



Food and Agriculture
Organization of the
United Nations



International
Plant Protection
Convention



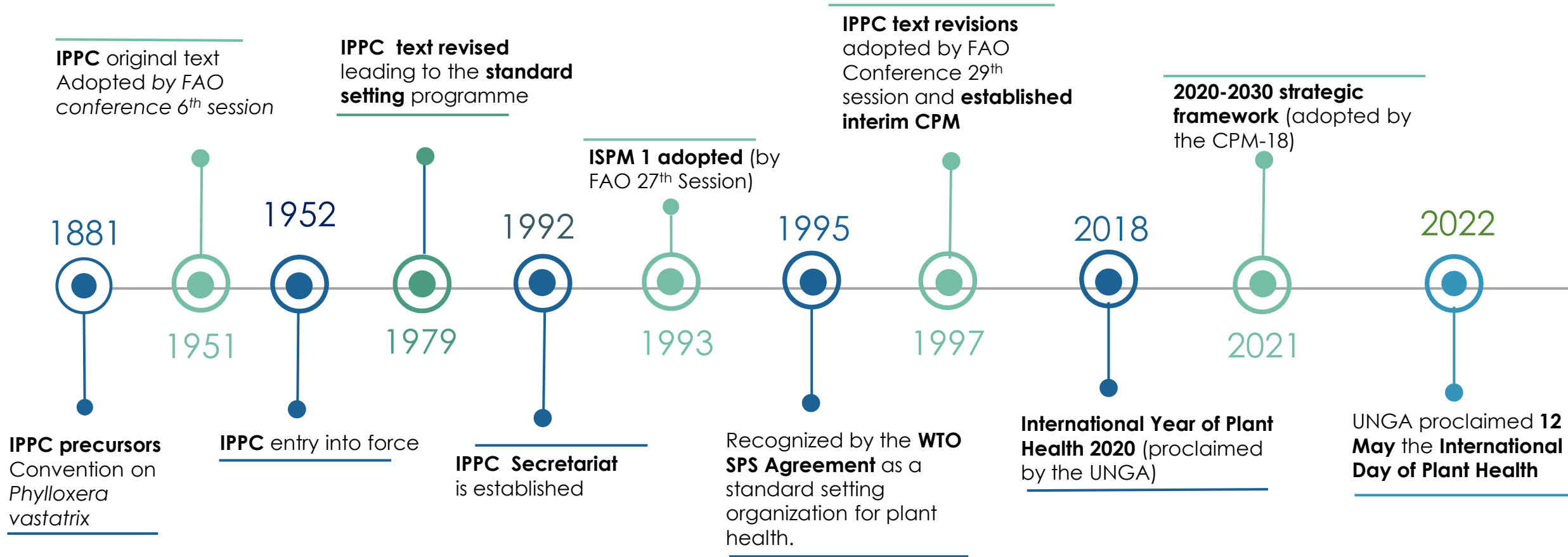
Beyond Standards: The IPPC's Approach to Strengthening Global Diagnostic Cooperation

EPPO Conference on Diagnostics 2026: Recent Developments and Future trends

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1.1 A brief history of the International Plant Protection Convention (IPPC)



1.2 Vision, mission and objectives

- **IPPC Mission:** Protect global plant resources and facilitate safe trade.
- **IPPC Vision:** The spread of plant pests is minimized and their impacts within countries are effectively managed.
- **IPPC objective:** All countries have the capacity to implement harmonized measures to reduce pest spread and minimize the impact of pests on food security, trade, economic growth, and the environment.

Strategic Objectives:



Protect the environment,
forests and biodiversity



Protect sustainable
agriculture and
enhance global food
security



Facilitate economic
and trade development



1 NO
POVERTY



2 ZERO
HUNGER



8 DECENT WORK AND
ECONOMIC GROWTH



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



15 LIFE
ON LAND



17 PARTNERSHIPS
FOR THE GOALS

1.3 Core activities



Standard Setting



Implementation and Capacity Development



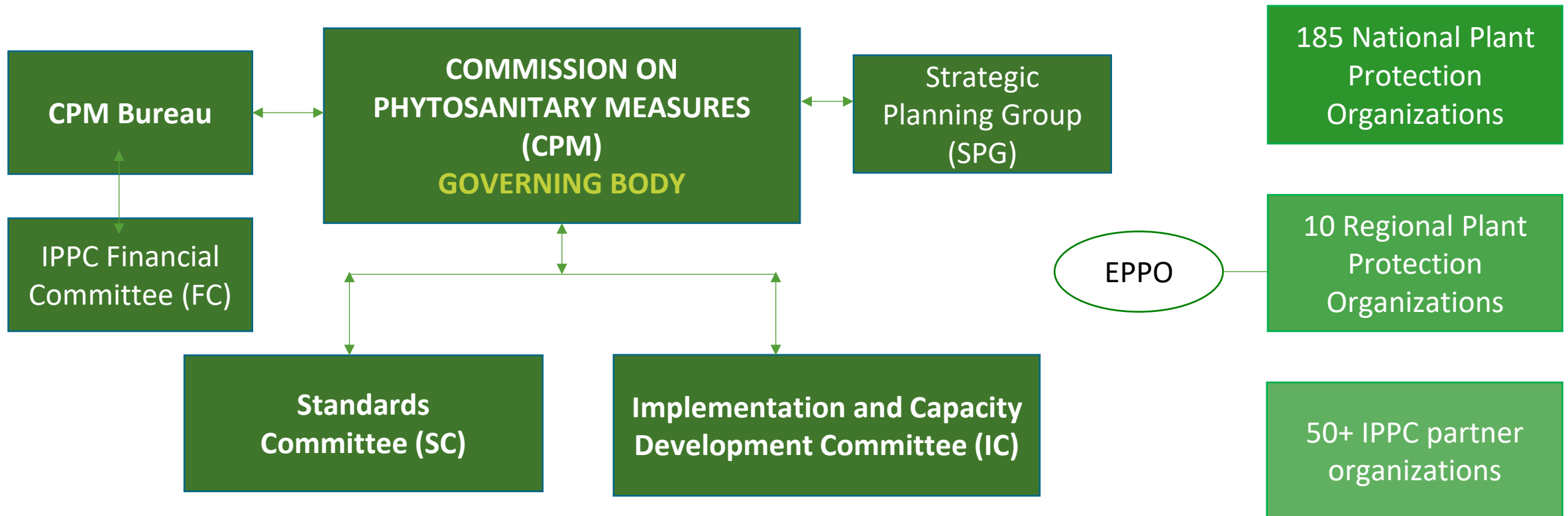
Communication and International Cooperation



Trade facilitation / IPPC ePhyto Solutions

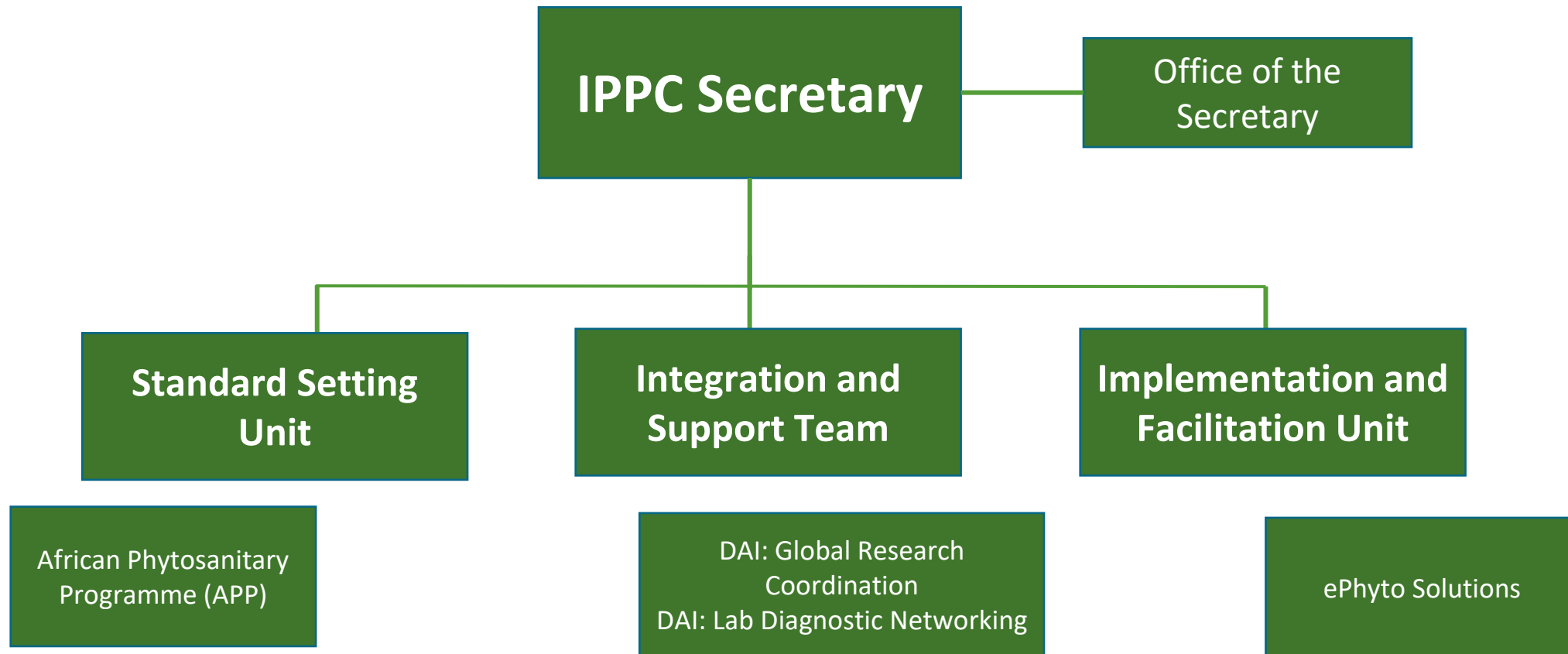


1.4 IPPC Governance





1.5 IPPC Secretariat Structure



International Plant Protection Convention (IPPC)



International treaty ratified by **185 contracting parties** to secure cooperation among nations in protecting global plant resources from the spread and introduction of plant pests.

IPPC Secretariat hosted by FAO-UN



The sole **standard setting organization** for **plant health** recognized by **WTO (in SPS Agreement)**. Also recognized as one of the **Biodiversity-Liasion Convention (BLG)** under UN and in collaboration with CBD.



The IPPC International Standards for Phytosanitary Measures (ISPMs) are global instruments to safeguard global **food security**, facilitate **safe trade** and **protect the environment**



Diagnostics as a Pillar of Global Plant Health Policy

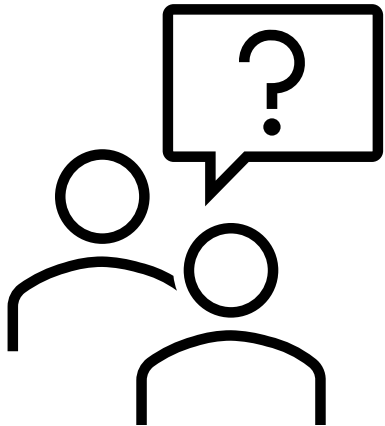


They are foundational pillars:

- deciding whether trade flows or stops,
- whether an outbreak is contained or escalates,
- whether confidence exists between trading partners.



Why plant pest diagnostics matter for trade, trust, and biosecurity?



Why diagnostics matter for trade, trust, and biosecurity?

Role in International Trade

Accurate diagnostics enable safe global trade by verifying pest-free consignments and preventing restrictions.

Protecting Food Security

Early detection of pests helps contain outbreaks and prevents long-term economic and ecological damage.

Building International Trust

Trust is built through shared standards, transparent validation, and consistent diagnostic results worldwide.

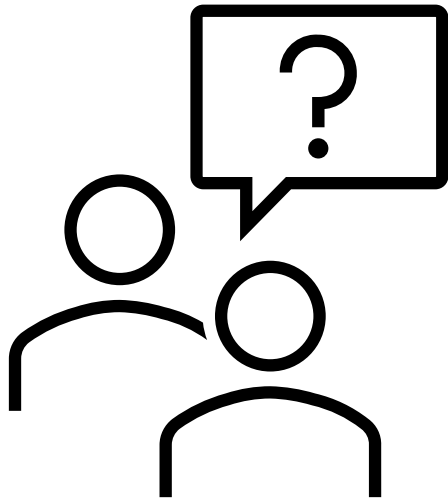
Global Cooperation Importance

Effective diagnostics rely on international cooperation, harmonization, and shared ownership to strengthen biosecurity.



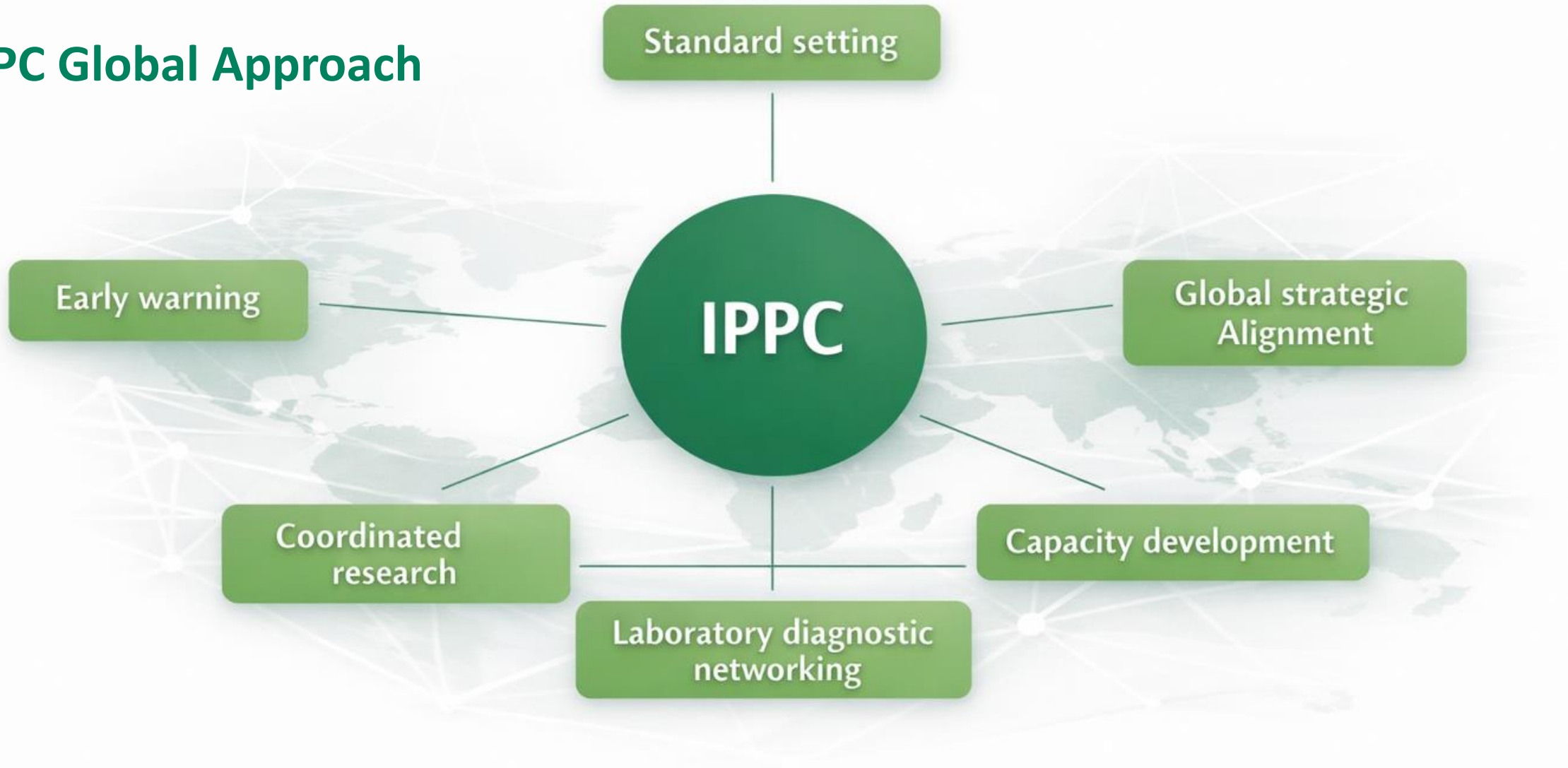


Plant pest diagnostics: what role does IPPC play?





IPPC Global Approach



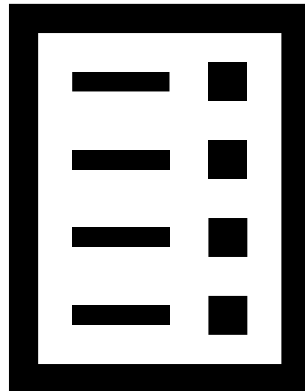


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IPPC Global Approach: Standard Setting





The IPPC standards: International Standards on Phytosanitary Measures (ISPMs)



phytosanitary certificates

pest free areas

pest surveillance

diagnostic protocols

export certification

pest reporting

audit in the phytosanitary context

phytosanitary treatments

glossary terms

commodity-specific standards

wood packaging material

pest risk analysis

international movement of wood



IPPC Diagnostic Protocols for regulated pests

What are they?

- Annexes to **ISPM 27**
- International Standards
- Not considered scientific publications

Why are they important?

- **Minimum requirements** for reliable diagnosis
- Essential for **national plant protection systems**
- Foundation for effective **pest surveillance**

How are they developed?

- Transparent, Inclusive and Participatory process
- Methods suitable across **different circumstances** – developing and developed countries
- Average development time: **3-4 years**

IPPC Technical Panel on Diagnostic Protocols (TPDP)

- **International experts**, appointed by the IPPC Standards Committee through a **Call for Experts**
- Discipline leads:
 - oversee DPs development by coordinating **drafting groups** (70+ authors worldwide)
 - ensure compliance with **IPPC requirements**
 - report to the **IPPC Secretariat**
- The TPDP meets in person **annually** to collectively review draft DPs

2025 TPDP meeting hosted by ANSES



Nematology
(1)

Mycology
(2)

Botany
(1)

Entomology
(3)

Bacteriology
(1)

Virology
(2)

How are diagnostic methods selected in IPPC Diagnostic Protocols?

According to their sensitivity, specificity and reproducibility



© FAO/Sergio Pierbattista

For **first detection**

✓ To detect a pest in an area for the first time

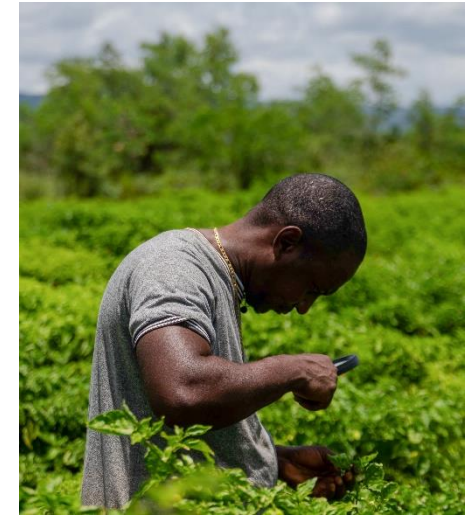
**Availability
of equipment**

For **routine diagnosis and surveillance**

✓ To detect a pest in consignments and areas

**Expertise
required**

Practicability

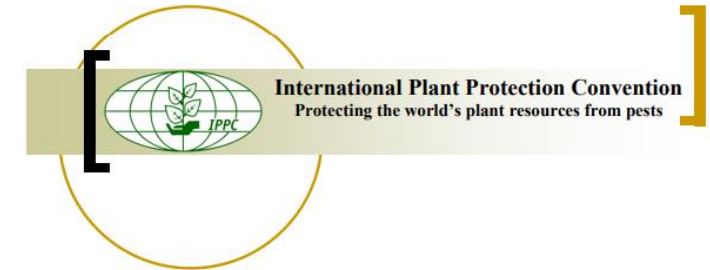


©FAO/Denni Visuals

IPPC Diagnostic Protocols: structure and content

1. Pest information – life cycle, host range, transmission
2. Taxonomic information – relevant taxonomic hierarchy
3. **Detection** – signs and symptoms, methods to detect in a commodity
4. **Identification** – methods for species identification
5. Records – records required to be kept
6. Contact points for further information – institutions and expert contact points
7. Acknowledgments – authors and contributors
8. References

Protecting the world's plant resources from pests



2019-2020 INSTRUCTIONS TO AUTHORS DIAGNOSTIC PROTOCOLS FOR REGULATED PESTS

These instructions are based on International Standard for Phytosanitary Measures ISPM 27. Diagnostic protocols for regulated pests and are compiled to provide more specific explanatory guidance for authors of diagnostic protocols.

*(Revised by the Technical Panel on Diagnostic Protocol (TPDP) in August 2019.
Edited by the IPPC Secretariat)*

IPPC Diagnostic Protocols in numbers

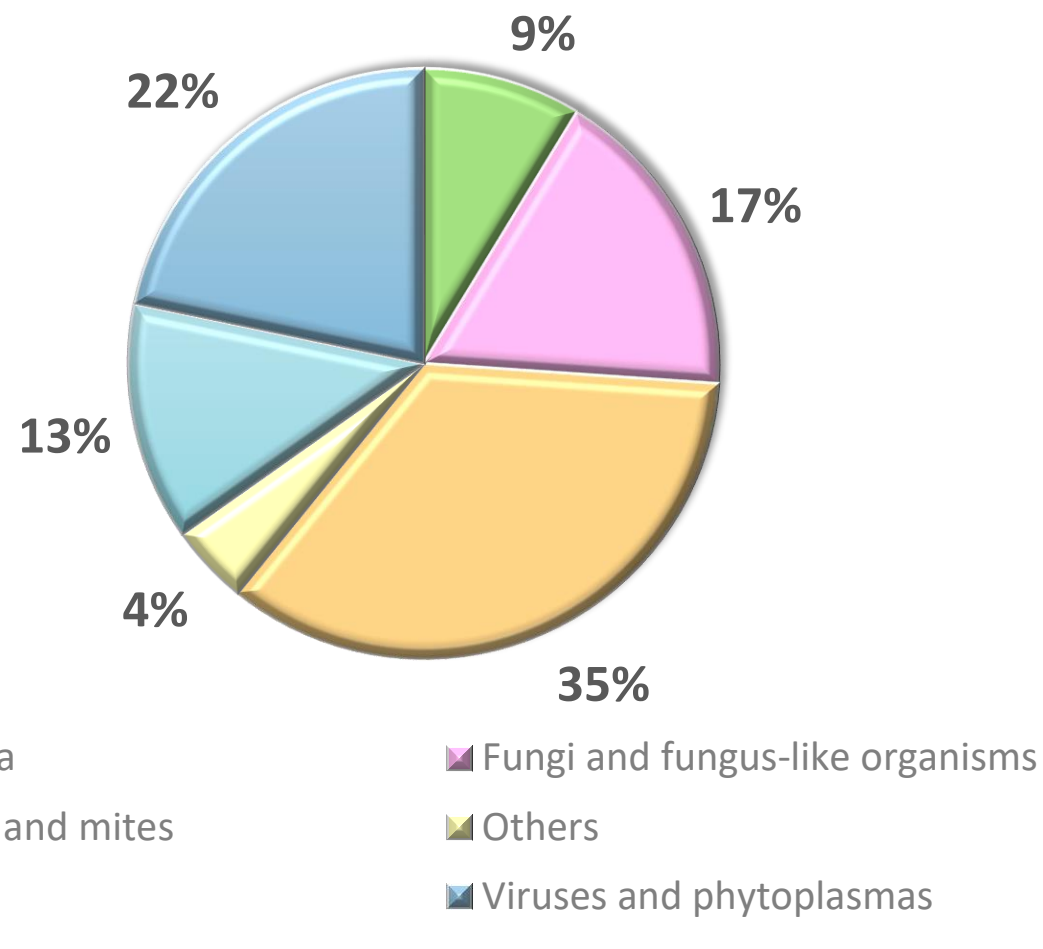
36

Adopted Diagnostic Protocols

23

Diagnostic Protocols under
development

- Pest- or pest group- specific (e.g. CLV, Tephritidae)
- Horizontal: HTS for bacteria





Upcoming Calls for Authors

IPPC will soon launch a **Call for Authors** to establish drafting groups for two new diagnostic protocols:

- *Begomovirus solanumdelhiense*
- Tomato mottle mosaic virus

Experts in plant virology, molecular diagnostics and pest identification are invited to apply, including laboratory specialists and researchers with relevant experience with these pests.

Nominations need to be supported by NPPOs or RPPOs.

IPPC Calls



**More info will soon be
available on the IPP Calls
Webpage**

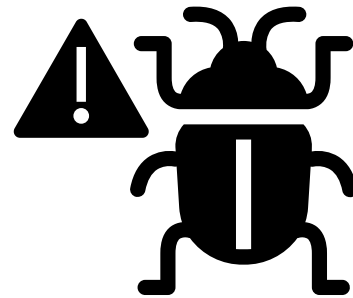


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IPPC Global Approach: Early Warning



IPPC Pest Outbreak Alert and Response System (POARS)

What is it?

- Process to identify **pests** that may become **significant threats** to plant health and trade

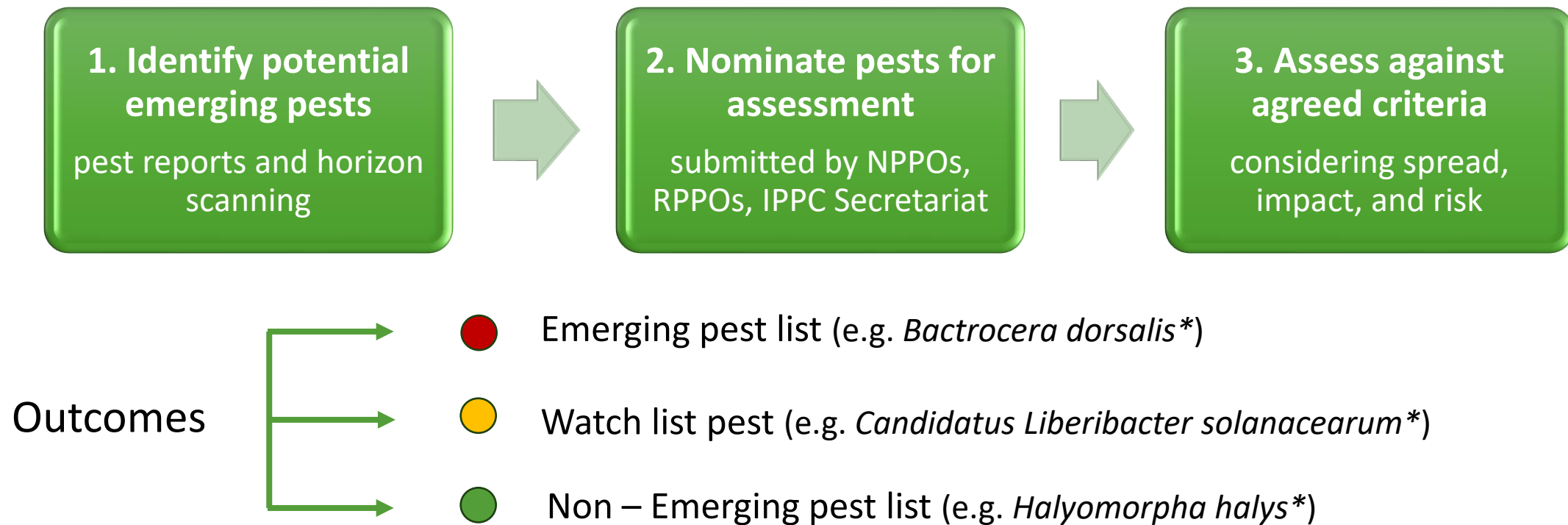
Why is it important?

- **Early detection** improved
- Faster and coordinated **responses**
- International **collaboration** to reduce impacts

How is it performed?

- Structured process
- Recent spread, current impact and potential risk
- **POARS Steering Group + Pest-specific Expert Working Groups**

IPPC Pest Outbreak Alert and Response System (POARS)



* results of the 2025 assessment

POARS Emerging Pest Assessment Criteria

Step 1: Distribution and spread	Step 2: Current impact	Step 3: Risk evidence
1.1 Recent Geographical Spread	2.1 Economic Impact	3.1 Likelihood of Introduction
1.2 Current Distribution	2.2 Environmental Impact	3.2 Scale of impacts in new areas
		3.3 Risk Management challenges

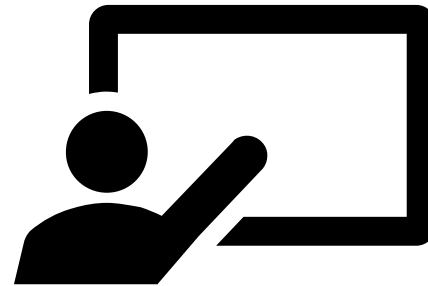


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IPPC Global Approach: Specialized Training as Capacity Building





IPPC Plant Health Campus

What is it?

- Online portal with **free, certified e-learning courses**, practical **guides**, and **tools** to support national and regional plant protection systems.

Why is it important?

- Ensure **practical relevance** of implementation material
- Strengthen **organizational systems**
- Promote **ownership** and **sustainability** of material
- Contribute to **stronger global plant health**

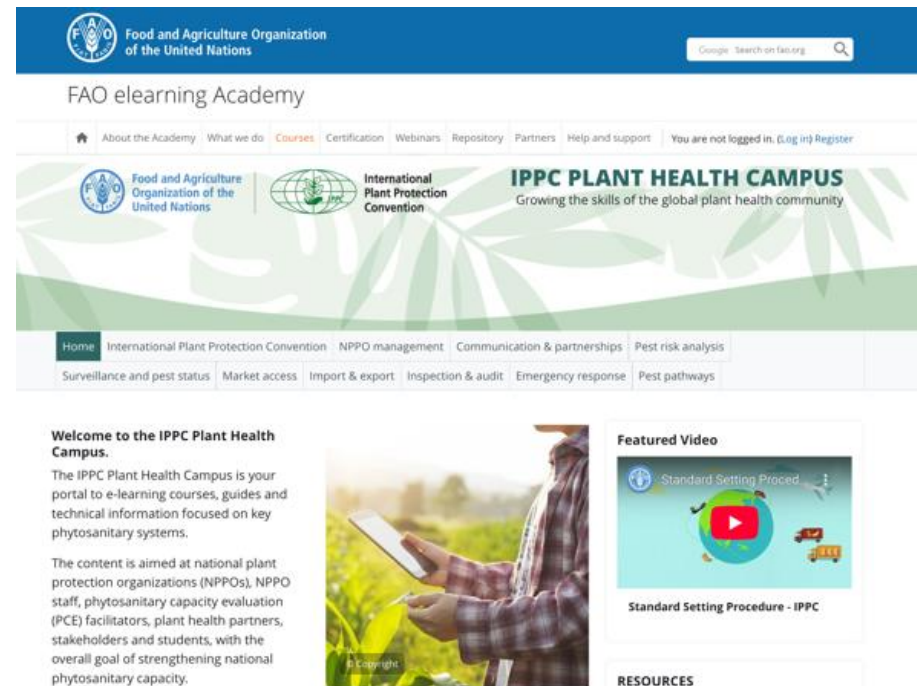
How is it developed?

- **Open, transparent, and inclusive process** with experts from NPPOs, RPPOs, scientific and regulatory institutions, or other NPPO approved entities

IPPC Plant Health Campus – one-stop platform

IPPC Plant Health Campus – one-stop platform

- **24 guides** to support capacity development and implementation of International Standards for Phytosanitary Measures (ISPMs)
- **14 IPPC e-learning courses** (more under development)
- **3 tools**
 - Learning pathways tool
 - Emergency preparedness simulation tool
 - PRA training kit



The screenshot shows the homepage of the IPPC Plant Health Campus. At the top, there is a blue header with the FAO logo and the text 'Food and Agriculture Organization of the United Nations'. Below this is a search bar and the text 'FAO elearning Academy'. A navigation menu includes links for 'About the Academy', 'What we do', 'Courses', 'Certification', 'Webinars', 'Repository', 'Partners', 'Help and support', and 'You are not logged in. (Log in) Register'. The main banner features the FAO and IPPC logos, along with the text 'IPPC PLANT HEALTH CAMPUS' and 'Growing the skills of the global plant health community'. Below the banner is a secondary navigation menu with links for 'Home', 'International Plant Protection Convention', 'NPPD management', 'Communication & partnerships', 'Pest risk analysis', 'Surveillance and pest status', 'Market access', 'Import & export', 'Inspection & audit', 'Emergency response', and 'Pest pathways'. The main content area includes a 'Welcome to the IPPC Plant Health Campus' section with introductory text, a 'Featured Video' section with a video player for 'Standard Setting Procedure - IPPC', and a 'RESOURCES' section.



**Funded by
the European Union**

IPPC Plant Health Campus supports diagnostics

Examples of available guides:

- **Delivering Phytosanitary Diagnostic Services**
- **Surveillance**
- **Pest Status**
- **Prevention, preparedness and response guidelines for Fusarium Tropical Race 4 (TR4) of banana: sampling and diagnostics of fusarium TR4**



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IPPC Global Approach

Coordinated Phytosanitary Research





CPM Focus Group on Global Phytosanitary Research Coordination

What is it?

- Focus Group established by CPM to conduct a **scoping study**.
- Determine if existing **research structures** are sufficient to ensure **global coverage**.
- Identify any **research gaps** that may exist.

Which are the outcomes?

- Scoping study outcomes presented to **CPM-20** in March 2026
- Existing organizational structures **reviewed**.
- **Gaps** in global coverage were **identified**.
- **Solutions identified** for CPM consideration.

Next steps?

- CPM extended the Focus Group's TOR through **CPM-21** (April 2027).
- Finalize a proposed **policy** and **research framework**.
- Develop a proposed **implementation plan**.

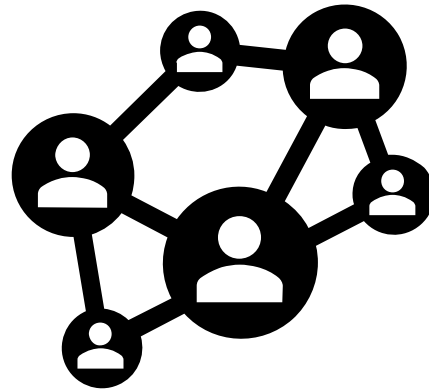


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IPPC Global Approach: Global Strategic Alignment Diagnostic Networking





CPM Focus Group on Diagnostic Laboratory Networking

What is it?

- Focus Group established by CPM -17 (2023) to gather information for the design of a **global network** of diagnostic laboratory services and diagnostic protocols for plant pests

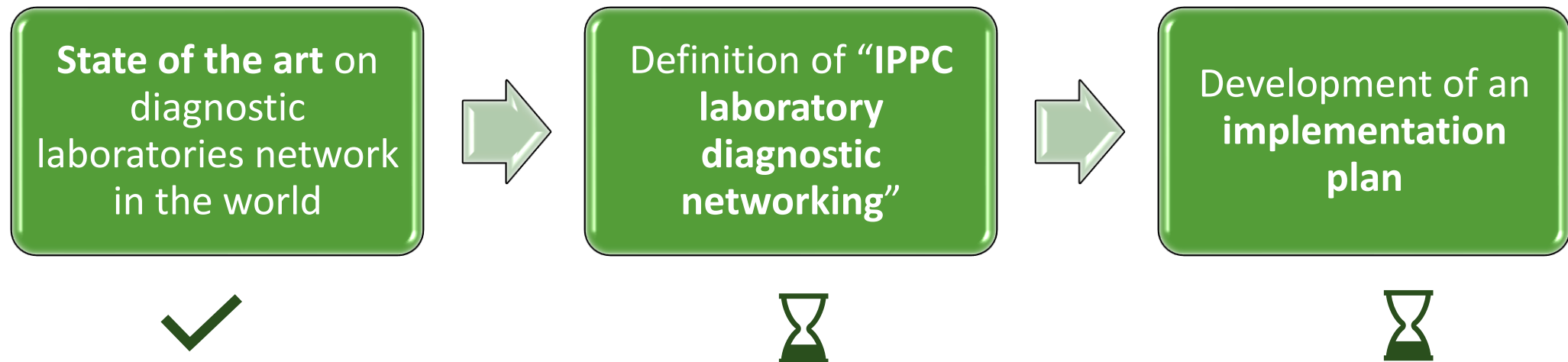
Why is it important?

- Support in addressing **NPPOs** structural and operational **changes**
- Enhance **reliability** and **timeliness** of pest ID
- Reduce duplication of **diagnostic capacity** across countries
- **Trade** facilitation

How is being developed?

- Gathering of relevant information, identification of **fundamental resources** (infrastructure, human resources, funding, legal frameworks, etc)

CPM Focus Group on Diagnostic Laboratory Networking



- Early stages of development
- Output to be defined
- First in-person meeting: June 2026, hosted by EPPO

CPM Focus Group on Diagnostic Laboratory Networking – Call for papers

We invite **discussion papers** to inform deliberations of the CPM Focus Group on:

- Key issues and considerations to be addressed during the meeting
- Strategic, technical or operational aspects relevant to the establishment of a global diagnostic laboratory network



Deadline
22 May 2026



IPPC-Calls@fao.org

Your input will help shape the work of the Focus Group



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Beyond Standards: Building an Integrated Diagnostic Ecosystem





From fragmentation to coordination: IPPC strategic evolution

Shift to Coordinated Ecosystem

IPPC is moving from rule-setting to fostering a **coordinated ecosystem** integrating standards, early warning, and capacity building.

Pest Outbreak Alert and Response System

POARS enhances **global preparedness** by enabling early detection and rapid information exchange on pest threats.

Research Coordination for Innovation

CPM Focus Group aligns **research** with **regulatory needs** to reduce duplication and accelerate diagnostic innovations.

Standards and Cooperation Synergy

Standards serve as system bricks, while cooperation builds bridges enabling **knowledge flow** and **resilience**.



IPPC - EPPO Partnership and Regional Leadership

Long-standing collaboration:

- IPPC Diagnostic Protocols: Annexes to ISPM 27 (TPDP members, DP authors, regional coordination)
- VALITEST
- EUPHRESKO
- Laboratory networks
- International Day of Plant Health: 12 May



**International Plant
Protection Convention**

12 May: International Day of Plant Health



- In collaboration with the **European Plant Protection Organization (EPPO)** and the “Don’t Risk It” campaign
- **Biosecurity Quiz** In collaboration with the European Food Safety Agency and the #PlantHealth4Life
- **Anti-Xylella Sniffer dogs** In cooperation with the *Ente Nazionale della Cinofilia Italiana* (ENCI)
- **FAO in action:** ISPM 15 stamp + sustainable pest management practices



You are actively contributing to IPPC standards effectiveness and global credibility.

Every diagnostic protocol you develop, every validation exercise you share, every laboratory network you strengthen - directly contributes to **harmonization, transparency, and mutual recognition** - the core objectives endorsed by the CPM.



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Thank you

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