The IPPC Community and One Health

*Prepared by the IPPC Secretariat*

During CPM-15 (2021), some Contracting Parties (CPs) suggested that consideration be given to an enhanced involvement of the IPPC community in the One Health approach. It was suggested that this could start with the IPPC Secretariat having discussions with key international players in One Health , such as FAO, the World Health Organization, the World Organization for Animal Health (OIE) and the United Nations Environment Programme. CPM-15 requested that “the agenda of the next Strategic Planning Group include a discussion on the extent of the involvement of plant health in the One Health approach, and the role of plant health in biosecurity, biosafety and environmental protection, to allow a further assessment and to make an informed CPM decision on this issue”.

1. Links with the CPM Focus Group on Pest Outbreaks Alert and Response Systems

“Strengthening Pest Outbreak Alert and Response Systems” is the one of the Development Agenda items in the IPPC Strategic Framework (2020-2030). Guidance to advance this new activity was provided by a CPM Focus Group (FG) on Pest Outbreaks Alert and Response Systems[[1]](#footnote-1) composed of experts from a regional plant protection organization and from several international organizations (Center for Agriculture and Bioscience International (CABI), Food and Agriculture Organization (FAO), World Animal Health Organization (OIE), International Atomic Energy Agency (IAEA) and two networks of researchers: Centre de Coopération International en Recherche Agronomique pour le Développement (CIRAD) and International Society for Plant Pathology (ISPP)).

The FG met virtually each month since January 2021 to address the twelve tasks laid out in its Terms of Reference. Over 20 side meetings were also organized to advance the work and several sessions were organized to have other organizaitons present overviews of their existing alert and response systems. An analysis of the most renowned alert systems was undertaken and will be published in a report in early 2022. Discussion in the FG meetings provided an opportunity to liaise with One Health stakeholders from within FAO (EMPRES (dealing with transboundary animal and plant pests and diseases), animal health and emergency units) as well as external organizations such as OIE, WHO, etc..

2. New FAO Strategic Framework and the FAO One Health Technical Working Group

FAO adopted a new [Strategic Framework for 2022-2031](http://www.fao.org/3/ne577en/ne577en.pdf). “FAO's [Strategic Framework](http://www.fao.org/pwb/home/en/) articulates FAO’s vision of a sustainable and food secure world for all, in the context of the [Agenda 2030 for Sustainable Development](http://www.fao.org/sustainable-development-goals/en/). FAO's Strategic Framework seeks to support the 2030 Agenda through the transformation to MORE efficient, inclusive, resilient and sustainable agri-food systems for ***better production, better nutrition, a better environment, and a better life***, leaving no one behind” ([FAO Office of Strategy, Programme and Budget (OSP)](http://www.fao.org/about/office-strategy-planning-resources-management/strategic-framework/en/)).

The IPPC Secretariat activities have been assessed as falling under two Programme Priority Areas (PPAs), namely:

* **One Health**, the 3rd PPA under “Better Production” (BP3) which outcome statement is “Strengthened and better performing national and international integrated One Health systems for human, animal, plant and environmental health achieved through improved pest and disease prevention, early warning and management of national and global health risks, including AMR”.
* **Transparent market and trade**, the 5th PPA under “Better Nutrition” (BN5) which outcome statement is “Improved market transparency and equitable participation in markets, global value chains and international trade achieved through policy coordination and human and institutional capacities for evidence-based decision-making”.

The outcome statement for the One Health PPA is “Strengthened and better performing national and international integrated One Health systems for human, animal, plant and environmental health achieved through improved pest and disease prevention, early warning and management of national and global health risks, including AMR”. Further information on gap, outcome, SDG targets, SDG indicators, accelerators, key thematic components, normative aspects, core function strategy, trade-offs and risk mitigation are available in Appendix 1, as an extract of the FAO Director General’s Medium Term Plan 2022-2025 and Programme of Work and Budget 2022-2023.

Intersectorial working groups have been set for each PPA within FAO and IPPC Secretariat staff are participating in BP3 “One Health” and BN5 “Transparent market and trade”.

The One Health Team is in the process of drafting a road map and a SWOT analysis and meets once a month.

3. Antimicrobial resistance (AMR) and plant health

Currently the IPPC community does not have robust data on the extent and volume of antimicrobial use by the plant sector worldwide. There are regional and national differences in antibiotic recommendations, which may be due to agricultural needs, legislation, availability, cropping systems, extension services, or the nature of the pathogens that are causing problems. Some studies, however, provide an example of types of use; at least 20 countries authorize antibiotic use to control fire blight and citrus greening disease in plants. In some countries, streptomycin is authorized to control certain bacterial diseases in pip fruit, stone fruit, seedling tomatoes and kiwifruit. Kasugamycin, oxytetracycline and oxolinic acid are other antibiotics used to control plant pests ([de León et al., 2008](https://www.sciencedirect.com/science/article/pii/S0261219408000860)[[2]](#footnote-2); [Stockwell](https://www.ncbi.nlm.nih.gov/pubmed/22849276) and Duffy, 2012[[3]](#footnote-3).).

The present limited data demonstrates extreme variation between the use of antibiotics in crop production across the regions, as well as in the amounts of antibiotics used by various countries within the regions.

CPM-14 (2019)[[4]](#footnote-4) noted and conveyed appreciation for the discussion on the use of Antimicrobials and Antimicrobial Resistance in respect of plant health as an important topic to monitor. CPM-14 supported the IPPC Secretariat maintaining a watching brief on the contribution of plant health related actions on Antimicrobial Resistance (AMR), through the FAO AMR working group, subject to CPM and IPPC Secretariat priorities and resources. The CPs further suggested that a CPM Recommendation on AMR be developed in relation to plant health. Hence, CPs initiated the discussion on the effects of the use of antimicrobial products for plant health and to collect systematic data of the effects of antimicrobials used it plant health.

Recently CPM-15 (2021) requested that the agenda of the next Strategic Planning Group (October 2021) include a discussion on the extent of the involvement of plant health in the One Health approach, and the role of plant health in biosecurity, biosafety and environmental protection, to allow a further assessment and to make an informed CPM decision on this issue.

Finally, it was agreed that the IPPC Secretariat involvement in AMR should be limited to the scope of the Convention, that is supporting the prevention of the spread of the plant pests through the development of International Standards for Phytosanitary Measures (ISPMs).

*The SPG is invited to:*

1. *Note* the latest development on “One Health” within FAO and the involvement of the IPPC Secretariat;
2. *Assess* *and recommend* an informed decision on the involvement of plant health in the One Health approach to CPM-16 (2021).

Appendix 1

1. Extract of the FAO Director General’s Medium Term Plan 2022-2025 and Programme of Work and Budget 2022-2023[[5]](#footnote-5) detailing the gap, outcome, SDG targets, SDG indicators, accelerators, key thematic components, normative aspects, core function strategy, trade-offs and risk mitigation for Better Production 3 “One Health”
2. Information targeting the IPPC Secretariat or plant health is highlighted in bold.

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| **BP3 One Health** | |
| Gap | Increasing losses to production and adverse health effects caused by the spread of biological threats, including zoonotic infections of pandemic potential and antimicrobial resistance (AMR) **in the crop**, animal and aquaculture sectors. |
| Outcome | Strengthened and better performing national and international integrated One Health systems for human, animal, **plant and environmental health** achieved through improved **pest and disease prevention**, early warning and management of national and global health risks, including AMR. |
| SDG targets | 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters  3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks  15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species. |
| SDG indicators | 1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies  3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness  **15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species** [+AMR Indicator] |
| Accelerators | Technology: Accelerating uptake of technical innovations and biosecurity guidance **to curb pest and disease losses**  Innovation: Innovative, digital solutions for expansive scaling-up of engagement, addressing inequalities in health systems through an integrated  One Health approach Data: Multiple-source **surveillance information system** at the territorial level, integrated with the Hand-in-Hand Initiative geospatial platform to better target actions and support user-level decisions  Complements: Governance (institutional and political economy) analysis to improve One Health governance, global to national; improved food chain monitoring for health and safety; systems-based training and focused capacity development; enhanced science-policy interface. |
| Key thematic components | • Integrated information systems (on animal and plant pests and diseases) • One Health and biosecurity human capital and resilience building • Preventing the next pandemic through a One Health approach • Emergency operations against transboundary plant pests and animal diseases • Transforming access to biosecurity and best-practice guidance • Health systems performance in sanitary and **phytosanitary measures (SPS) standards for better trade and food security** • Antimicrobial resistance: addressing AMR in the agriculture, fisheries and environment sectors |
| Normative aspects | • Joint FAO-OIE-WHO Global Early Warning and Response System (GLEWS) for Major Animal Diseases, including Zoonoses, FAO Desert Locust Information Service (DLIS), FAO-WHO International Food Safety Authorities Network (INFOSAN) • Rotterdam Convention • **International Plant Protection Convention (IPPC)**, Codex Alimentarius (“Food Code” for food safety) • Global Action Plan on Antimicrobial Resistance, and Tripartite Zoonoses Guide • FAO-OIE Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) • FAO Good Emergency Management Practices (GEMP) |
| Core function strategy | • Data services for One Health decision-making: **global pest, disease and health data systems on animal and plant pests and diseases for epidemic management and investment decisions in national health systems** • **Norms and standards development in SPS areas, biosecurity and health security systems (with SPS performance, including plant health)** • Governance (including arrangements with the UN system, as well as non-UN partnerships) in the One Health/ecosystem services and biodiversity interface, and with FAO Members regarding measuring performance of health systems and AMR progress, and with **international conventions on plant protection (IPPC)** and food safety standards (Codex Alimentarius) • **Capacity development for One Health and biosecurity implementation, through digital tools and partnerships, with innovative extension and adult learning for national human capital development** • Policy development: implementation of the global strategies for major animal and plant pests and diseases, including Peste des Petits Ruminants (PPR), African Swine Fever (ASF), **fall armyworm**, locust management, Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs), Global Action Plan on AMR • Lead policy dialogues and processes with FAO Members and regional organizations, the private sector and civil society |
| Trade-offs | Trade-off management is central to sustainable resource utilization, and trade-offs can be expected depending on the context and target groups which are the focus of the Programme. In particular, trade-offs may occur between increasing disease intelligence and restrictions on trade for sanitary reasons; and stringency of biosecurity in international movements for trade vis-à-vis access and participation of small holders in markets; and in wildlife harvesting and health security |
| Risk/Mitigation | Risks:  1. Reduced public expenditures on prevention, due to impact of COVID-19 on budgets and priorities, may reduce manageability and increase impact of Animal and Plant Pests and Diseases (APPDs)  2. National UN system programming priorities do not include agricultural biosecurity    Mitigation:  1. Focus on an all-hazards approach within FAO programming and support resilience building and small farmer and producer level through advocacy and policy change  2. Extend the One Health approach to embrace all sectors (APPDs and AMR under biosecurity programmes) |

1. IPP Webpage on the CPM Focus Group on Strengthening Pest Outbreak Alert and Response Systems: https://www.ippc.int/en/core-activities/governance/cpm/cpm-focus-group-reports/strengthening-pest-outbreak-alert-and-response-systems/ [↑](#footnote-ref-1)
2. Comparative efficiency of chemical compounds for *in vitro* and *in vivo* activity against *Clavibacter michiganensis* subsp. *michiganensis*, the causal agent of tomato bacterial canker  [↑](#footnote-ref-2)
3. Use of antibiotics in plant agriculture, [V O Stockwell](https://pubmed.ncbi.nlm.nih.gov/?term=Stockwell+VO&cauthor_id=22849276), [B Duffy](https://pubmed.ncbi.nlm.nih.gov/?term=Duffy+B&cauthor_id=22849276)  [↑](#footnote-ref-3)
4. <https://assets.ippc.int/static/media/files/publication/en/2019/07/CPM-14_Report_withISPMs-2019-07-31.pdf> [↑](#footnote-ref-4)
5. FAO Director General’s Medium Term Plan 2022-2025 and Programme of Work and Budget 2022-2023, <http://www.fao.org/3/ne576en/ne576en.pdf> [↑](#footnote-ref-5)