



Food and Agriculture
Organization of the
United Nations



International
Plant Protection
Convention



Department
for Environment
Food & Rural Affairs

Coordinating Climate Change and Phytosanitary Issues at a Global Level

CPM Focus Group on Climate Change and Phytosanitary Issues

London, 21 – 23 September 2022

International Plant Health Conference



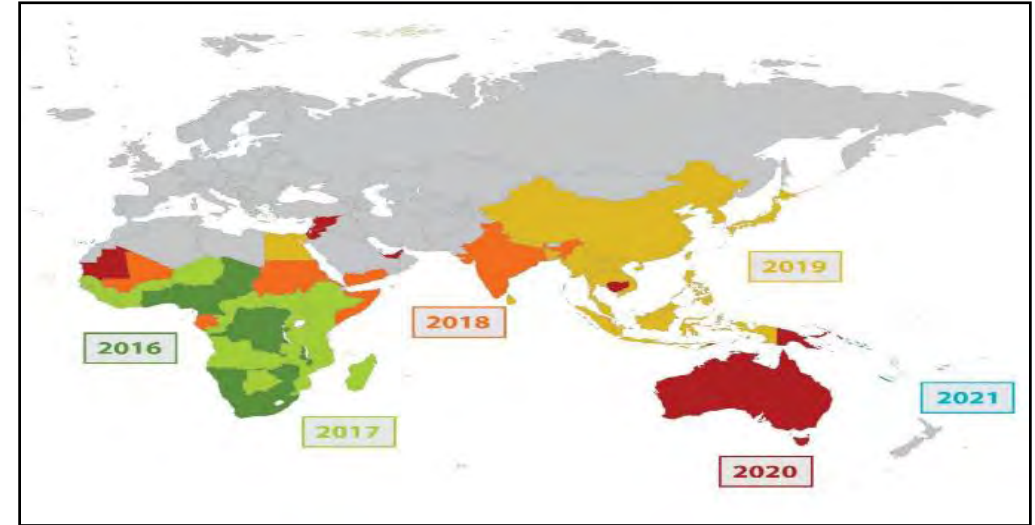
Climate Change Impacts on Plant Health 'A Global Issue'

- Available science suggests that **climate change has a significant impact on plant health**, through the actual and potential expansion of pest distribution and intensity, and changes in pest epidemiology and life cycle.
- **Mitigation of these impacts** will present a major challenge to the national, regional and international plant protection organizations.



Climate Change and Phytosanitary Issues 'A Global Opportunity'

- The International Plant Protection Convention (IPPC) Strategic Framework 2020-2030 includes the ***“Assessment and management of climate change impacts on plant health”*** as one the eight development agenda items to be addressed by the global plant health community over the current decade.
- Strategic Framework for the International Plant Protection Convention (IPPC) 2020–2030:
<https://www.fao.org/3/cb3995en/cb3995en.pdf>



IPPC Development Agenda Item Strategic Framework 2020-2023

Assessment and management of climate change impacts on plant health

GOAL

By 2030, the **impacts of climate change on plant health** and the safe trade of plants and plant products are evaluated, especially in relation to pest risk assessment and pest risk management issues, and phytosanitary issues are represented and highlighted within the international climate change debate.



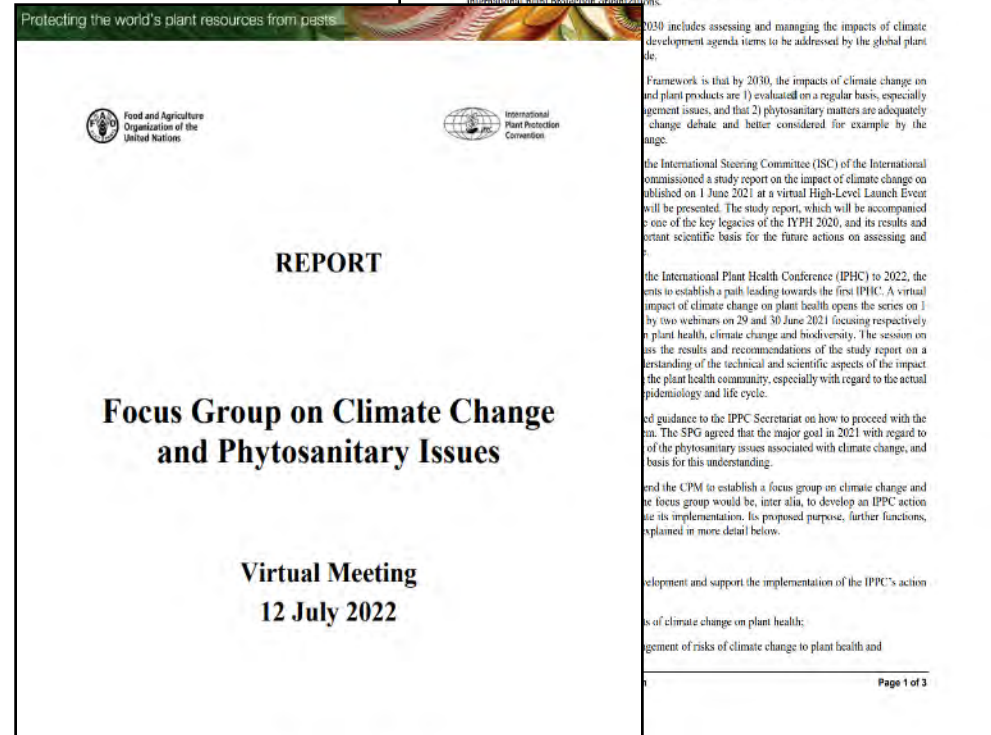
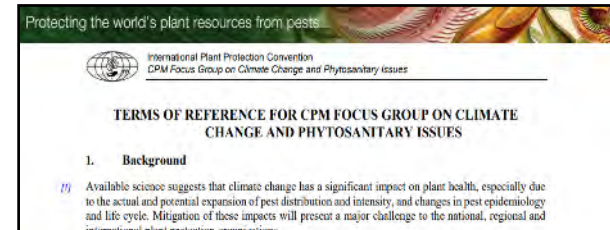
CPM Focus Group on Climate Change and Phytosanitary Issues (FG-CCPI)

- The Commission on Phytosanitary Measures (CPM) **Focus Group on Climate Change and Phytosanitary Issues (FG-CCPI)** was formally endorsed by the CPM Bureau in July 2021 and became active in September 2021.
- The primary role of the FG-CCPI will be to support the implementation and delivery of the IPPC's 'Action Plan on Climate Change Impacts on Plant Health' over the 2022-2025 period.



CPM Focus Group on Climate Change and Phytosanitary Issues (FG-CCPI)

- The Focus Group is composed of ten members with regional representation and specialized skills and experience in climate change and phytosanitary issues, and knowledge of the IPPC and its activities.
- The Focus group meets on a monthly basis to coordinate the delivery of the FG-CCPI Action Plan and develop key materials and resources to support the Action Plan.
- The Focus Group will remain effective until CPM-19 (2025), and the composition of the focus group is presented in: <https://www.ippc.int/en/publications/90486/>.



FG-CCPI Key Outcomes and Core Action Areas

Outcome 1:

Raising awareness of the impacts of climate change on plant health

Core action areas:

- Convene and participate in meetings and side events related to the impacts of climate change on plant health.
- Facilitate discussions within IPPC subsidiary bodies, regional workshops as well as other IPPC technical groups.
- Assist Contracting Parties (CPs) to meet their National Reporting Obligations (NRO) established by IPPC.

Plant health and climate change

Key messages

- Climate change weakens our ecosystems and may support pest and disease dispersal and incidence.
- Alterations in weather conditions may lead to biological changes in pests and diseases, and also impact plant physiology and structure, which may increase vulnerability of plants towards pests and diseases.
- Increased pest and disease risks, degrading ecosystems and water scarcity can affect food security and livelihoods and contribute to economic crises, forced migration and conflicts.
- Implementing international standards for phytosanitary measures helps countries to prevent the introduction and spread of harmful pests and to preserve biodiversity.
- Preserving biodiversity helps to improve plant resilience and mitigate the impact of climate change on plant health.

Climate change has an impact on pests, pathogens and plant physiology

Plants are the source of the air we breathe and most of the food we eat. The Food and Agriculture Organization of the United Nations (FAO) estimates that between 20 and 40 percent of the global crop yields are reduced each year due to the damage caused by plant pests and diseases. Global yield losses of major staple crops such as wheat, rice and maize are projected to increase by 10 to 25 percent per degree of global average surface warming. Crop losses will be most severe in areas where warming accelerates plant pest and disease population growth and their metabolic rates.

Climate change affects all four dimensions of food security: food availability, food accessibility, food utilization and food systems stability. People who are already in a vulnerable position and food insecure are likely to be the first affected by increased crop failure and new patterns of pests and diseases.

The life cycle, epidemiological characteristics and spread of plant pests and diseases are determined by climatic factors such as solar radiation, temperature and rainfall. Slow onset events such as increasing temperature are usually easier to predict than rapid onset events such as shifts in rainfall patterns. Global warming and extreme changes in weather events will likely affect the life cycle, epidemiological characteristics and spread of plant pests and diseases. Rising temperatures may for instance increase the fertility of pests, and thus accelerate their population development and

Increased carbon dioxide and ozone levels in the atmosphere and intensified rainfall may also have an impact on plant physiology and structure, which could lead to a greater plant vulnerability towards pests and diseases. Rising temperatures may cause breakdown of resistance mechanisms in plants and increase their lignification, i.e. hardening of the cell walls, which can reduce possibilities to process the plant biomass in food production. Storms and increased amount of rainfall may weaken plants and cause an increased fungal and bacterial infectivity. The increased virulence of plant diseases may enlarge the geographical range within which pests spread. In the case of droughts, stressed plants risk losing their natural ability to resist pests and diseases.

Climate change also increases the risk of pests and diseases to find favourable climate conditions in areas previously uninhabitable to them and consequently spread to these areas. Newly introduced crops may further facilitate the pest and disease distribution in such areas. The impacts of pests

and diseases may even be boosted if their interactions with prevalent hosts lack resistance mechanisms developed in their area of origin through coevolution. Increased focus on analyzing the impact of climate change when conducting pest risk analysis can therefore help to protect plant health, biodiversity and food security.

In response to the increased spread of plant pests, the global use and demand of some potentially harmful synthetic, toxic pesticides is expected to increase.

Increased plant pests may cause significant economic losses and reduce yields and the quality of the harvest, thus resulting in potentially considerable food losses. Countries should consider the implementation and enforcement of sanitary and phytosanitary measures to achieve the benefits of safe international trade in plants and plant products.

If a pest's geographical distribution is dependent on climatic conditions, it is adapted to a warm climate; rising temperatures can facilitate its dispersal to new areas.

Increased plant pests may cause significant economic losses and reduce yields and the quality of the harvest, thus resulting in potentially considerable food losses. Countries should consider the implementation and enforcement of sanitary and phytosanitary measures to achieve the benefits of safe international trade in plants and plant products.

The International Plant Protection Convention (IPPC) community's response to mitigating the impact of climate change on plant health

The IPPC Strategic Framework 2020-2030 includes assessing and managing the impact of climate change on plant health as one of the eight development agenda items that the global plant health community seeks to achieve over the current decade. In specific terms, the Strategic Framework aims at having regular assessments of the impact of climate change on plant health and the safe trade of plants and plant products, especially in relation to pest risk analysis and management issues. The other major goal is that phytosanitary issues are adequately reflected in the international climate change debates, especially under the Intergovernmental Panel on Climate Change.

The International Year of Plant Health 2020 (IYPH) aims at raising global awareness of the importance of plant health. As one of the major legacies of the Year, the IYPH International Steering Committee has commissioned a study on the impact of climate change on plant health, which is to be published on 1 June 2021. The results and recommendations of the study will provide scientific foundations for future actions on assessing and managing the impact of climate change on plant health.

EU institutions are proud to be the main sponsor of the European Year. It is a chance to raise awareness of the importance of plant health and to do not necessarily reflect the views of the European Union.



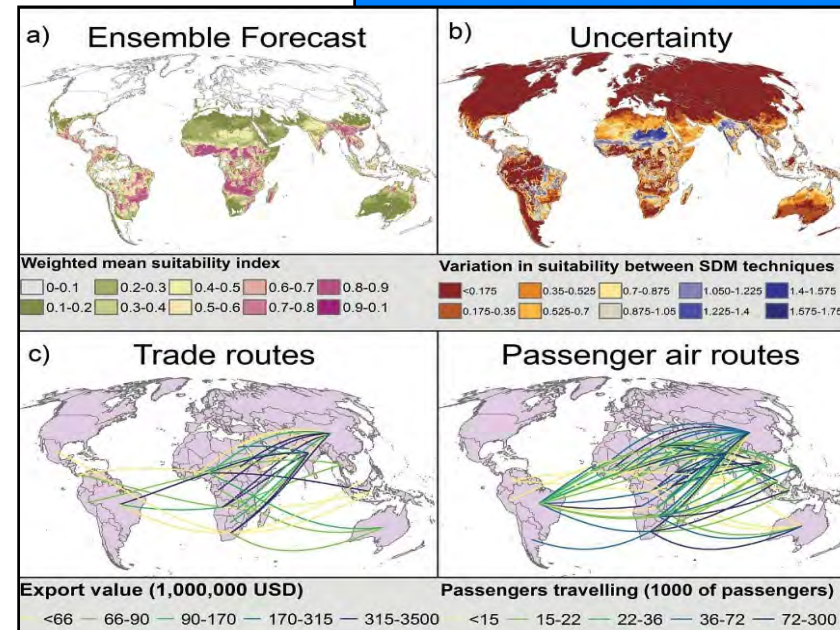
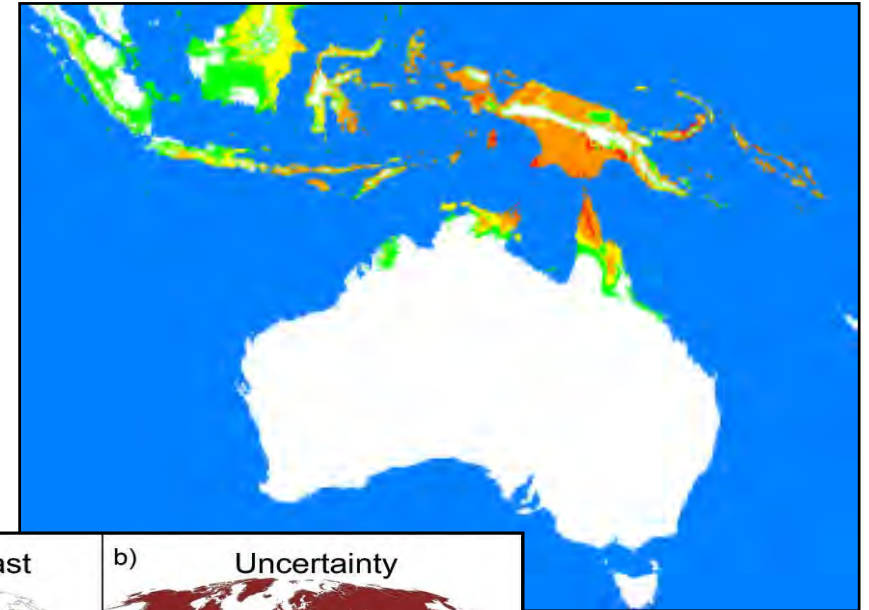
FG-CCPI Key Outcomes and Core Action Areas

Outcome 2:

Enhancing the evaluation and management of risks of climate change to plant health

Core action areas:

- Support countries to collect, analyse and use climate change impacts-related information in decision-making
- Support countries in building capacity to help mitigate the impacts of climate change on plant health



FG-CCPI Key Outcomes and Core Action Areas

Outcome 3:

Enhancing the recognition of phytosanitary matters in the international climate change debate


Core action areas:

- Strengthen collaboration with relevant international, regional and national organizations
- Facilitate, promote and support phytosanitary issues - related policy dialogue at the global level

ASEAN FAW ACTION PLAN
Supporting FAW Across Southeast Asia

RESISTANCE MANAGEMENT PROGRAMME

CLIMATE CHANGE, RESISTANCE AND TRANSBOUNDARY PLANT PESTS & DISEASES



WORKSHOPS

Join us to hear about building resilience to climate change AND plant pests and diseases as part of regional resistance management


Part 1: Climate change and transboundary plants pests and diseases in Southeast Asia with a focus on fall armyworm

August 16, 2022 | 15:00 PM to 16:30 PM SGT (GMT +8)
Dr Prassana Boddupalli (CIMMYT)
Chris Dale (Chair of the IPPC Focus Group on CC and Phytosanitary Issues)
Dr Sulav Paudel/Dr Craig Phillips (NZ AgResearch)

Part 2: The role of genomics in a changing climate

September 06, 2022 | 16:30 PM to 18:00 PM SGT (GMT +8)
Dr. Chun-Sen MA (Chinese Academy of Agricultural Sciences)
Dr. Ir. Y. Andi Trisyono (Universitas Gadjah Mada, Indonesia)
Dr Wee Tek Tay (CSIRO)

Videos and Presentations can be downloaded from:
<https://www.aseanfawaction.org/videos>
Contact: info@aseanfawaction.org



FG-CCPI Action Plan Priorities 2022-2023

1. Raising awareness of the impacts of climate change on plant health through increasing CPM wide understanding of how climate change may increase of the potential movement and spread of pests through **webinars and special sessions involving CPM, RPPOs and NPPOs.**



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PROTECTING PLANTS
PROTECTING LIFE

Protecting plant health is key to combatting climate change. Save plants, save the planet!

#PlantHealthConference

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Emerging pests

Webinar Series: Fall Armyworm, a global threat to prevent

- Q&A document
- Record
- Presentations Available on the webinar page

Webinar One - IPPC Fall Armyworm prevention programme
(Completed) (22nd October 2021)
Overview of the FAW guidelines, FAW biology, distribution and expert panel discussion. (120 attendances from Asia, Africa, Europe, and Pacific countries)

Webinar Two - FAW Prevention and Preparedness
(Completed) (19th November 2021)
Overview of FAW prevention and preparedness measures (for countries where FAW is absent), with a focus on managing and monitoring regulated and natural FAW risk pathways. (122 attendances from Asia, Africa, Europe, and Pacific countries)

Webinar Three - FAW response and communication
(Completed) (10th December 2021)
Overview of FAW emergency response, communication and engagement measures (for countries where FAW has been officially detected and confirmed) with a focus on post-detection coordination, communication and engagement. (122 attendances Asia, Africa, Europe, and Pacific countries)

[webinars/fall-armyworm-faw-training-part-1-22-october-part-2-19-november-and-part-3-10-december/](#)



FG-CCPI Action Plan Priorities 2022-2023

2. Exploring opportunities to **enhance IPPC National and Regional reporting systems to identify and share climate change information** relating to changes in pest distributions, host range, and adaptability of pests and host plants.



Pest reporting



FG-CCPI Action Plan Priorities 2022-2023

3. Developing a ‘Climate Change Impacts on Plant Health’ webpage on the IPP as a repository of all FG-CCPI related materials and resources.

The screenshot displays the FAO website interface. At the top, there are logos for the Food and Agriculture Organization of the United Nations and the International Plant Protection Convention. A search bar and navigation menu are visible. The main content area features the title "CPM Focus Group on Climate Change and Phytosanitary Issues". Below the title, there is a globe icon with arrows pointing to it, followed by text explaining the group's establishment and primary role. A call to action for a "Scientific review of the impact of climate change on plant pests" is also present. A footer note provides contact information for the page.

Food and Agriculture Organization of the United Nations

International Plant Protection Convention

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CPM Focus Group on Climate Change and Phytosanitary Issues

The Focus Group on Climate Change and Phytosanitary Issues (FG-CCPI) was established by the Commission on Phytosanitary Measures (CPM-15) in April 2021.

The primary role of the FG-CCPI is to coordinate the development of the agenda item "Assessment and management of climate change impacts on plant health" and support the implementation and delivery of an action plan over the next four years (2022-2025).

Scientific review of the impact of climate change on plant pests

This web page was last reviewed on 2022-04-28. For queries or comments regarding the contents of this page, please contact Enka.MangiliAndre@fao.org.

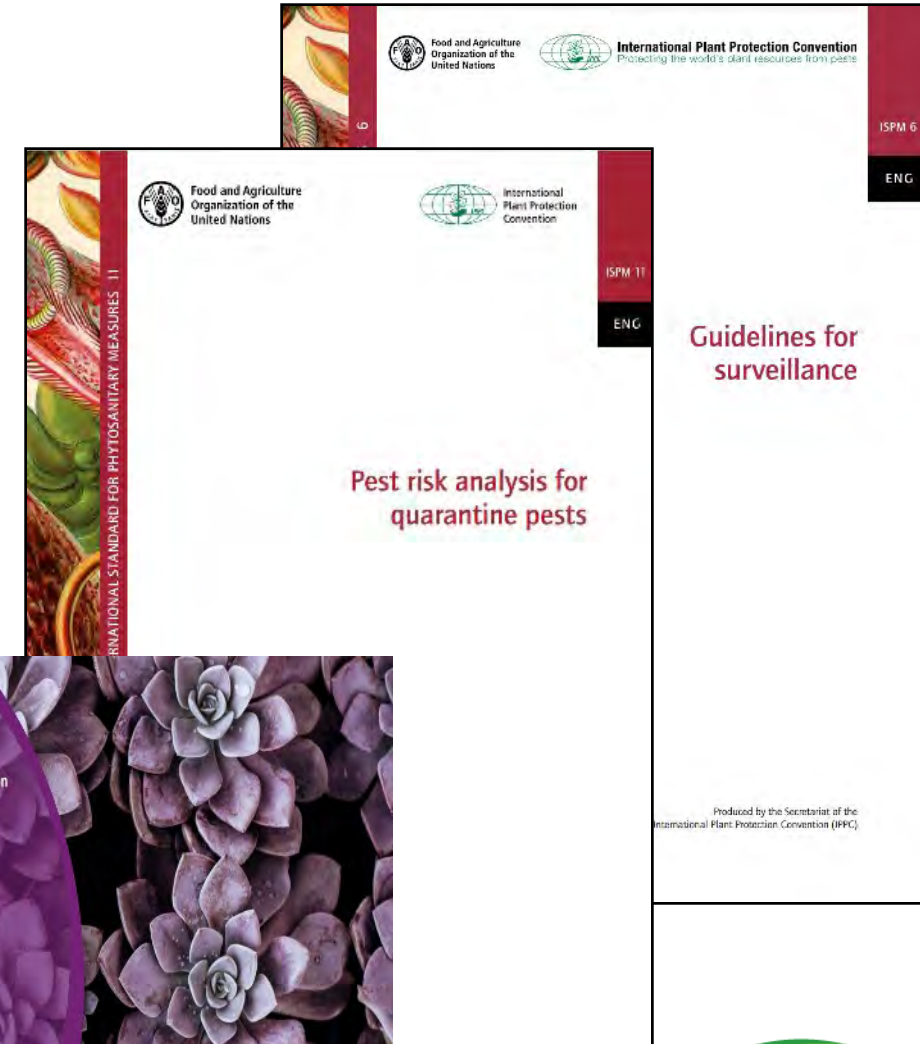
Preventing FAW introduction

- Home
- About Fall Armyworm
- FAO Global Action
- Project overview
- Outputs and Activities
- Implementation Strategy



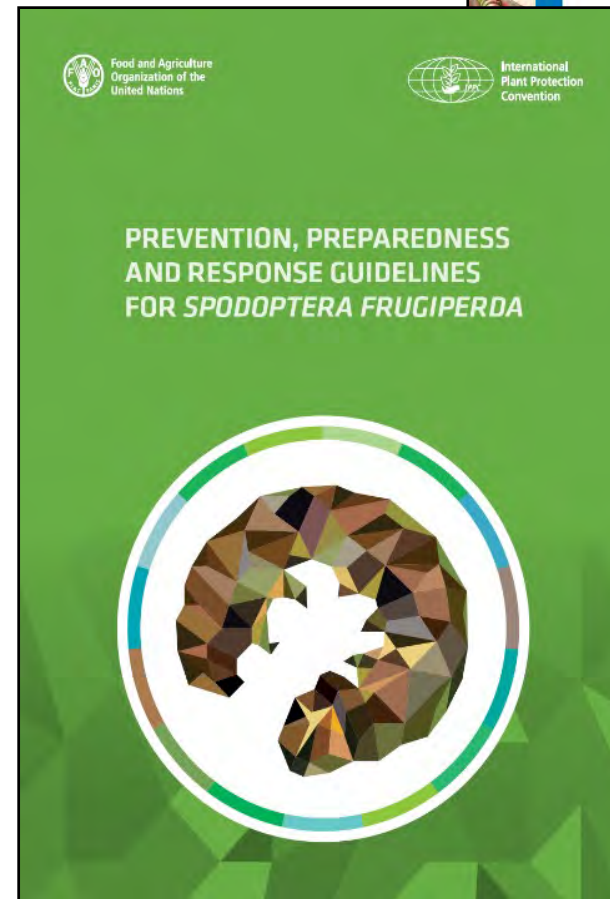
FG-CCPI Action Plan Priorities 2022-2023

4. Enhancing the evaluation and management of risks of climate change to plant health to incorporate climate change factors into the traditional Pest Risk Analysis (PRA) processes and investigating opportunities to incorporate climate change considerations in existing pest surveillance systems and practices.



FG-CCPI Action Plan Priorities 2022-2023

5. **Developing an IPPC Guide** to assist NPPOs in identifying, assessing, mitigating and managing climate change impacts on plant health.





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Thank You

Dr Gabrielle Vivien Smith
Australian Chief Plant Protection Officer

London, 21 – 23
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