significant exposure or susceptibility to a known hazard’.

- [9] Adapting that definition to the plant health sector, EFSA have defined an ‘emerging plant health risk’ as ‘a risk resulting:

- (i) from a newly identified plant pest for which a significant probability of introduction and/or spread may occur, or
- (ii) from an unexpected new or increased significant probability of introduction and/or spread of an already known plant pest (e.g. a new or a modified pathway of introduction, a change in agriculture or forestry practice, a change in pest/disease management or the cultivation of a new crop), or
- (iii) from a new or an increased susceptibility of the host plants to a known plant pest’.

(Pautasso et al. 2015)

- [10] Thus an ‘emerging risk’ to plant health might arise from an emerging pest, a new pathway, a newly created vulnerability such as widespread planting of a susceptible cultivar, withdrawal/loss of an effective control method, or development of increased pest resistance to a control method.

4. Remit

[11] The 1951 text of the IPPC included:

Article VII INTERNATIONAL CO-OPERATION

...

a) Each contracting Government agrees to co-operate with FAO in the establishment of a world reporting service on plant diseases and pests, making full use of the facilities and services of existing organizations for this purpose, and, when this is established, to furnish to FAO periodically the following information: (i) reports on the occurrence, outbreak and spread of economically important pests and diseases of plants and plant products which may be of immediate or potential danger; (ii) information on means found to be effective in controlling the pests and diseases of plants and plant products. b) Each contracting Government shall, as far as is practicable, participate in any special campaigns for combating *particular destructive pests or diseases which may seriously threaten crop production and need international action to meet the emergencies*. (emphasis is mine here and in other extracts below)

[12] Even in 1951 the IPPC scope mentioned a ‘particular reference to pests and diseases of importance to international trade’. However changes to the IPPC in 1997, consequent on the WTO SPS Agreement, shifted the focus still further on to technical justification at a national level for phytosanitary measures applied to trade pathways. This change coincided with the allocation for the first time of significant resources to the IPPC. The 1997 IPPC still included a broader ambition to secure ‘common and effective action to prevent the spread and introduction of pests of plants and plant products, *and to promote appropriate measures for their control*’, but the IPPC Secretariat has never been resourced to fulfil that ambition.

[13] The IPPC Strategic Framework for 2012-2019 included the following paragraph:

A core contribution of the IPPC to managing these global challenges is developing and maintaining an effective and credible forum where plant protection officials can communicate, debate, and cooperate in joint actions and measures to address long term and *newly emerging global plant health issues*.

[14] On the other hand, the IPPC Secretariat Enhancement Evaluation in 2015 reported the views of the OIE (the World Organisation for Animal Health) as follows:

202. IPPC actively sought input from Codex and OIE for improving the standard setting process by involving them in the Focus Group on Improving the IPPC Standard Setting Process (July, 2011). Although OIE admires the very thorough and solid process of standard setting in IPPC, they also think it is quite rigid and time consuming, making it very difficult to quickly agree to a *harmonized response addressing an emerging plant health risk* and rapidly including latest scientific insights in the approved standards.

[15] Turning to the regional level, each RPPO has a different remit according to its constitution, but it is clear from discussions in the TC that these go well beyond assisting member countries with setting and implementing trade related measures. All RPPOs do some scanning of the horizon for new and emerging risks. EPPO’s activities in this respect, as just one example, are described in Pautasso et al. (2015). EPPO has maintained an ‘Alert List’ since 1999 to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and to achieve early warning. Organisms can be entered rapidly onto this list following analysis of new information by the Information Officer. The list is also used by EPPO to select candidates which may be submitted to a full Pest Risk Analysis (PRA). The current version of the EPPO ‘Alert List’ is at

https://www.eppo.int/ACTIVITIES/quarantine_activities.

- [16] Within the EPPO region, at about the same time as the changes to the IPPC, phytosanitary services in EU countries were adapting to the introduction of the EU Single Market. This led to a different approach to risk management with less emphasis on national PRAs and measures at borders between EU countries and more on a regionally co-ordinated management of emerging plant health risks, in many cases on the basis of EPPO PRAs and Standards. Such regional co-ordination can address all pathways, not just international trade. For example, natural spread can be restricted through containment measures in buffer zones and suppression in adjoining infested areas.
- [17] Other RPPOs, for example NAPPO, also work on co-ordinated approaches to emerging pests, such as contingency planning, factsheets, information exchange, surveillance plans, research co-ordination and workshops. Presentations from the 2017 TC with RPPO lists of emerging pests and related activities are available at <https://www.ippc.int/en/core-activities/external-cooperation/partners/technical-consultation-among-rppos/2017-29th-tc-among-rppos-1/>. *Fusarium oxysporum* Tropical Race 4 was mentioned by seven of the ten RPPOs as an emerging risk. Huanglongbing and *Tuta absoluta* were both mentioned by three RPPOs, Cassava mosaic virus, Khapra beetle, banana bunchy top and *Xylella fastidiosa* by two.

5. Resources

- [18] The CPM Bureau meeting, in June 2017, recorded that:

... in general IPPC focuses on quarantine pests and is seen as mainly standard setting organization while dealing with emerging issues or pests as a new role for IPPC would require major time investment and funding. Taking that into account, the Bureau agreed that *RPPOs should be given a major role in identifying emerging issues* from information solicited in their region, which should be coordinated at the TC-RPPOs level and then reported after their selection and prioritization to the CPM.

The Bureau decided that a new arrangement for processing emerging issues would be that RPPOs have a quarterly conference coordinated by the IPPC Secretariat to discuss emerging issues and decide if they are global or regional in nature, and to identify possible (individual or coordinated) actions and recommendations to contracting parties (establishment of surveillance, sharing of PRAs, etc.). The Secretariat will engage with the TC Chair and discuss these proposed arrangements for discussion by the SPG and TC-RPPOs at the end of October for decision at the CPM 13 (2018).

- [19] It is not clear in the first sentence of this extract whether the ‘focus’ refers to the IPPC as a document, or to the IPPC governance through which contracting parties have agreed (for good reasons) to focus resources on this aspect of the IPPC remit, partly by adopting a narrower interpretation of the term ‘phytosanitary measure’ than in Article II of the IPPC.
- [20] The RPPOs are willing within their respective remits to help identify and address the risks from emerging pests, but ‘giving [them] a major role’ does not solve the resource problem, which is a constraint also at RPPO level. The idea of some form of quarterly contact to pick up emerging pest risks is sound but requires central resourcing to drive the process, and some clarity as to how RPPOs identify emerging pest risks and how the network of IPPC, RPPOs, NPPOs and others can then respond.

6. Criteria and Assessment

[21] The Bureau meeting in June 2017 suggested that pests that:

- had made a continental jump
- have a wide host range and where hosts are widely distributed
- have large potential for damage and economic loss across continents
- [show] evidence of a shift in the risk
- have an impact on natural environment as well as on production
- have an ability for crop destruction and the ability to eliminate entire production areas.

[22] could qualify as emerging pests. The examples they proposed were *Tuta absoluta* and pine wood nematode (*Bursaphelenchus xylophilus*). It is not clear from the Bureau report how the different criteria were intended to interact. If all criteria must be met then few if any organisms would qualify. If only one of the criteria has to be satisfied there could be several hundred candidates. A decision tree or scoring matrix is needed to apply the criteria in practice to produce a manageable list of a few emerging pests at global level. The scheme on the following page is intended as an example of the sort of approach which might be tried. It is intended to supplement and support rather than to replace expert judgements on which pests are likely to pose most risk globally or regionally, and which pests might have priority for co-ordinated action against them at global or regional level. The 30th TC-RPPOs agreed that RPPOs would prepare to test this scheme with possible candidate pests at the 31st TC, but would meanwhile continue to share information on emerging pests and risks.

[23] Factors other than those identified by the Bureau could be incorporated. For example, for an organism to be a globally emerging pest, it might be considered a requirement that it poses a threat to at least two continents. At the 30th TC RPPOs it was agreed that social factors should be considered alongside economic and environmental (citing the example of the impact of *Xylella fastidiosa* in communities with a long tradition of olive cultivation). It was also agreed that a slightly adapted version might be used for assessment of emerging pests at regional level, but that because of wide variations in land area and population the threshold figures would be different for each region.

[24] A pest may be identified as a possible ‘emerging pest’ at regional or global level, for example through an RPPO Alert List. Relevant evidence may come from official reports of geographical spread or changing impact, scientific literature or press reports, or from sentinel plant networks, for example.

[25] Once identified as an ‘emerging pest’ it could be subjected to an analysis to confirm (or not) whether it is a ‘priority emerging pest’ by assessing its risks relative to other ‘emerging pests’ and to identify potential risk management options. This would not be ‘Pest Risk Analysis’ in the narrow sense of the agreed interpretation in ISPM5, but could use some of the questions posed and information gathered in the course of a PRA carried out according to ISPM11. There is a hint of this broader approach in ISPM2 which refers to ‘- hazards identified outside the scope of the IPPC and to be communicated to other authorities.’ Like a pest-specific PRA, it would be at the taxonomic level of species but could be at a higher or lower taxonomic level if justified. The process would have to be fit for purpose and proportionate to the amount of resources available against priority emerging pests.

[26] Some of the key features and sometimes differences from PRA would be:

- The analysis would be carried out at global or regional level
- The analysis would specifically compare risks to enable prioritisation between pests
- Risk management would cover not only possible phytosanitary measures (in the narrow sense) but also needs for:

- Research
- Guidance
- Communications materials
- Accessible and effective control methods
- Biological control options
- Plant breeding responses
- The analysis would identify potential partners and stakeholders for co-ordinated action against the pest and a potential co-ordinating body
- The analysis would be subject to some form of consultation

7. Co-ordination

[27] The minimum response to a priority emerging pest would be to co-ordinate the action being taken against it by different bodies and stakeholders. If there are no resources to do the co-ordination, or no resources to carry out actions to be co-ordinated, there is no point in identifying priority emerging pests. Co-ordination of action against a priority emerging pest would not necessarily be done by the IPPC Secretariat, though the IPPC Secretariat and relevant RPPOs should be involved in the network to ensure that phytosanitary aspects (in the narrow sense) are taken fully into account.

[28] Others who might carry out co-ordination could include:

- RPPOs
- NPPOs
- FAO Divisions or Regions
- CABI
- CGIAR associated institutes
- Charitable foundations
- Grower and commodity organisations

[29] Participation in the co-ordinated action could be open, with appropriate safeguards against conflicts of interest, to:

- Plant breeding companies
- Crop protection companies
- Biological control manufacturers
- Academic researchers

[30] Many of the existing mechanisms for supporting national action against regulated pests could also be relevant against priority emerging pests, for example datasheets, diagnostic protocols, workshops for sharing experience, standards for testing efficacy of controls. So although resources would be required to carry out any of these actions, it would not always be necessary to establish new mechanisms.

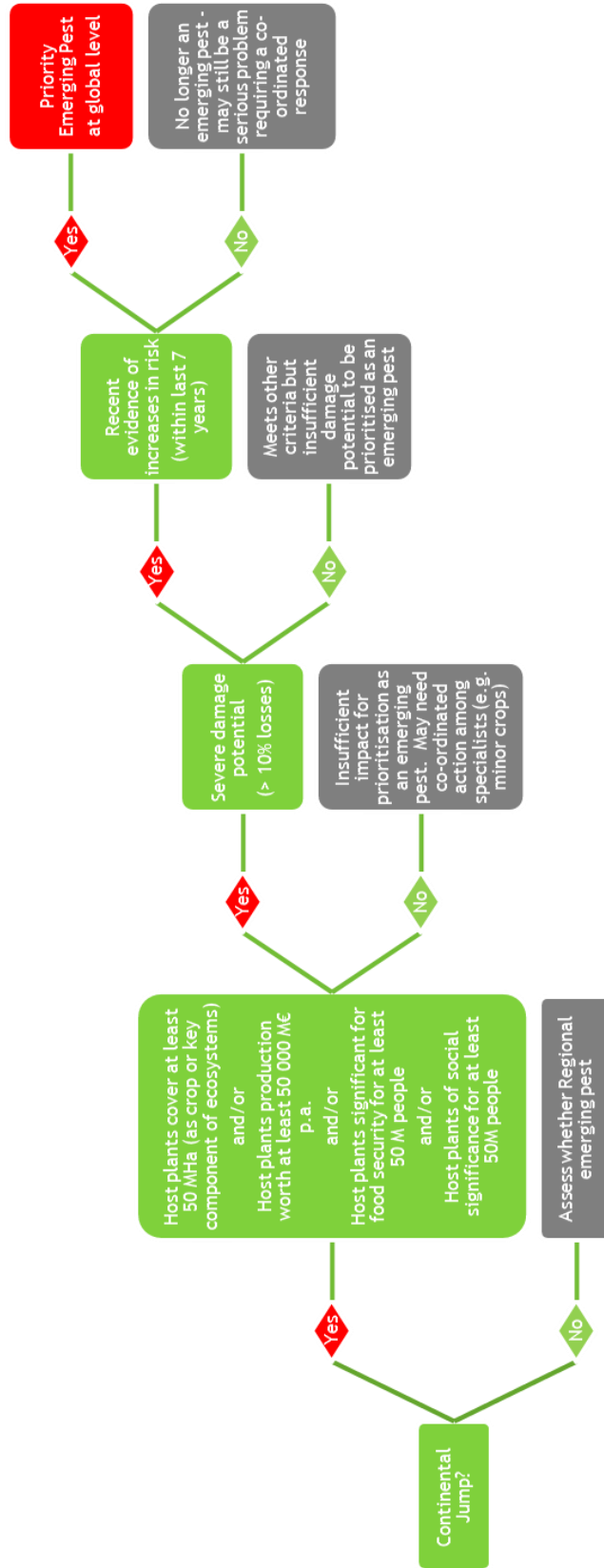
8. Conclusions

[31] It is only useful to identify emerging pests if resources are available to co-ordinate action against them globally or regionally. Pest risk analysis (in the ordinary sense of the words) could be used to assess risks and identify possible risk management options against emerging pests. Any proposed scheme for doing this could be tested against benefits which it might have achieved had it been in place to address recently emerged pests (which are still emerging in some regions) such as *Tuta absoluta*, *Halyomorpha halys*,

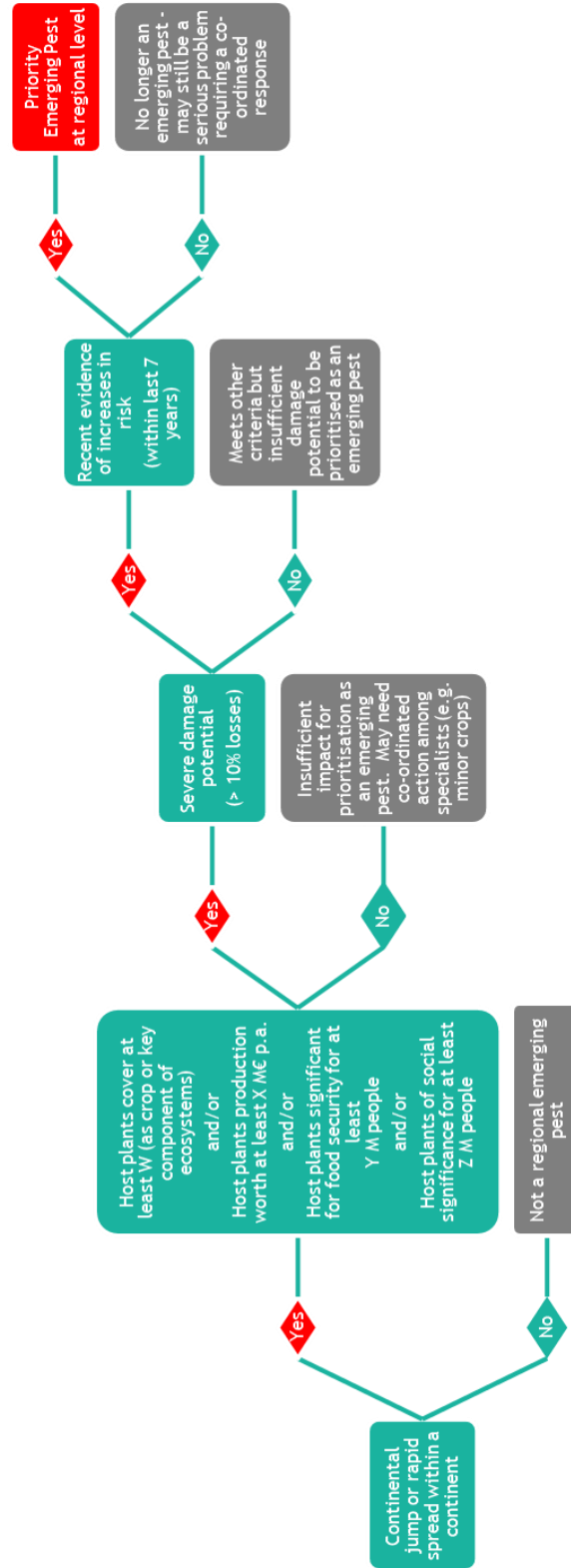
Drosophila suzukii and *Spodoptera frugiperda*. Before considering any more complex scheme of analysis for this purpose a simple decision tree has been elaborated based on the criteria identified by the Bureau. This will be tested on candidate organisms by RPPOs during the 31st TC-RPPOs.

9. Reference

Pautasso M, Petter F, Rortais A and Roy A-S (2015) Emerging risks to plant health: a European perspective
CAB Reviews 2015 10, No. 021.



A possible Decision Tree for a global "priority emerging pest"



A possible Decision Tree for a regional "priority emerging pest"