



Welcoming speech

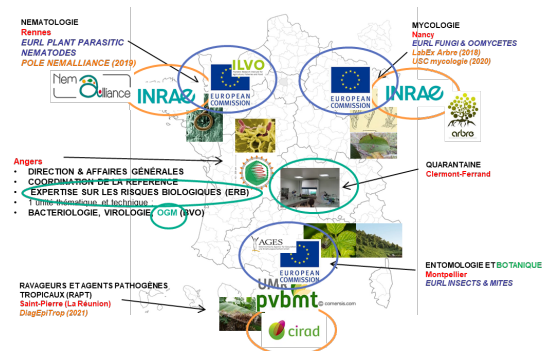
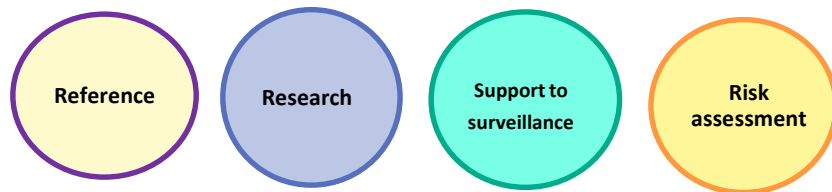
From outbreaks to anticipation & vice versa:

A short overview of the Anses missions in parallel with Horizon Scanning – A focus on forest tree health

***2nd International Workshop
on Horizon scanning for Plant health***

***11-13 February 2025
Maisons-Alfort, France***

The diversity of missions related to Plant Health at Anses



PLANT HEALTH LABORATORY



LYON LABORATORY

USC INRAE CASPER
EAS

The French phytosanitary mode of organisation: Anses as the risk assessor & DGAI as the risk manager



French NPPO:
French Directorate General on Food Safety (DGAI)

Forest Health Department



Anses represents France at the Efsa Plant Health RA network



FOREST PESTS AND DISEASES IN FRANCE :

AN OVERVIEW OF THE (RECENT &) CURRENT ISSUES

PH. REIGNAULT

PLANT HEALTH LABORATORY

PLANT HEALTH SCIENTIFIC DIRECTOR

21ST PLH RA NETWORK MEETING – 28/29.X.2024





FORESIGHT & PREPAREDNESS DETECTION OF PLANT HEALTH THREATS

A focus of French forest health

Forest tree health: a diversity of pests & pathogens, among which several are either emerging or regulated

Economic impact

Forestry : *Endothia canker* of chestnut, *Phytophthora ramorum*, bark beetles, *Xylella fastidiosa*

Food production (dried fruits) : chestnut blight, oriental chestnut gall wasp, walnut thousand cankers disease

Environnement & biodiversity

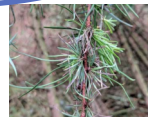
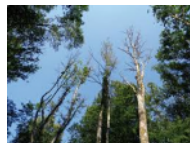
Ash dieback, box tree moth, *X. fastidiosa*

Landscape & services

Ash dieback, box tree moth, *X. fastidiosa*, canker stain of plane tree

Human health

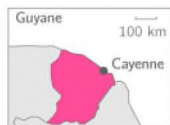
Sooty bark disease of maple tree



The most recent outbreaks (regulated QP) related to forest trees

Bretziella fagacearum, *Coniferiporia sulphurascens*, *C. weirii*, *Pseudocercospora pini-densiflorae*
UNDETECTED SO FAR

Anoplophora chinensis (2019)



Anoplophora glabripennis (2022, 2024)



Phytophthora ramorum (2017, 2024 – EU isolate)

Bursaphelenchus xylophilus (2018-2021)

How identifying biological risks to come?



Virtue of a generic surveillance: The PORTRAP project and xylophagous insects – the case study of the tiger longhorn beetle



SORE (official surveillance of regulated & emerging pests) : 2021 – experimental trapping design of the **French NPPO (DGAI)** with support from **INRAE et ONF**

Aims : **passive surveillance in potentiels entry for pests**

- ports, airports, aéroports, national interest wholesale markets (*MIN*)
- non specific approach / production sector
- forest, gardens & green spaces, infrastructures (*JEVI*), fruit growing
- **Targets: beetle insects from woody plants**

PORTRAP project, using generic traps for early detection of insects

Trapping on 13 sites (7 sea, 1 waterway port, 4 airports & 1 MIN)

> 9279 samples - 110 different ssp.

> no QP trapped

- **8 ssp. of exotic beetles**
- families **Cerambycidae & Curculionidae (Scolytinae & Platypodinae sub-families)**

Use of generic trapping
devices towards
early detection of exotic
xylophagous insects :

A focus on the ports of the
Nouvelle-Aquitaine region



Virtue of a generic surveillance: The PORTRAP project and xylophagous insects – the case study of the tiger longhorn beetle



Le directeur général

Avis de l'Anses
Saisine n° : 2023-SA-0028

Maisons-Alfort, le 17 novembre 2023

AVIS
de l'Agence nationale de sécurité sanitaire
de l'alimentation, de l'environnement et du travail
relatif à « la catégorisation de *Xylotrechus chinensis* »



Figure 1 Adulte de *Xylotrechus chinensis* (photo : L. Valladares)



Categorisation of **8 exotic insect spp.** > impact & ranking > PRA

Xylotrachus chinensis, Asia

Established in **Nouvelle-Aquitaine & Occitanie**

Specific to trees for the *Morus* genus (**mulberry tree**)

- stricts containment measures implementation
- research projects to be initiated:

➤ Intraspecific **genetic diversity**

➤ **Ability to attack other host plants with significant issues** (vinegrape, apple & pear trees)



How Anses research contributes to forest tree health risk anticipation

Towards a generalized generic surveillance: SORE in SPORE

(SORE INsecte SPOREs) : Use of large-spectrum insect traps for the detection of forest fungi & oomycetes in the framework of official surveillance

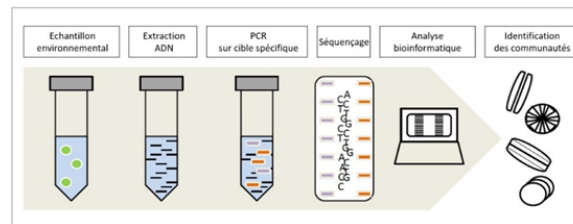
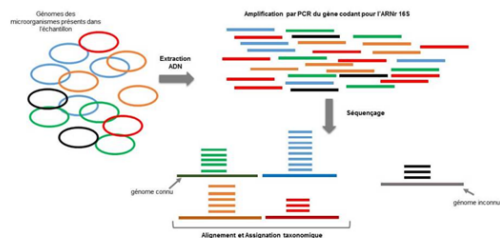
2024-2025

INRAE

Traps > sampled insects > DNA extraction > metabarcoding > RT-qPCR



Focus of OP



Surveillance – research interaction: the case study of Pine wood nematode



Maricette et al. *Annals of Forest Science* (2021) 80:21
<https://doi.org/10.1186/s13595-023-01186-8>

INRAE

RESEARCH PAPER

Open Access

Annals of
Forest Science

Two decades of epidemiological surveillance of the pine wood nematode in France reveal its absence despite suitable conditions for its establishment

Nicolas Mariette^{1*}, Hoël Hotté², Anne-Marie Chappé³, Marie Crocidier⁴, Géraldine Anthoine⁵, Corinne Samiguet¹, Odile Colhard¹, Emmanuel Kersaudy⁶, Marie-Thérèse Paris¹, Emmanuel Koen⁶ and Laurent Folcher¹

Priority QP > mandatory surveillance

- **Description of surveillance** of PWN in continental Fr. + Corsica over the 2000-2019 period
- Evaluation of attack potential **expression level** (evapotranspiration modeling)
- Measure of intra-generic diversity
- Pine trees, insect vectors, imported and/or circulating wooden goods & wooden pallets > 18 000 wood samples + 66 000 insect samples

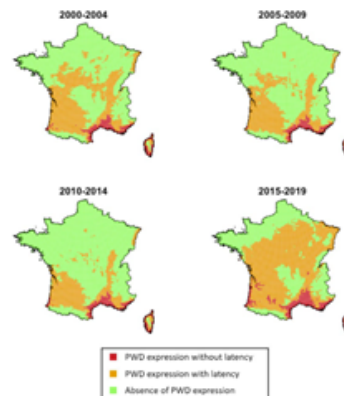


Fig. 4 Risk maps of PWD expression for metropolitan France from 2000 to 2019 according to the mean annual temperature (MAT) and mean summer temperature (MST). The construction of these maps was based on the works of Grubb et al. (2018) (see the Section 2 for further information)

A French specific structure dedicated to a better surveillance:



the Epidemiological Plant Health Surveillance Platform

The Epidemiological Plant Health Surveillance Platform

- Launched in **2018** & responsible for **improving plant health surveillance** in France
- Bringing together **7 national public and private institutions** recognised for their high level of expertise
- Provides **support to policy makers & Plant health stakeholders**
- **Surveillance tools / expertise / case study analysis**

Values



Consensus



Collaboration



Interdisciplinarity



Surveillance

Epidemic intelligence

Review of sanitary news : global monitoring, several sources, text-mining, expert committee information.

ToBRFV

Mappe France, illustration de la situation sanitaire. Depuis le début 2017 (ToBRFV), la ToBRFV a été observée au sein de la zone de culture de tomates en France et en Italie. Au début 2018, la zone de culture de tomates a été étendue à la zone de culture de tomates en Italie. La zone de culture de tomates a été étendue à la zone de culture de tomates en Italie. La zone de culture de tomates a été étendue à la zone de culture de tomates en Italie.



Figure 1. Carte des régions de ToBRFV présentement confirmées en Europe de 2017 à 2018. Mises à jour de la carte du BM-EPH de Mars 2018. Sources des données : ANS, ANS.

Anoplophora glabripennis

Veille scientifique

Cette étude a évalué différentes sources lumineuses à base de diodes électroluminescentes (DEL) pour surveiller *Anoplophora glabripennis*. Les résultats ont montré que les lampes d'onde de 400 nm et 450 nm étaient les plus appropriées pour attirer les adultes la nuit. Cette étude peut être utile au développement de pièges lumineux à DEL pour la surveillance de la longévité adulte.

Titre	Catégorie	Lien
Research on Photoinduction-Based Technology for Trapping <i>Anoplophora glabripennis</i> (Matsushita, 1853) (Coleoptera: Cerambycidae)	Méthodes pour surveiller la surveillance	Lien

Fusarium oxysporum f. sp. *cubense* Tropical race 4

Veille sanitaire secondaire

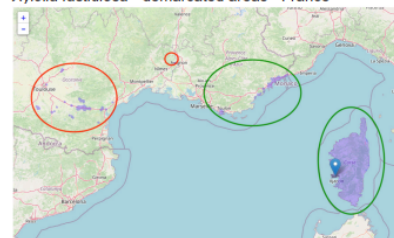
L'Afrique de l'Est était impactée par *Fusarium* TR4 et aussi menacée par *Fusarium* TR4 car cette race du champignon est présente au Mozambique. Pour étudier la distribution et l'incidence de la maladie des tomates (à *Fusarium* TR4 à partir), une enquête a été conduite sur deux saisons au Rwanda, au Burundi, dans le nord-ouest de la Tanzanie (régions de Kigoma et Kigoma) et dans l'est de la République centrafricaine (région de Bangui). Toutes les tomates ont une incidence de maladie supérieure à 40%, la plus élevée concernant la Tanzanie avec 63,6%.

Titre	Catégorie	Publication	Lien
Baseline under threat in Africa East Europe	Afrique de l'Est	Communauté / vulgarisation	Lien

Real-time web mapping surveillance

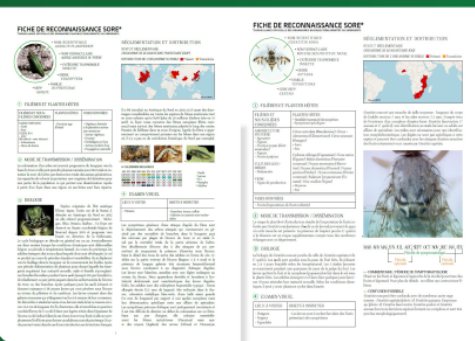
Datascience, detection new outbreaks, monitoring support.

Xylella fastidiosa - demarcated areas - France



Recognition

Pest survey sheet.



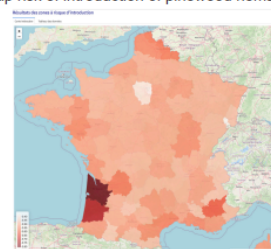
Evaluation of a surveillance system
Improve specific monitoring.



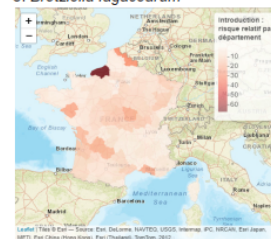
Risk maps to anticipate emergence

Tools and methods, early detection, pest-free territory.

Map risk of introduction of pinewood nematode



Relative risk of establishment of *Bretziella fagacearum*



The Epidemiological Plant Health Surveillance Platform

- A set of thematic permanent working groups > Pine Wood Nematode
- Several temporary tailor made Project Teams > Armyworm & Oak Wilt
- Associate research projects :



- **BEYOND Building** epidemiological surveillance and prophylaxis with **observations near and distant** *France's Priority Research Program "Growing and Protecting Crops Differently"*
- **TIERS-ESV Information Processing** and Expertise of Health Risks for Epidemiological Surveillance in Plant Health
- **Co-Act-2** Controlling **flavescence dorée**: mechanisms of emergence, epidemic dynamics, resistance of regional grape varieties



Thank you for your attention

www.anses.fr



Science driving a safer, healthier world for all





Horizon scanning - Background and use

**Second International Scientific Workshop on
Horizon Scanning and Plant Health**

Paris – 11 February 2025

DG SANTE – G1 Plant Health Unit

EU Plant Health Law

Regulation (EU) 2016/2031

Challenges

- **PROTECT EU AGRICULTURE, HORTICULTURE & ENVIRONMENT FROM NEW PLANT PESTS**

Objectives

- Increasing **international movements** of plants
 - Global trade: EU world's biggest importer of agricultural goods
 - Travellers
- **Climate change** (sustainability goals)

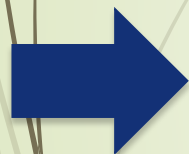
EU Plant Health Law

- **Prevention**
- **Increased vigilance for imports**
- **Early identification and action against new pests**

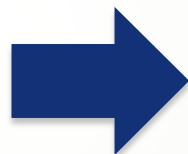


Prevent and control the spread of plant pests

EU Plant Health Law



**Prevent and control the spread
of plant pests**



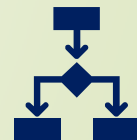
**Scientific and
technical assistance**



**Horizon
Scanning**

Horizon Scanning

- **Objective**: identify and assess emerging risks to plant health worldwide and within the EU territory
- **Methodology**: monitoring potential threats through media, scientific data, literature, expert reports and international reports.
- **Importance**: early decision-making to prevent risks before they affect agriculture and environment. Help on the prioritisation of plant health legislative actions



Horizon Scanning

- **Analysis of monthly newsletters and reports**
- **Monthly presentations and highlights to the Standing Committee on Plants, Animals, Food and Feed**
- **Outcome : prevent entry of pests to the European Union, tune surveillance and target import control efforts**



PeMoScoring

- **Methodology to score the risk of the identified non-regulated pests**
- **Support for legislation and policy**
- **Follow-up mandates to EFSA**



Futurs prospects

Strengthening surveillance, developing integrated prevention strategies and taking a proactive approach to future challenges

Stay alert

New pest diseases



Climate change



Globalisation





Food and Agriculture
Organization of the
United Nations



International
Plant Protection
Convention



Background information on strengthening Pest Outbreak Alert and Response Systems (POARS)

IPPC's Mission and Global Impact

- Recognized as a standard-setting organization for plant health by the WTO SPS Agreement along with *Codex Alimentarius* and WOAHA (“**SPS sisters**”).
- IPPC Secretariat collaborating with 11 Regional Plant Protection Organizations and over 40 international organizations.
- Adoption of **46 ISPMs**, the development of **20 IPPC guides** and **6 e-learning courses** strengthened global phytosanitary standards for safe trade.



(Since 1951) International treaty to secure cooperation among nations in protecting global plant resources from the spread and introduction of pests of plants, in order to preserve food security, and biodiversity and to facilitate safe trade.



Pest Outbreak Alert and Response Systems (POARS) Development Agenda (DAI)

(...) a global pest alert system with mechanisms to evaluate and communicate emerging pest risks will be developed, providing regular information to NPPOs on changes in pest status around the world. NPPOs will use this to quickly adapt their phytosanitary systems to reduce the risk of introduction and spread. In the case of outbreaks, strengthened pest outbreak response systems and tools will help countries take much more timely action, especially against new incursions. NPPOs, RPPOs and the FAO will collaborate to develop and roll out a comprehensive but easy to use toolbox to help countries respond quickly and effectively. Some RPPOs may play an active role in assisting NPPOs to coordinate outbreak responses across their regions.”

- The **IPPC Strategic Framework 2020-2030** includes eight development agenda items (DAIs), one of which is the Strengthening Pest Outbreak Alert and Response Systems (POARS).

INTERNATIONAL PLANT PROTECTION CONVENTION STRATEGIC FRAMEWORK 2020–2030



OUR MISSION

Protect global plant resources
and facilitate safe trade



OUR VISION

The spread of plant pests is minimized and their impacts within
countries are effectively managed

OUR GOAL

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

A

Enhance global food security
& increase sustainable
agricultural productivity

B

Protect forests and the
environment from the
impacts of plant pests

C

Facilitate safe trade
development &
economic growth

CORE ACTIVITIES



Standard setting



Implementation &
capacity development



Communication &
international co-operation

IPPC DEVELOPMENT AGENDA 2020–2030

1. Harmonization of Electronic Data Exchange.
2. Commodity- and Pathway- Specific ISPMs.
3. Management of E-commerce and Courier Mail Pathways.
4. Developing Guidance for the Use of Third-Party Entities.
5. Strengthening Pest Outbreak Alert and Response Systems.
6. Assessment and Management of Climate Change Impacts on Plant Health.
7. Global Phytosanitary Research Coordination.
8. Diagnostic Laboratory Network.

CONTRIBUTING TO UN 2030 SUSTAINABLE DEVELOPMENT GOALS





Background

CPM -14 requested that the Bureau draft an action plan for an IPPC pest emergency system

2019

2020

CPM Bureau established a CPM Focus Group on POARS (FG POARS) to recommend effective POARS

FG POARS evaluated the existing systems and agreed on recommendations

2021

2022

FG POARS presented the recommendations to CPM-16 (2022) and were published on the IPP

Completed 12 tasks defined in its ToRs and presented considerations to the SPG

CPM-16 agreed to establish a POARS Steering Group (SG POARS)

CPM-17 agreed on the overarching implementation plan for the IPPC Strategic Framework 2020-2030 DAI

2023

2024

POARS SG initiated activities

POARS SG Membership

- 11 experts from around the world.
- Chair: Panagiota MYLONA from the European Commission
- Chairperson: Matthew EVERATT from the United Kingdom of Great Britain and Northern Ireland as vice-chairperson
- Implementation and Facilitation Unit (IFU) of the secretariat oversees the POARS development agenda item (DAI) and has coordinated both the FG POARS and the POARS SG.
- 1 RPPO, AIEA, SENASA - Argentina, DEFRA - UK,

USDA – USA, KEPHIS – Kenya, CABI, IAEA, European Commission, Standards Committee, Implementation and Capacity Development Committee, CPM Bureau





Commission on Phytosanitary Measures (CPM)
185 Contracting Parties + 11 RPPOs

Standards Committee (SC)

- Technical panels (TPs)
- Expert working groups (EWGs)
- Ad hoc expert groups

**Implementation and
Capacity Development
Committee (IC)**

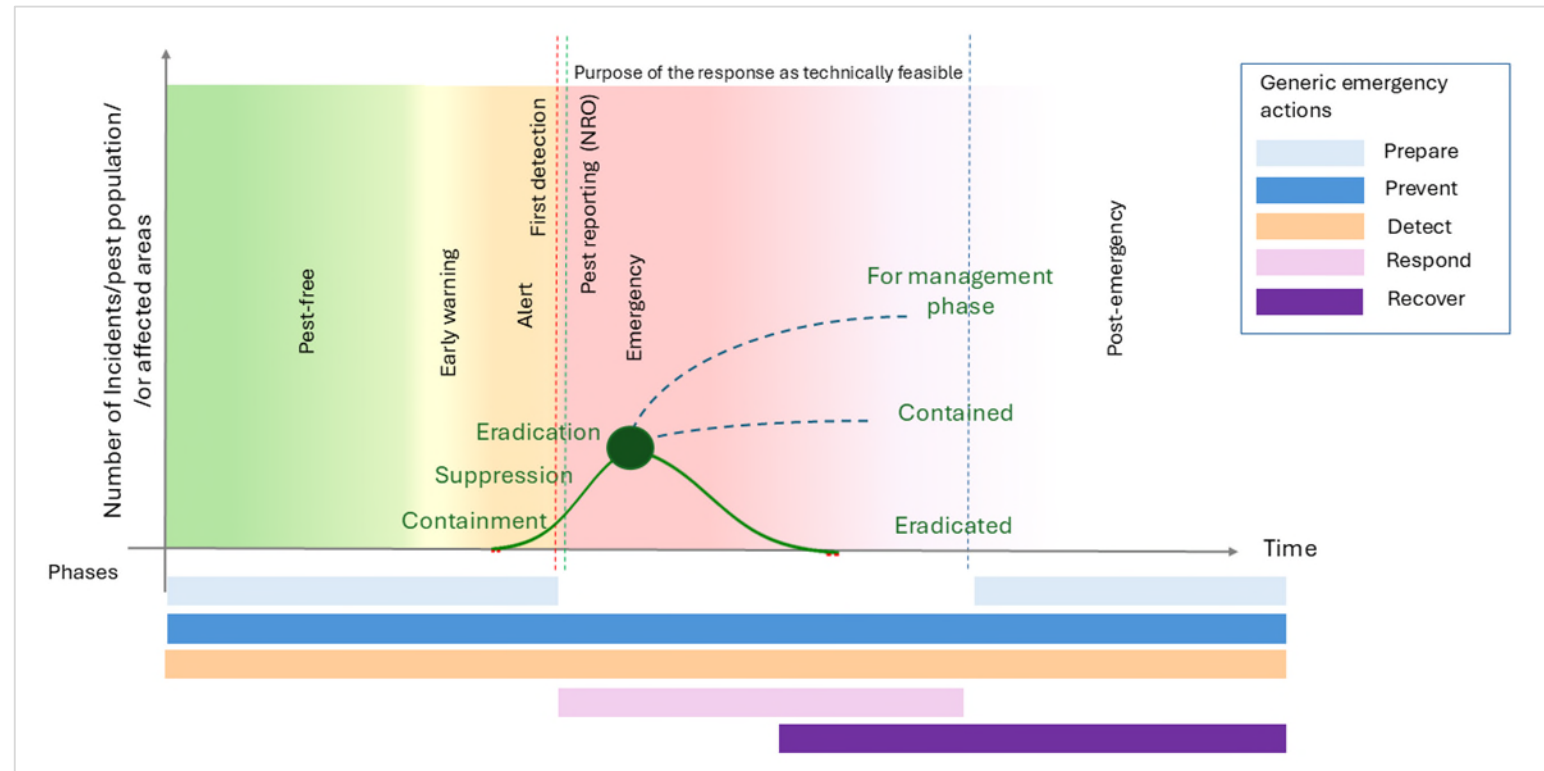
- IC Sub-groups (Capacity and development matters)
- IC Teams (specific tasks)

CPM Bureau (7)

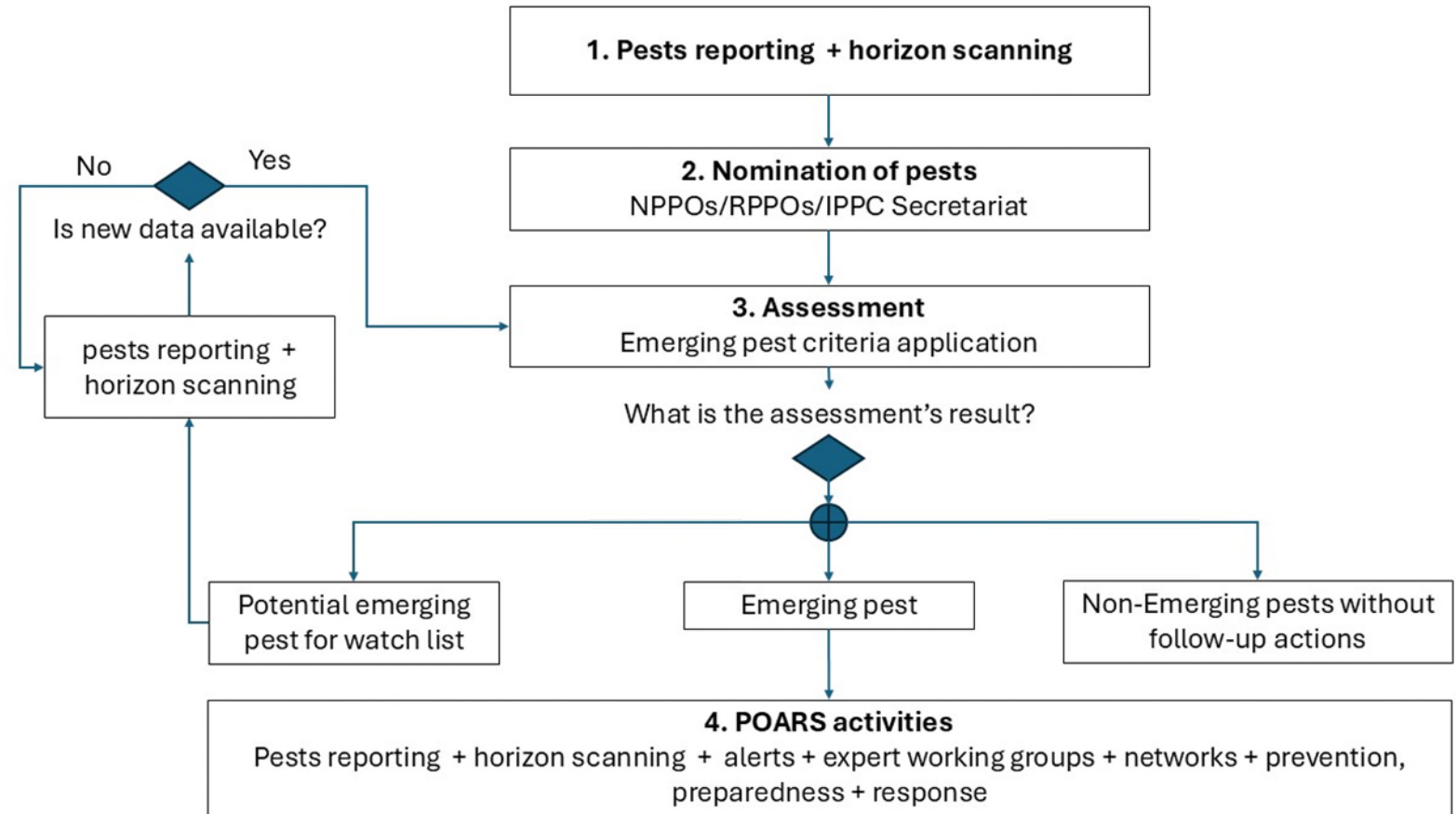
- Strategic Planning Group
- Financial Committee
- ePhyto Steering Group
- **POARS Steering Group**

Scope of the POARS

POARS aims to support the IPPC community in mitigating the risks posed by **emerging pests**. The initiative focuses on identifying **emerging pests of global concern**, alerting the IPPC community and stakeholders, and supporting countries across four (4) key areas of outbreak response: prevention, preparedness, response and recovery.



What is the process to identify emerging pests of global concern?



Emerging Pest:
Meets all criteria

Non-emerging Pests for Watch List:
Require observation due to data
uncertainties

**Non-emerging Pest without
Follow-up:**
Do not meet the criteria.



Call for Nominations of Potential Emerging Pests of Global Concern

2025: pilot POARS
activities.

Context:

- CPM-14 (2019) confirmed that updates on emerging pests should be a standing item on the CPM agenda.
- The POARS Steering Group (SG) is responsible for evaluating and selecting potential emerging pests.
- **Who can nominate?** NPPOs, RPPOs, and other stakeholders (research institutions, international organizations, private sector) via an NPPO or RPPO.
- **How to submit?**
 - Complete the **nomination form**





IPPC Monthly Pest Reporting Summary – January 2025

National Reporting Obligations (NROs) ensure timely pest updates to prevent the spread of quarantine pests.

Key Pest Reports (January 2025)

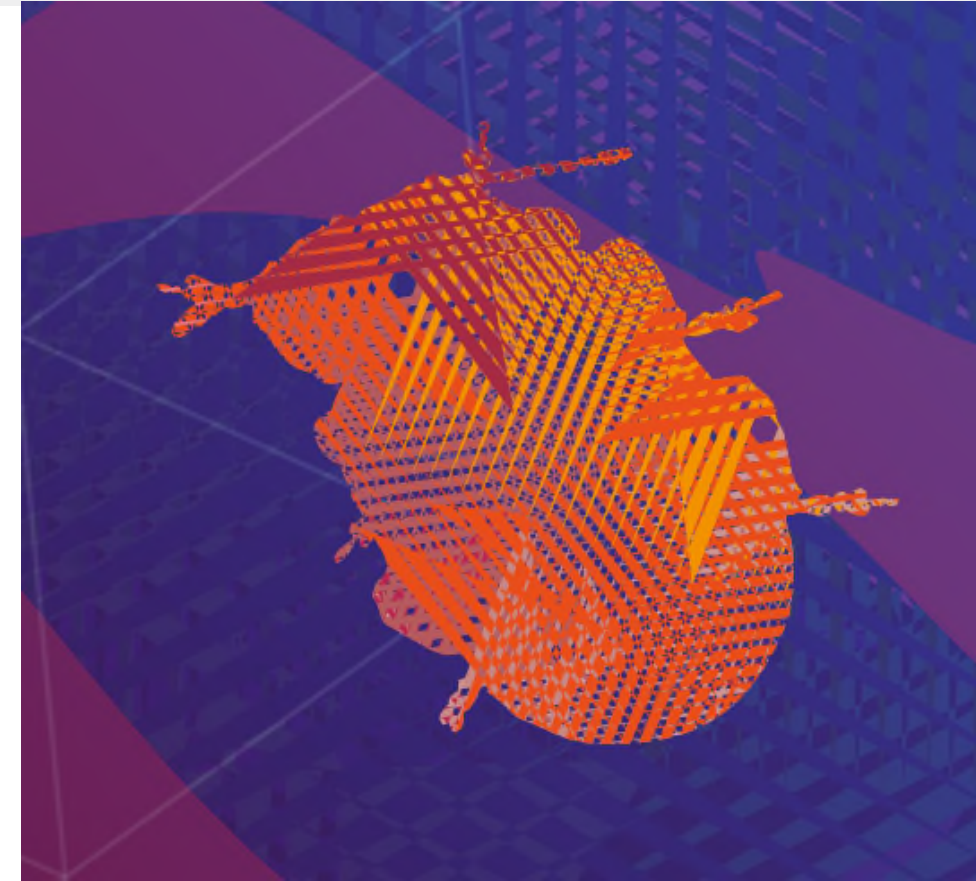
- *Tomato brown rugose fruit virus* (TOBRFV)
- *Liberobacter asiaticum* (Citrus Greening)

Fruit Flies:

- *Ceratitis capitata*, *Anastrepha ludens*, *Bactrocera dorsalis*

How to stay engaged?

- Take the NRO E-Learning Course to master all 13 NROs ([National Reporting Obligations - International Plant Protection Convention](#))
- [Next Summary in March 2025 – Stay updated via IPP Reporting System](#)





Global Alert System for Emerging Pests

Objective:

Establish a **mechanism** to **communicate emerging pest risks**.

Provide **regular information** to support timely **phytosanitary actions**.

Reduce the **risk of introduction and spread** of pests through **early alerts**.

When is an Alert issued?

- **New Emerging Pest Identified** – Assessed against **emerging pest criteria**.
- **New Outbreak Reported** – Verified pest report confirms **outbreak occurrence**.
- **Significant Change in Pest Status** – New biological/ecological data or changes in host range.



What are the criteria to identify emerging pests of global concern?

Criterion	Description
Initiation	
Recent geographical spread	Recent pest outbreaks are reported in more than one area, showing a significant expansion of the pest's range.
Current distribution	The pest has a limited distribution in its endangered area.
Current impact	
Economic impact	The pest is causing substantial economic impact according to what is described in ISPM 11 (Pest risk analysis for quarantine pests) and supplement 2 of ISPM 5 (Glossary of phytosanitary terms).
Environmental impact	The pest is causing substantial environmental impact according to what is described in ISPM 11 and supplement 2 of ISPM 5.
Risk evidence	
Likelihood of introduction into new areas	The pest has a high likelihood of introduction in new areas based on assessment in line with ISPM 11.
Scale of impacts in new areas	The pest is likely to cause substantial impacts based on assessment in line with ISPM 11.
Risk management	The pest risk is likely to be difficult to manage effectively in new areas.

Emerging Pest:
Meets all criteria

Non-emerging Pests for Watch List:
Require observation due to data
uncertainties

**Non-emerging Pest without
Follow-up:**
Do not meet the criteria.



Scope of the POARS

Prevention – guidance on phytosanitary measures to prevent the introduction, establishment and spread of emerging pests;

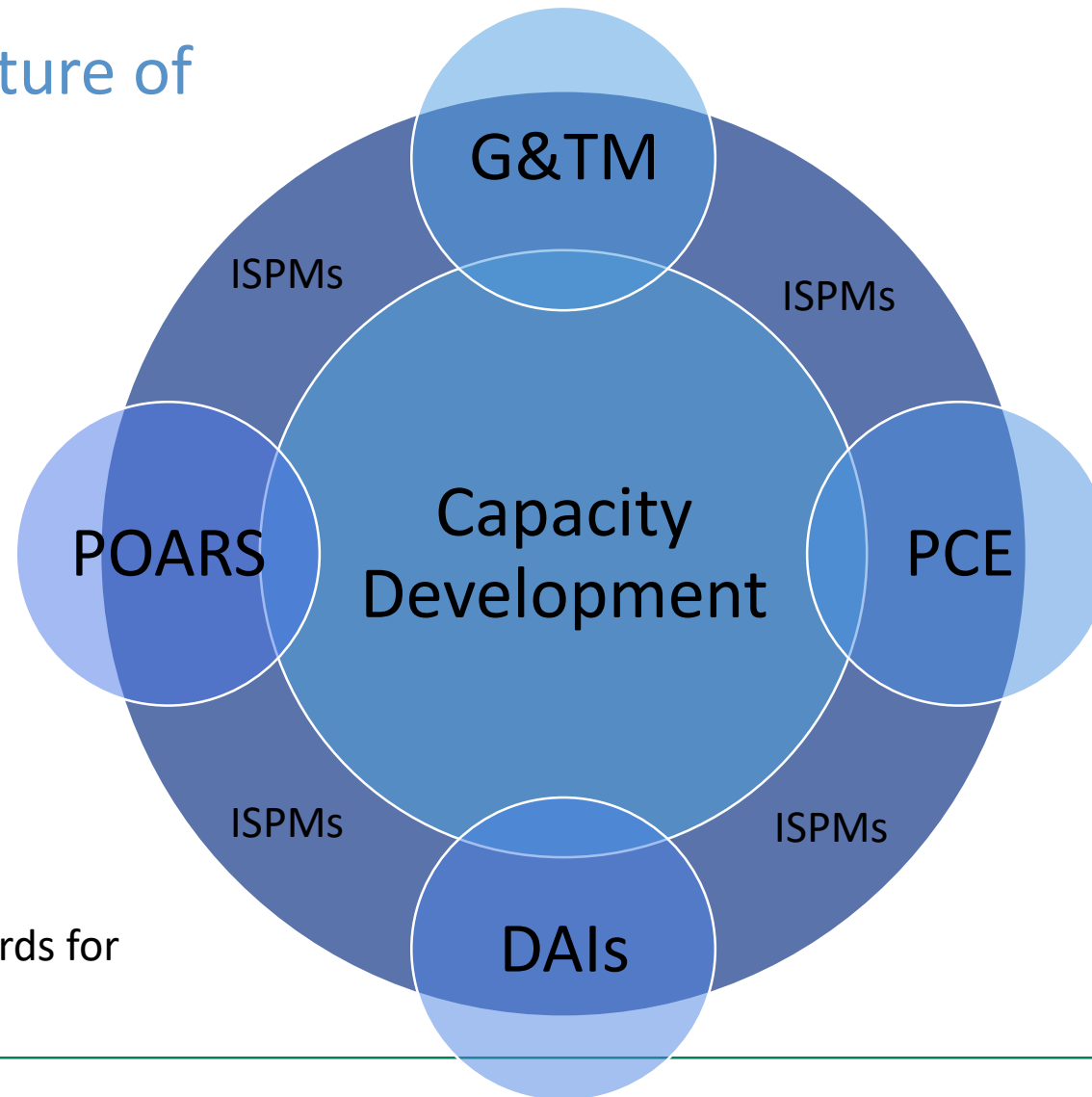
Preparedness – strengthening the overall capacity and capability of national plant protection organizations (NPPOs), systems and stakeholders, to effectively manage pest outbreaks e.g. through the provision of contingency plans, diagnostic protocols, training activities and simulations;

Response – coordinated technical and operational efforts to manage emerging pests outbreaks.

Recovery – post-response actions aimed at protecting against the pest that caused the emergency and transitioning away from emergency measures.



Interconnected nature of POARS with other components



G & TM: Guides and training
materials (Plant Health
Campus)

PCE: Phytosanitary Capacity
Evaluation

ISPMs: International Standards for
Phytosanitary Measures

4. Phytosanitary Capacity Evaluation (PCE): A One Health Tool



SPOTLIGHT: Building a resilient plant health system in Senegal



South-South Cooperation: End of project heralds positive changes for plant health in Cambodia and Sri Lanka



PCE process:

Situation analysis

Strategic planning

Validation

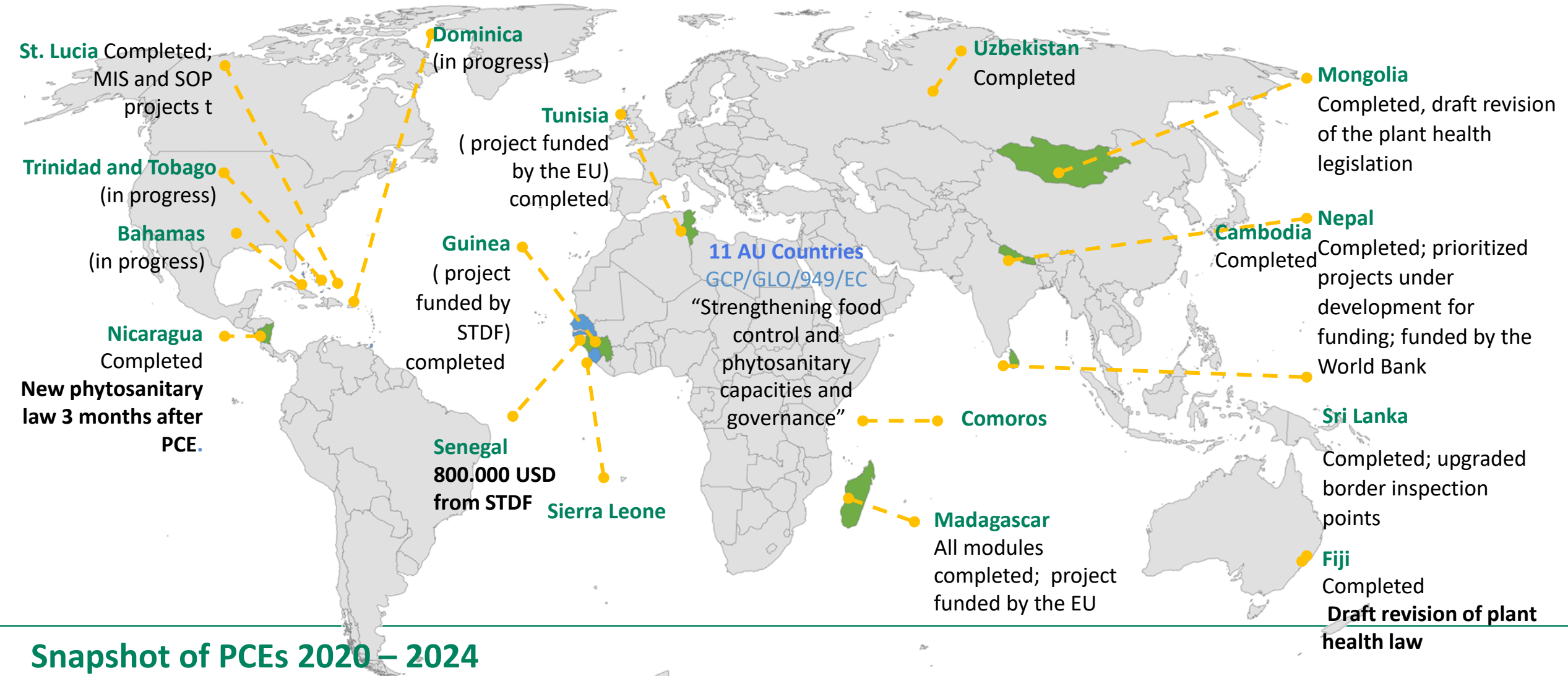
PCE outcomes:

**National Phytosanitary Capacity
Development Strategy**

New/revised legislation/regulation

4. Phytosanitary Capacity Evaluation (PCE): A One Health Tool

SG POARS



3. Innovative digital capacity development platform: IPPC Plant Health Campus

IPPC PLANT HEALTH CAMPUS

Growing the skills of Plant Health professionals worldwide



International
Plant Protection
Convention

Home	NPPO Management	Communication	Import inspection	Export Certification	Surveillance
Pest Risk Analysis	Import Regulation	Market Access	Emergencies	Domestic Programmes	Diagnosis

Welcome to the IPPC Plant Health Campus.

The Campus aims to support Plant Health professionals, and in particular staff working with **National Plant Protection Organizations (NPPOs)**, in developing the skills they need to prevent the introduction and spread of plant pests and to facilitate safe trade.



LATEST VIDEOS



3. Innovative digital capacity development platform: IPPC Plant Health Campus



How IPPC e-Learning can help to enhance phytosanitary excellence: a personal account from the NPPO of Zambia

Justina Chivanga, Senior Plant Health Inspector and Head of Standards and Regulations Unit in the Department of Plant Quarantine and Phytosanitary Service (NPPO) of Zambia recently shared her experience of completing the IPPC e-learning courses.



Francisco Gutierrez from the Belize Agricultural Health Authority speaks about the importance of IPPC's guides and training materials

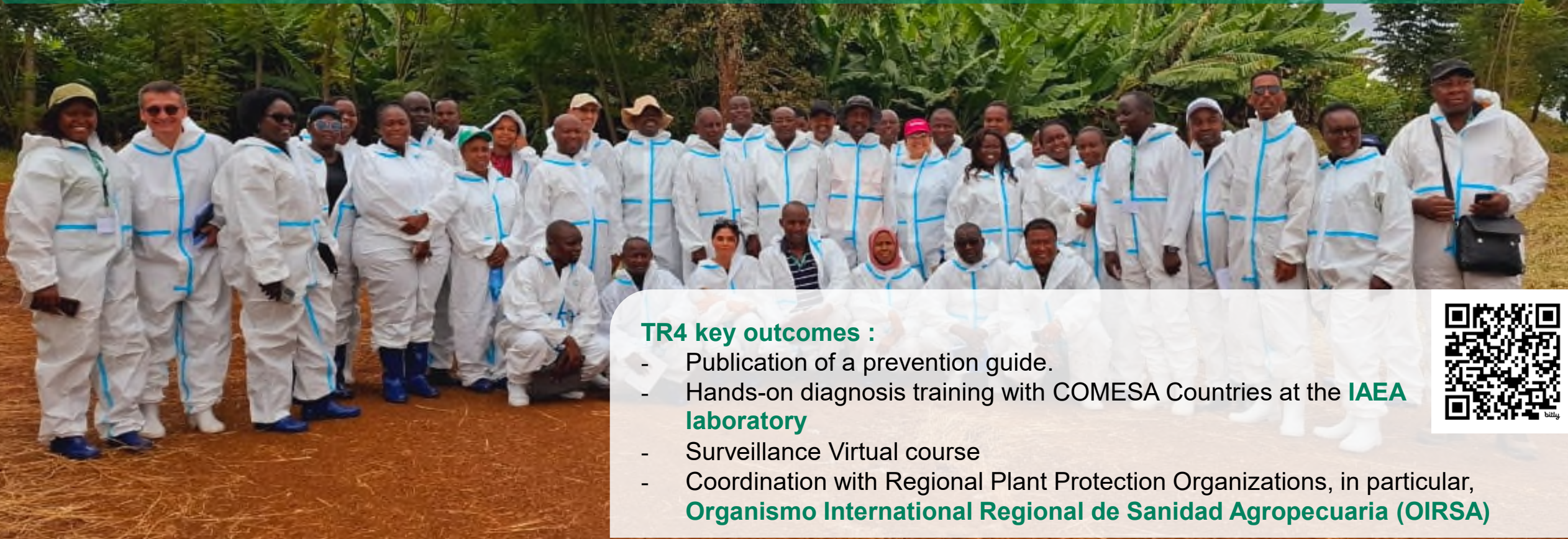


We speak to Francisco Gutierrez, Technical Director of the Plant Health Department of the Belize Agricultural Health Authority, Phytosanitary Capacity Evaluation facilitator and Implementation and Capacity Development Committee (IC) lead for the IC team on IPPC guides and training materials.



2. The Commission on Phytosanitary Measures (CPM) requested the IPPC Secretariat to lead global coordination for Banana Fusarium Wilt TR4

First hands-on simulation exercise in Africa in Nairobi, Kenya (May 2024) with 13 COMESA countries, with transfer of expertise from Central America through FAO.



TR4 key outcomes :

- Publication of a prevention guide.
- Hands-on diagnosis training with COMESA Countries at the **IAEA laboratory**
- Surveillance Virtual course
- Coordination with Regional Plant Protection Organizations, in particular, **Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA)**





Food and Agriculture
Organization of the
United Nations



International
Plant Protection
Convention

Thank you

IPPC Secretariat

Food and Agriculture Organization
of the United Nations (FAO)

ippc@fao.org | www.ippc.int





AfricaCDC
Centres for Disease Control
and Prevention



“Overview of One Health in Africa”

Africa CDC One Health Division

February 11th , 2025

Safeguarding Africa's Health

Important Information

- The Africa CDC One Health Unit is currently not doing horizon scanning and I would be presenting on the unit's portfolio.
- We are aware of the fact, Horizon scanning can support policymakers and other decision-makers in anticipating future developments, managing risks and pursuing opportunities to help build resilience to future shocks and reduce uncertainty
- There is a request we are making in the last slide for this presentation

BACKGROUND

MANDATE

The Africa CDC is **an autonomous institution of the African Union** charged with the responsibility to promote the prevention and control of diseases in Africa.

VISION

“A safer, healthier, and prosperous Africa, in which Member States are prepared to timely **prevent, detect and respond** effectively to public health threats and outbreaks.”

MISSION

To **strengthen Africa’s public health institutions and systems’ capacities, capabilities** and partnerships to timely prevent, detect and respond effectively to public health threats and outbreaks based on evidence-based policies, programs and interventions.

Content

1

One health Approach

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One Health Unit

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Key programs within the One Health Unit

4

Zoonotic disease program

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Food Safety program

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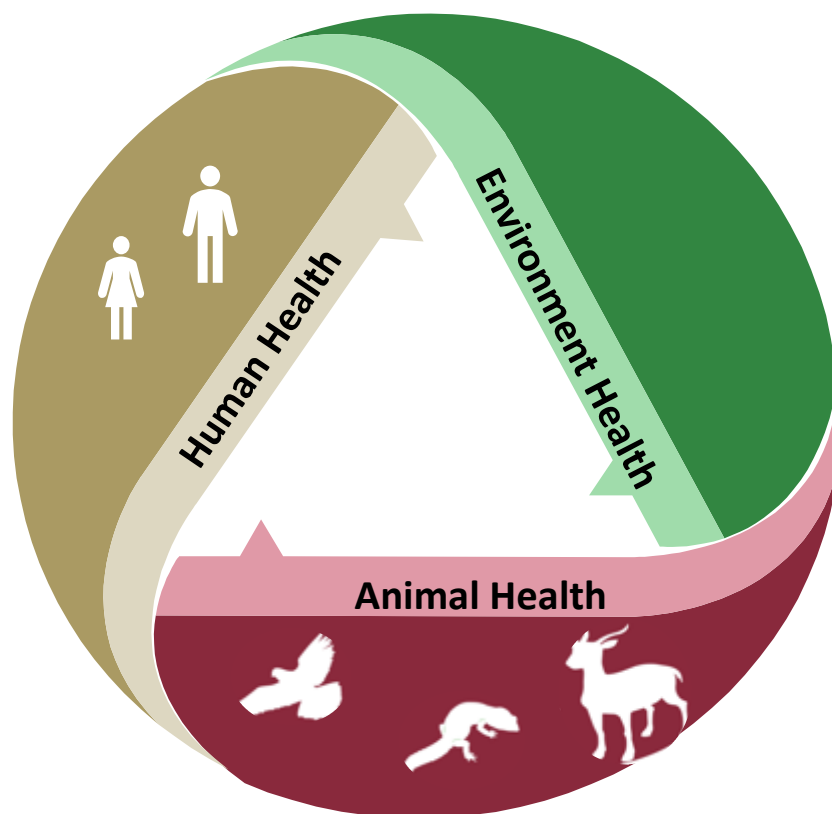
Climate Change program

Today's health threats require multisectoral responses

- Africa's rich biodiversity, intertwined with its human population expansion and animal husbandry presents a complex ecosystem.
- This complexity increases the risk of zoonotic diseases, pandemics, antimicrobial resistance, food safety issues, environmental contamination, and climate change.
- No one sector alone can address all aspects.
- To respond effectively to these risks, understanding the drivers of disease emergence, spread, and persistence is imperative.
- Collaborative, multisectoral and transdisciplinary approach are needed.
- This approach leverages and coordinates resources from multiple sectors.



What is One Health?



“

One Health is a collaborative, multisectoral and transdisciplinary approach used to attain optimal health outcomes for people, animals, plants, and their shared environment.

Africa CDC framework for One Health Practice in NPHIs, 2020

”

Africa CDC approach to operationalize One Health



- Launched the Africa CDC's Strategic Plan 2023 – 2027.
- Key focus areas to drive continental One Health efforts include:
 - **Facilitating Intersectoral and multi-disciplinary collaboration at the national and continental levels** to integrate human, animal, and environmental data into real-time surveillance.
 - **Supporting One Health surveillance for priority zoonotic diseases.** Provide technical assistance and capacity building to Member States to incorporate One Health approaches into the surveillance of zoonotic diseases.

One Health Unit Strategic Objectives



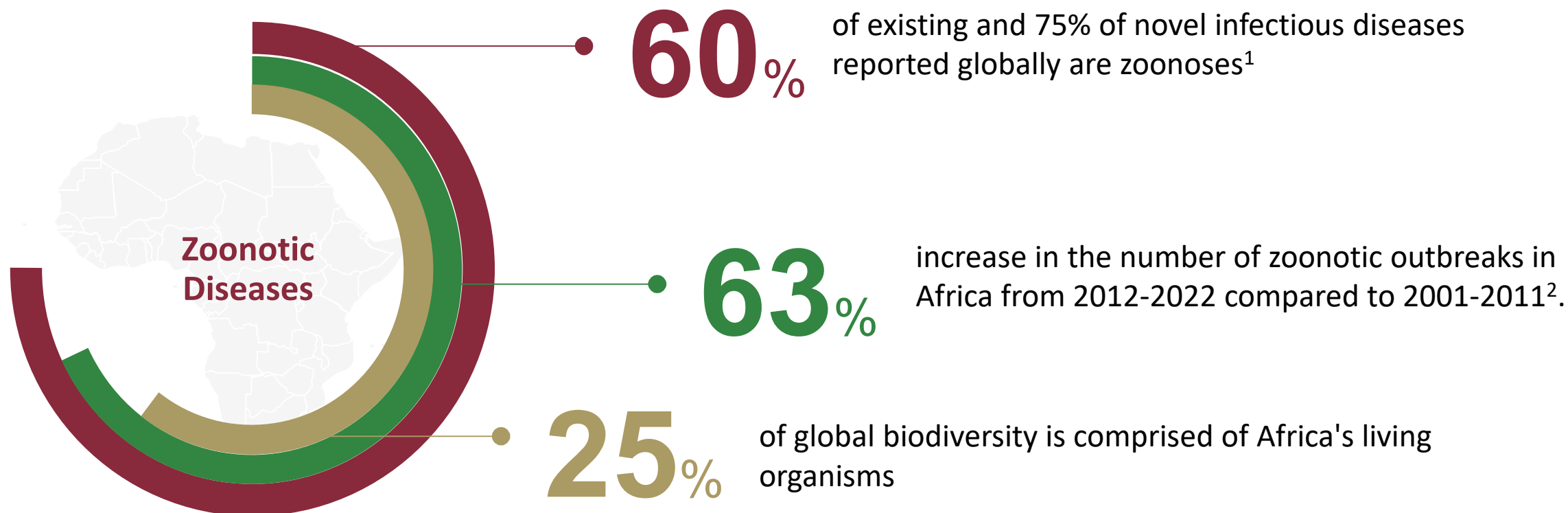
- To promote a collaborative, multisectoral approach to public health that recognizes the interconnectedness of human, animal, and environmental health.
- To strengthen capacity for detection, prevention, and response to disease outbreaks at the interface human-animal-environment.

Zoonotic Disease program

Activities and Impact

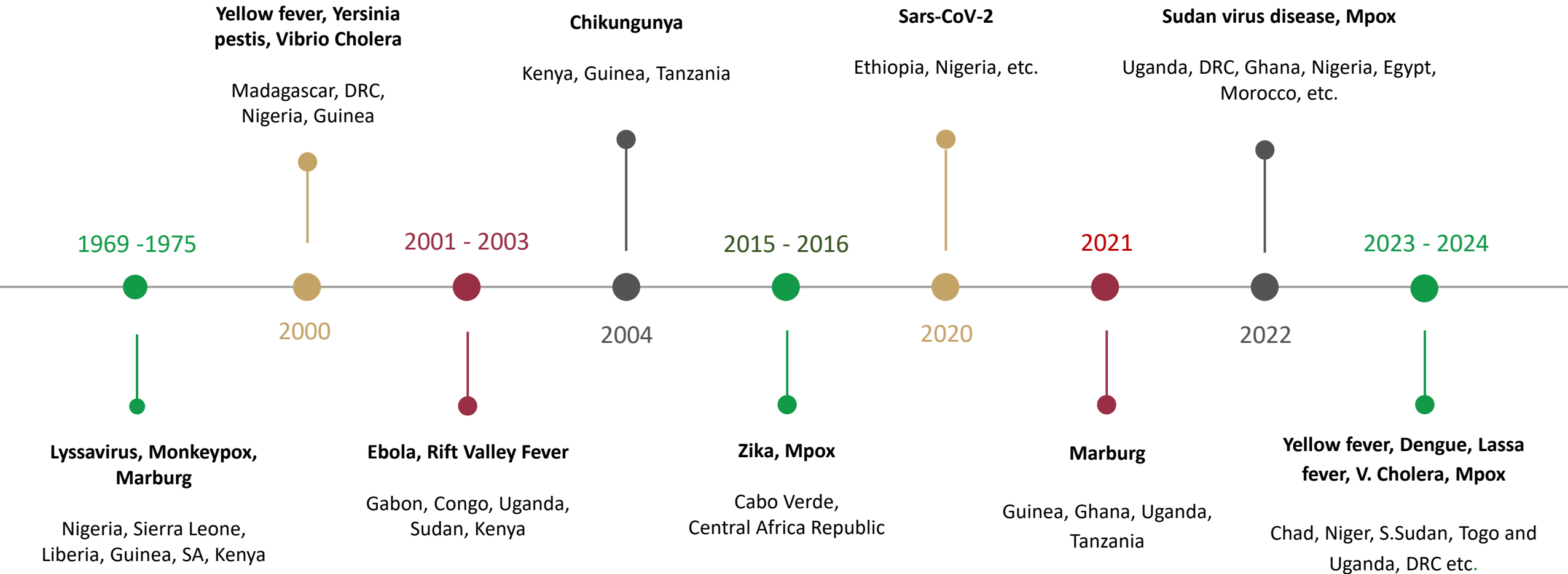


Zoonotic Diseases (ZD) situation in Africa



In Africa, zoonotic diseases account for approximately 26% of DALYs due to infectious diseases

Infectious Diseases Outbreaks in Africa



Zoonotic Diseases Programme

Strategic focus

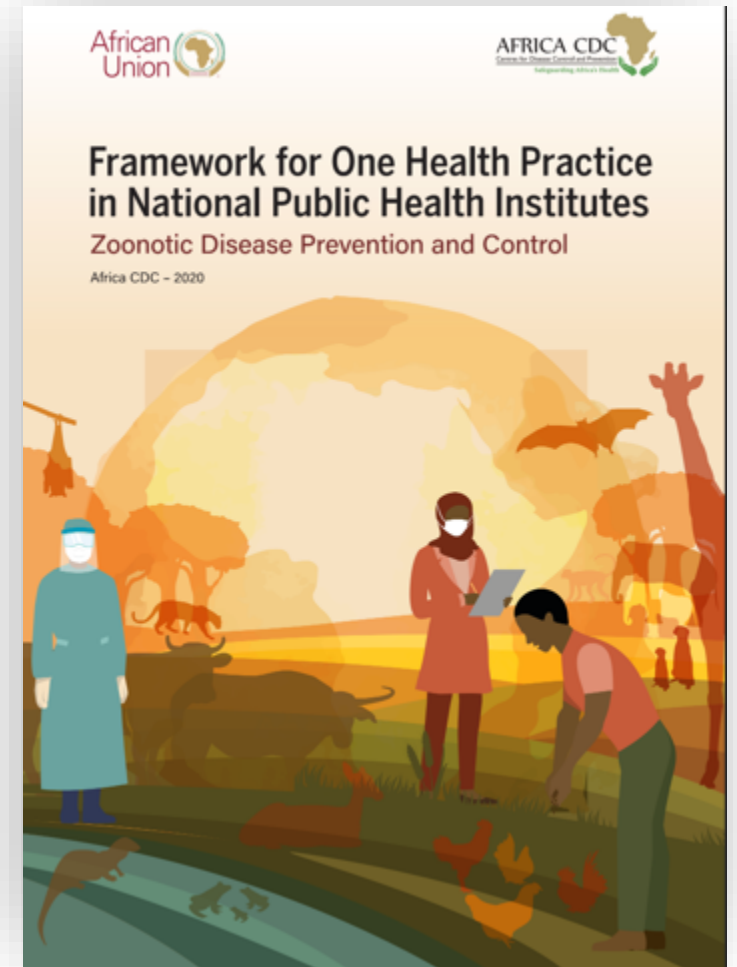
Support member states in adopting and implementing the Framework for One Health Practice in NPHIs.

Program objectives

- Provide strategic direction for ZD outbreak prevention and control on the continent.
- Work with other AU agencies and international organizations such as the regional quadripartite to coordinate zoonotic diseases control efforts in Africa.
- Lead the implementation of the Africa CDC Framework for One Health Practice in NPHIs in Regional Economic Communities (RECs) and Member states.
- Provide leadership to the AU One Health Coordinating Group on Zoonoses and other regional and continental activities.

Zoonotic Diseases Surveillance in Africa

Framework for One Health Practice in NPHIs in Africa



Objectives of the Framework

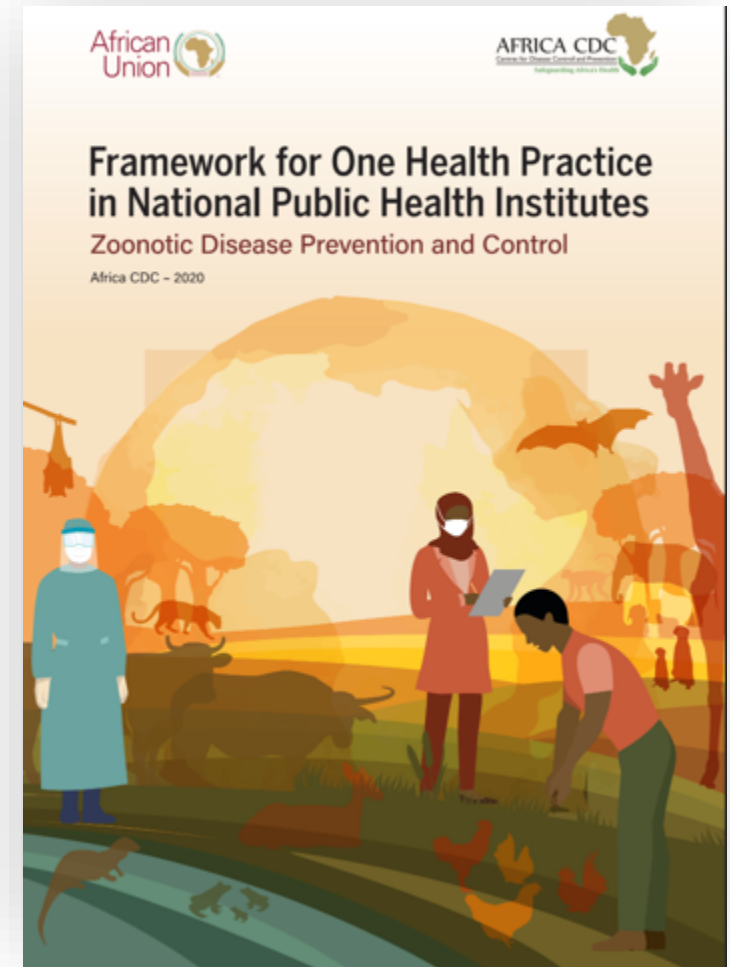
Support and collaborate with key stakeholders across all relevant sectors to strengthen One Health coordination, collaboration and communication

Develop and strengthen surveillance systems and data-sharing mechanisms with all relevant stakeholders

Strengthen laboratory systems and networks to ensure early detection, surveillance, and response to priority zoonotic diseases using a OH approach

Ensure effective and coordinated public health emergency preparedness and response using a One Health approach

Strengthen and support workforce development using a One Health approach to prevent and control priority zoonotic diseases



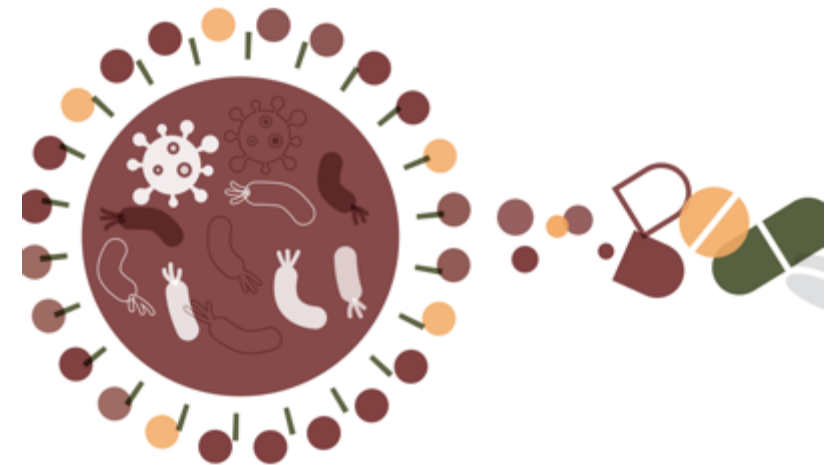
Antimicrobial Resistance Program

Activities and Impact



OH in the context of Antimicrobial resistance

- Africa faces the highest burden of antimicrobial resistance (AMR) among WHO regions, yet this burden remains largely undefined.
- A 2022 Africa CDC study across 14 MS found only 5 of the 15 WHO-prioritized antibiotic-pathogen combinations are consistently tested, showing high AMR rates³.
- To tackle AMR issues a framework that allows multisectoral collaboration is needed.
- Africa CDC developed the 2020-2025 AU Framework for AMR Control that describes strategies to address AMR which aligns with the Declaration On African Common Position on AMR. (Assembly/AU/Decl.3(XXXIII)).



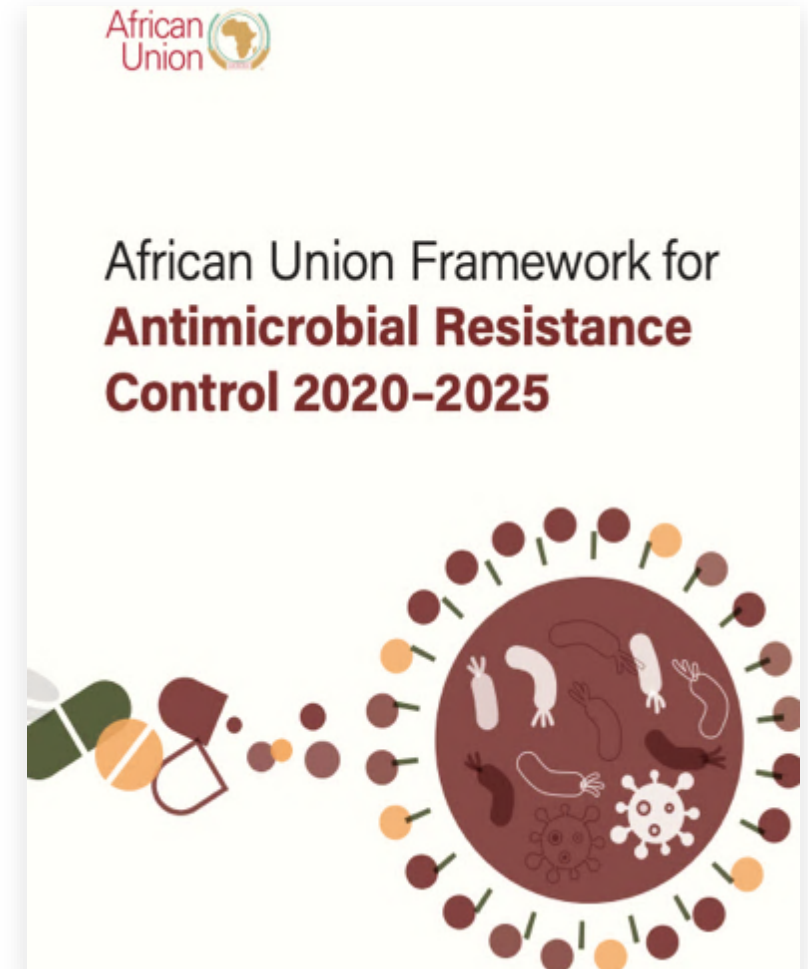
Key objectives of the AMR framework

Improve AMR & AMU Surveillance

Delay Emergence of AMR

Limit transmission of AMR

Mitigate Harm in Affected population



Food Safety Program

Activities and Impact



Food Safety Programme

Strategic goal

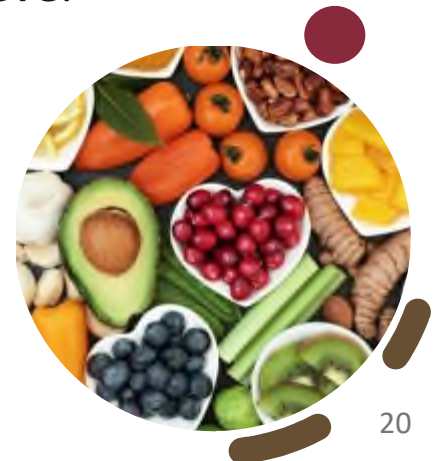
The reduction of the burden of foodborne diseases on the continent by strengthening targeted prevention and control efforts.

Priority Areas

- Strengthening food safety governance
- Addressing food safety hazards in the food supply chain;
- Enhancing food safety surveillance and response
- Strengthening regional and international cooperation
- Promoting consumer awareness and education

Strengthening food safety governance

- Few countries in Africa have formalized regulatory frameworks for food safety
- Africa CDC works to
 - Develop and enforce food safety regulations and standards
 - Establish effective monitoring and surveillance systems
 - Build the capacity of regulatory agencies
- The Africa Union published the Food Safety Strategy for Africa 2022 – 2036 (FSSA)
 - To provide leadership in coordinating food safety governance at continental level



Strategic Objectives of FSSA

Strengthen Food Safety and quality Policy, Legal and Institutional frameworks

Strengthen the human and infrastructure capacity for food control systems

Promote food safety culture, evidence-based advocacy, communication, information and knowledge sharing to raise consumer awareness and empowerment

Improve trade and market access at national, regional, continental and global levels

Strengthen research, innovation, technology development and transfer

Establish and strengthen coordination mechanisms and enhance cooperation at national, regional, continental and global levels



Climate Change Program

Activities and Impact



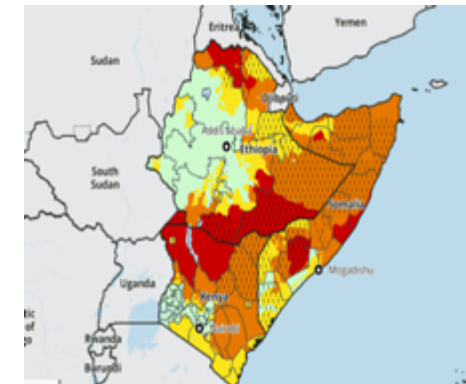
OH in the context of Climate change

- 7 out of the 10 countries most vulnerable to climate change are in Africa.
- Africa is the most exposed to climate change despite less than 4% GHG emission⁹
- Example:
 - In Eastern Africa, cyclones are causing malnutrition.
 - Rising vector-borne diseases in previously unaffected areas
- Climate Change exacerbates the current health challenges in the continent.
- A cross-sectoral approach focusing on the impact on humans and the shared environment is essential to mitigate climate change effects on infectious diseases

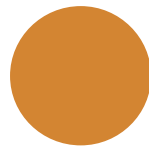
Cyclones in SADC



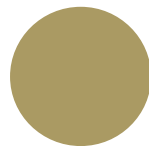
Horn of Africa: drought



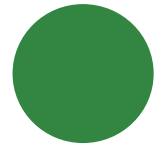
OH in Climate Change - Africa CDC Priorities



Climate change can provide temperature-sensitive vectors and pathogens with ideal conditions for their optimal development and survival, and increase the geographical spread and transmission



Climate change can also lead to more frequent and severe natural disasters, such as floods, droughts, and hurricanes. Emphasizing the importance of improving disaster response and preparedness in order to mitigate the impact of these events on public health.



Climate change can also affect the availability and quality of water, leading to an increased risk of waterborne diseases such as cholera and typhoid. (improving access to safe water and sanitation in order to reduce the incidence of these diseases.)



Climate change can impact agricultural production and food security, which can in turn affect nutrition and public health.

The OH benefits are clear, but implementation can be challenging!

- There is no “one-size-fits-all” at a MS, regional or continental level.
- Requires political cooperation.
- Requires coordination and collaboration at the national, regional, continental and international levels with regional, sub-regional, and cross-border cooperation.
- Continental ownership and leadership.
- Multisectoral and interdisciplinary responses rooted in ensuring equitable access to resources, skills, capacity and incentives.
- Risk of returning to business-as-usual once an immediate crisis is over (especially if externally funded or national structures are not adjusted).
- Need for continuous improvement, and the pursuit of novel solutions to the OH challenges.



Partnership Request

- The Africa CDC One Health Unit is requesting for a partnership that will technically support the team to build our capacity so that we can be utilizing horizon scanning within our Unit.
- This partnership is open to all that are currently utilizing horizon scanning in their work



Strategic collaborations



Food and Agriculture
Organization of the
United Nations



World Organisation
for Animal Health
Founded as OIE



EcoHealth
Alliance



THANK YOU

Africa Centres for Disease Control and Prevention (Africa CDC),
P.O. Box 3243, Addis Ababa, Ethiopia, Ring Road, 16/17,
Tel: +251 (0) 11 551 77 00, Fax: +251 (0) 11 551 78 44

visit our webpage at:

<https://africacdc.org/programme/surveillance-disease-intelligence/one-health>

www.africacdc.org

    @africacdc



Australian Government

Department of Agriculture,
Fisheries and Forestry

Second International Workshop on Horizon Scanning for Plant Health

An Australian perspective

Brendon Reading

Australian Government

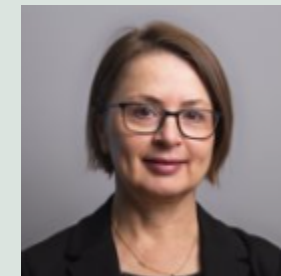
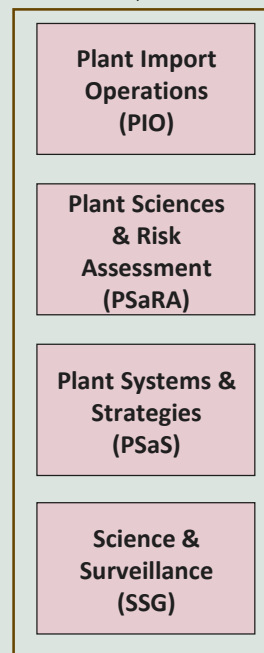
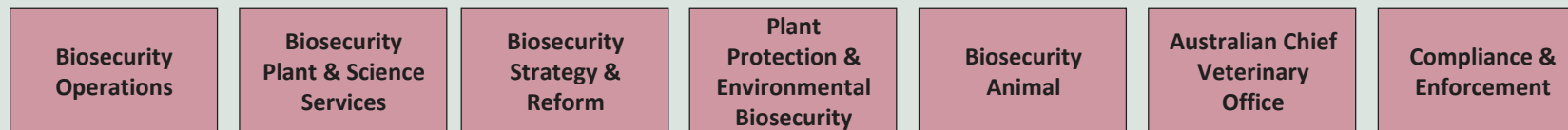
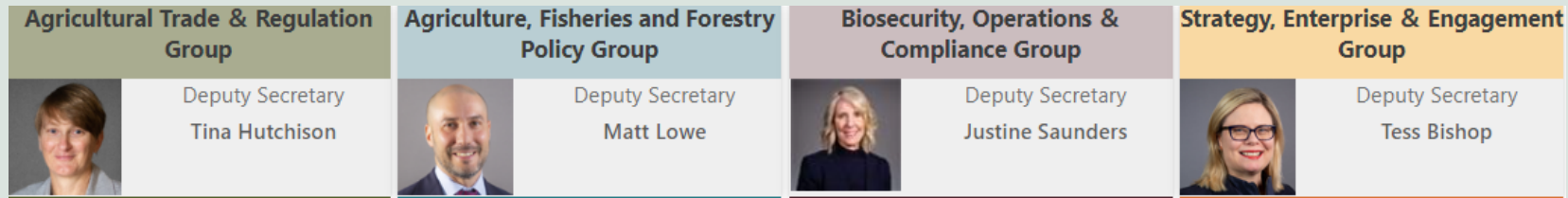


DAFF structure

OFFICIAL



The Secretary
Adam Fennessy



Dr Gabrielle Vivian-Smith
Australian Chief Plant
Protection Officer (ACPPO)

Australia's Plant biosecurity outlook

Increasing pest and disease pressures



CARGO /
HITCH-HIKERS

- Pests contaminate goods pre-export or on outside of vessels and containers.
- Department is implementing new measures to manage risk.
- Increase in detections of ants, BMSB, GAS, and khapra beetle.



Brown marmorated
stink bug



Khapra beetle

Department of Agriculture, Fisheries and Forestry



NORTHERN
AUSTRALIA

- Movement of pests down through Torres Strait in northern Australia.
- Department controls these where possible.
- We monitor for new incursions when controls are not possible.



Fall armyworm



Fruit flies



GLOBAL
TRADE

- The increase in global trade is leading to an increase in pest detections at the border.
- The department is remaining vigilant in its regulation of new pests, new pathways, and new hosts.



Xylella



Seed-borne
pathogens

Avoiding information overload

National Priority Plant Pest List (NPPPL)


	1. Xylella (Pierce's disease) Name: <i>Xylella fastidiosa</i> Note: Includes vectors Risks: 350+ species including grapevine, olives, & almonds		6. Huanglongbing Name: ' <i>Candidatus Liberibacter asiaticus</i> ' Note: Includes vectors Risks: Commercial varieties of citrus
	2. Khapra beetle Name: <i>Trogoderma granarium</i> Risks: Grains, rice, oilseeds, dried fruits		7. Spongy moths Name: <i>Lymantria dispar</i> spp. complex & <i>Lymantria monacha</i> Risks: 1000+ species including eucalypts, pine forests, fruit & nut trees
	3. Spotted wing drosophila Name: <i>Drosophila suzukii</i> Risks: Fruits (berries, cherries, nectarines, plums and grapes)		8. Stink bugs Name: <i>Halyomorpha halys</i> (BMSB) and <i>Erthesina fullo</i> (YSSB) Risks: 300+ species of plants
	4. Fruit flies (exotic species) Name: Multiple genera Note: Includes several <i>Bactrocera</i> species Risks: 300+ species including fruit and vegetable trees		9. Mites of bees (internal & external) Name: Multiple genera Note: Includes Varroa, Tropilaelaps & Tracheal mites Risks: Bee industry (pollination & honey)
	5. Karnal bunt Name: <i>Tilletia indica</i> Risks: Wheat, durum wheat, triticale		10. Myrtle rust Name: <i>Austropuccinia psidii</i> (exotic strains) Risks: 100+ species, mainly in the Myrtaceae family



Over 400
Industry
HPPs



Horizon scanning resources

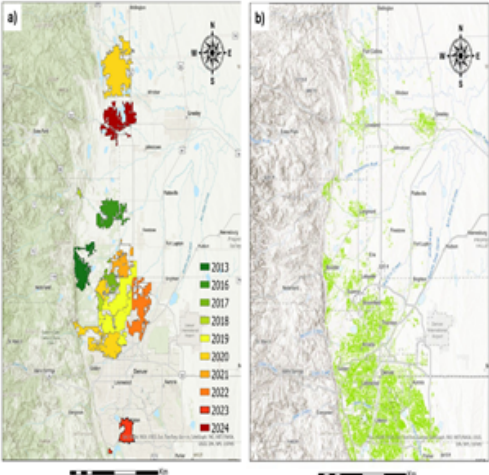


Your daily digest is ready

Good day, Brendon Reading!
Here is what important has happened today, 20 Dec 2024. Created for you by Intelliriver Source (IBIS).

Issue: Plant Health General News

Spread of the emerald ash borer, *Agrilus planipennis*, in the Front Range region of Colorado





Department of Agriculture, Fisheries and Forestry Daily Briefing

Saturday 1st February 2025

 Australian Government
Department of Agriculture, Fisheries and Forestry

 Download Media Items in PDF

 Download Media Items in Plain Text

 Open Viewer for more news

Jump to: Minister (2) | Department and APS (12) | ABARES (1) | Agricultural Industry (8) | Trade (17) | Biosecurity & Compliance (9) | Drought (3) | Fisheries (4) | Forestry (2) | Natural Resources Management (4) | Climate and Land (3)





Plant Health Newsletter on HORIZON SCANNING

December 2024

European Food Safety Authority (EFSA)
EFSA-Q-2023-00856
doi: 10.2903/sp.efsa.2025.EN-9214



Thursday, May 9, 2024 Notification

First report of camellia spiny whitefly, *Aleurocanthus camelliae* (Hemiptera: Aleyrodidae), in Croatia

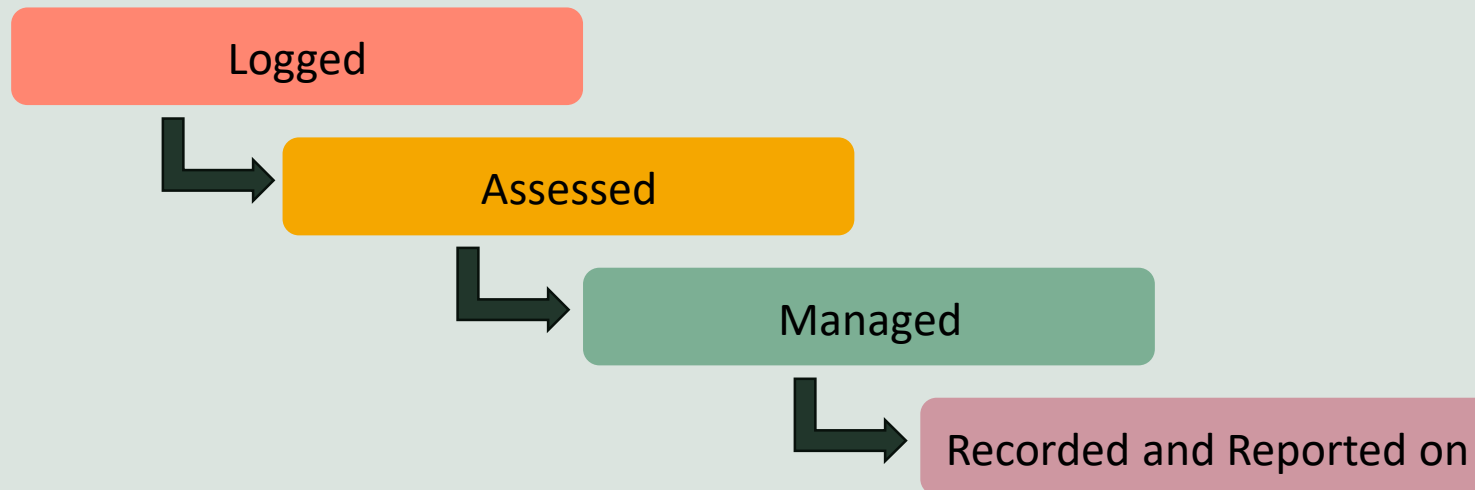
Country: Croatia

Source: Natura Croatica

Event: New Location

Changing Biosecurity Risk (CBR) Process

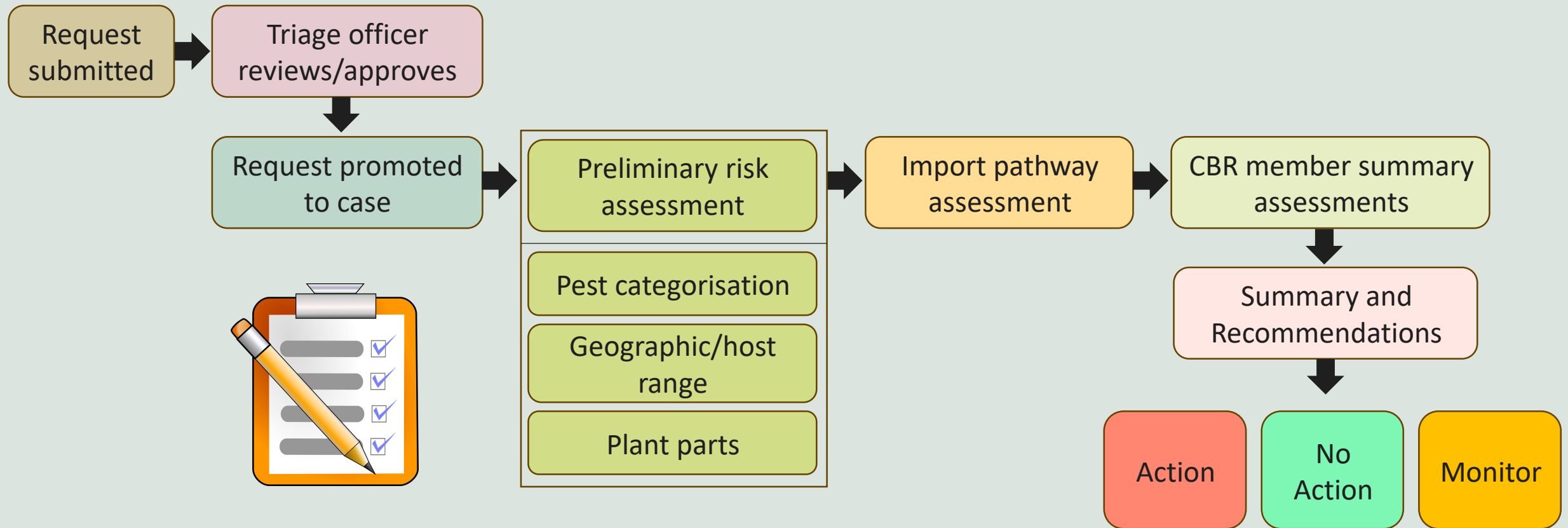
- A process for receiving, recording, analysing and initiating actions and decisions to address changing risks and hazards.
- This process promotes the scanning, recording and monitoring of changing plant health related risks and hazards, alerted by a range of mechanisms.
- The information analysed enables more informative decision making and allows the department to become more responsive to change, which will ensure Australia's import conditions and policies evolve and remain fit for purpose.
- The CBR process provides a single portal through which information on changing biosecurity risks and hazards can be:



'Triggers' for a CBR assessment

Group:	Trigger/scope:
<u>NEW/FIRST:</u>	New host of a NPPP or HPP
	New host record of a quarantine pest on commercial crops, established industry, or Australian native plant
	Newly discovered potential quarantine pest of importance to commercial crops, established industry, or Australian native plants
	New strain or biotype of a pest that appears to be more damaging
	Taxonomic change of a significant pest that results in a change in pest status
<u>PATHWAY CHANGE:</u>	New evidence to demonstrate a change in pathway association of a significant quarantine pest (e.g. NPPP or HPP)
<u>DISTRIBUTION:</u>	New geographical distribution of a significant quarantine pest (e.g. NPPP or HPP)
	Rapidly spreading quarantine pest or hitchhiker around the world
<u>OTHER</u>	Enter definition (mandatory field will appear to enter definition and these will be reviewed)

CBR workflow



CBR in action

Concern (submitter) – In 2022, a novel disease similar to pear fire blight (*Erwinia pyri* sp. nov) was found in a pear orchard in Zhangye City, Gansu Province, China. The disease mainly damages the branches, leaves, and fruits of the plant. This information was in a journal article published in May 2024.

Trigger – Newly discovered potential quarantine pest of importance to commercial crops, established industry or Australian native plants.



Risk assessment (CBR group) – *Pyrus betulifolia* nursery stock identified as a pathway. All permitted *Pyrus* spp. nursery stock requires minimum 12-months growth and visual screening in post entry quarantine. Post entry quarantine and visual screening was considered appropriate to manage the risk of *Erwinia pyri*.

CBR Outcome – Biosecurity risk identified for *Pyrus* spp. nursery stock; however, the risk is managed by current import conditions. No further action was required, and the case was closed.

Thankyou

Contact

Brendon Reading

Assistant Director

Preparedness and Response | Plant Health Policy

Plant Protection and Environmental Biosecurity Division

Phone +61 2 6272 4705 or +61 421 912 626 | Email Brendon.Reading@aff.gov.au

Department of Agriculture, Fisheries and Forestry

GPO Box 858 Canberra ACT 2601 Australia



Exotic pest early warning systems & preparedness activities

Godshen Pallipparambil Robert
Center for Integrated Pest Management (CIPM)

NC STATE UNIVERSITY



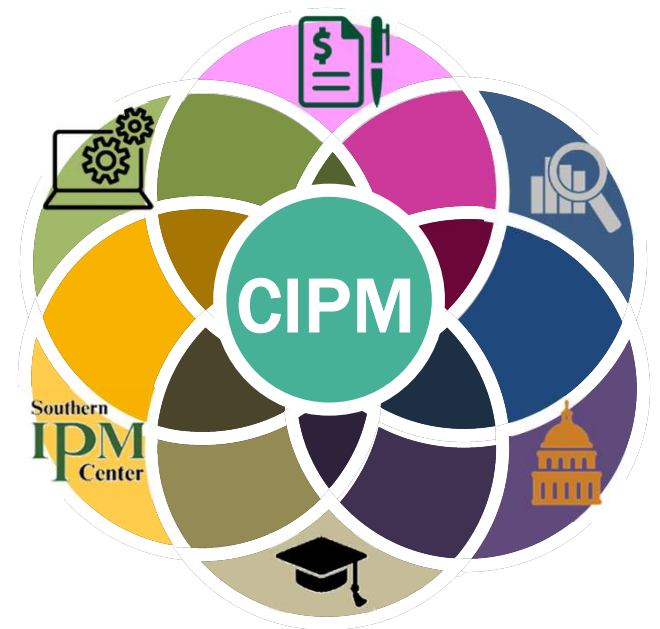
Center for Integrated Pest Management (CIPM)

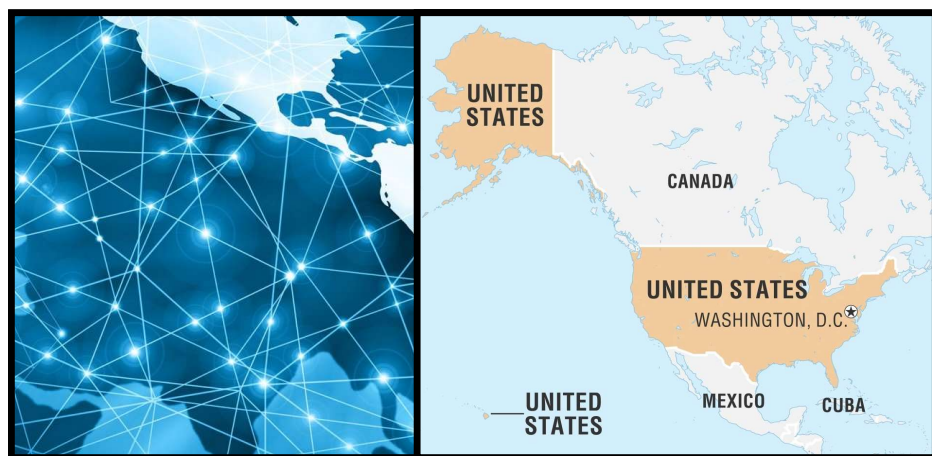
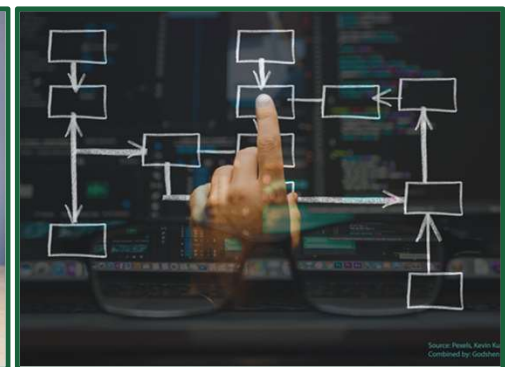
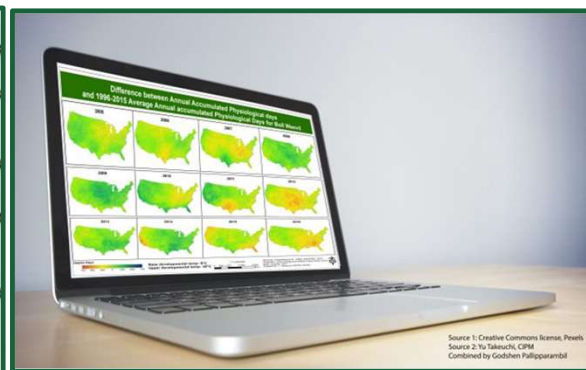


More than 25 years of work experience with US NPPO (USDA APHIS PPQ)



70-80
employees





Godshen Pallipparambil

Assistant Director, NSF Center for Integrated
Pest Management
grpallip@ncsu.edu



Yu Takeuchi

Associate Director for Innovations, NSF Center
for Integrated Pest Management
ytakeuc@ncsu.edu



Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Science and Technology

Plant Protection and Quarantine



North American Plant Protection Organization

Phytosanitary Alert System

```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
```

Early Warning
Systems

Pest
Databases

Pest Impact
Assessment
&
Prioritization

Pest Datasheets
&
New Pest
Response
Guidelines

Assist with
Delimitation
&
eradication
surveys

Exotic Pest Information and Prediction Systems (EPIPS) is a tightly integrated group of systems built and managed by CIPM for USDA Plant Protection and Quarantine (PPQ)



AIRA

DSES

EPIPS supports the following PPQ mission areas: bio-surveillance and preparedness (PestLens), pest risk analysis (GPDD and PAGs), pest spread and phenology modeling (SAFARIS), and pest identification (ITP)

```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
```

Early Warning
Systems

Pest
Databases

Pest Impact
Assessment
&
Prioritization

Pest Datasheets
&
New Pest
Response
Guidelines

Assist with
Delimitation
&
eradication
surveys



**What is happening outside
the US borders?**



PestLens

Mission: PestLens supports USDA-APHIS-PPQ efforts to protect U.S. agriculture and natural resources against exotic plant pests by providing early warning information and a mechanism for centralized documentation and coordination of safeguarding actions.



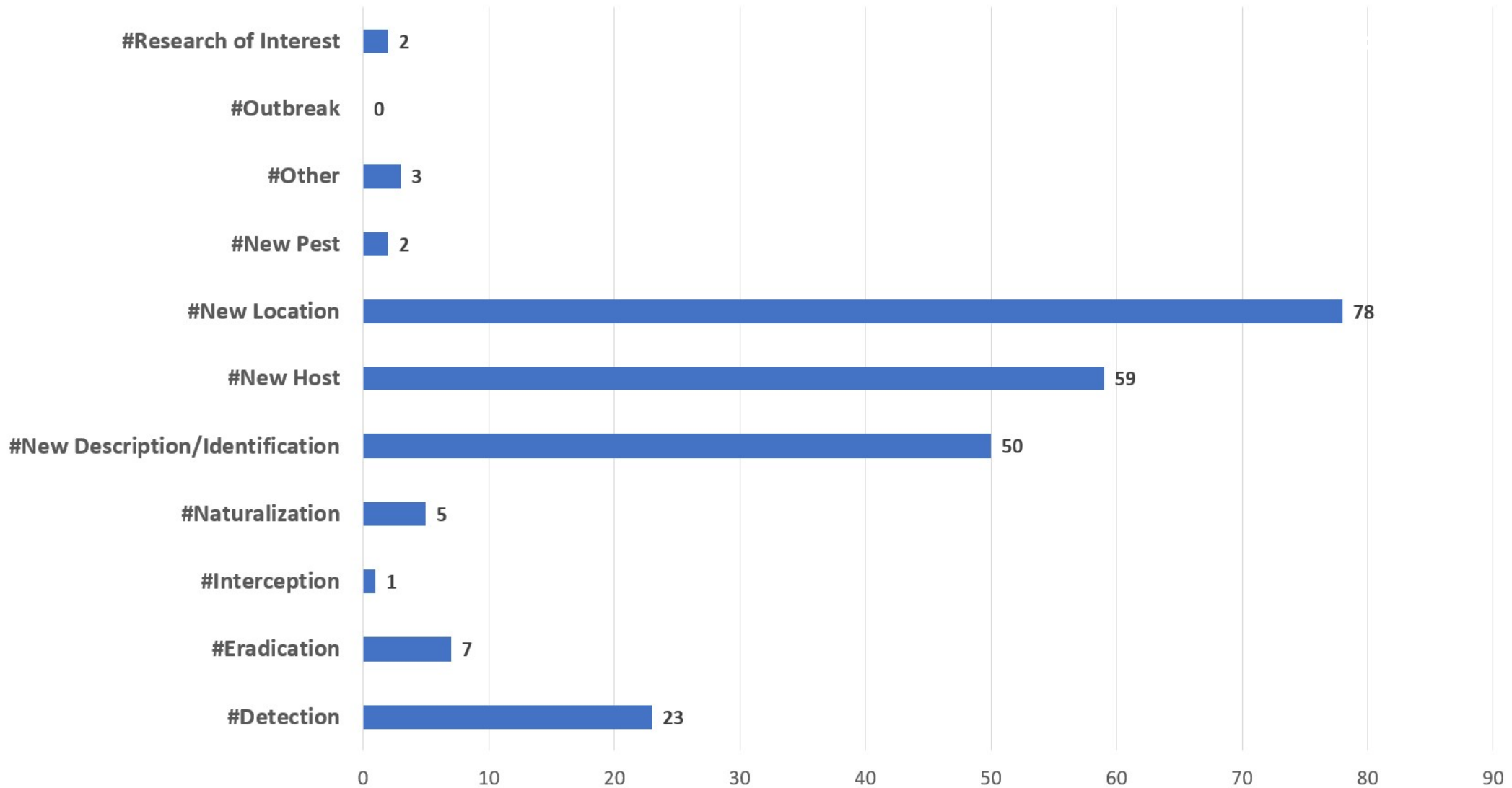
PestLens



Jennifer Cook
Godshen Robert

Sherrie Emerine
Huiping Zhou
Jaap van Kretschmar
Rosemary Hallberg

PestLens articles in different categories: 2020



PestLens Article

[View Notification](#)[Save Article](#)[Edit Article](#)

South American palm borer, *Paysandisia archon* (Lepidoptera: Castniidae), established in Switzerland

Reported by PestLens on: Thursday, January 23, 2025

Country: Switzerland

Source: BioInvasions Records

View Count: 104

Event: New Location

During a 2023 survey, South American palm borer, *Paysandisia archon* (Lepidoptera: Castniidae), was found infesting cultivated *Phoenix canariensis* (Canary Island date palm) and *Chamaerops humilis* (dwarf fan palm) plants at multiple locations in Switzerland. Affected plants showed foliage damage, larval tunnels, and larval-feeding sawdust. *Paysandisia archon* was detected in and eradicated from Switzerland from 2010 to 2013.

Paysandisia archon infests economically important palm species, including *Phoenix* spp., *Washingtonia* spp. (fan palm), and *Sabal* spp. (palmetto). *Paysandisia archon* has been reported from other parts of Europe and South America and is not known to occur in the United States.

[View Edits](#)

Reference(s):

1. Fehr, V., A. Minetti, M. Conedera, and G. B. Pezzatti. 2024. First evidence of establishment of the palm borer moth *Paysandisia archon* (Burmeister, 1879) in southern Switzerland. *BioInvasions Records* 13(4):901-908. Last accessed January 23, 2025, from <https://doi.org/10.3391/bir.2024.13.4.05>.

Other resources:

[View more information about *Paysandisia archon* in the Global Pest and Disease Database](#)

Other PestLens articles about this pest:

[South American palm borer, *Paysandisia archon* \(Lepidoptera: Castniidae\), detected in Germany](#)

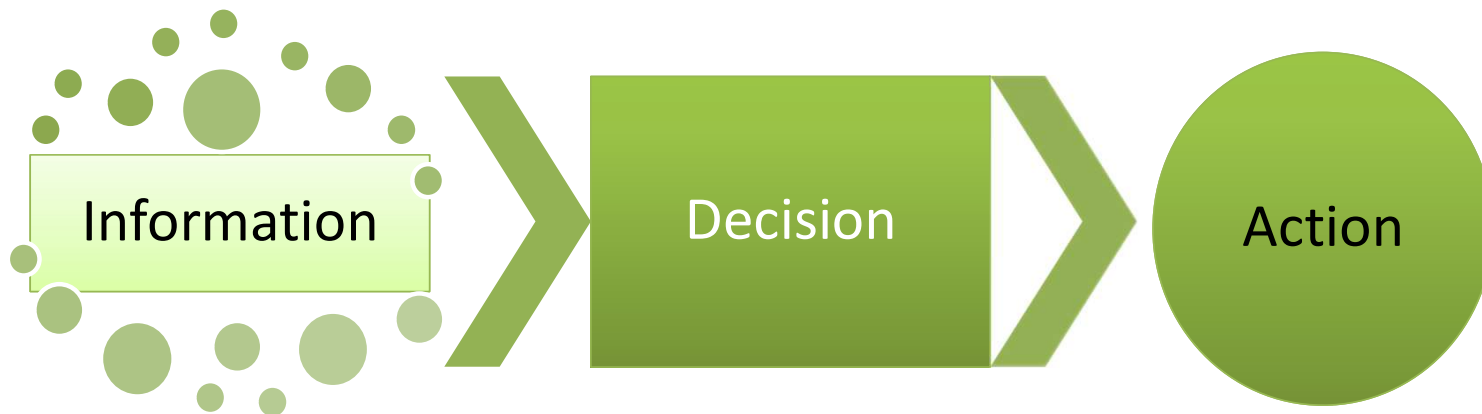
[First report of the South American palm borer *Paysandisia archon* \(Lepidoptera: Castniidae\) in the Czech Republic](#)


[First report of the South American palm borer *Paysandisia archon* \(Lepidoptera: Castniidae\) in Cyprus and Slovenia](#)



Actions on each PestLens article

- New host?
- New distribution?
- Is this new info in our pest database?
- Does this pest need to go through the prioritization process?
- Existing open pathways?
- Further regulation needed?





```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
```

Early Warning
Systems

Pest
Databases

Pest Impact
Assessment
&
Prioritization

Pest Datasheets
&
New Pest
Response
Guidelines

Assist with
Delimitation
&
eradication
surveys

Data Gathering



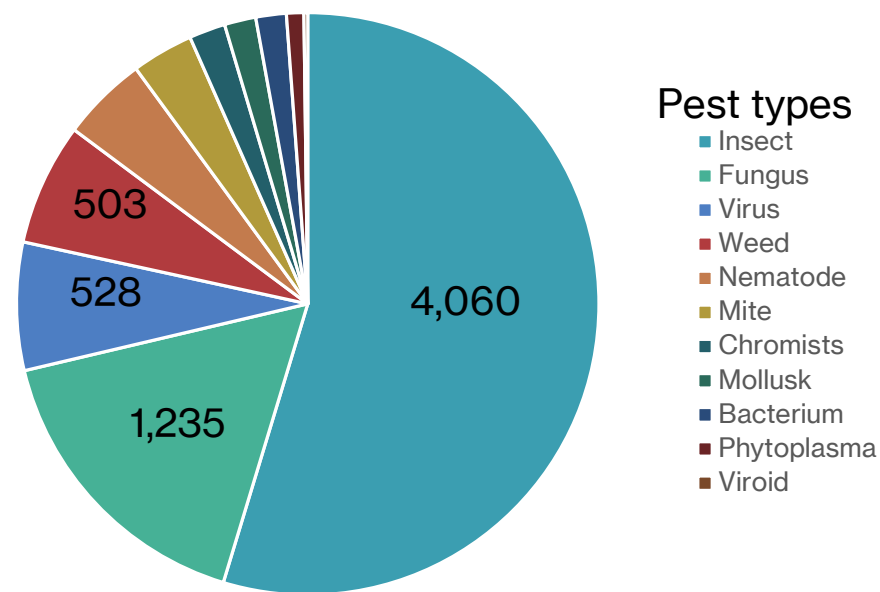
Database

We operate an Enterprise Data Center that is USDA-certified, offering enterprise class infrastructure. We develop, deploy and manage databases for our stakeholders.

Global Pest and Disease Database (GPDD)

Over 7,400 unique plant pests

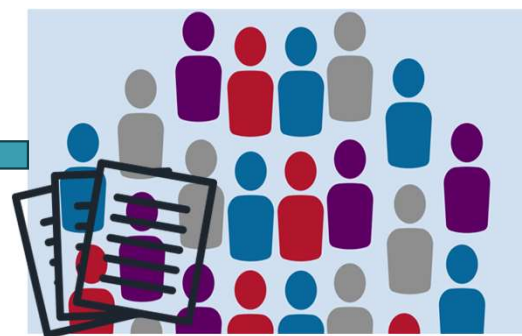
Data Category	Count
Pests	7,471
Country or Regions	1,045
Pest x Country	359,044
Hosts	31,503
Pest x Host	268,905
Primary Sources	94,453
Cited	86,266
Additional	8,187



Unique pests



notifications



6 researchers
2 IT analysts



Distribution records supported by direct evidence

[Show additional records not supported by direct evidence \(in gray italic type\)](#)

Albania: [\(56\)](#)

Algeria: [\(134\)](#)

Angola: [\(282\)](#)

Argentina: [\(35, 36, 260\)](#)

Australia: [\(29, 47, 121, 128, 140, 145, 149, 157, 194, 343, 422\)](#)

New South Wales: [\(29, 47, 121\)](#)

Northern Territory: [\(343, 422\)](#)

Queensland: [\(29, 128, 140, 149, 157\)](#)

South Australia: [\(145\)](#)

Victoria: [\(29, 343\)](#)

Western Australia: [\(145\)](#)

Austria: [\(134\)](#)

Bangladesh: [\(173, 261\)](#)

Benin: [\(392, 393\)](#)

Botswana: Distribution of: *Heliothis armigera* [\(96\)](#)

Brazil: [\(29, 35, 89, 91, 101, 123, 217, 304, 306, 367\)](#)

Alagoas: [\(91\)](#)

Amapa: [\(367\)](#)

Bahia: [\(29, 89, 123, 367\)](#)

Distrito Federal: [\(29, 367\)](#)

Espirito Santo: [\(306, 367\)](#)



```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
```

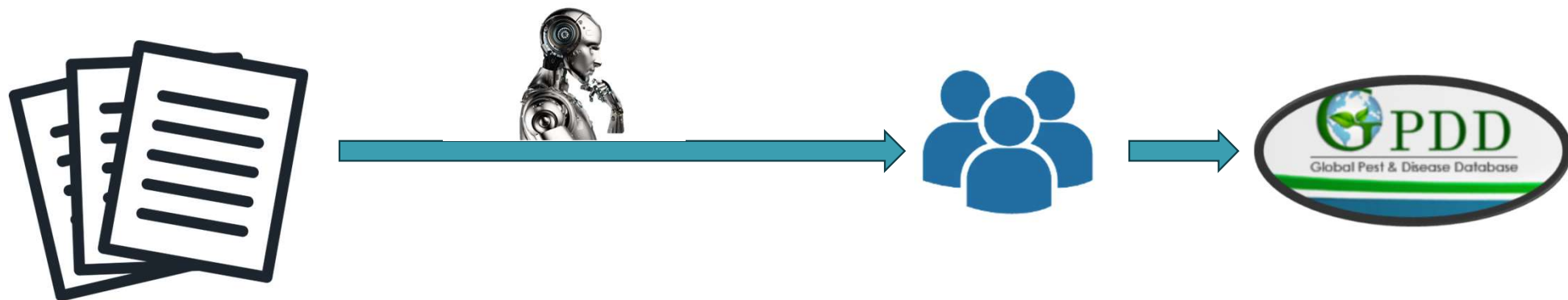
Early Warning
Systems

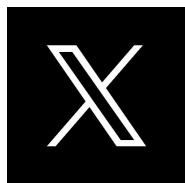
Pest
Databases

Pest Impact
Assessment
&
Prioritization

Pest Datasheets
&
New Pest
Response
Guidelines

Assist with
Delimitation
&
eradication
surveys





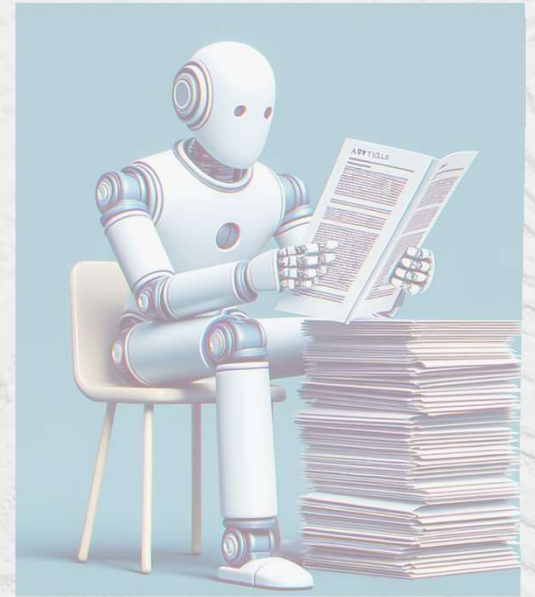
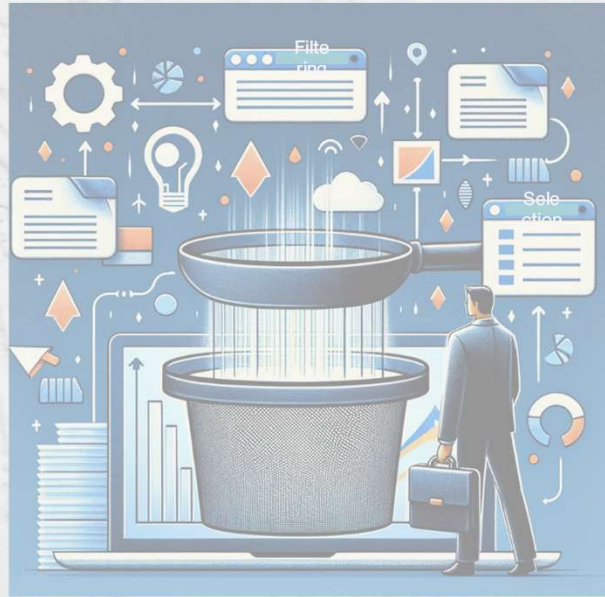
.gov

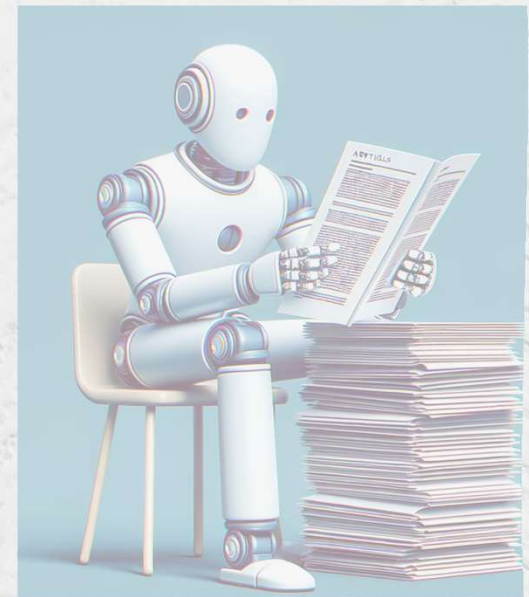
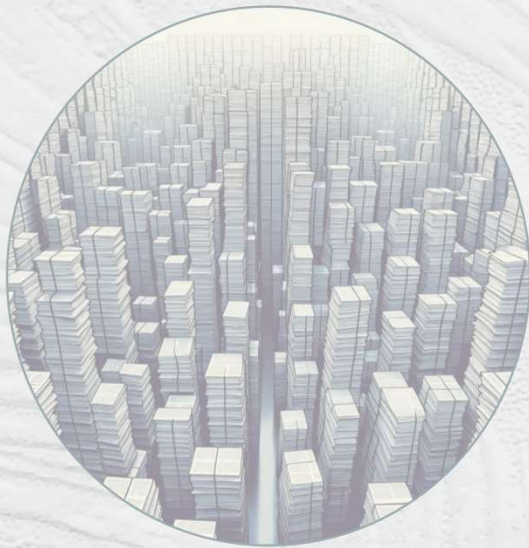


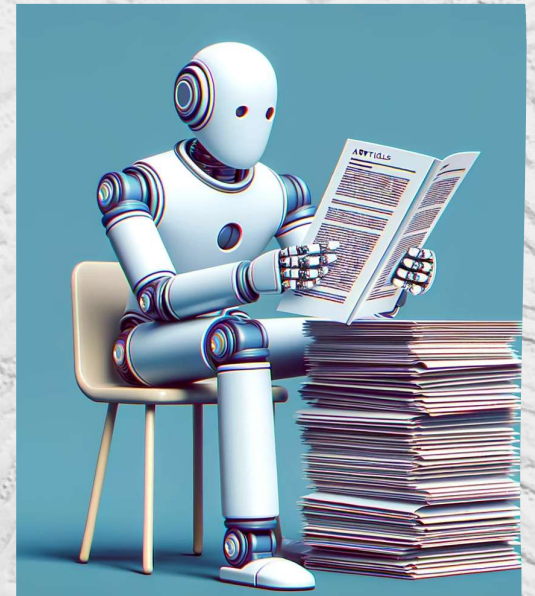
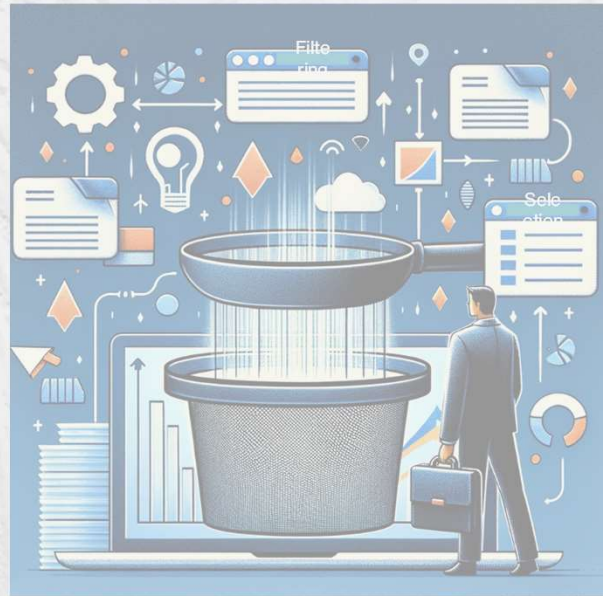
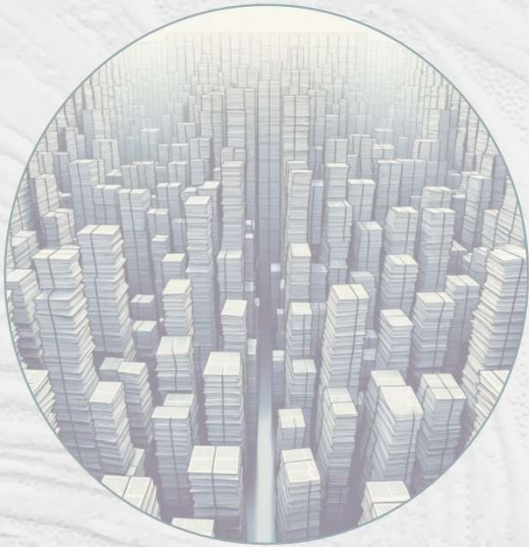
Automated Information Retrieval and Analysis (AIRA) model for monitoring global exotic pest activity (2024-26)



Godshen Robert
Dalon White
Robert Straser



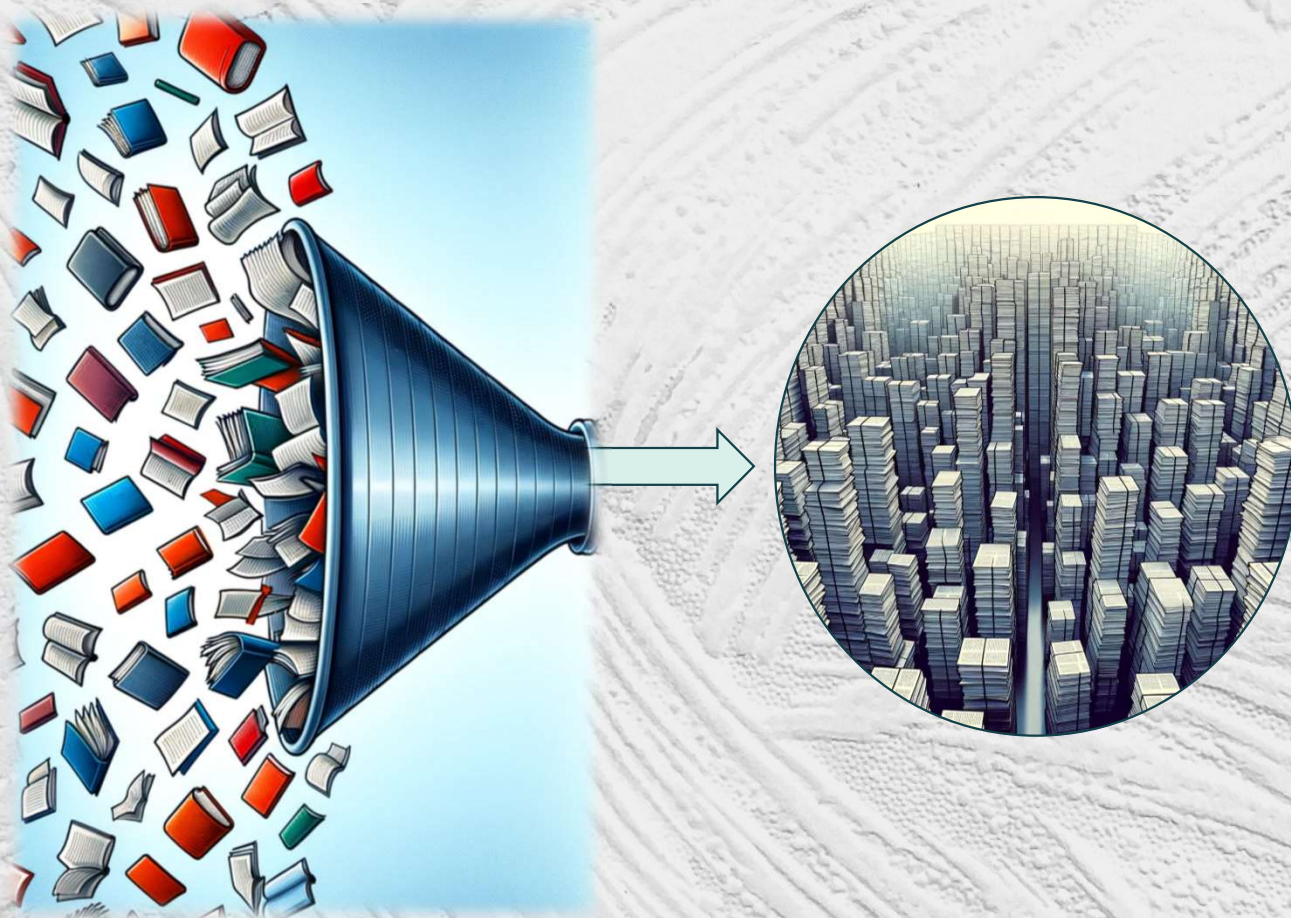




New hosts
New locations

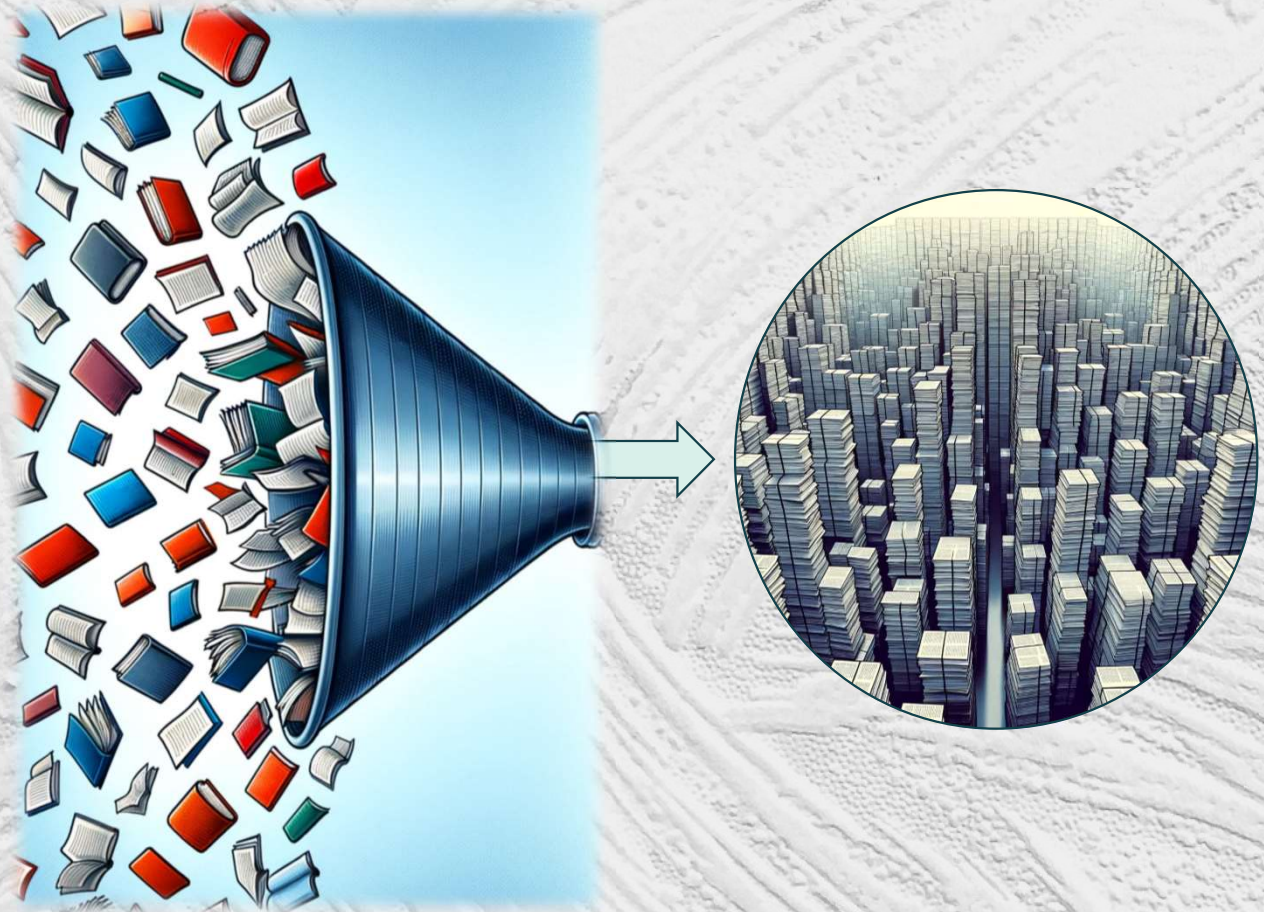
Where are we at?

IPPC pest reports
EPPO reports
EPPO database
NAPPO Pestalerts



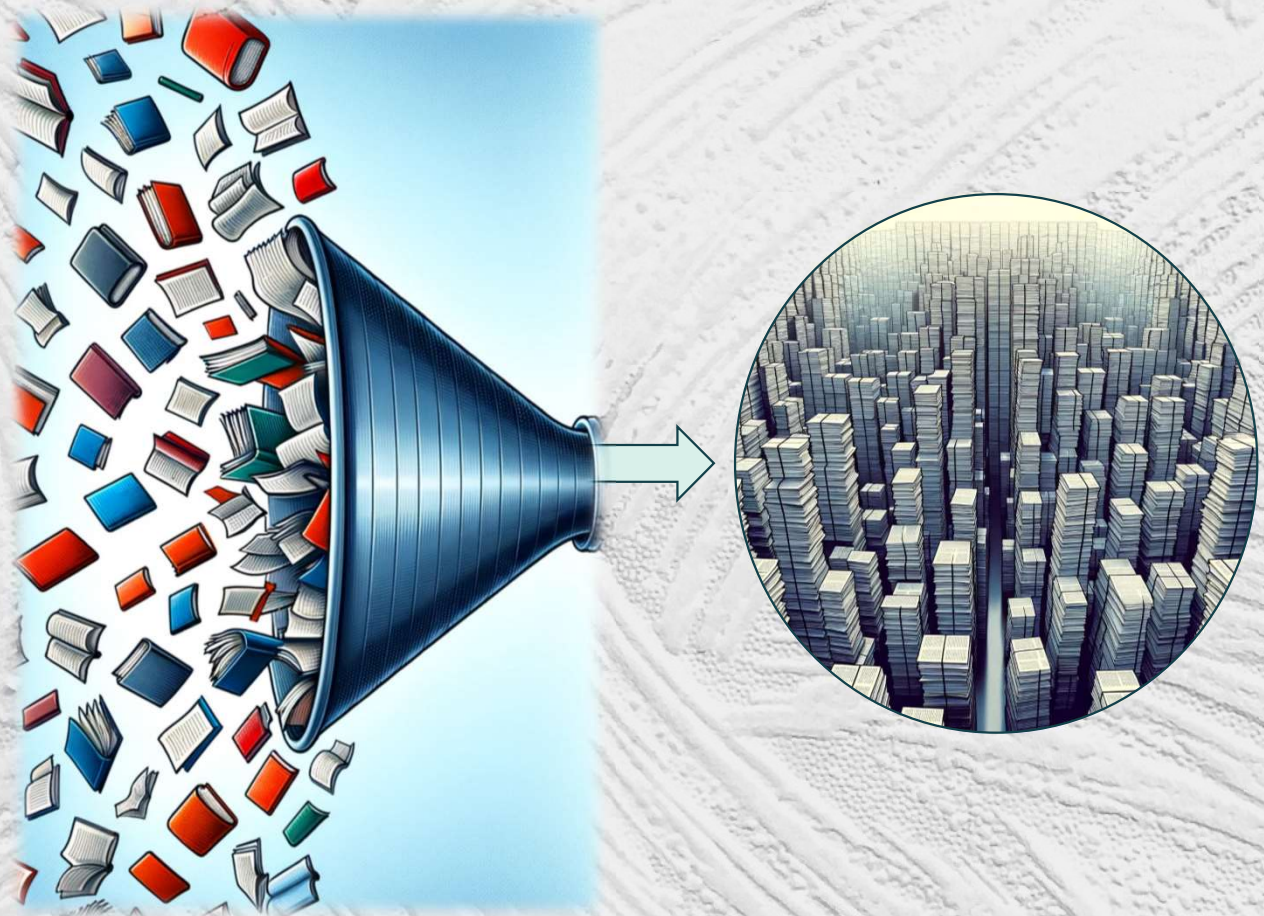
Where are we at?

Google News
Social media (X, FB)



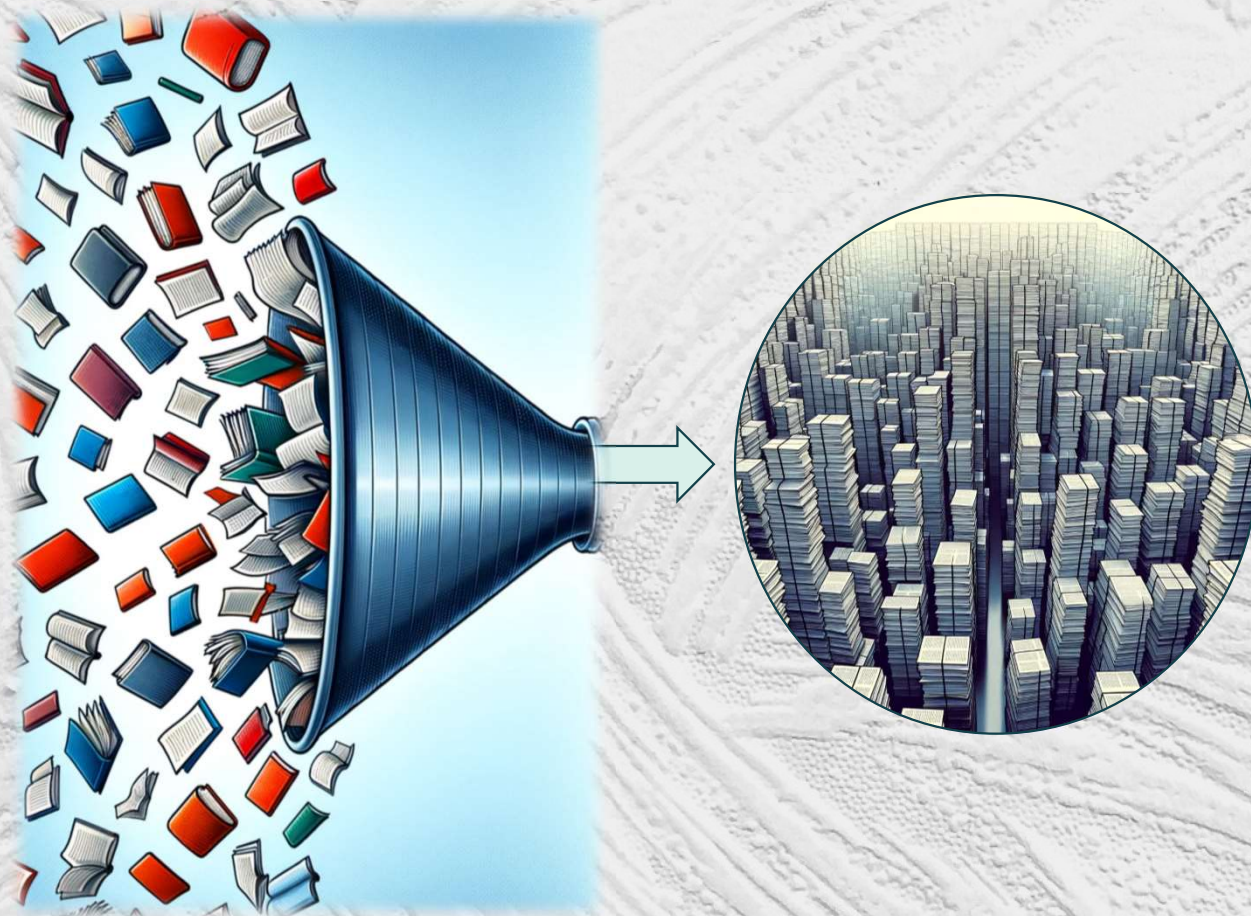
Where are we at?

Google News
Social media (X, FB)



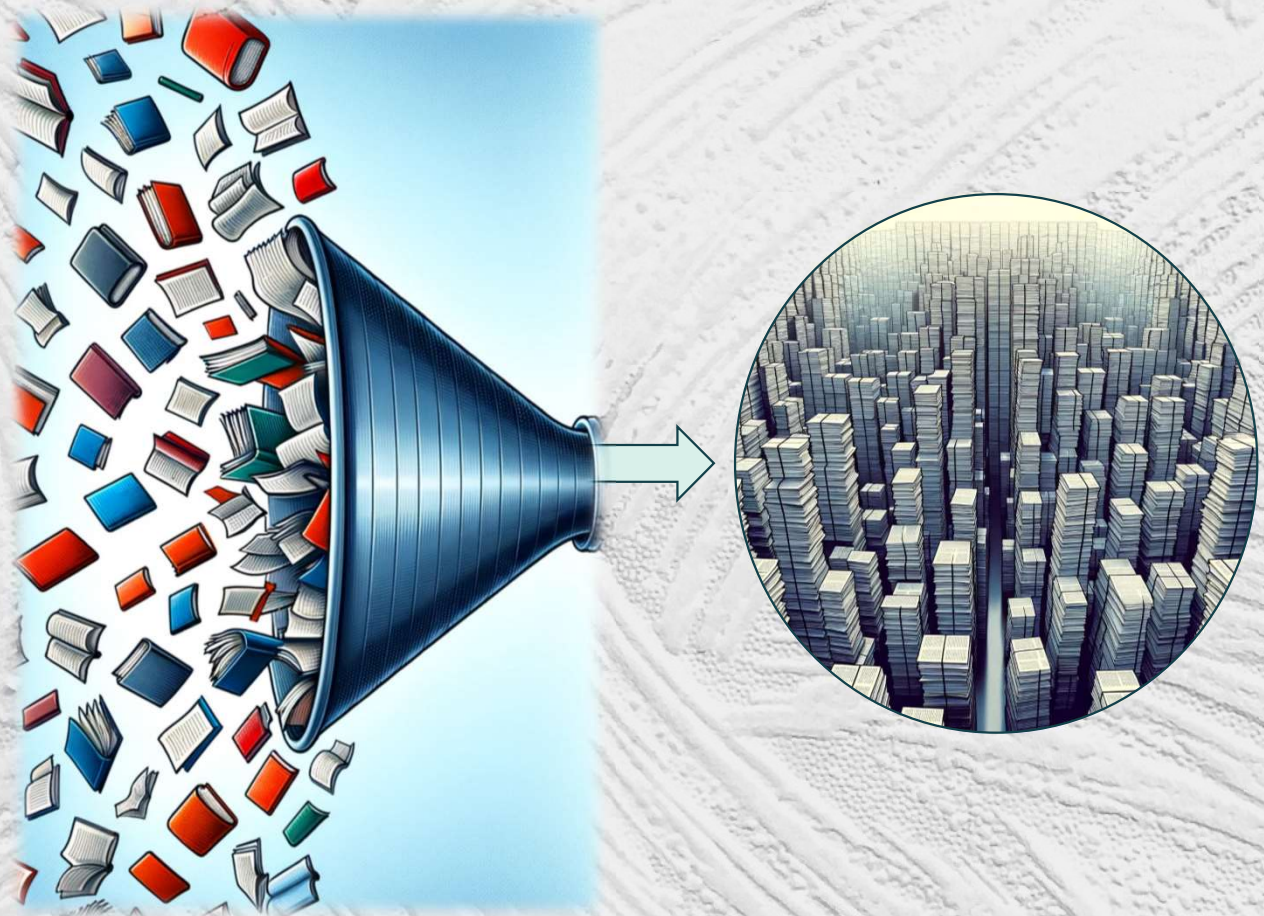
Where are we at?

EDDMaps
State detection
survey results



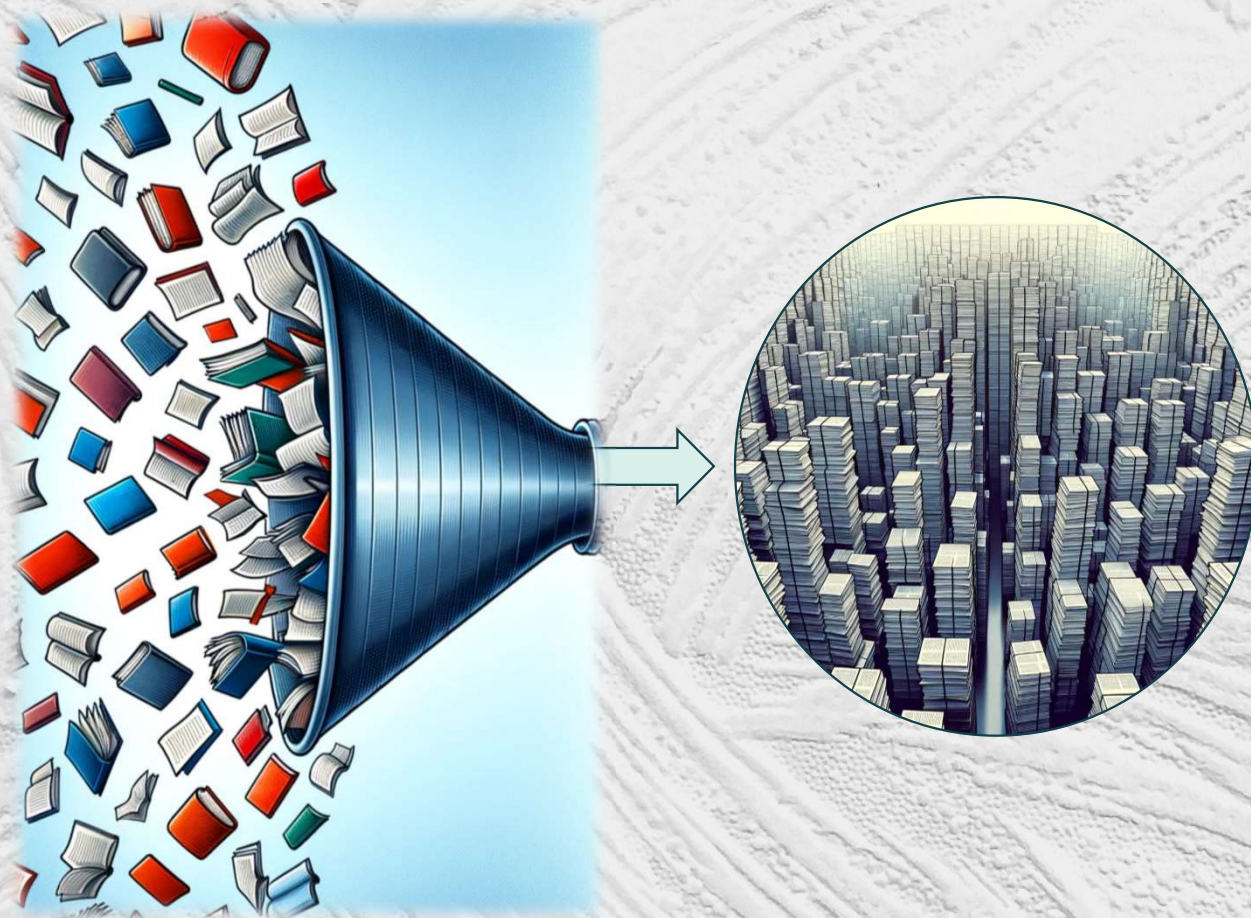
Where are we at?

iNaturalist
GBIF

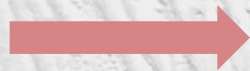


Where are we at?

**Internal
USDA documents**



Where are we at?



Where are we at?

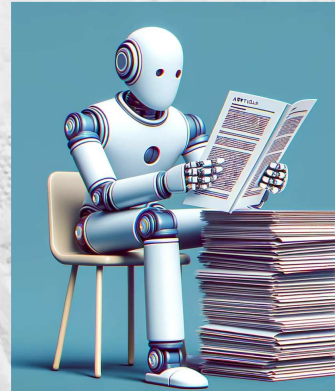


restricted data

Local



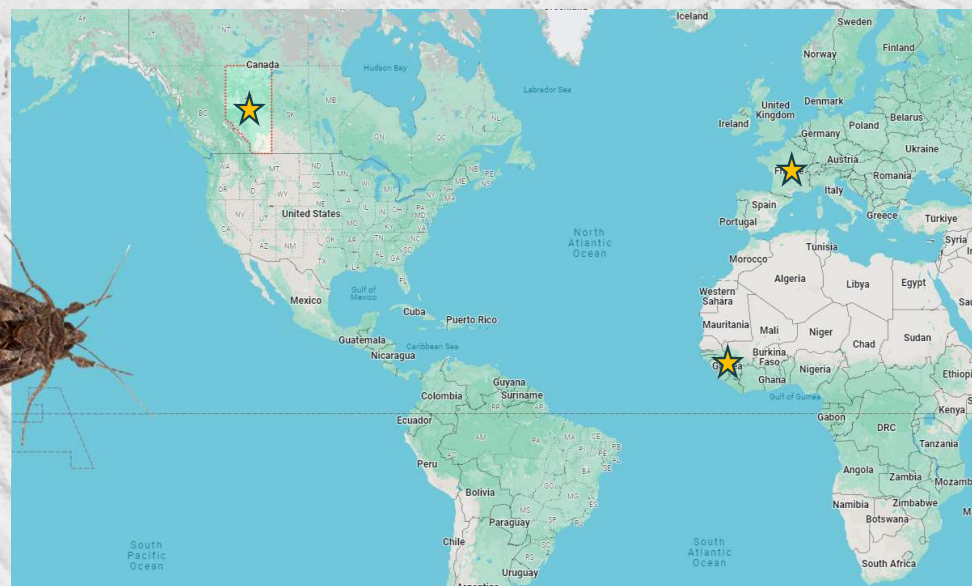
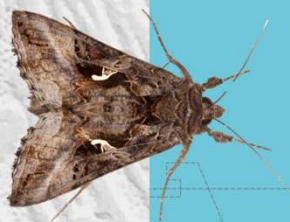
LLM



Where are we at?



LLM



From social media

Contents

- [1] 🗺 Southeast Asia [↗](#)
- [2] 🗺 Unknown [↗](#)
- [3] 🗺 Unknown [↗](#)
- [4] 🗺 California [↗](#)
- ... - ...

-
- [1] 🗺 China [↗](#)
 - [2] 🗺 Indonesia [↗](#)
 - [3] ✖ Malaysia [↗](#)

Separates **new** data

India(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), **Chinese Taipei**(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), China(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Thailand(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Indonesia(1)(2)(3)(4), Malaysia(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Philippines(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Uganda(1)(2), Sri Lanka(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Papua New Guinea(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Nepal(1)(2)(3)(4)(5)(6)(7)(8)(9), Vietnam(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Bangladesh(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Solomon Islands(1)(2)(3)(4)(5)(6)(7) (GBIF)

India(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Indonesia(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Thailand(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), **Tanzania United Republic of**(1)(2)(3), China(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Australia(1), Taiwan Province of China(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Singapore(1)(2)(3)(4)(5)(6), Pakistan(1)(2)(3)(4)(5)(6), Japan(1)(2)(3)(4)(5)(6)(7), **Macao**(1)(2)(3), Hong Kong(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Philippines(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Nepal(1)(2)(3)(4), Malaysia(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Sri Lanka(1)(2)(3)(4), Nigeria(1), Mauritius(1)(2), United States(1)(2)(3)(4)(5)(6)(7)(8)(9)(10), Bangladesh(1)(2)(3)(4)(5)(6)(7), Kenya(1)(2)(3)(4)(5)(6), Cambodia(1)(2)(3)(4)(5)(6), **Réunion**(1)(2)(3)(4)(5), **Zambia**(1), Vietnam(1), **Lao People's Democratic Republic**(1), East Timor(1), Guam(1) (INATURALIST)


Early Warning
Systems

Pest
Databases

Pest Impact
Assessment
&
Prioritization

Pest Datasheets
&
New Pest
Response
Guidelines

Assist with
Delimitation
&
eradication
surveys

- 
1. Pre-assessments
 2. Provisional assessment
 3. Full impact assessment

		select one:	Uncert.	Alternate Choice I	Alternate Choice II	Score	Comments/
--	--	-------------	---------	-----------------------	------------------------	-------	-----------

18

In areas where this pest occurs:

[a] Organism is almost always highly managed/controlled and/or prevention programs specific to this organism are usually in place

[b] Generally no preventative programs specific to the organism are in place, but the organism is highly managed/controlled when needed

[c] Generally no *specific* control or preventative programs are in place for the organism, but some specific controls (e.g., topical controls such as pesticides or cultural control) may be applied when populations are high

[d] Organism is only controlled under rare conditions

[e] Organism is not managed/controlled because it is not important

[f] Organism cannot be controlled in a cost-effective manner

[?]

Consider an organism to be "highly managed/controlled" if it requires multiple control techniques or involves a great deal of time, energy or money to manage the pest.

a

b

c

d

e

f

negl

low

mod

high

max

a

b

c

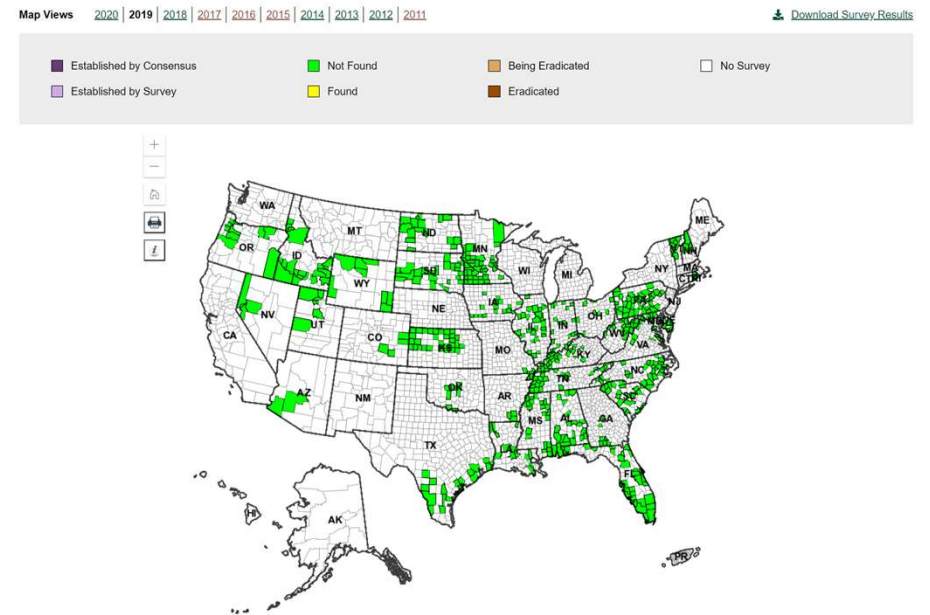
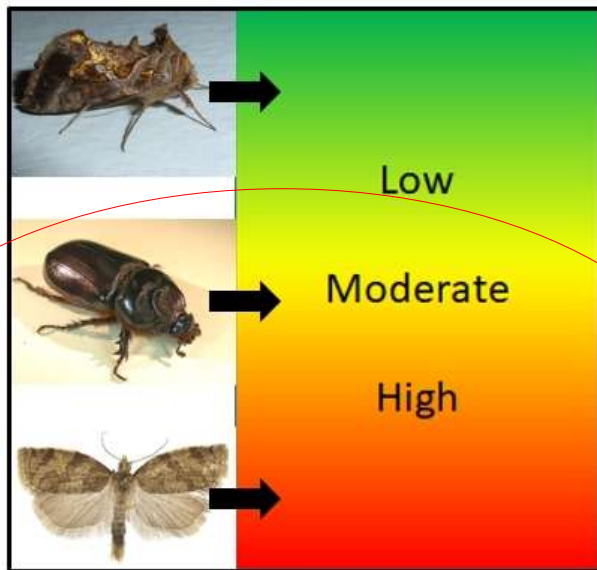
d

e

f

?

Categorizing Exotic Pests for Resource Allocation




```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
```

Early Warning
Systems

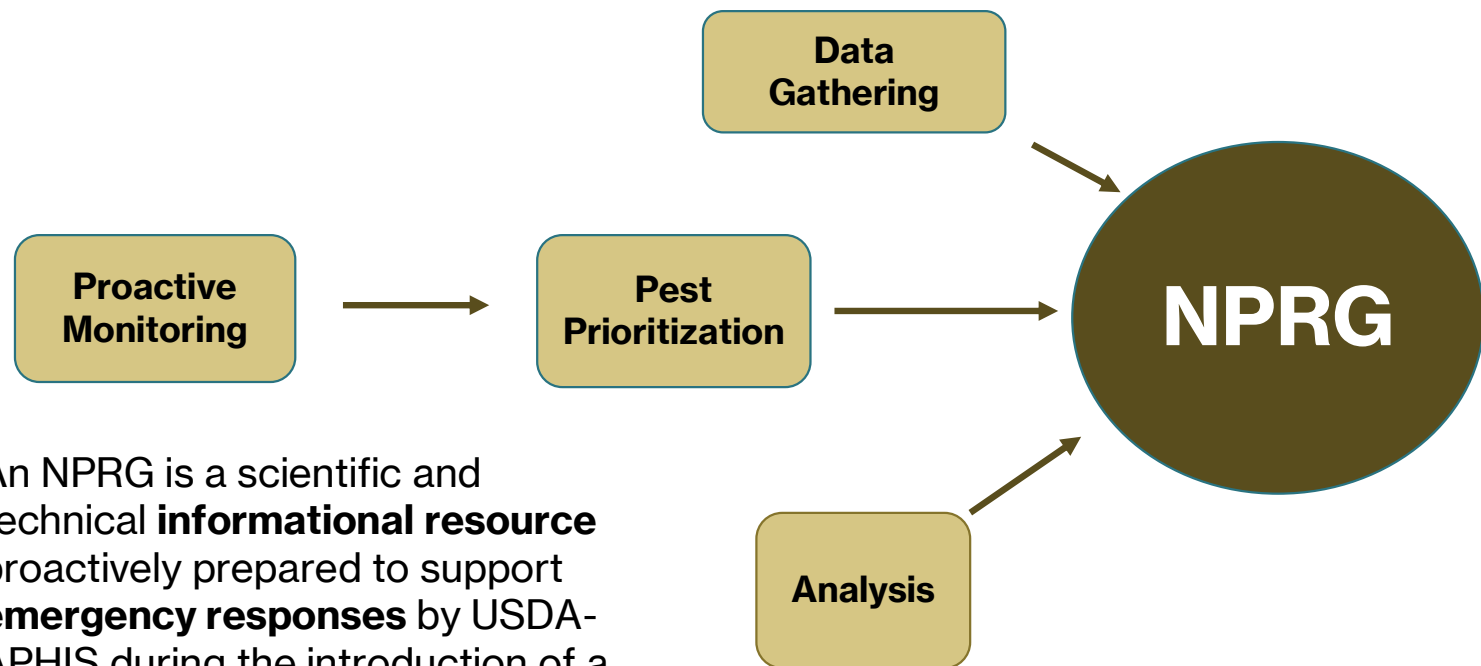
Pest
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Pest Impact
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&
eradication
surveys

New Pest Response Guidelines (NPRG)



An NPRG is a scientific and technical **informational resource** proactively prepared to support **emergency responses** by USDA-APHIS during the introduction of a high risk exotic pest.

```
graph LR; A[Early Warning Systems] --> B[Pest Databases]; B --> C[Pest Impact Assessment & Prioritization]; C --> D[Pest Datasheets & New Pest Response Guidelines]; D --> E[Assist with Delimitation & eradication surveys];
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Early Warning
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Delimitation
&
eradication
surveys



Researchers (left to right)

Drs. Barney Caton, Hui Fang, Nicholas Manoukis, and Godshen Pallipparambil

hold insect traps while posing for a group picture during a week of teamwork including simulations and analysis, at the Daniel K. Inouye U.S. Pacific Basin Agricultural Research Center in Hilo, Hawaii. (Photo courtesy USDA)

From: entomologytoday.org

Simulation-Based Investigation of the Performance of Delimiting Trapping Surveys for Insect Pests FREE

Barney P Caton, Hui Fang, Nicholas C Manoukis , Godshen R Pallipparambil

Journal of Economic Entomology, Volume 114, Issue 6, December 2021, Pages 2581–2590,
<https://doi.org/10.1093/jee/toab184>

Published: 11 October 2021 **Article history** ▼

JOURNAL OF APPLIED ENTOMOLOGY

ORIGINAL CONTRIBUTION |  Free to Read

Quantifying insect dispersal distances from trapping detections data to predict delimiting survey radii

Barney P. Caton , Hui Fang, Nicholas C. Manoukis, Godshen R. Pallipparambil

First published: 28 October 2021 | <https://doi.org/10.1111/jen.12940>

Article | [Open Access](#) | [Published: 30 June 2022](#)

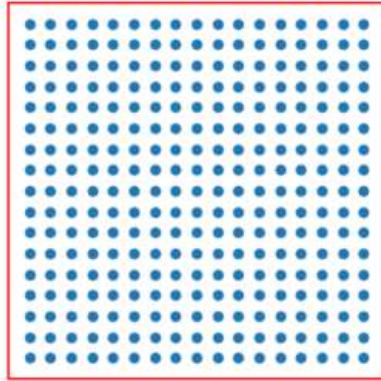
Simulation-based evaluation of two insect trapping grids for delimitation surveys

Hui Fang, Barney P. Caton , Nicholas C. Manoukis & Godshen R. Pallipparambil

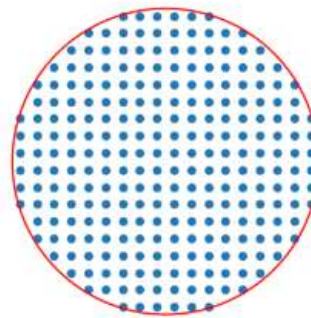
Scientific Reports **12**, Article number: 11089 (2022) | [Cite this article](#)

487 Accesses | **4** Altmetric | [Metrics](#)

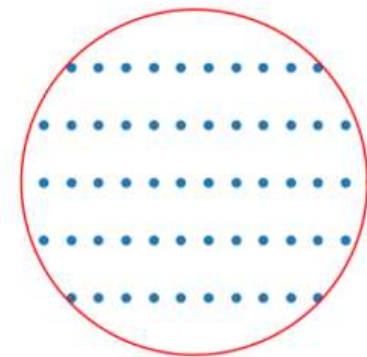
Select Design



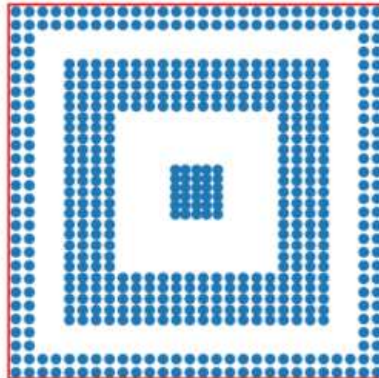
Square fully trapped Design



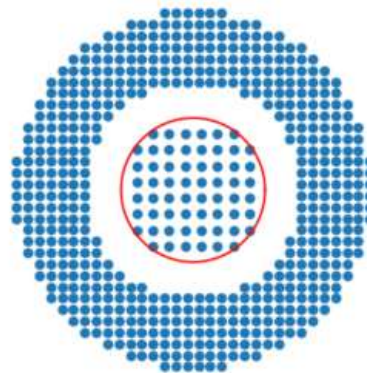
Circular fully trapped Design



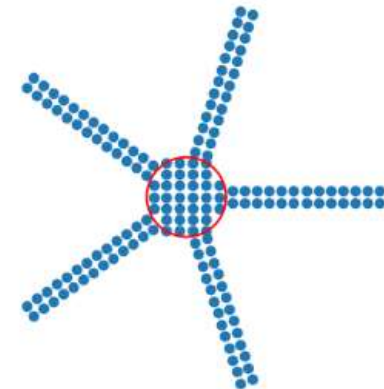
Parallel Transect Design



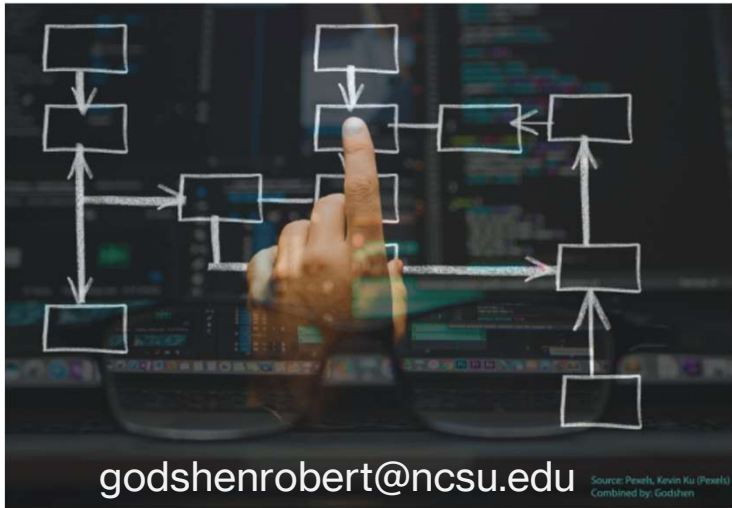
Square Core-buffer-Perimeter



Circular Core-buffer-perimeter Design



Core and Transect Design





From Horizon Scanning to Risk Management

CABI

MaryLucy Oronje, James Cullum, Hannah Fielder, Libertad Sanchez Presa, Roger Day

Second International Scientific Workshop on Horizon Scanning and Plant Health

13th February 2025

Background – from Horizon Scanning to Risk Management

Outline of Presentation

- Background info
 - Plantwise Plus
- CABI tools driving Pest risk prioritization
- Horizon Scanning (HS)
 - Pest Risk Registers (PRR)
 - Pest Risk Monitoring (PRiM)
 - Self-Organising Maps (SOMs)
- Future Plans

PlantwisePlus 2021-2030

PLANTWISEPLUS VISION

Smallholder farmers are empowered to manage evolving plant health threats, increase their incomes, improve food security and safety, and reduce biodiversity loss



2030 Goal

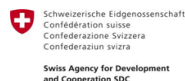
Support countries to **predict, prevent and prepare** for plant health threats in the face of a changing climate
75 million smallholder farmers **produce** more food using safer and sustainable crop production practices, thereby improving food security and rural livelihoods.

Underlying principles: IPM; agro-ecology and climate-smart agriculture; plant health and food systems; engagement with diverse stakeholders, including agro-input dealers; promotion of lower risk plant protection products; gender mainstreaming; income generating opportunities.

Coordinated national and regional
pest preparedness and management

Reduced pesticide risk through increased access to and use of IPM solutions

Enhanced **farmer advisory services**





Pest Preparedness

IF

National and regional authorities are supported to coordinate and implement prioritised pest prevention actions and climate-resilient pest management plans

THEN

Pest, threats and outbreaks will be mitigated through stronger national and regional plant health systems

BECAUSE

Relevant stakeholders will be better able to predict, prevent and prepare for priority pests and share alerts and advice with smallholder farmers

Activities

Pest Risk Prioritisation

- Risk identification, ranking
- Risk analysis
- Risk register
- Risk monitoring

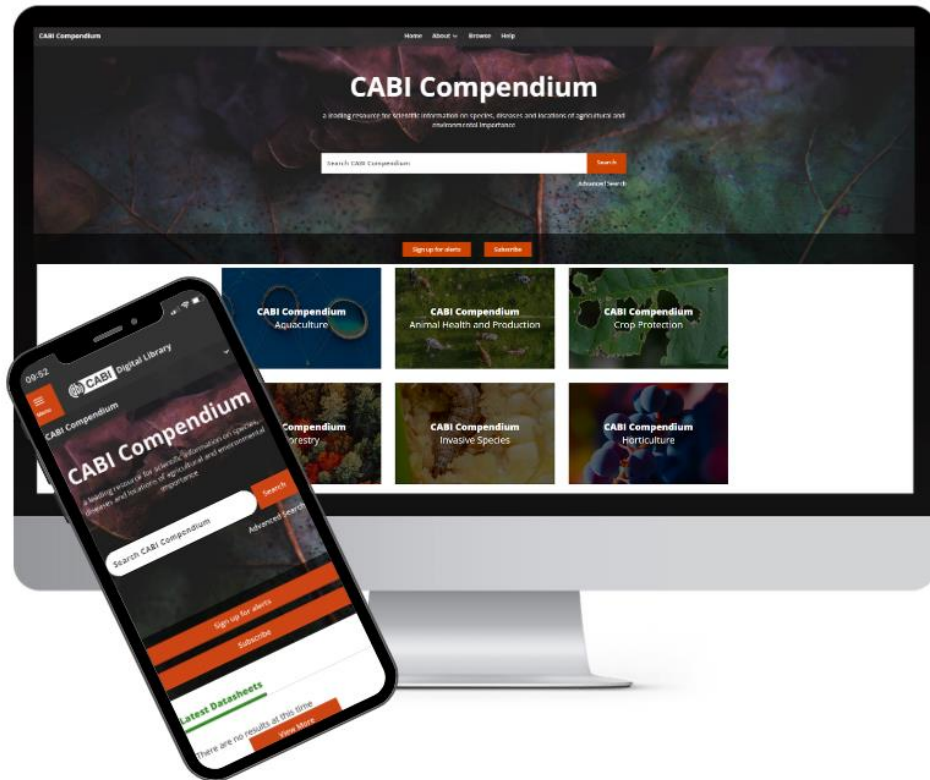
Pest Risk Management

- Import conditions
- Border inspections
- Contingency planning
- Publicity
- Surveillance (early detection)

Pest response

- Emergency response
- Surveillance
- Management of established invasives

CABI Compendium Support Tools



Extensive
coverage

~8000 full datasheets
on plants, animals
and micro-
organisms; data and
image library

Distribution
data

Detailed up-to-date
data on species
distribution, and
pest-host
relationships

Decision-
support
tools

Support users
understand and
prepare for risk

Animal Health & Production



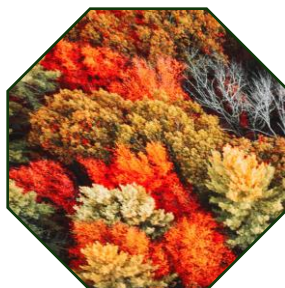
Aquaculture



Crop Protection



Food Safety & Quality



Forestry



Seedborne Pests



Invasive Species



Horticulture



CABI Compendium



CABI Compendium Data

Data Updating

- Publishing **new / revised datasheets**: 200 datasheets per year
- Annual upload of latest **EPPO** pest and **WOAH** animal disease distribution data
- Quarterly **data mining** of records added to CABI Abstracts
- Updating using data from **Distribution Maps of Plant Pests/Diseases**
- In response to **user feedback**
- Checking **alert services** such as Pest Lens and IPPC reports

Data Sharing

- Agreements with EFSA, WWF, Acorn Rabobank, RGB Kew and others
- Includes distribution data, pest-host relationship data and many other data types

CABI Compendium Tools: supporting Pest Risk Prioritization and Assessment



Horizon Scanning Tool

Prioritizing invasive species threats to a country / area



Pest Risk Analysis (PRA) Tool

Guiding risk assessors through the PRA process to produce a PRA report



Invasive Species Discovery Tool

A flexible advanced search across the open access invasive species datasheets

Gratis subscriptions provided to >100 NPPOs in lower- and middle-income countries.
Used in 'pest preparedness' activities in PlantwisePlus and other SPS projects with various partners

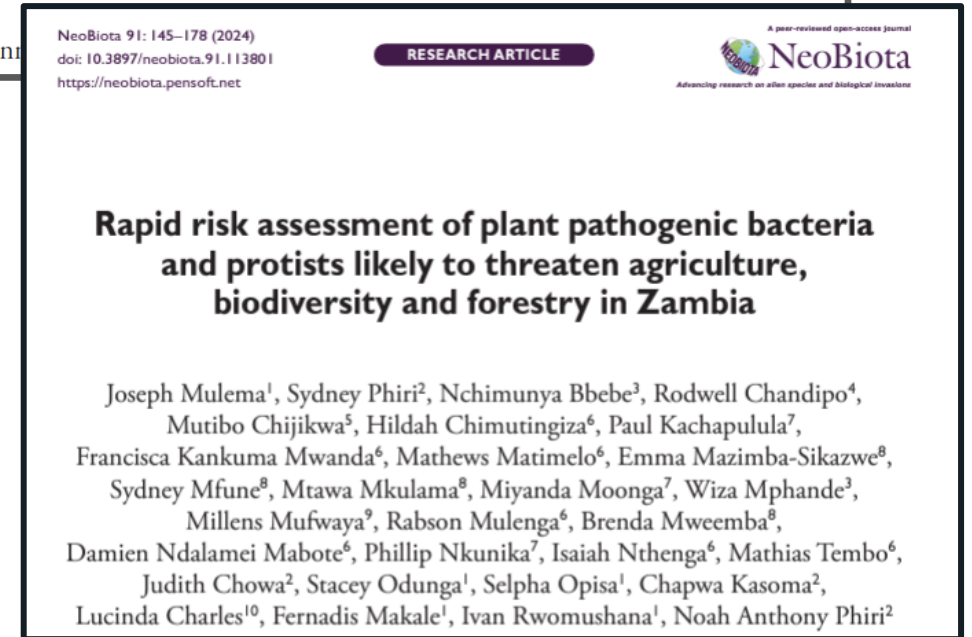
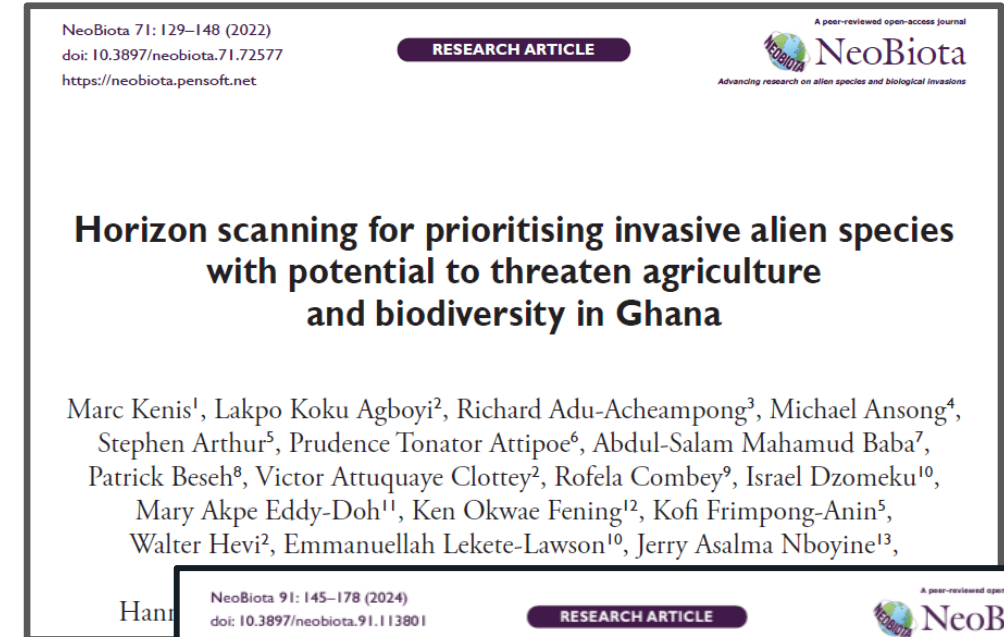
Horizon Scanning

National

- Kenya, Ghana, Zambia, Burkina Faso, Bangladesh
- Pakistan, **Rwanda**

Regional

- **West Africa, Central Africa**
- **East Africa (EAC)**
- **ASEAN**
- Caribbean already has process (CAHFSA)



Pest Risk Registers

- Input = horizon scanning scores
- Also covers:
 - Taxonomy
 - Distribution
 - Biology
 - Recommended follow-on actions
 - Metadata
- Supported by **CABI Compendium** data



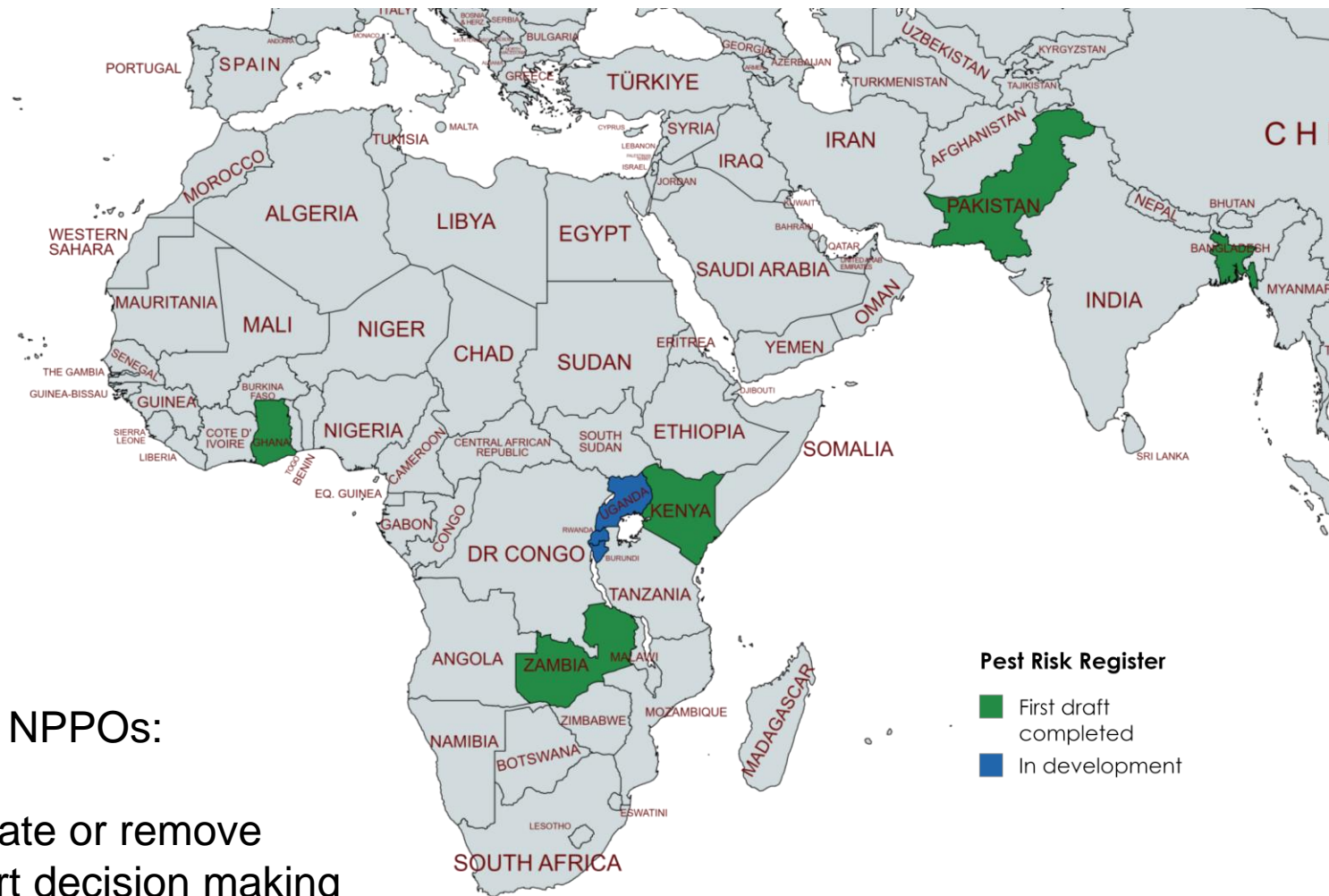
Pest	Risk Elements						
Scientific Name	Likely Pathway of Arrival	Likelihood of Entry	Likelihood of Establishment	Magnitude of Socio-Economic Impact	Magnitude of Environmental Impact	Overall Score	Overall Confidence
<i>Xanthomonas citri</i> pv. <i>citri</i>	Contaminant	5	5	5	2	175	High
<i>Ceratocystis fimbriata</i>	Contaminant	5	5	5	2	175	High
<i>Bemisia tabaci</i> (MEAM1)	Contaminant	4	5	5	3	160	High
<i>Dickeya zeae</i>	Contaminant	4	5	5	3	160	High
<i>Pectobacterium atrosepticum</i>	Contaminant	5	5	5	1	150	Low

Pest Risk Registers

Location	Number of Pests
Kenya	400
Ghana	172
Zambia	1626
Uganda	TBC
Rwanda	TBC
Burundi	TBC
Pakistan	335
Bangladesh	180

Registers are owned and managed by NPPOs:

- Regular review
- Decisions on pests to add, update or remove
- Consult PRiM reports to support decision making



PRR Working Groups



KEPHIS PRR TWG undertaking Review of Pest risk register at a workshop held between 29th and 30th July 2024, Machakos: *Photo courtesy: Asenath Koech.*



Zambia Plant Quarantine and Phytosanitary Service (PQPS) PRR TWG undertaking Review of Pest risk register at a workshop held between 29th and 30th July 2024, Machakos: *Photo courtesy: Chapwa Kusoma .*

Current countries (Africa)

- Ghana
- Zambia
- Kenya
- Current Countries (Asia)
- Bangladesh
- Pakistan

New countries to be onboarded

- Rwanda
- Uganda
- Sri Lanka

Regional Risk Registers - ASEAN

- The Association of Southeast Asian Nations (ASEAN) have an A1 and A2 pest list database:
 - **A1** = quarantine pests, not present in member countries
 - **A2** = quarantine or non-quarantine pests distributed in limited area and under official control
- This will be developed into a regional pest risk register
- It will support pest risk analysis, emergency response and risk management



Created with mapchart.net

Pest Risk Monitoring (PRiM) Reports

- Providing filtered information of direct relevance to target countries
- Maintained parallel to country Pest Risk Registers
- Uses output from dedicated EIOS board
- Incorporates Machine Learning to reduce manual effort
- Automatic report generation

Pest Risk Monitoring Report: Ghana

1st May – 30th June 2024

CABI monitors the web for newly published articles for plant pests and diseases that are not yet present in Ghana, using the World Health Organization's 'Epidemic Intelligence from Open Sources' (EIOS) platform. EIOS continuously scans more than 23,000 sources covering both news websites and scientific literature.

The objective of the report is to present timely information about potential changes to the level of risk posed by these pests and diseases, supporting decision-making by risk assessors and enhancing pest preparedness.

How to interpret the report

- The plant pests and diseases monitored in EIOS are selected by the National Plant Protection Organization. To view the Pest Risk Register or for more information, please contact PPRSD.
- All relevant articles that were found for monitored pests and diseases are presented. Not all pests and diseases that are monitored in EIOS will have had articles published in the period covered by this report.
- The items in this report have been filtered using an automated system. Some articles may be less relevant to some users. We recommend that readers use their own expertise to consider any implications of the information provided for pest risks.
- The information is for the consideration of the Phytosanitary Risk Working Group to support decision-making. It may prompt updates to be made to pest entries in the Pest Risk Register and appropriate follow-on actions to be defined in response.

For questions or feedback, please contact Louisa@cabi.org

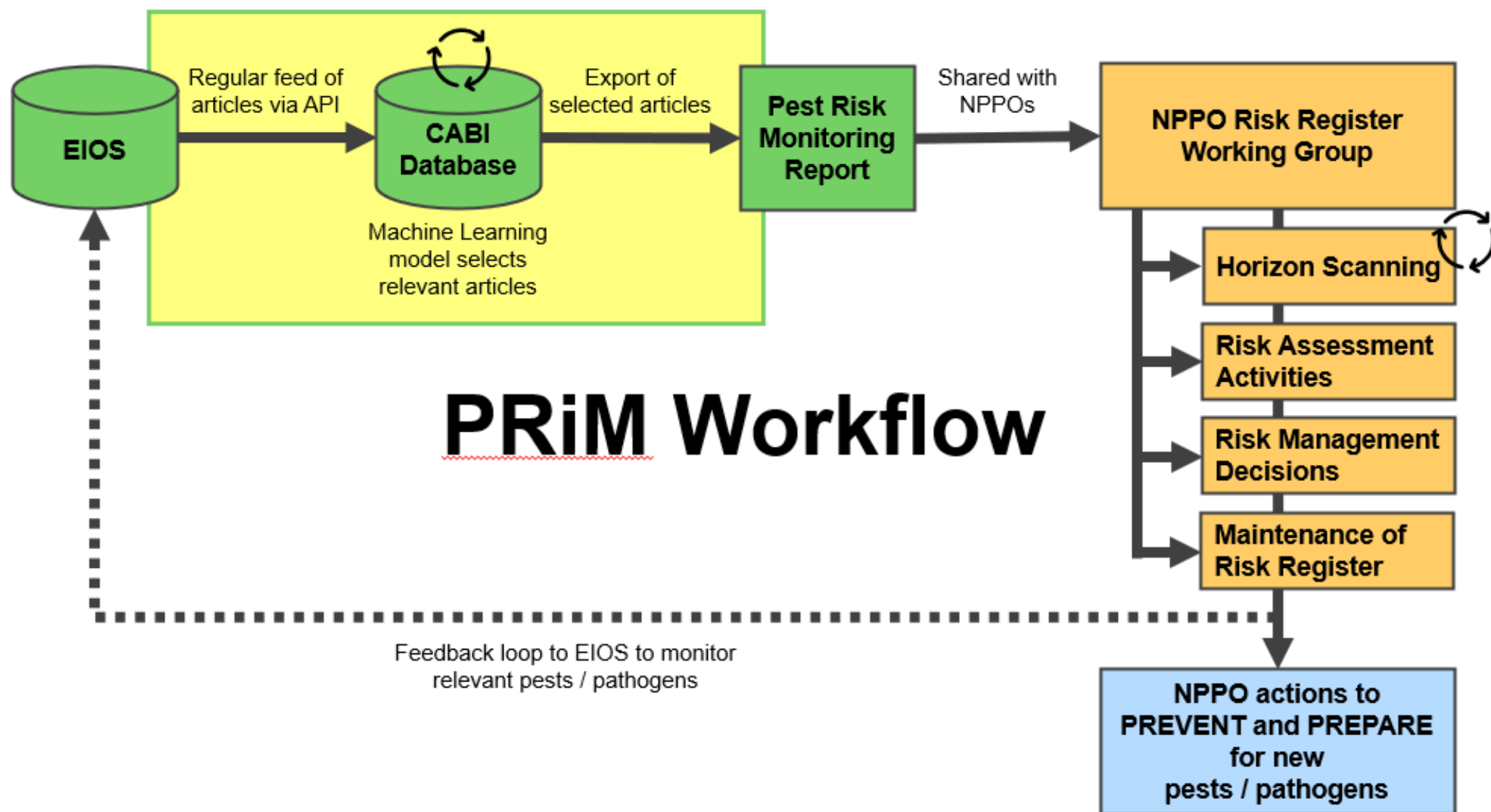
Reporting period:	1st May– 30th June 2024
Number of articles:	7

Supported by PlantwisePlus

Articles

Pest	Article Title	Publication date	Source
<i>Bemisia tabaci</i> (MEAMV)	Current and future scenarios of suitability and expansion of cassava brown streak disease, <i>Bemisia tabaci</i> species complex, and cassava planting in Africa	19/06/2024	pubmed
Cassava brown streak viruses	Current and future scenarios of suitability and expansion of cassava brown streak disease, <i>Bemisia tabaci</i> species complex, and cassava planting in Africa	19/06/2024	PeerJ
<i>Scirtothrips dorsalis</i>	Field efficacy of a biopesticide and a predatory mite for suppression of <i>Scirtothrips dorsalis</i> (Thysanoptera: Thripidae) in strawberry	28/06/2024	pubmed
<i>Scirtothrips dorsalis</i>	Infected gypsophila prevented from entering by <i>Rosellinia</i> in strawberry	26/06/2024	Floral daily
<i>Scirtothrips dorsalis</i>	Imported cut-flowers and phytosanitary control in Russia	17/06/2024	Floral daily
<i>Scirtothrips dorsalis</i>	Russia: Quarantine zone established in Amur region due to Western flower thrips	19/06/2024	Floral daily
<i>Scirtothrips dorsalis</i>	Agriculture authorities spinosad to control <i>Scirtothrips dorsalis</i>	19/06/2024	PHYTOMA - Agropubli
Tomato spotted wilt orthotospovirus	First report of Tomato brown rugose fruit virus in Ireland	19/06/2024	Nature

Supported by PlantwisePlus



Pest Risk Monitoring (PRiM) Reports

Article details

Generated keywords

MLM Accuracy - "Confidence"

Promote/ Demote option between Selected/Excluded

Report Generation

View Articles Pest List Management Config j.cullum@cabi.org

Article Type:
Selected Articles

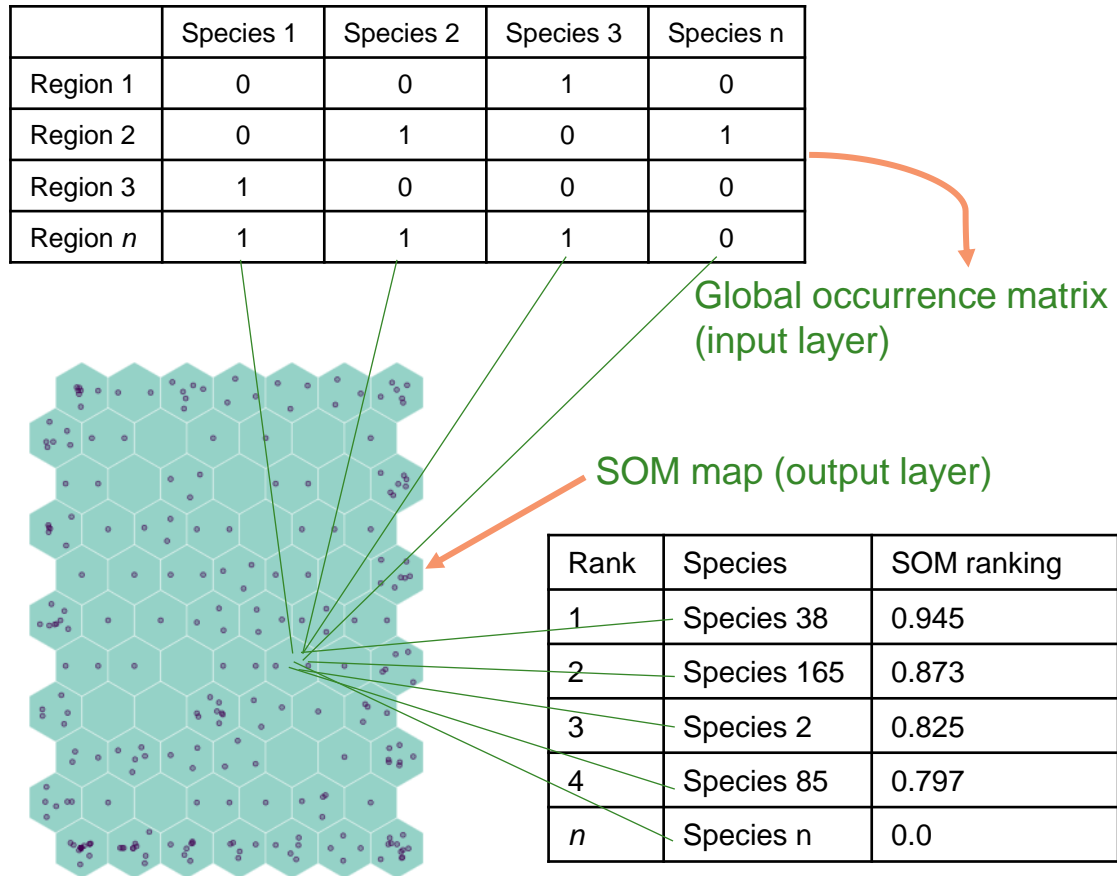
Date Range Accuracy

Export Articles Generate Report

Date	Article Name	Source	Species	Keywords	Countries	Justification	Record Checked	Accuracy
31.01.2025	January 31, 2025 Sixty-nine new cases of detection of dangerous quarantine objects in imported vegetables and fruits were recorded in the port of Novorossiysk	vniikr	Tomato Brown Rugose Fruit Virus Megaselia Scalaris Monochamus Monochamus Urussovi	tobrfv tomato brown rugose fruit virus megaselia scalaris rosselichoznadzor австралия австрия белгия греция карантинный карантинных show more...	Argentina Australia Austria Bangladesh Belgium Brazil Chile Cuba France Germany show more...		Select <input type="checkbox"/> Select / Deselect All Visible	85 Demote
31.01.2025	Agriculture - Plant Research; Study Results from National Institute of Medicinal Materials Broadening Understanding of Plant Research (Report on emerging foliar soft rot disease on ginseng Panax vietnamensis and the identification of Neocosmospora ipomoeae ...	gphin	Glomerella Cingulata Fusarium Miscanthi	disease plant plants anthracnose pathogens agriculture diseases fungal fusarium reported show more...	Viet Nam		<input checked="" type="checkbox"/>	64 Demote

Self-Organising Maps (SOMs)

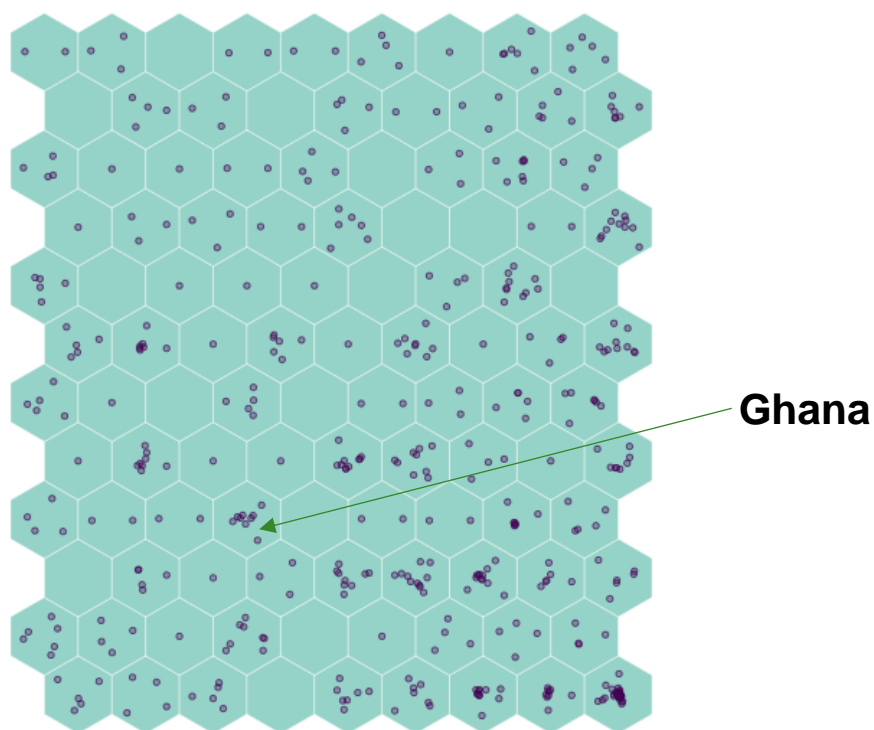
SOM classifies high-dimensional data into two-dimensional space represented by the map cells.



- The map size is determined according to the **number of regions**.
- In **several iterations**, the data points (regions) are distributed in a multidimensional space according to their similarity.
- Regions with a **similar pest assemblage** are located close together and are projected into the output layer.
- Each cell has a **weight vector** composed of as many elements as there are pest species which defines its position in the multidimensional space created by the algorithm.
- Creation of the **pest risk list**. Extract the weights vector of the neuron containing the region of interest. Pests are ranked according to their weight vector component.

Findings

How did SOM cluster the geographic regions according to their pest assemblages?



Scientific name	Common name	SOM Ranking	Risk category
<i>Unaspis citri</i>	citrus snow scale	0.88	High
<i>Chrysomphalus dictyospermi</i>	dictyospermum scale	0.88	High
<i>Mononychellus tanajoa</i>	cassava green mite	0.805	High
<i>Orseolia oryzivora</i>	African rice gall midge	0.795	High
<i>Chrysodeixis chalcites</i>	golden twin-spot moth	0.764	High
<i>Diaphania indica</i>	cucumber moth	0.764	High
<i>Cylas puncticollis</i>	sweet potato weevil	0.763	High
<i>Melanaphis sacchari</i>	yellow sugarcane aphid	0.74	High
<i>Pinnaspis strachani</i>	lesser snow scale	0.74	High
<i>Helopeltis bergrothi</i>	cacao-mosquito	0.73	High
<i>Xiphinema ifacolum</i>	dagger nematode	0.72	High
<i>Erythricium salmonicolor</i>	pink disease	0.648	Moderate
<i>Phanerochaete salmonicolor</i>		0.648	Moderate
<i>Oryctes boas</i>	rhinoceros beetle	0.635	Moderate
<i>Pelopidas mathias</i>	rice skipper	0.606	Moderate

Risk categories: 0-0.29 = Low, 0.3-0.60 = Moderate, 0.7-1.0 = High

Countries grouped in the same cell:

- **Ghana**, Benin, Cameroon, Democratic Republic of the Congo, Côte d'Ivoire, Guinea, Senegal, Sierra Leone, Togo

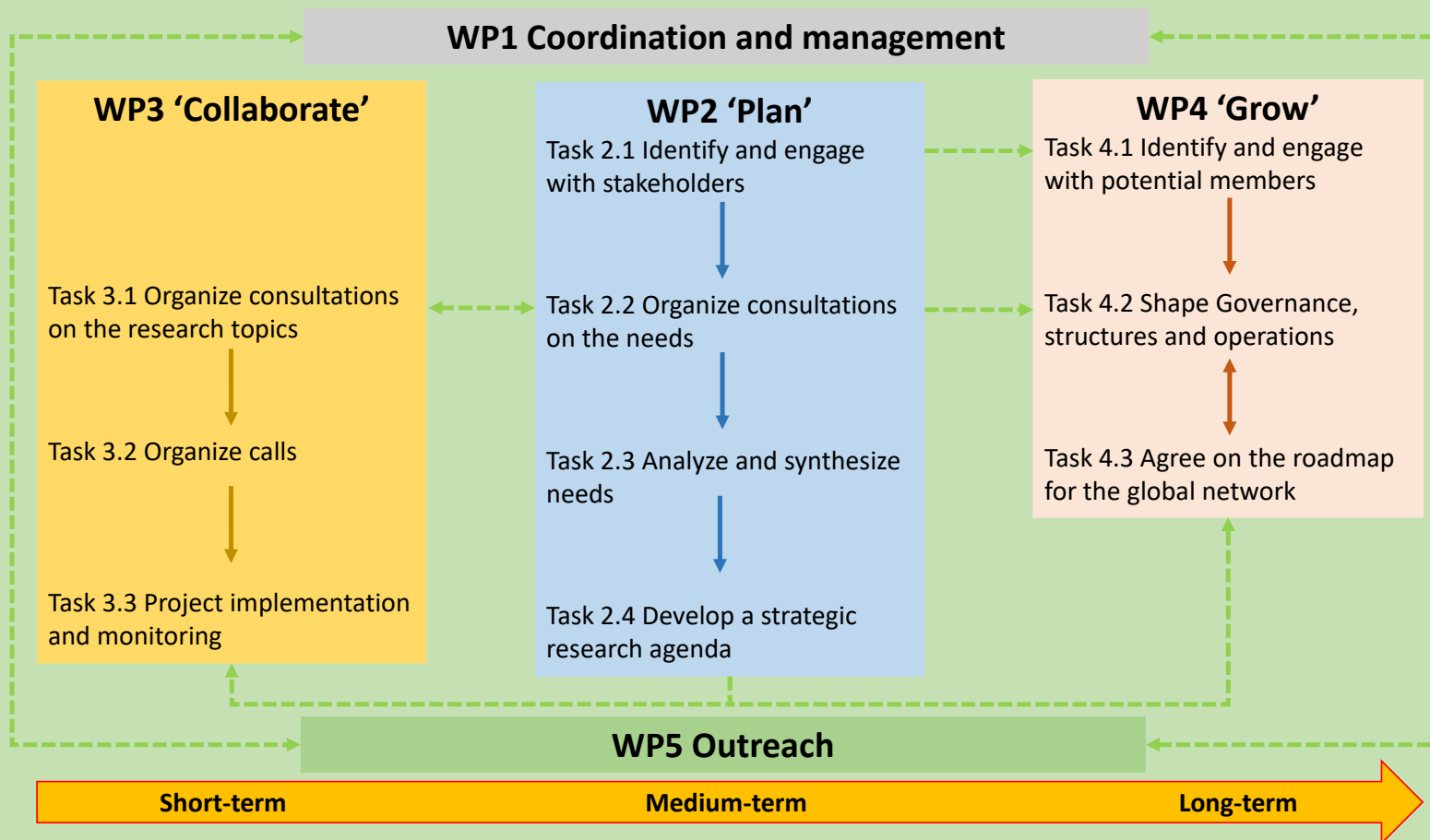


Network for phytosanitary
research coordination and funding

Phytosanitary Research priorities for Africa



EUPHRESO III activities and Regional Champions



WP2 'Plan'

- To lead coordination of research

WP3 'Collaborate'

- To support transnational collaboration

WP4 'Grow'

- To shape the operations and create the structures

WP5 'Outreach'

- To enhance knowledge exchange

2024/2025 Research Priorities –Africa

Tomato Brown Rugose fruit virus (TBRFV)

- Rapid and accurate testing of imported tomato and capsicum seeds
- Screening of local pepper varieties for resistance and uncultivated solanaceous plants
- ToBRFV interaction with other tomato viruses
- Role of Honeybees as a vector of TBRFV

***Fusarium oxysporum* f.sb *cubense* tropical race 4 (FoC TR4)**

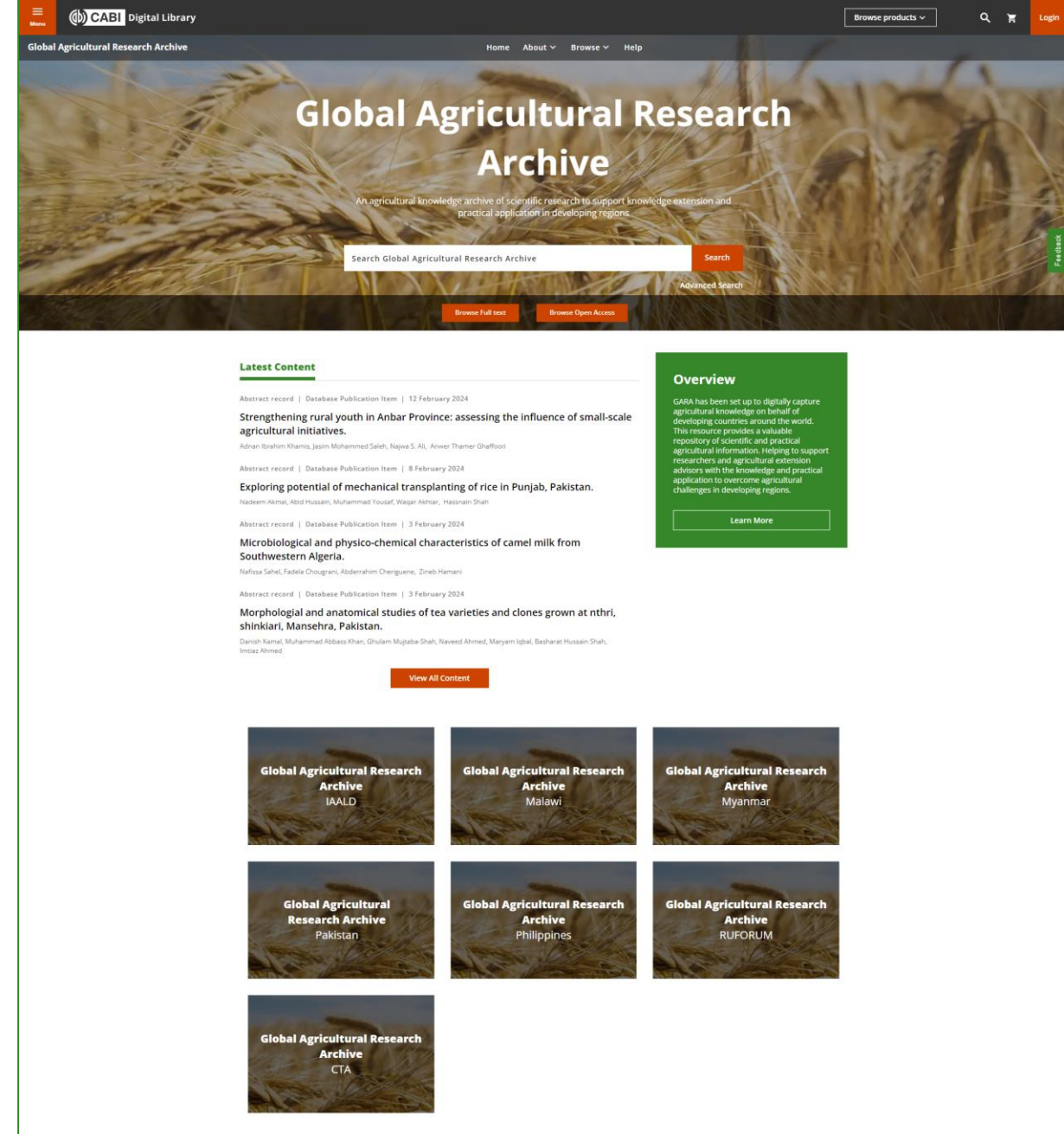
- Development of rapid and affordable diagnostics for FOC TR4 adaptable by NPPOs
- Development of resistant banana lines against FOC TR4
- Review and develop effective official phytosanitary controls to manage banana imports for planting

Xylella fastidiosa

Hosts crops and vectors

GARA

- Archives agricultural knowledge from around the world
- 8,000 full text PDFs including conference papers, journal articles, annual reports and bulletins
- Developed in collaboration with partners and contributors



Menu

CABI Digital Library

Authenticated via
CABI

Browse products ▾

  Damian Bird ▾

EUPHRESKO III

Home About Browse

EUPHRESKO III

A knowledge repository of reports on national and international research activities conducted in EUPHRESKO III countries

Search

Advanced Search

Feedback

Latest Content

Database Publication Item | 18 July 2024

Modern tools and approaches to tackle pests in the Mediterranean crop production systems.

N. T. Papadopoulos

Database Publication Item | 17 July 2024

Overview

EUPHRESKO III is an international network of organizations that develop, own and manage phytosanitary research programmes, fund and undertake research activities and use research provisions for policy development and implementation. This resource provides a repository of national and international phytosanitary research activities conducted in

Future plans

Pest Risk Prevention

- Refine the Pest Review Process (sustainability of the process)
- Continue with capacity building on HS and Pest Risk Monitoring
- Expand to other developing countries
- Refine tools CPC, ISC, HS tool , PRA tools to support pest risk identification, prioritization and risk assessment

Euphresco III

- Identify Phytosanitary research priorities
- Coordinate phytosanitary research in Africa
- Build content on GARA

CABI's role in the EIOS Plant Health Community:

- Founding members, with EFSA
- Co-development of community guidelines
- Regular community meetings – management of sources and categories, and forum for discussion of any other issues/developments
- Bringing together like-minded organisations, to share knowledge and learnings



CABI is an international intergovernmental organisation, and we gratefully acknowledge the core financial support from our member countries (and lead agencies) including:



Ministry of Agriculture and
Rural Affairs,
People's Republic of China



Agriculture and
Agri-Food Canada



Ministry of Foreign Affairs of the
Netherlands



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

Second International Workshop on Horizon Scanning for Plant Health 11 February 2025 - Paris

Johannes Schnitzler
WHO-Hub for Pandemic and
Epidemic Intelligence
Intelligence Innovation Integration

EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

A GLOBAL INITIATIVE LED BY THE
WORLD HEALTH ORGANIZATION



World Health
Organization

HUB
Pandemic and Epidemic
Intelligence

EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

A GLOBAL INITIATIVE LED BY THE
WORLD HEALTH ORGANIZATION



**World Health
Organization**

HUB

Pandemic and Epidemic
Intelligence



Health emergencies throughout the year and on every continent local – regional -global

As of November 2024

41 Graded health emergencies

81 Affected countries*

Current examples

CONFLICT

Israel/oPt 2023



© WHO

MPOX

Multi-country 2022 / 2024 (PHEIC)



© WHO / Guerchom Ndebo

DISPLACEMENT

Sudan 2023



© Reuters/Zohra Bensemra

CHOLERA

Multi-Region 2023



*Number of affected countries are excluding Mpox and COVID-19 as global emergencies .

Source for status on graded health emergencies: WHO Health Emergency Dashboard. Last retrieved 4 Sept 2024.

Source for world map showing Cholera: Multi-country outbreak of cholera – External Situation Report (14 Mar 2024, [link](#)). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Map Production: WHO Hub. © WHO 2024. All rights reserved.

Pandemics confront us with radical uncertainty

Uncertainty before a pandemic

Pathogen?



Where?



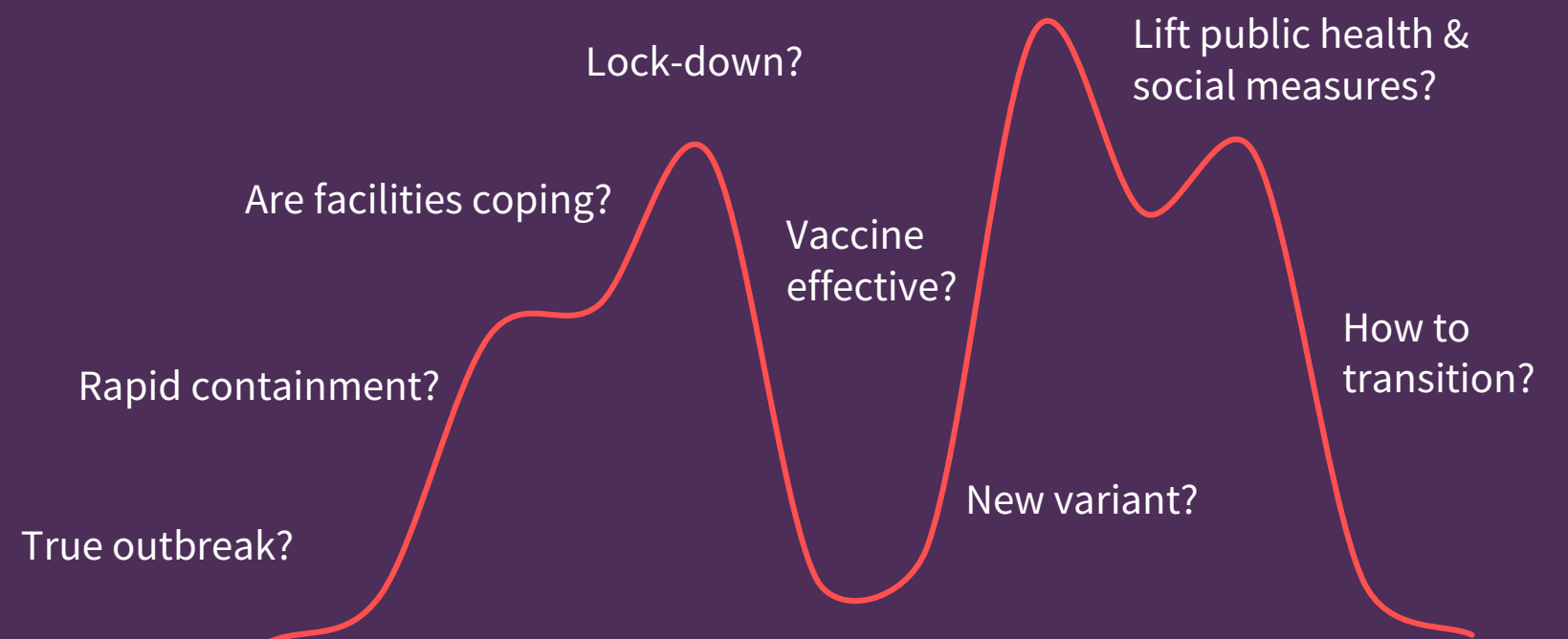
Severity?



When?



Uncertainty during a pandemic



A need for more agility, resilience and collaboration in surveillance

Lessons learnt

Operating in constant emergency modes hinders innovation

Trusted expert networks cannot be built amidst crises

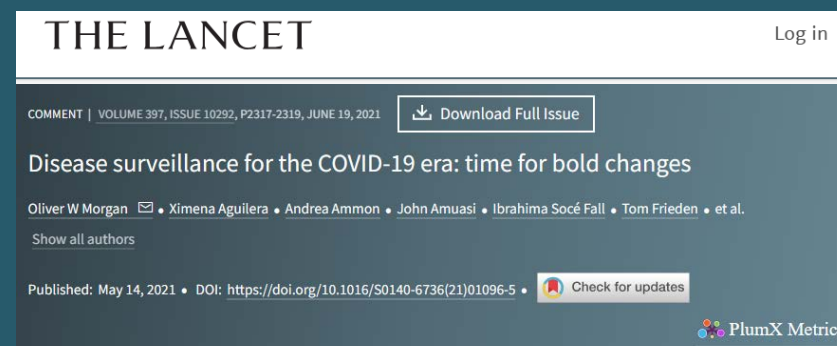
Adaptability in the face of uncertainty is needed

Pathways to change

300+ recommendations from COVID-19 and recent major emergencies



Call to action from global experts



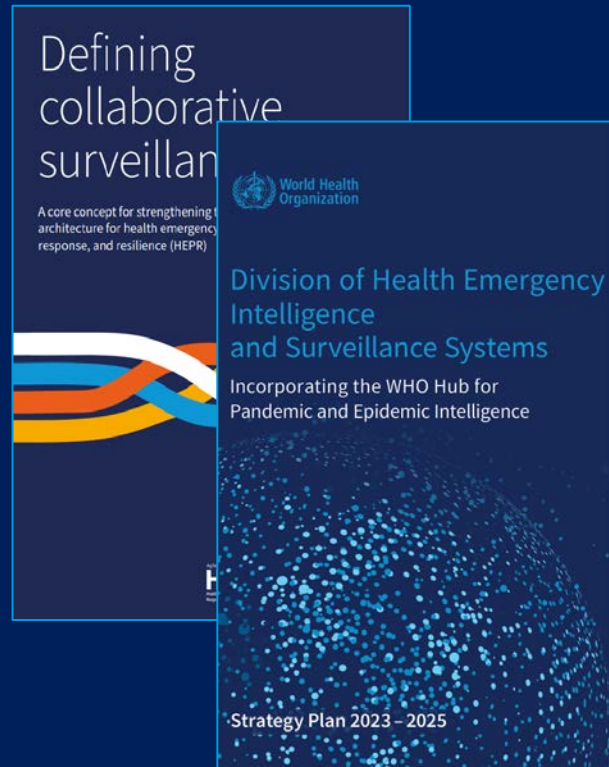
Initiation of WHO Hub
Sep - 2021



Collaborative Surveillance



Our Strategy for 2023-2025



Vision

A world where **collaborative surveillance empowers countries and communities** to minimise the **impacts of pandemic and epidemic threats**

Mission

We catalyse **transformation** in collaborative surveillance **across all levels and serve countries** by **connecting, innovating, and strengthening** capabilities to produce **better data, analytics, and decisions**

Roles



Connect



Innovate



Strengthen

Our project portfolio



Connect

Convene partners to prioritize & transform collaborative surveillance efforts



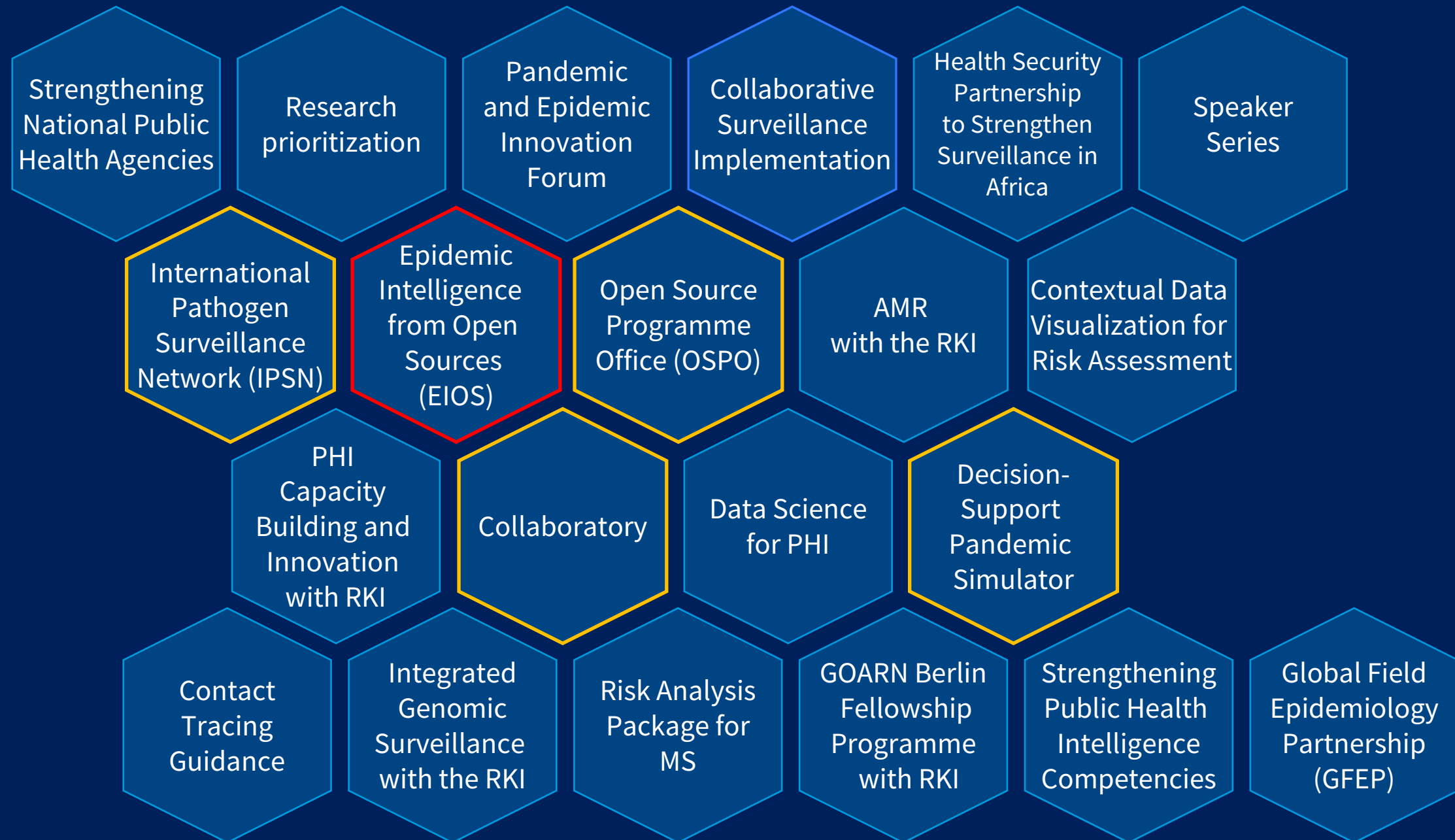
Innovate

Innovate effective solutions to solve key surveillance challenges



Strengthen

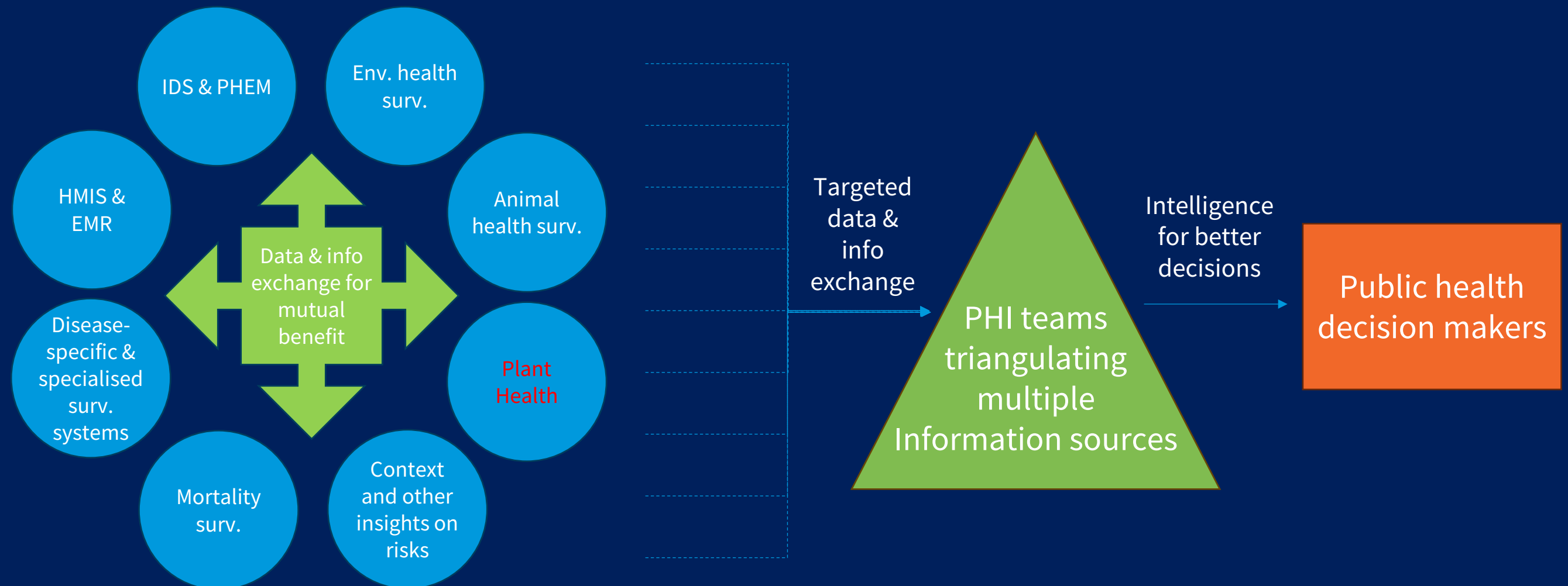
Scale up the most successful solutions to surveillance barrier



Collaborative Surveillance (CS)

CS represents a new generation of surveillance – seeking to enhance the intersection between systems through collaboration and enable better decisions through more integrated data analysis

Illustrative vision of effective collaborative surveillance (elements are non-exhaustive)

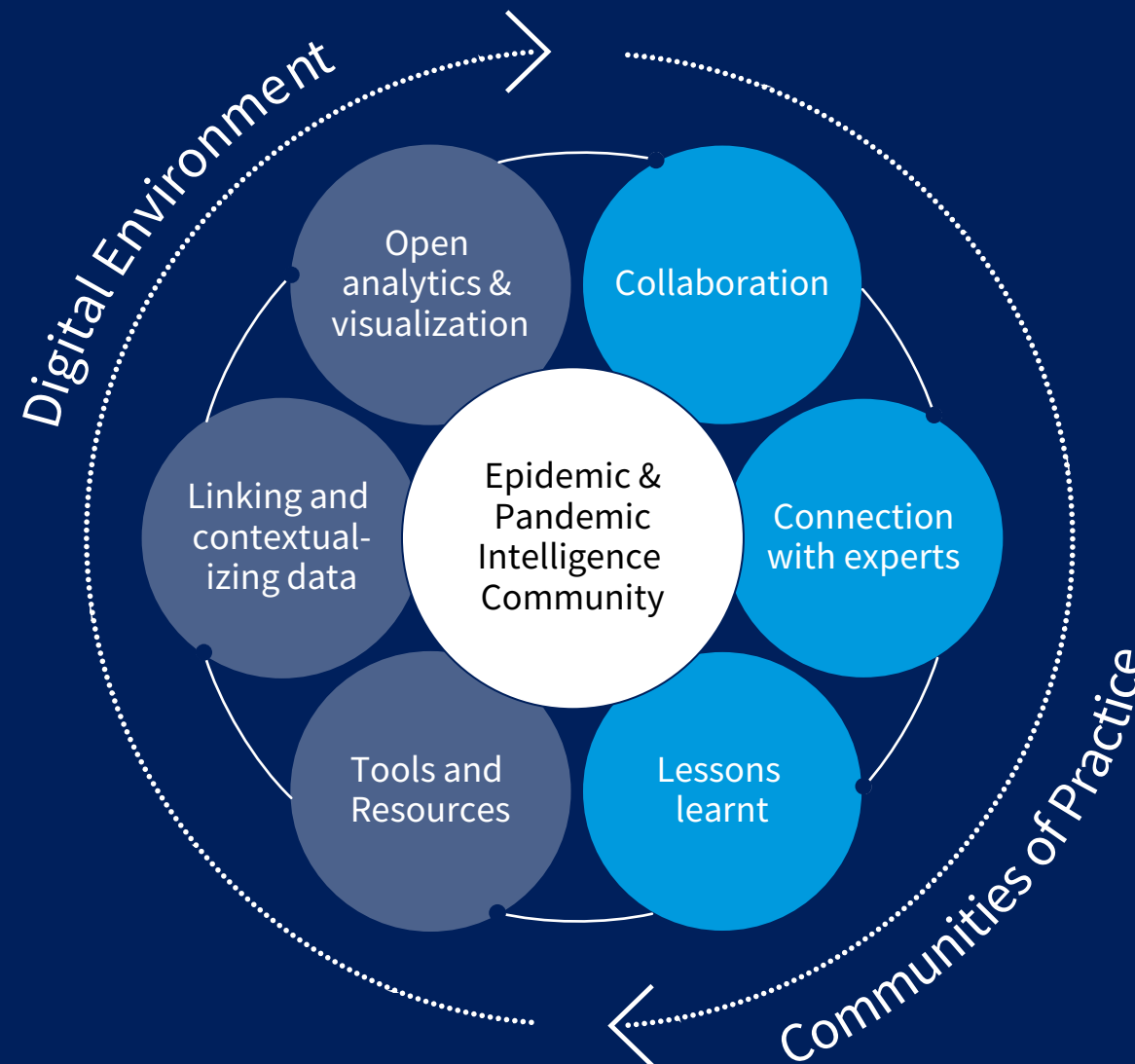


Collaboratory

A world where interconnected pandemic and epidemic intelligence communities collaboratively and rapidly respond with enhanced data, better analysis, and actionable insights – before and during emergencies

Digital Environment

Building a digital environment facilitating exchange of data, analysis, and insights



Community

Using the convening power of WHO to connect, build and strengthen communities

Decision Support Pandemic Simulator

Vision statement

Enable better and more equitable health emergency policy outcomes with novel, transparent, best-in-class digital decision aids

Solution elements

Key value-added solutions from the user perspective – providing and enabling next-generation:



Novel ability to simulate **compounding impact of multiple interventions**



Flexible exploration of **'what if' scenarios** through completely customizable pathogen characteristics



Equitable access to simulation capabilities across geographies, user types and experience levels



Simplified, rapid translation of epidemic insight **into the policymaking process**



Shared modeling and data baseline as well as visualization tool to enable **collaborative standardized approach** and language **to pandemic and epidemic simulation**

ILLUSTRATIVE



PDS Pandemic Decision Simulator



Solutions that bring impact

PDS tool support technical experts as well as public health experts and governmental policy makers by aiding their decision-making in pandemic situations.



Understanding of realistic scenarios



Evidence-based intervention planning



Data-driven trade-offs

Open Source Programme Office

*“The World Health Organization (WHO) is the **first agency of the United Nations (UN) to launch a formal Open Source Programme Office (OSPO).**”*

Why Open Source?

- Open Source solutions identified as the **most readily adaptable**, and **rapidly customizable** in pandemics.
- Open Source projects and initiatives **provide proven successful models to collaborate with other organizations to create new technologies** and support the development of new communities.

Foster collaboration & open innovation in the global public health ecosystem



Center of competency for Open Source related efforts for WHO





The International Pathogen Surveillance Network (IPSN) is a new global network bringing together pathogen genomic actors to improve public health decision making

Vision: Every country has equitable access to sustained capacity for genomic sequencing and analytics as part of its public health surveillance system

Mission: Create a mutually supportive global network of genomic surveillance actors that amplifies and accelerates the work of its members to improve access and equity

What is IPSN?

A network of pathogen genomic actors (human and animal health), including:

- ✓ National and international lab networks & disease programs
- ✓ Public and veterinary health systems
- ✓ Academic groups
- ✓ Private sector
- ✓ Philanthropy & civil society
- ✓ International standard organizations
- ✓ Platform providers

What does IPSN do?



Communities of practice to solve common challenges



Country scale-up accelerator to align efforts & enable South-South exchange



Grant funding to enable equity and power IPSN projects



High-level advocacy & comms to keep PGS on the agenda



Global partner forum for genomic surveillance

What will IPSN deliver?

Increased harmonization and innovation in pathogen genomics

Increased scale and efficiency of country capacity building efforts

Increased political attention and financing efficiency



Stronger national and international surveillance system better able to detect and characterize new threats and reduce endemic burdens

The background of the entire image is a photograph showing a series of human figures made from paper cutouts. They are arranged in a line, holding hands, and are placed on a wooden plank surface. The lighting is from the side, creating long, dark shadows that stretch across the wood. The figures are slightly out of focus, with the one in the foreground being sharper.

EIOS

EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

A GLOBAL INITIATIVE LED BY THE
WORLD HEALTH ORGANIZATION

EIOS

EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

WHAT

prevent and mitigate
public health emergencies

HOW

connect experts and data
around the world and provide
training and tools to rapidly
detect, contextualise, analyse,
assess and share information.



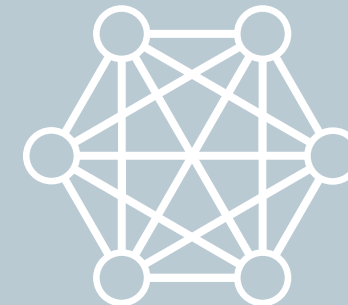
EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

THE EIOS INITIATIVE IS BUILT ON THREE PILLARS

Collaboration



Community

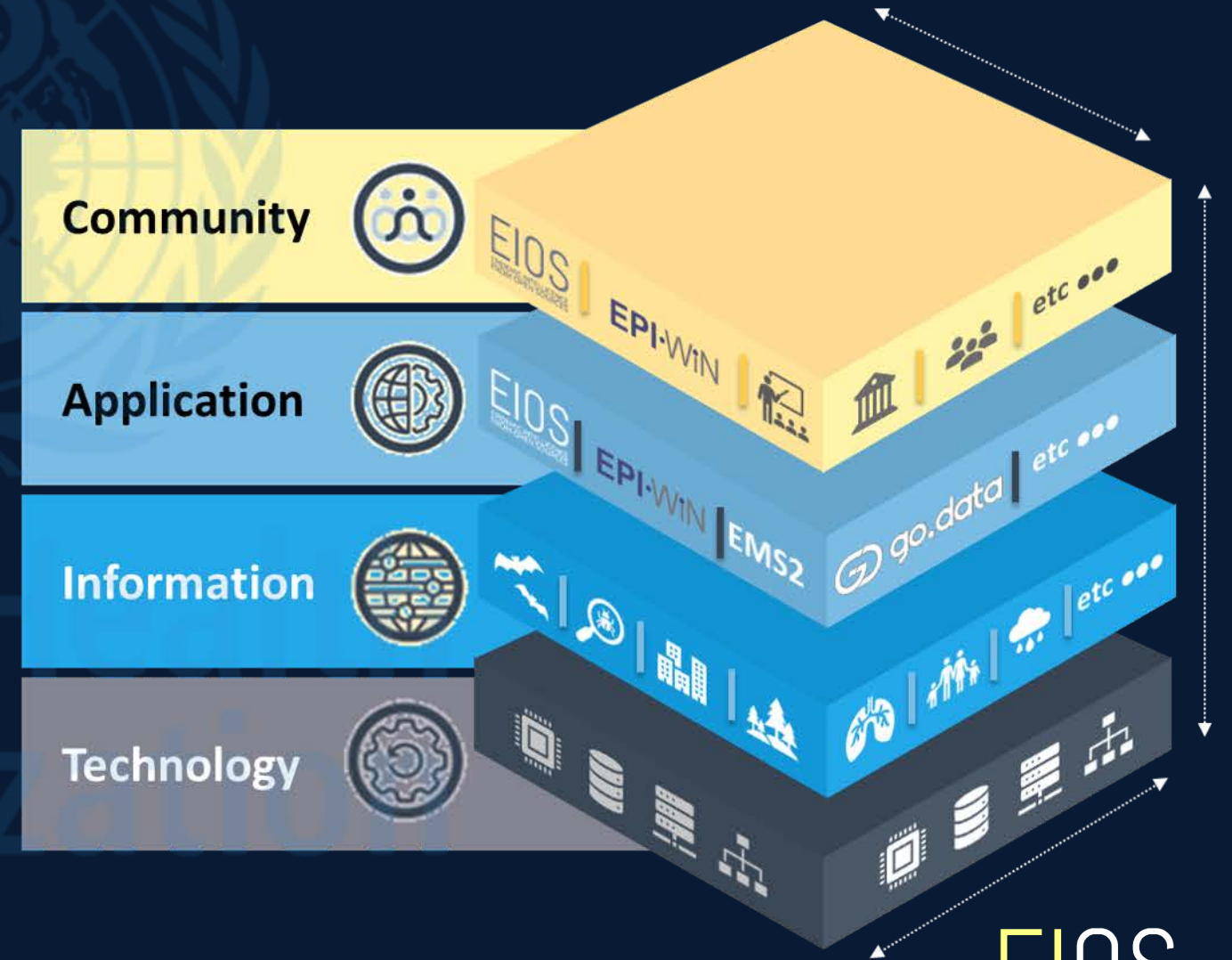


Technology

EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

Public health surveillance / intelligence

prepare - prevent - detect - assess - respond



The EIOS system



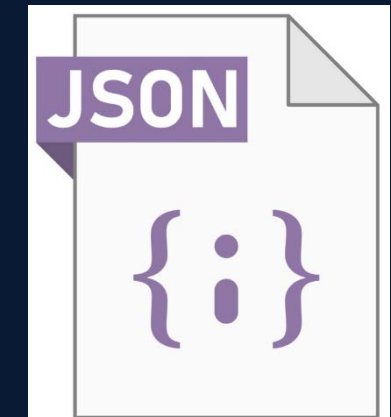
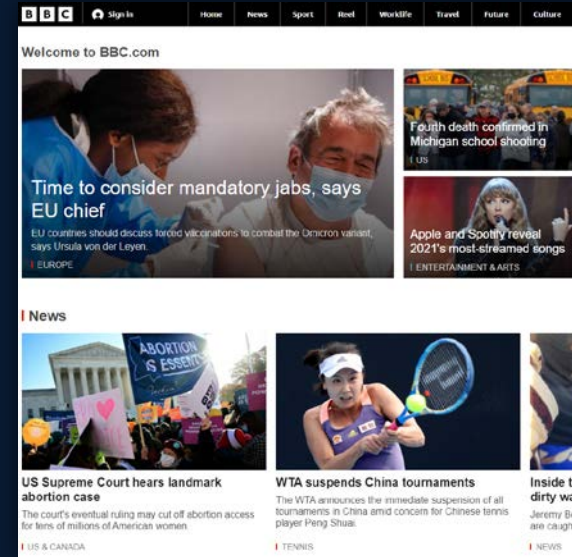
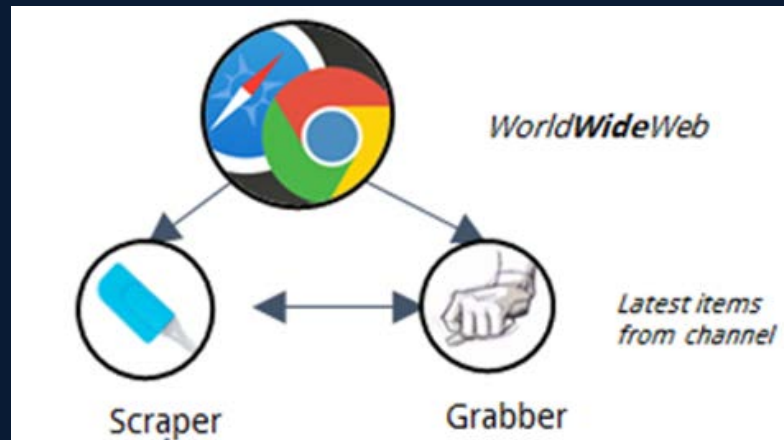
All Hazards - One Health

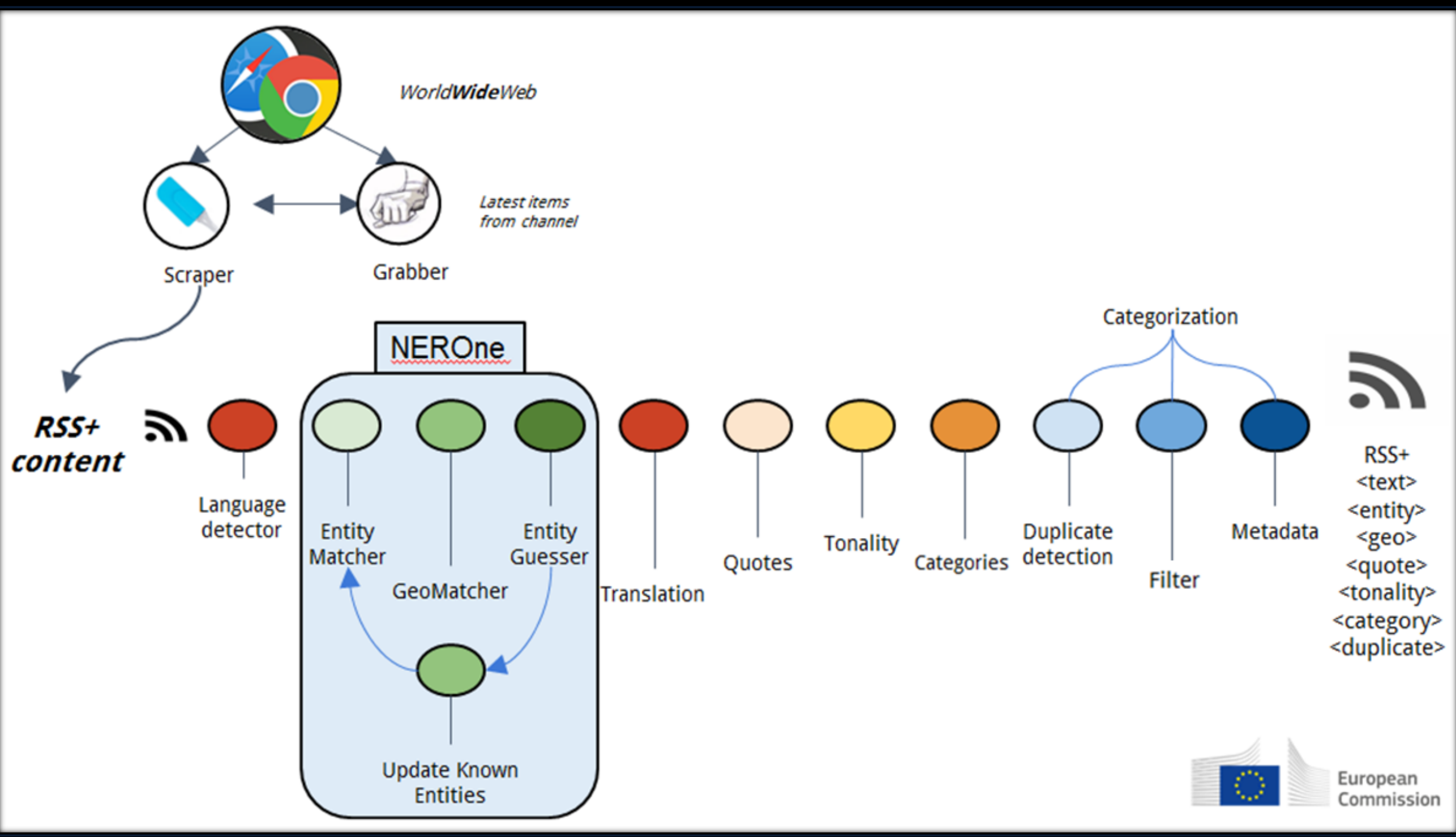
Fit-for-purpose,
constantly evolving
web-based system
designed to
augment and
accelerate global
public health
intelligence activities



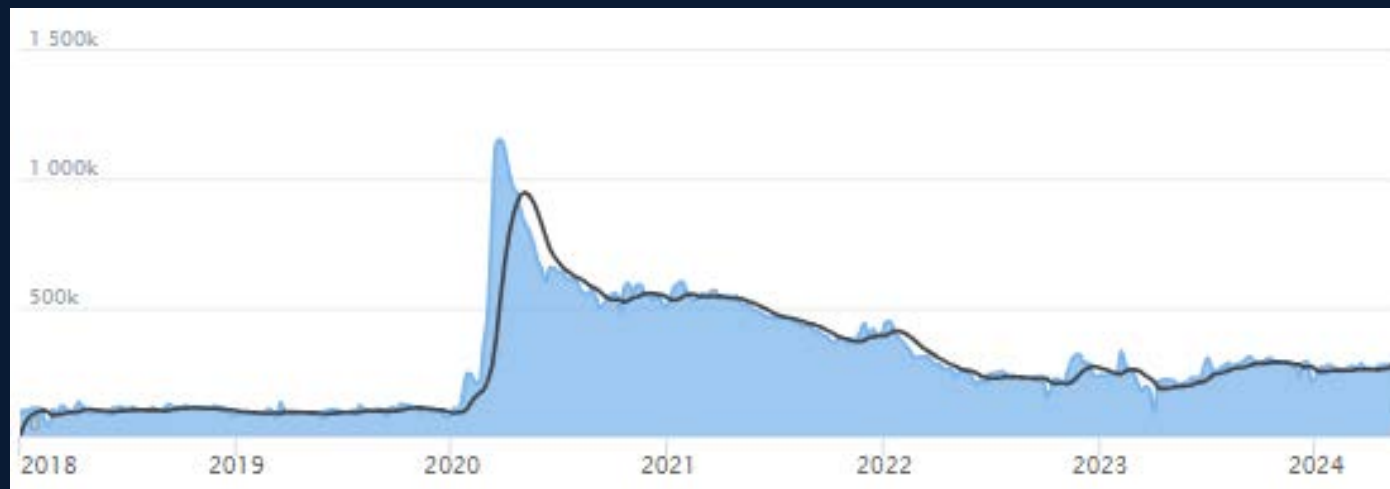
- EIOS core system developed by the Joint Research Center of the European Commission
- Operations and Maintenance and additional development -> Adappt Ai
- Additional **modules** developed by multiple partners
- The **processing chain** harvests articles from the set of selected sources
- Classifies articles with **relevant categories for public health** + adds other metadata + detects duplicates
- Sends enriched information to the EIOS portal

Broad range of sources

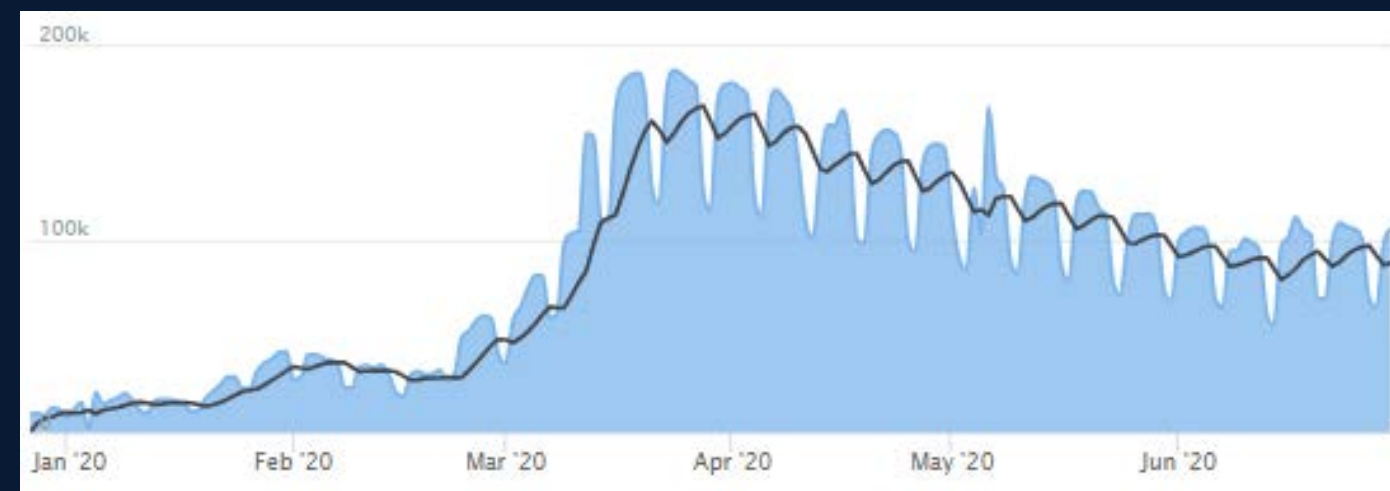




EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES



Daily average May 2023 to April 2024



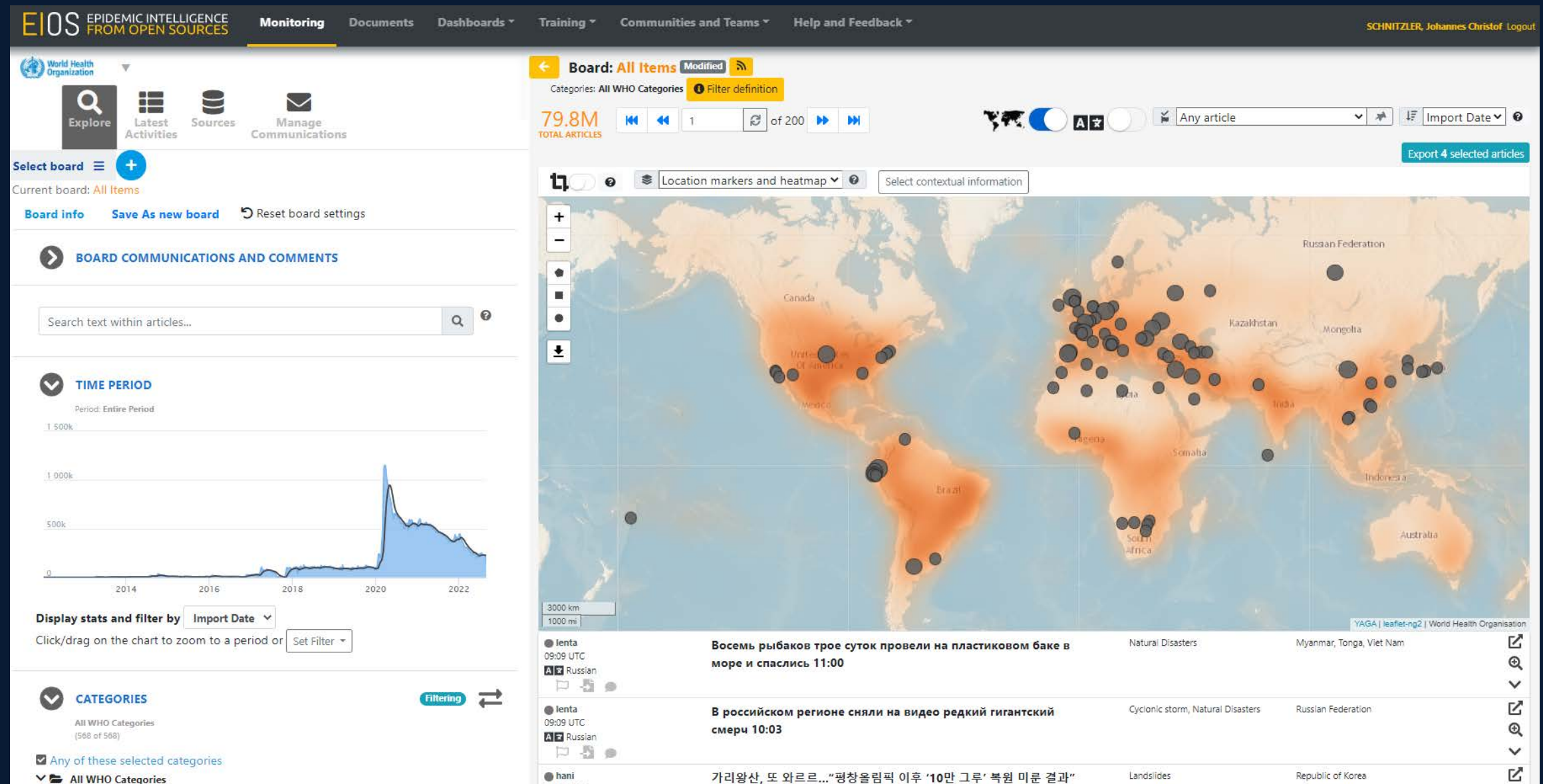
Articles fetched and analysed	325,000
Pushed to EIOS (WHO community)	51,000
After duplicates detection	38,000

Throughput per second 3.8

Innovating and integrating Open Source Public Health Intelligence through community and technology

EIOS
EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

A GLOBAL INITIATIVE LED BY THE
WORLD HEALTH ORGANIZATION



Snapshot of EIOS System



The EIOS initiative has been adopted by over 100 Member States and over 30 organisations and networks

EIOS Trainings

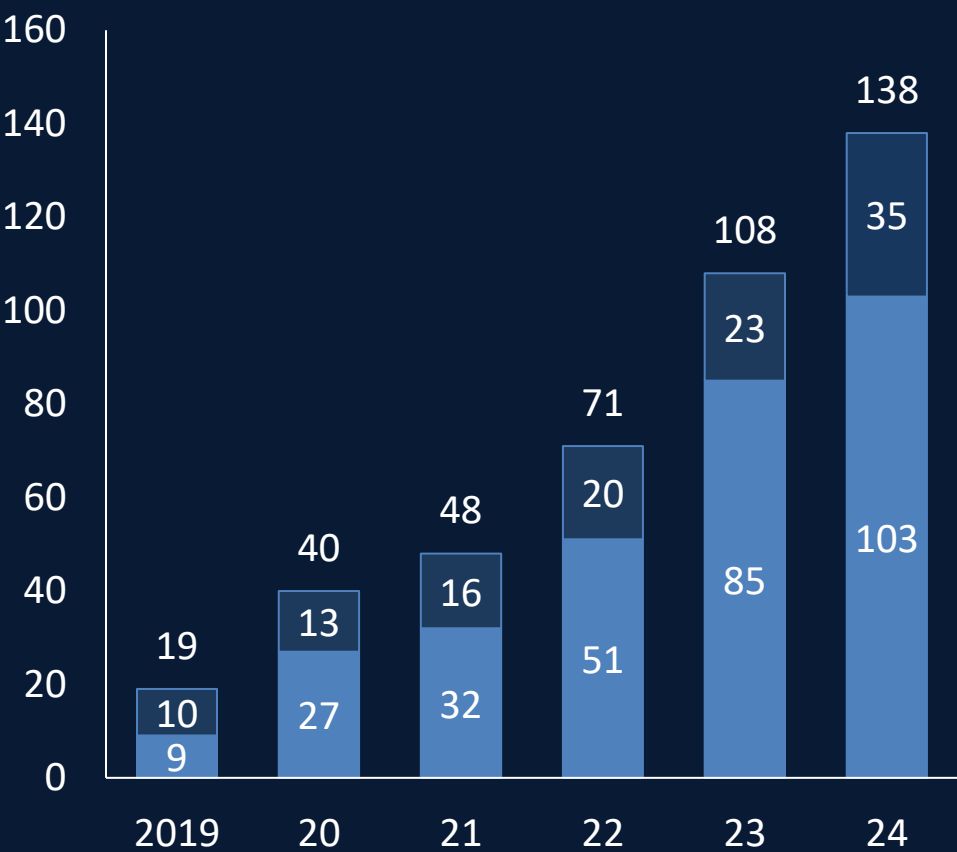
256
EIOS trainings

4164
Training participants

123
EIOS trained Member States/organisations

2761
Participants enrolled in the EIOS online
OpenWHO course

EIOS Communities: Cumulative Growth



All communities have received EIOS training, enabling them to effectively use the EIOS system. Communities can be Member States, regional CDCs, other organizations and networks.

Building and Strengthening Public Health Intelligence (PHI) Competencies

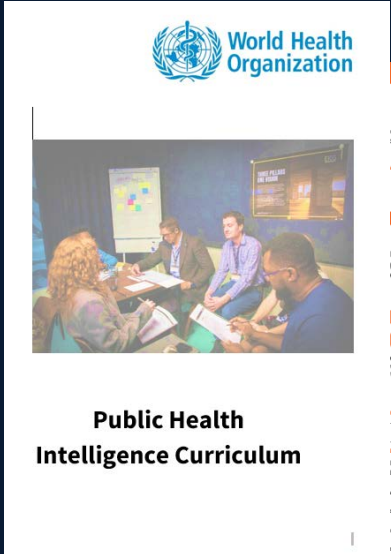
Goals



Strengthen capacity for a **unified All-hazards, One Health approach** to early detection, verification, assessment and communication of public health threats



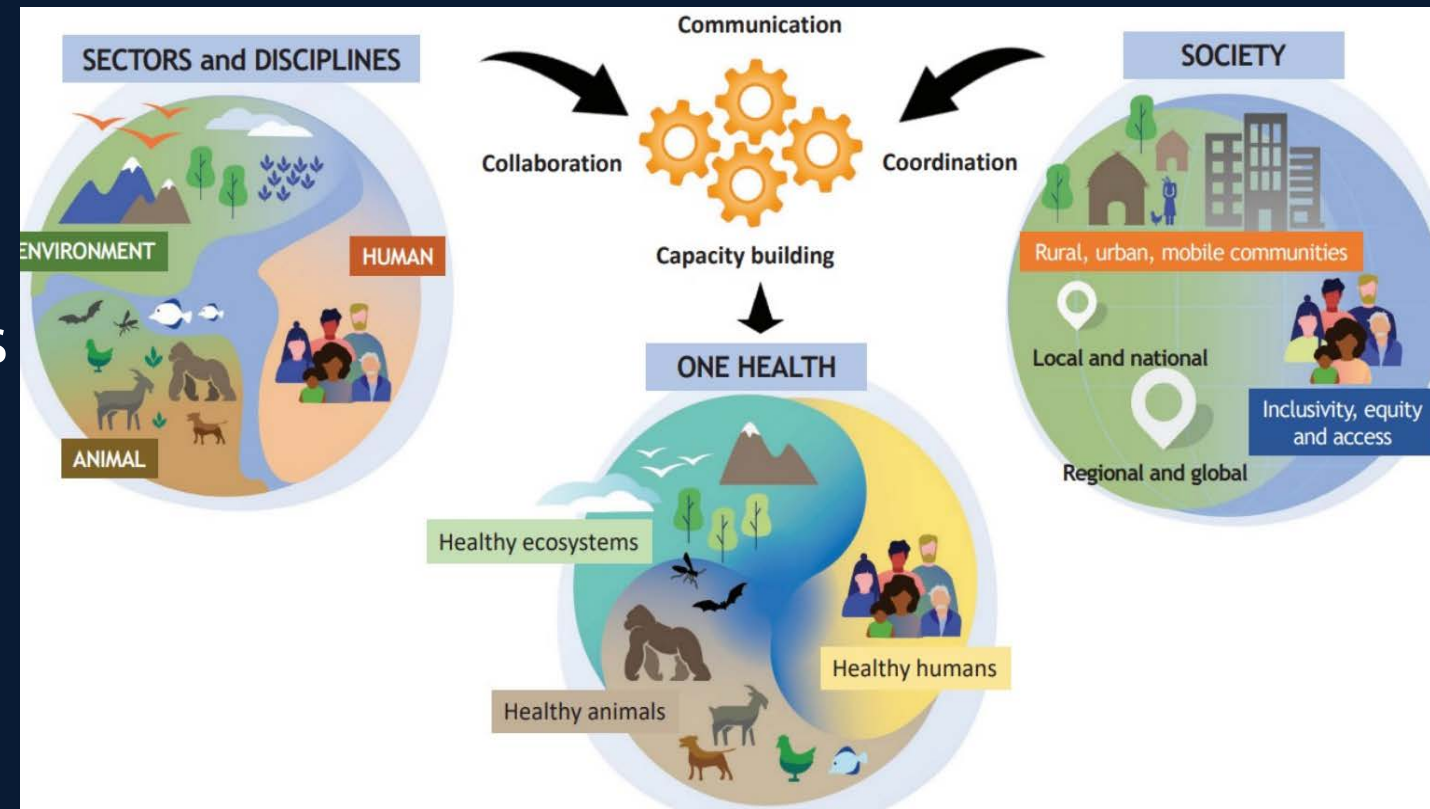
Develop and maintain **relevant competency framework, curriculum and training materials** to support capacity building and PHI implementation in MS, WHO, NGOs and networks worldwide



EIOS - All Hazard, One Health Approach

Plant Health - important dimension

- Direct impact on human and animal health
- Carriers of human pathogens and harmful toxins
- Antimicrobial and antifungal resistance
- Food safety / security
- Displacement
- Economy → Health Systems
- Agriculture / Environment ← Climate Change





CATEGORIES

Spodoptera frugiperda [LAPHFR]
(3 of 4855)

Filtering



☒ Any of these selected categories

Show unselected categories

☒ All Plant Health Categories

(3 of 4855 categories selected)

☒ EU Legislation Pests

(1 of 726 categories selected)

☒ Plant Health Threats (Alphabetically)

(1 of 2471 categories selected)

☒ Plant Health Threats (Taxa)

(1 of 722 categories selected)

☒ Insecta

(1 of 461 categories selected)

☒ Lepidoptera

(1 of 36 categories selected)

☒ Noctuidae

(1 of 4 categories selected)

☒ Spodoptera frugiperda [LAPHFR]

☒ Combine more selected categories in **AND**



MENTIONED GEOGRAPHICAL AREAS

Countries, territories and areas: No filter

Countries, territories and areas in Continent(s): No filter

Countries, territories and areas in WHO Region(s): No filter



Board: Spodoptera frugiperda - Famine Modified



Categories: Spodoptera frugiperda [LAPHFR] **Filter definition**

1

TOTAL ARTICLES



Any article



Import Date



watchdoguganda

03 Apr 13:16 UTC

English



Bugoma Forest Under Siege by Human Hands,
Perpetuating Environmental Disaster

Deforestation, Drought,
Ecology, Man-Made
Disasters ... +2.

Uganda



PIN TO RECENT BOARDS

All items

All items included

Monkey Pox DRC

Test

Test Board 20210407

Test202230626

TestHWFHealthOnly20210322

TestRSS

TestRSSBoard

UEFA Test

More...

CATEGORIES

Deforestation

Drought

Ecology

Man-Made Disasters

Natural Disasters

Spodoptera frugiperda [LAPHFR]

MENTIONED COUNTRIES, TERRITORIES AND AREAS

Uganda

AUTOMATIC SUMMARY

Bugoma Central Reserve Forest once stood as a testament to nature's grandeur, boasting a lush tapestry of biodiversity beneath its towering canopy. Today, this verdant oasis lies vanquished, reduced to a desolate expanse of barren land, a victim of unbridled human exploitation. Unpredictable rainfall patterns and soaring temperatures wreak havoc on agricultural practices, while the surge in pest invasions decimates crops.

DESCRIPTION

Nestled within the picturesque landscape of Kikuube district, Bugoma Central Reserve Forest once stood as a testament to nature's grandeur, boasting a lush tapestry of biodiversity beneath its towering canopy. Yet, today, this verdant oasis lies vanquished, reduced to a desolate expanse of barren land, a victim of unbridled human exploitation.

SEARCH HIGHLIGHTS

For Mathias Tugumisirize, a farmer whose Irish potato garden falls victim to marauding **army worms**, the... Now, it is being destroyed by the **army worm**.... Mugabo, the LC1 Chairperson for Kyabayanja village in Kikuube district, who grimly predicts an imminent **famine**

EIOS v.2, where are we going?

New partnership model and re-architecture support a strengthened, sustainable, and scalable EIOS system with more frequent, iterative improvements...



World Health
Organization

HUB
Pandemic and Epidemic
Intelligence

EIOS v.2.0

Enhanced UI / UX

- System that caters to more user needs
- Re-architecture of portal backend

EIOS v.2+

Advanced and optimized

- Tech development capacity significantly increased and accelerated

EIOS v.1 - current

Limited system capabilities

- Time to respond to community needs
- Users report information overload

+Scalability

+Agility (dev)

+Capabilities

+Modularity

+Integrations

+Support
(O&M)

Anomaly Detection

Semantic Search

Speech-to-Text

Noise-Reduction

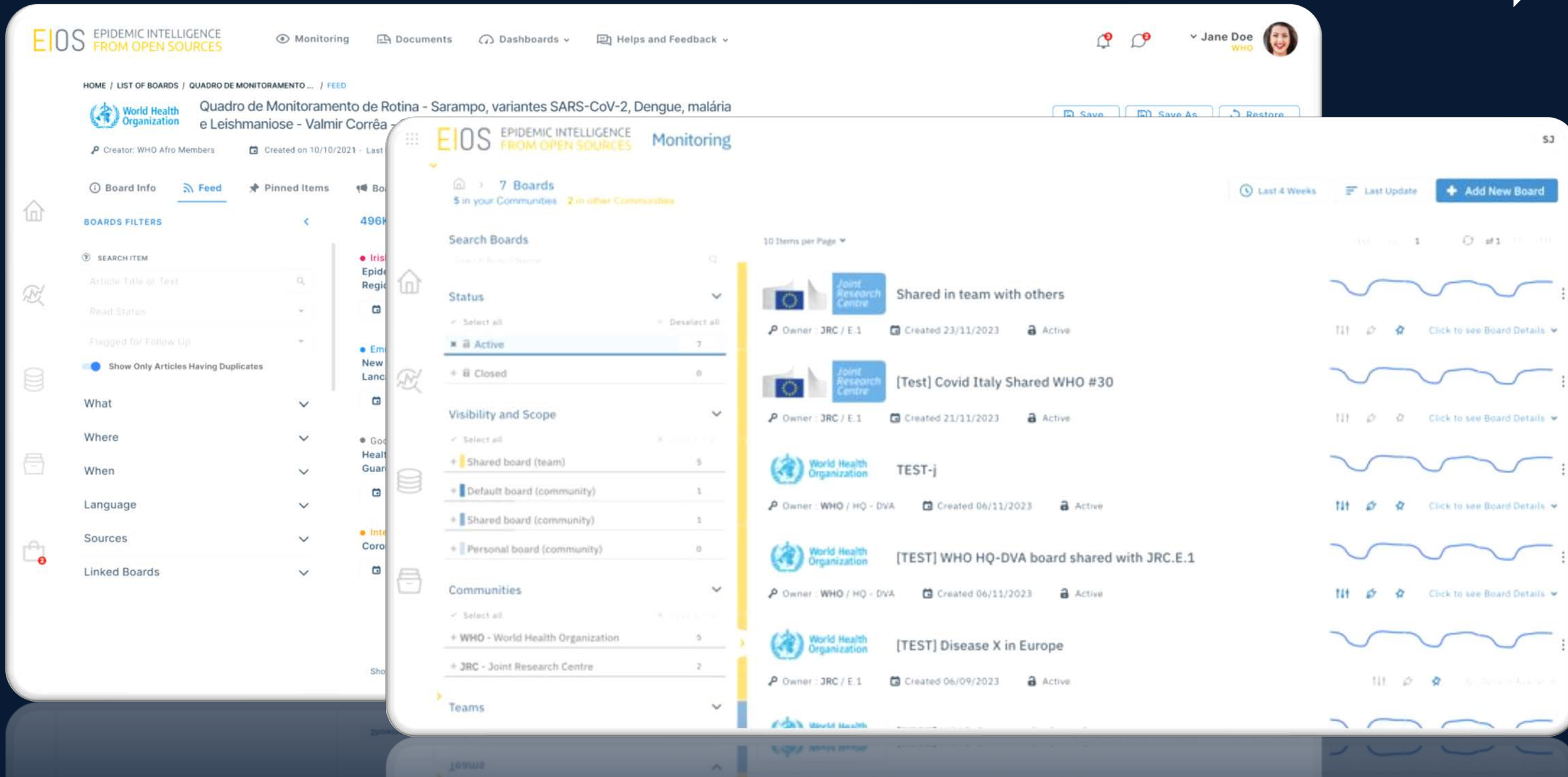
Abstractive
Summarization

new Webscraping

Source & Category
Editors

Pandemic classifier

EIOS V2 - New User Interface



EIOS V2 - Multilingual User Interface



Label Management (Translator)

Select Language ▼

[Go To Label Approval](#) [Export](#)

[Draft](#) [SubmittedForReview](#) [ModificationRequired](#) [Accepted](#)

[header](#) [navbar](#) [filter](#) [filtersBoard](#) [filtersActivities](#) [filterTeams](#) [filtersArchives](#) [boardsList](#) [board-list-item](#) [modal-languages](#) [modalTimeframe](#) [modalSorting](#) [pagination](#) [inputFeec](#)

[Labels of header](#) [dashboardsSubMenu](#) [helpSubMenu](#) [userSubMenu](#)

Portuguese ▼		Portuguese	
Label ID ↑↓	English translation	Machine translation	Manual translation
<input type="text"/>	<input type="text"/>	Select Label Status	▼
monitoring	Monitoring	Monitorização	Monitorizacio? sdfsd
documents	Documents	Documentos	Documentos
dashboards	Dashboards	Painéis	Painéis
help	Help and Feedback	Ajuda e Feedback	Ajuda e Feedback
TestJS	TestJS_en	TestJS_en	TestJS_en_2

Introduction of Ontology and Taxonomies

EIOS domain specific taxonomy:

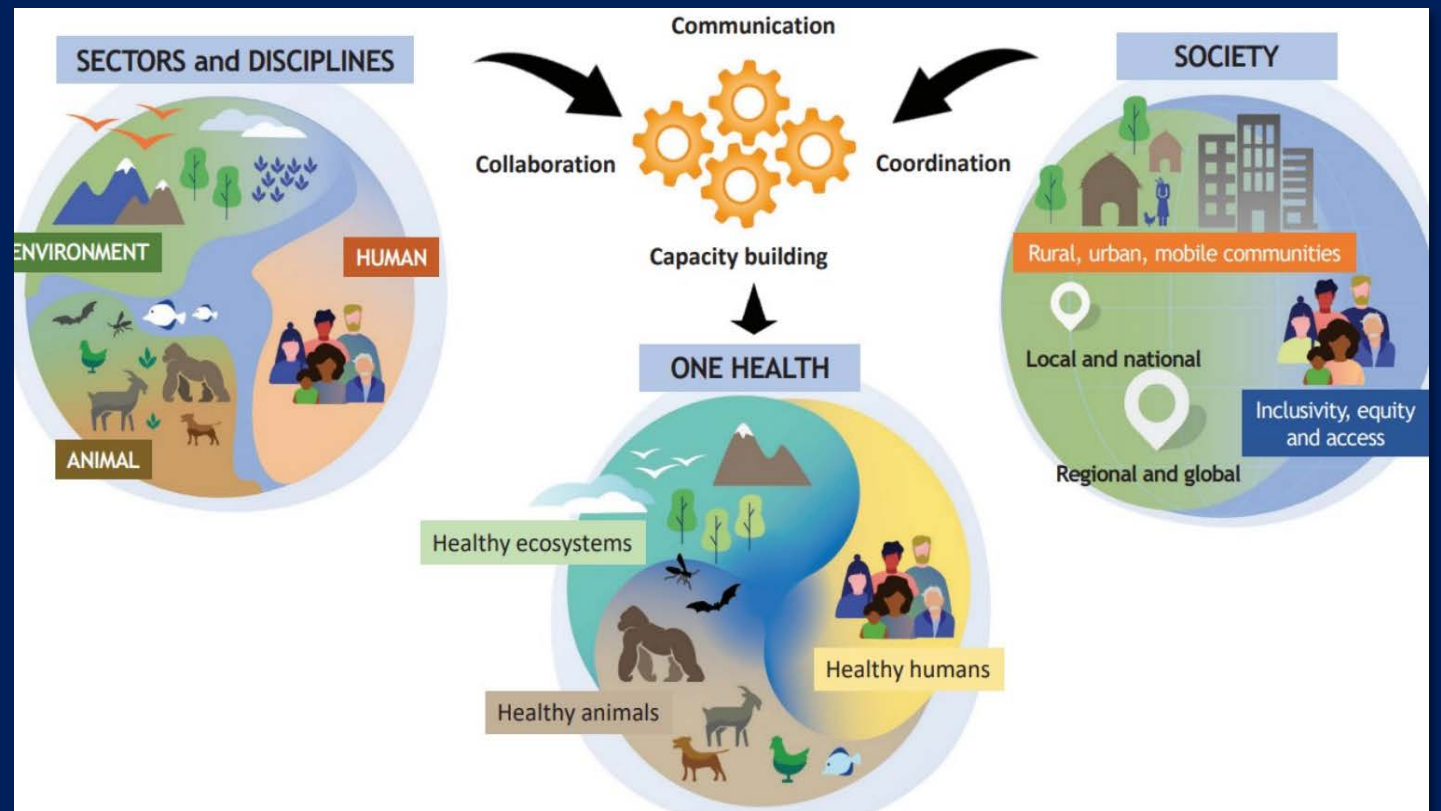
Allow for selection of categories by group / topic of interest

Progress toward a PHI One Health ontology

Facilitate information exchange between systems and sectors

Enhance semantic automated analysis

Identification of change in patterns and connections



Source: WHO One Health High-Level Expert Panel: Theory of Change

Human diseases and agents

Infectious Diseases

All Infectious Diseases (A-Z)

By Transmission type

By Pathogen Type

Airborne

Physical contact

Bloodborne

Genetic

Sexual contact

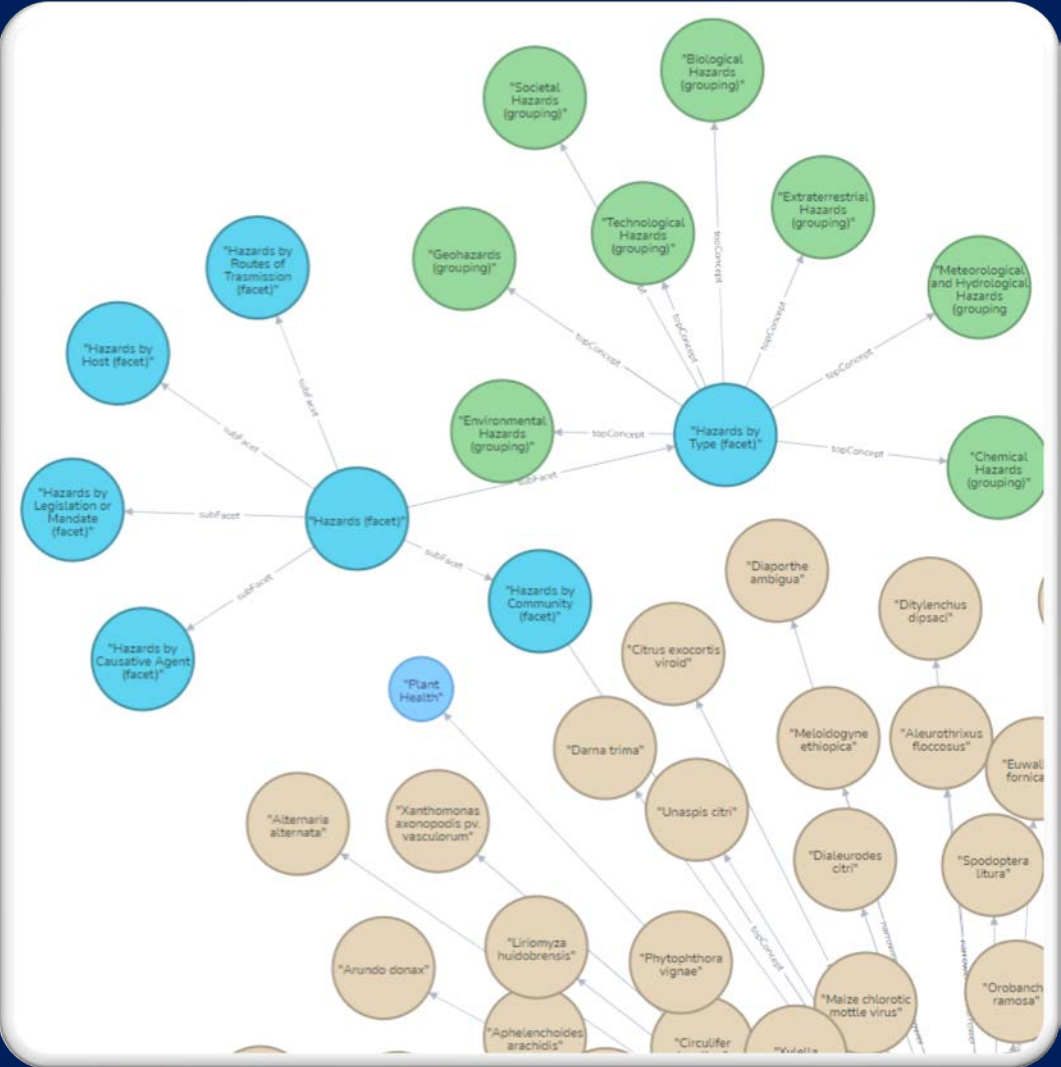
Unknown

Enteric or ingestion

Vector borne

Other zoonoses

Maternal-fetal and congenital



World Health Organization

Human diseases and agents

Infectious Diseases

All Infectious Diseases (A-Z)

By Transmission type

By Pathogen Type

Airborne

Physical contact

Bloodborne

Genetic

Sexual contact

Unknown

Enteric or ingestion

Vector borne

Other zoonoses

Maternal-fetal and congenital

By Transmission type

Medical Product



World Health Organization

Enhanced communications

Shared boards across teams/communities

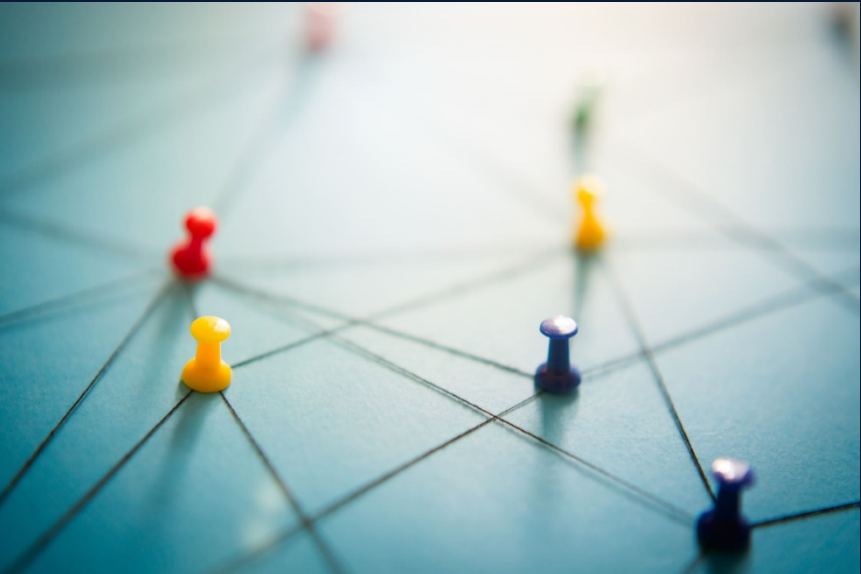


A team can invite other teams, even across communities, to collaborate and share workload



Enhanced communications

Enhanced information products



Publication of a post

by SPAGNOLO, Luigi on 06/12/2024 13:45

Board WHO /EURO Avian flu - Global

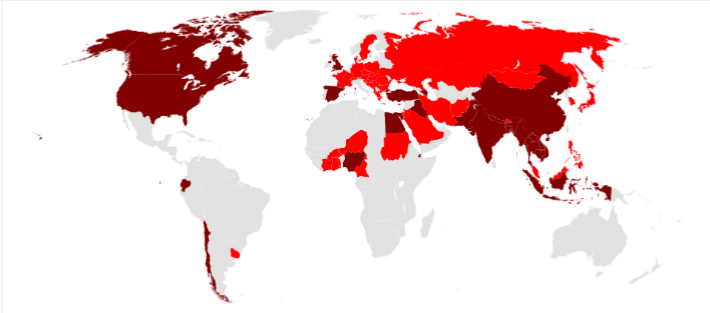


Post A single mutation in bovine influenza H5N1 hemagglutinin switches specificity to human receptors

From: <https://www.science.org/doi/10.1126/science.adt018>

@ SCHNITZLER Johannes Christof, @ FONTAINE, Julie for your attention.

In 2024, several human infections with **highly pathogenic clade 2.3.4.4b bovine influenza H5N1 viruses in the United States** raised concerns about their capability for bovine-to-human or even human-to-human transmission. In this study, analysis of the hemagglutinin (HA) from the first-reported human-infecting bovine H5N1 virus (A/Texas/37/2024, Texas) revealed avian-type receptor binding preference. Notably, a Gln226Leu substitution switched Texas HA binding specificity to human-type receptors, which was enhanced when combined with an Asn224Lys mutation. Crystal structures of the Texas HA with avian receptor analog LSTa and its Gln226Leu mutant with human receptor analog LSTc elucidated the structural basis for this preferential receptor recognition. These findings highlight the need for continuous surveillance of emerging mutations in avian and bovine clade 2.3.4.4b H5N1 viruses.



- Article Single Mutation in Avian Flu Could Increase Threat to Humans
- Article Single mutation in H5N1 bird flu virus may make it more infectious to humans, study finds
- Article A single mutation in the H5N1 influenza virus is enough to facilitate human transmission
- Article A single mutation in cow bird flu would allow it to be transmitted between humans

New features and functionalities

AI supported advanced analysis capabilities

Noise Reduction RKI - WHO

EIOS EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

EIOS NOISE REDUCER

Select an Approach

English_TFIDF_RandomForest

Language: English

Vectorizer: TF-IDF

Model: Random Forest

Noise Reduction

LOW

LOW 0.00 0.33 0.67 OFF 1.00

RELEVANT ARTICLES (168)

AFGHANISTAN-Deputy Country Director for Programs (H/F)-Kabul - Probability: 0.23

SYRIA - MEAL Coordinator (M/F) - Amman - Probability: 0.23

Quick takes: Florida sees more dengue, Polio funding announcement, Wellcome appoints new CEO - Probability: 0.2608333333333333

Administrative Assistant - CAPACities - Probability: 0.2

NOISY ARTICLES (6)

Consultant for Facilitation of Quality Rights Training of Trainers in Nepal - Probability: 0.34333333333333327

Syria: Health Cluster Türkiye Hub: Flash update#3: Ongoing shelling and airstrikes in Idlib and Western Aleppo (Tuesday, 10 October 2023) - Probability: 0.37500000000000006

oPt: Standing for Peace: Trócaire's Statement on the Crisis in Israel and Palestine - Probability: 0.35

Pandemics Classifier JRC

Events Coarse Taxonomy

REPORTING: reporting single/multiple infection cases and deaths that occurred within a short period of time and provision of general situation overview (in terms of people affected) spanning a longer time period.

IMPACT: all events that are impacted by the outbreak of the infectious disease/pandemic, e.g. cancellation of events

MEASURE: introduction and changes to legislation, restrictions and recommendations of preventive nature necessary to combat the disease, i.e. the number of infected/affected people and spread of the disease, roll-out of related vaccines, medicines and equipment.

VIOLATION: any illegal activity, fraud, fake product discovery, unrest related to the introduced measures, and spread of misinformation.

RESEARCH & DEVELOPMENT: reporting on the phenomena observed during the spread of the disease, progress on vaccines, medicine and relevant equipment development, and support to research and development related to diagnose or treat the disease.

COMMUNICATION: high-level meetings to discuss the situation, impacts and/or introduce measures, and launch of new information sharing/collection instruments concerning the disease and related phenomena.

SUPPORT: provision of financial and other type of support to the affected entities, community, economy, etc., and mentions of the need or lack of such support.

MISCELLANEOUS: any other events related (not covered above) or unrelated to infectious diseases, and non-events, i.e. texts not referring to any actual event nor a state of an event, e.g. descriptions of processes.

Trained Model

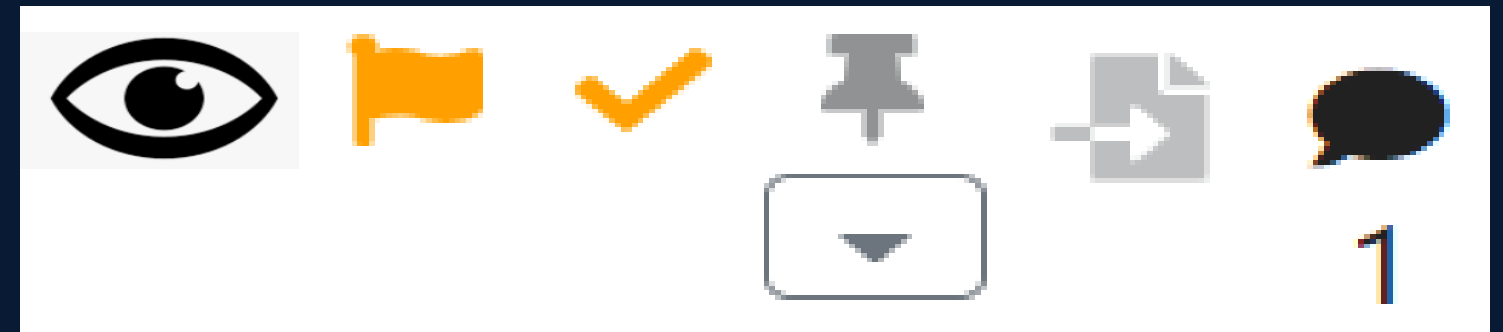
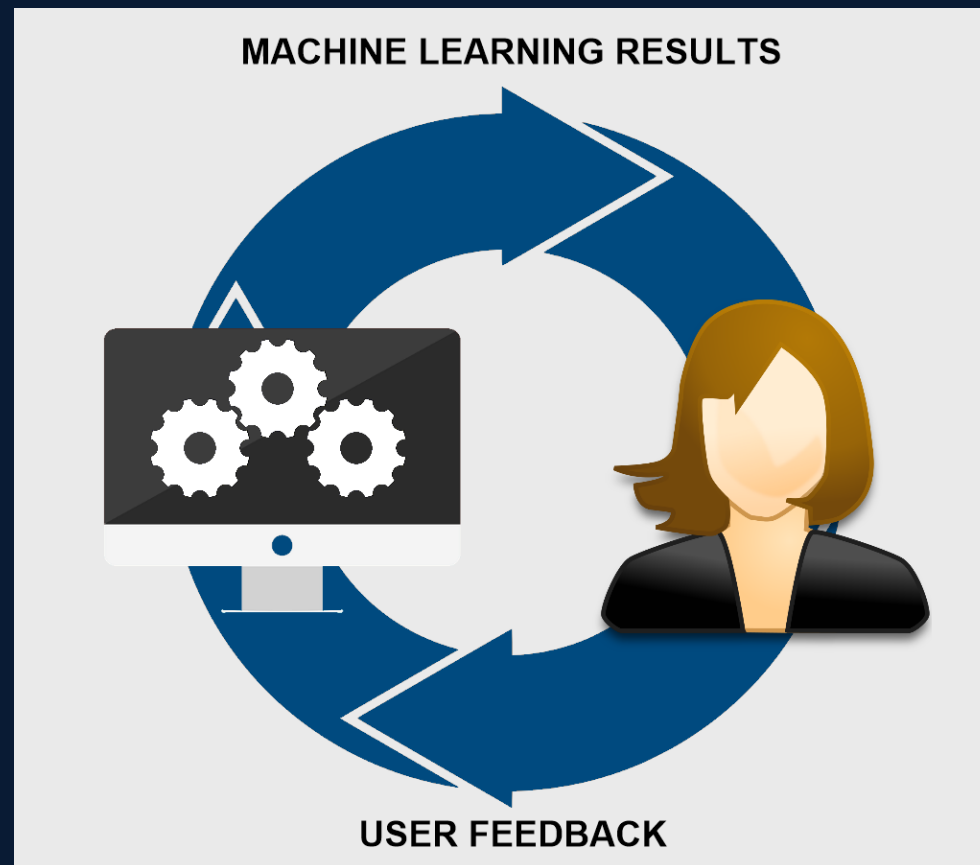
Corpus: 4.5k snippets

Model: RoBERTa base

F1 score: 0.76 micro and macro

8 coarse-grained categories
25 fine-grained categories

Recommender System JRC



Speech to text – Radio mining

OICT + WHO AFRO

Leveraging the OICT Unite Wave platform - Listen to online and FM radio stations
Transcribes the speech into text - The text is analyzed to detect potential signals
Feeding into EIOS as a new source Type



Multi-language

English, Swahili, Arabic,
French, Portuguese, ...



Transcription

Speech recognition
models adapted for
African languages,
and dialects.

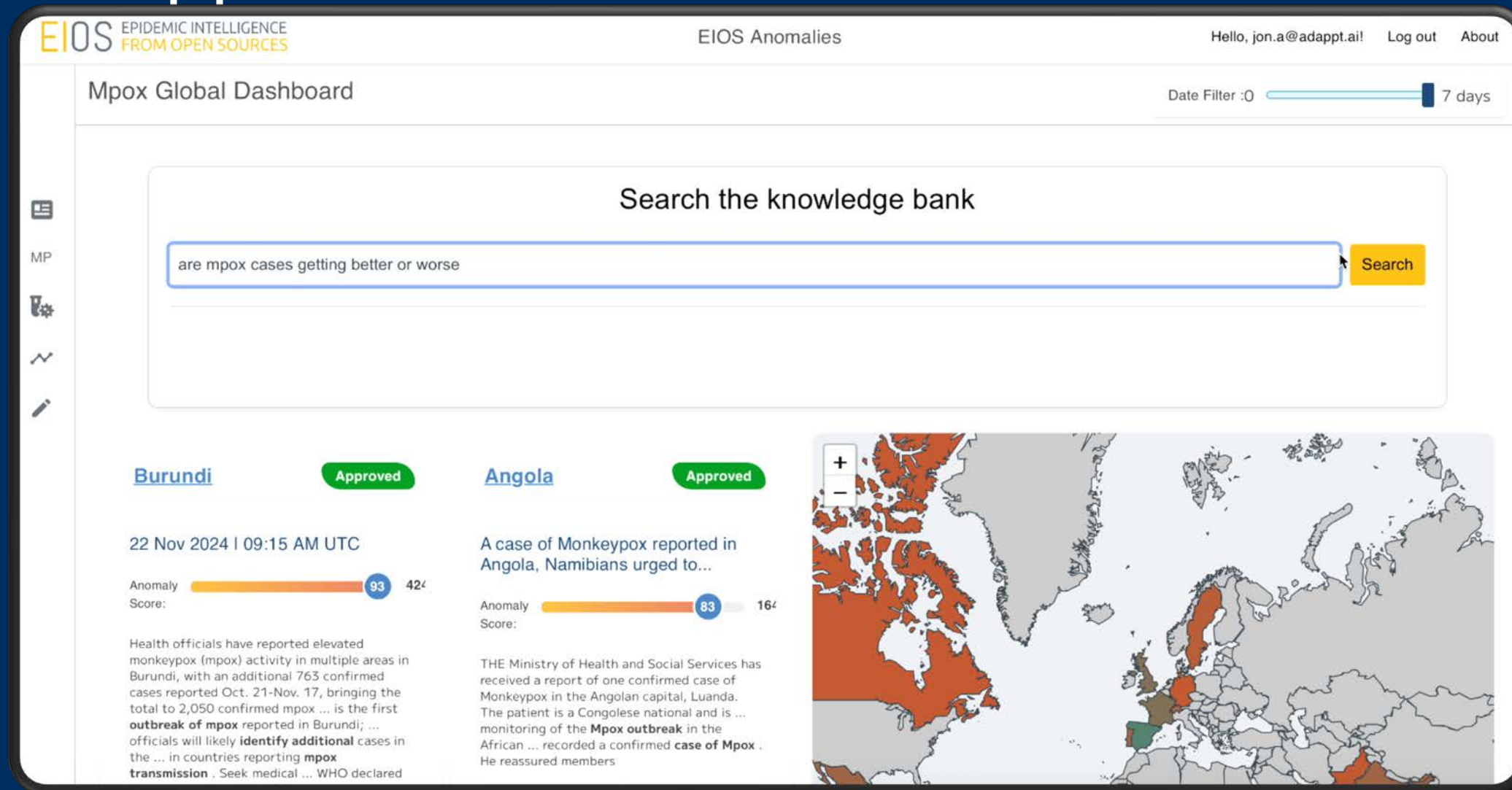


Pilot

Few countries to
participate in a
pilot.

Anomaly Detection and Semantic Search

Adappt ai - WHO



Search the Knowledge Bank

Hello, how can I assist you today?

Send Query

No response available

Broad Semantic Search

Mpox Global Dashboard

0  8+ Date Filter: 8+ days

Search the knowledge bank

Type your question...

Search

Rwanda

Approved

Sex, a Hex and a Sick Child Offer Clues to...

Anomaly Score:  87 2615

On Sept. 30, 2023, an anxious father brought his 5-year-old son to the hospital in Kamituga, a muddy, bustling town carved out of the thick forest in the eastern Democratic ... boy had a **high fever** and oozing sores ... months later, the **new strain** of the virus ... have adapted to **spread more easily and quickly between people**. **More than 62,000 cases** of mpox have ... had its first-ever **case of mpox** , they were ... have been infected. **Mpox transmission...**

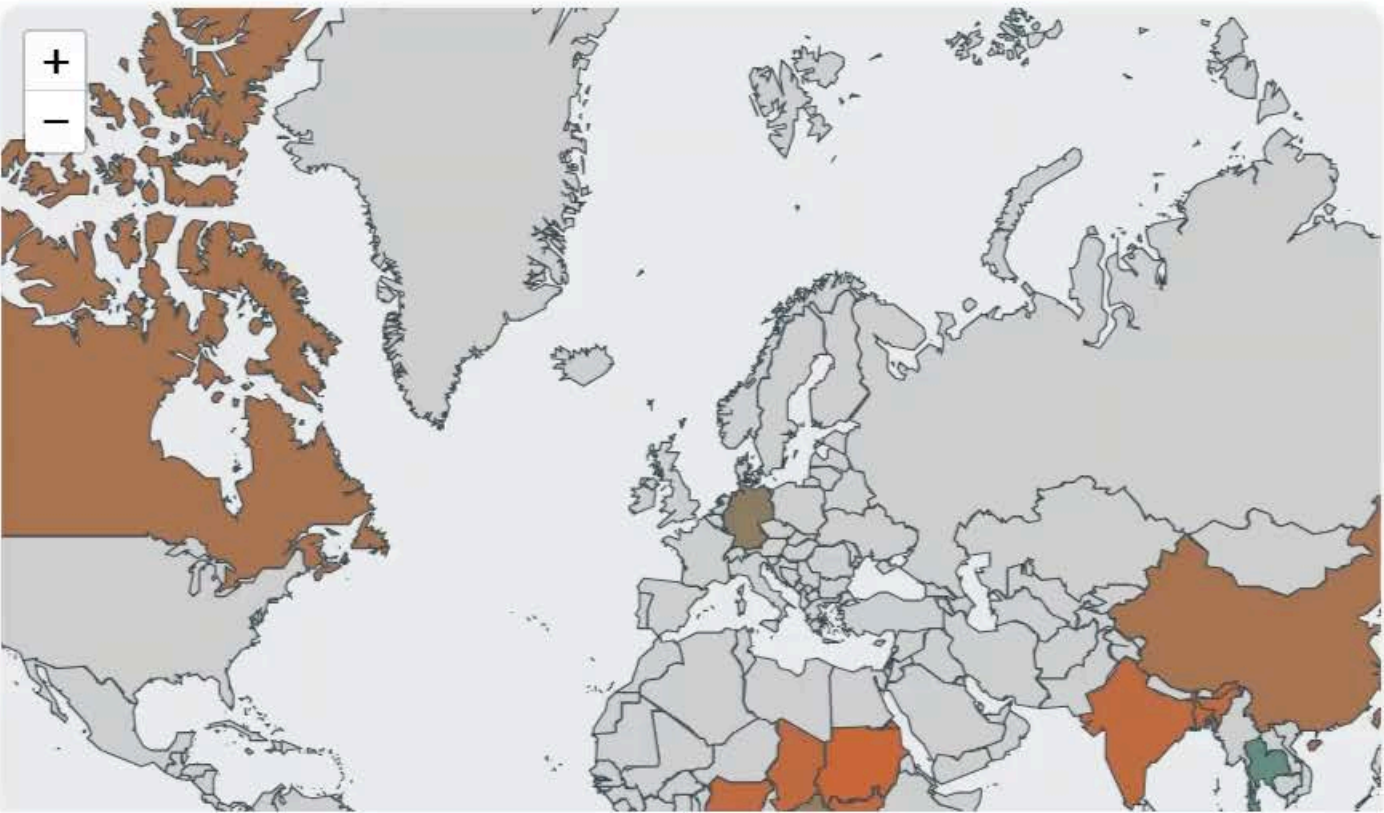
Brazil

Approved

Digital Tools and Analytics in the Fight Against Mpox

Anomaly Score:  88 2943

threat. The virtual meeting, organized by the WHO Hub for Pandemic and Epidemic Intelligence and partners, focused on fostering collaborative actions and leveraging innovative solutions in response to the evolving mpox outbreak . The meeting ... 2023, a concerning **upsurge of mpox cases**, particularly in ... during the initial **mpox outbreak** . Experiences shared ... responding to the **mpox outbreak** . Dr. Julia ... analyzing ellipses of **mpox outbreaks** . He underscored ... Go.Data. contributing to ...



Mpox Global Dashboard

0  8+ Date Filter: 8+ days

Search the knowledge bank

Search

Check relevance with LLM

Rwanda

Approved

Sex, a Hex and a Sick Child Offer Clues to...

Anomaly Score:  87 2615

On Sept. 30, 2023, an anxious father brought his 5-year-old son to the hospital in Kamituga, a muddy, bustling town carved out of the thick forest in the eastern Democratic ... boy had a **high fever** and oozing sores ... months later, the **new strain** of the virus ... have adapted to **spread more easily and quickly between people**. **More than 62,000 cases** of mpox have ... had its first-ever **case of mpox**, they were ... have been infected. **Mpox transmission...**

Brazil

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**For more
information**

<http://www.who.int/eios>
eios@who.int

World Health
Organization

Other communities using EIOS

Paolo Tizzani

Senior Veterinary Epidemiologist
World Animal Health Information and Analysis Department



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for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal



Summary

1. Introduction to the WOAAH
2. WOAAH epidemic intelligence
3. Assessment and evaluation -> how to improve system performance

WOAH's mission

Improve animal health globally, thereby ensuring
a better future for all.



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for Animal
Health

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animale

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de Sanidad
Animal



Ensure transparency

121 listed diseases
Domestic animals
and wildlife

31 aquatic

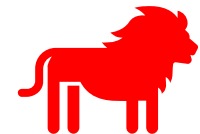
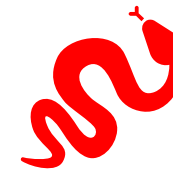
3 Emerging
diseases



53 Non-listed
diseases in
wildlife

90
terrestrial

183 Members
+
24 Territories





Reporting LISTED Diseases



User-friendly, intuitive,
time-efficient



High resolution dynamic
mapping



Open access to WAHIS
data



<https://wahis.woah.org>

Facilitates reporting, promotes the use of data



WOAH Epidemic intelligence



“Cycle of organised and systematic collection, analysis and interpretation of information from all sources to enhance early detection of health events and early warning for timely response, based on an adequate assessment of the associated risk”

Epidemic intelligence at WOAAH – key figures 2023

121 + 3

Listed and
emerging disease

183

Members

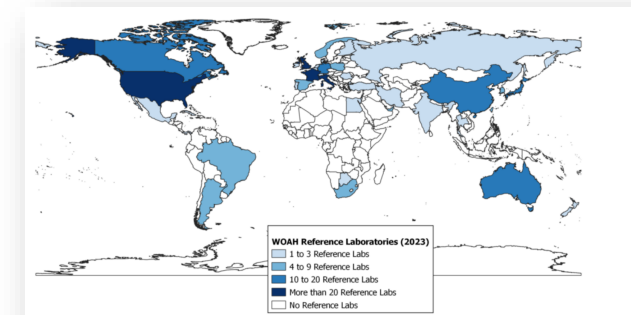
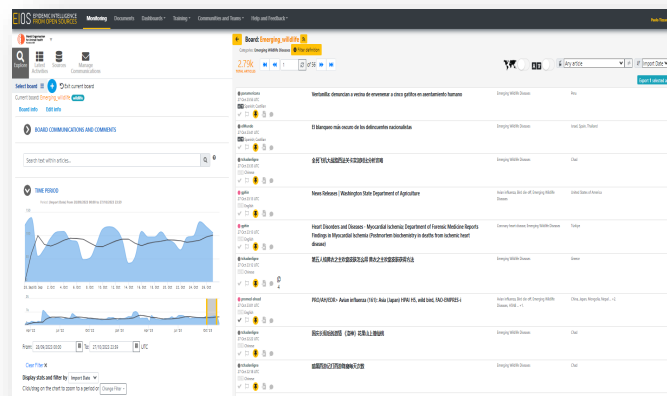
120 000

Signals
(web scraping)

334

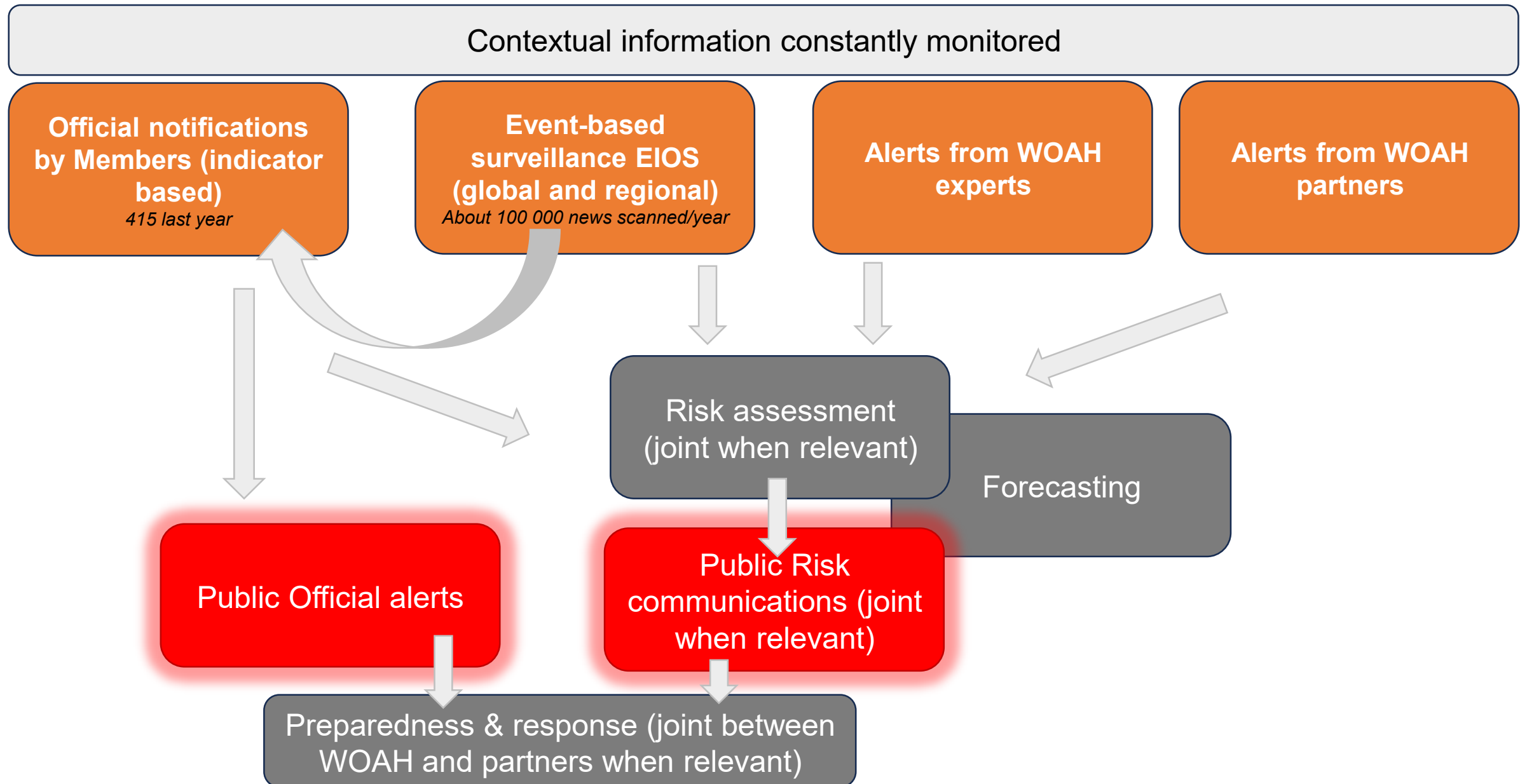
Reference Centers

WAHIS: World Animal Health Information System



+ WOAAH network of partners and experts
information exchange

WOAAH activities for global early warning



Use of EIOS for WOA Epidemic intelligence



World
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for Animal
Health

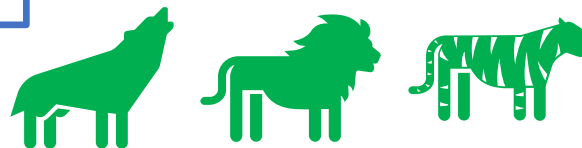
Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal



WOAH community
since November 2017

5 teams
22 members



WGW community
since 2020

1 team
14 members

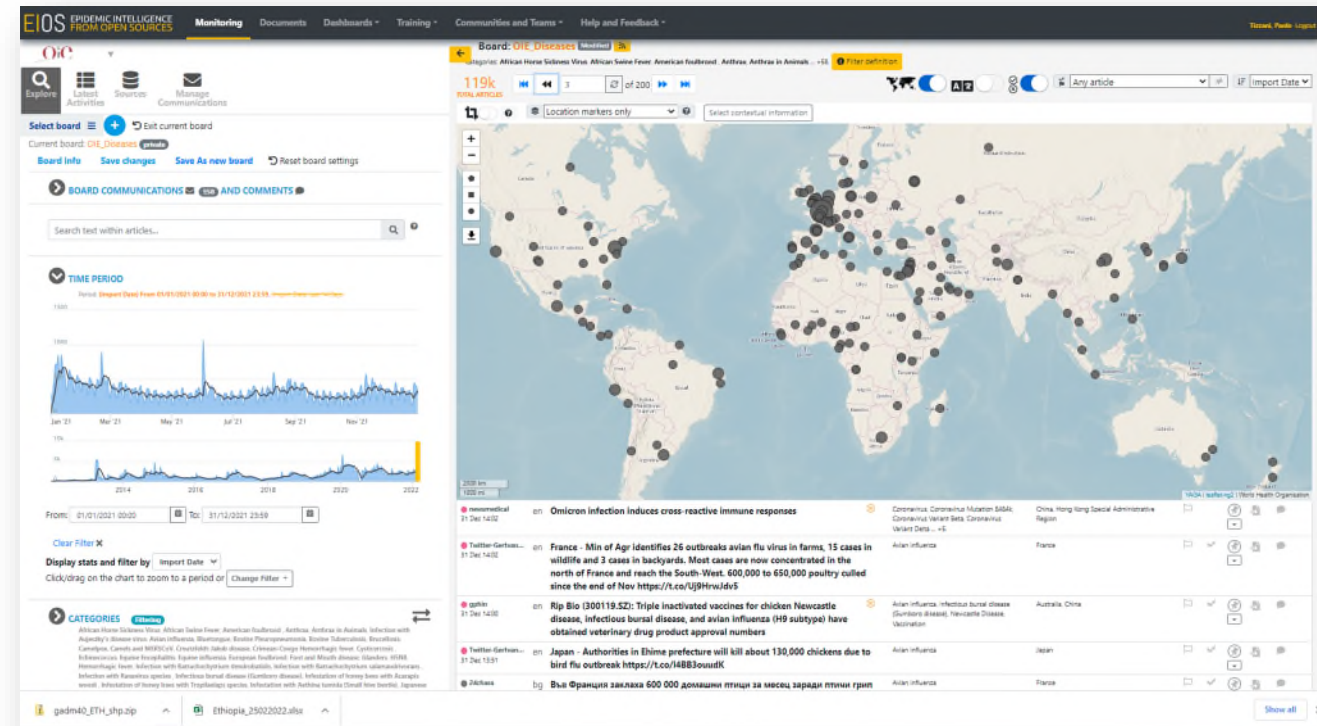


GLEWS community since
March 2020

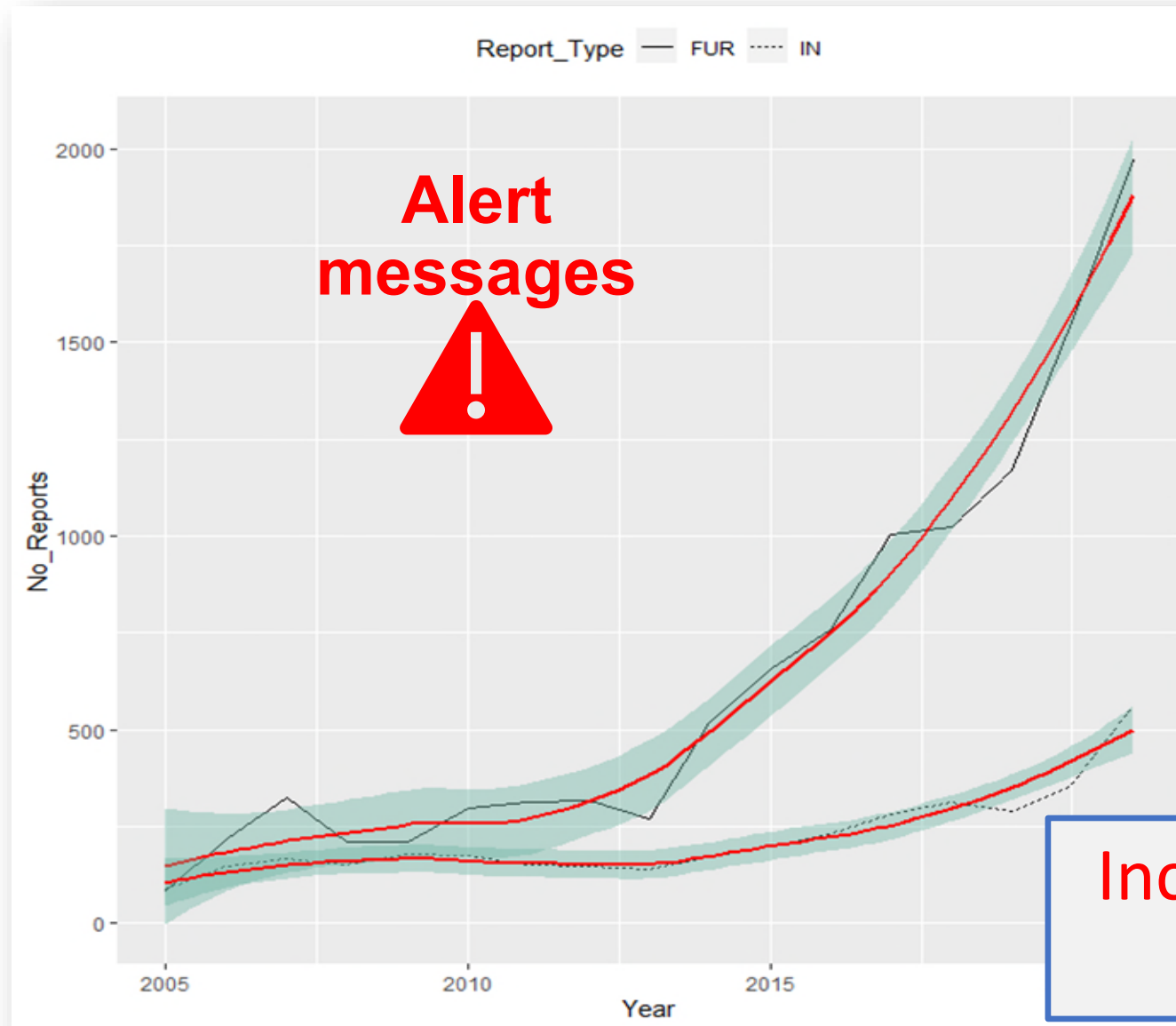
1 team
12 members



- **EIOS** system for epidemic intelligence
- **Daily screening** of the web for diseases of interest
- Around **120,000** signals / year
- Communication between WOA and its Members
- Several animal disease categories created since 2017



EIOS EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES



Increased reporting
by up to 14%

Evaluation Overview - EIOS GEST meeting

Assessing EIOS performances in monitoring animal diseases

Methodology

- *Gap analysis of reporting performance*
- *Creation of country reporting scores – **Official reporting***
- *Creation of a detection score - **EIOS***
- *Use a risk matrix approach to identify countries and territories where EIOS performance needs improvement*

Evaluation Overview

Methodology

		Detection capacity score		
		Low	Medium	High
Reporting country score	Low	High priority	High priority	Medium priority
	Medium	High priority	Medium priority	Medium priority
	High	Low priority	Low priority	Low priority

Evaluation findings

Main findings

- *EIOS detected news for only **65%** of the countries and territories (**28/43**)*
- ***60%** of the news detected in **five Members***
- *Globally EIOS detected relevant signals for **29 diseases out of the 121** listed (**24%**)*
- ***78%** of signal detected for only **6 diseases***

Did these findings influence or change the use/implementation of EIOS?

- *We have initiated a process to improve EIOS sensitivity in priority countries and territories*

Evaluation reflections

Challenges/limitations with the evaluation?

- *EIOS data accessibility could be improved.*
- *Varying timing of implementation of animal health categories in EIOS*
- *Languages availability is not consistent across different animal categories*
- *Significant manual effort remains necessary to assess message relevance and assign messages to specific countries or locations*

Evaluation reflections

Opportunities for future evaluations?

- *Improve data extraction / consultation of EIOS data*
- *Improve reduction of noise*
- *Improve accuracy in geographic location of news*
- *Better define governance and traceability for old and newly implemented categories + category metadata*
- *Re-evaluation after implementation of changes planned for the future*



Final recommendations, challenges and opportunities for using EIOS in other communities

Recommendations, challenges and opportunities

Recommendations

- Coordination at team level is key
- Responsible for board creation and management / update

Challenges

- Manage big amount of data
- Coordinate outside the WOAHA team with other partners

Opportunities

- Extend beyond the event-based surveillance (sensitivity assessment, risk mapping)
- Building an EI network



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animale

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de Sanidad
Animal

Thank you

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[YouTube](#)
[Flickr](#)



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de Sanidad
Animal





Source Editor & Category Editor Management tools

Second International workshop

Horizon scanning for plant health

11 February 2025

Vlad Dragu (European Dynamics)

The Europe Media Monitor (EMM) data pipeline

Daily News

EMM Mission

to deliver
independent, relevant
information about
facts and **opinions**
extracted from
on-line media
to EU policy makers
at all levels

Politics

**Sed ut perspiciatis unde omnis iste
natus error sit voluptatem
accusantium doloremque laudantium**

totam rem aperiam, eaque ipsa quae ab illo inventore
veritatis et quasi architecto beatae vitae dicta sunt
explicabo. Nemo enim ipsam voluptatem quia voluptas
sit aspernatur aut odit aut fugit, sed quia consequuntur
magni dolores eos qui ratione voluptatem sequi
nesciunt. Neque porro quisquam est, qui dolorem
ipsum quia dolor sit amet, consectetur, adipisci velit,
sed quia non numquam eius modi tempora incidunt ut
labore et dolore magnam aliquam quaerat voluptatem.



Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus

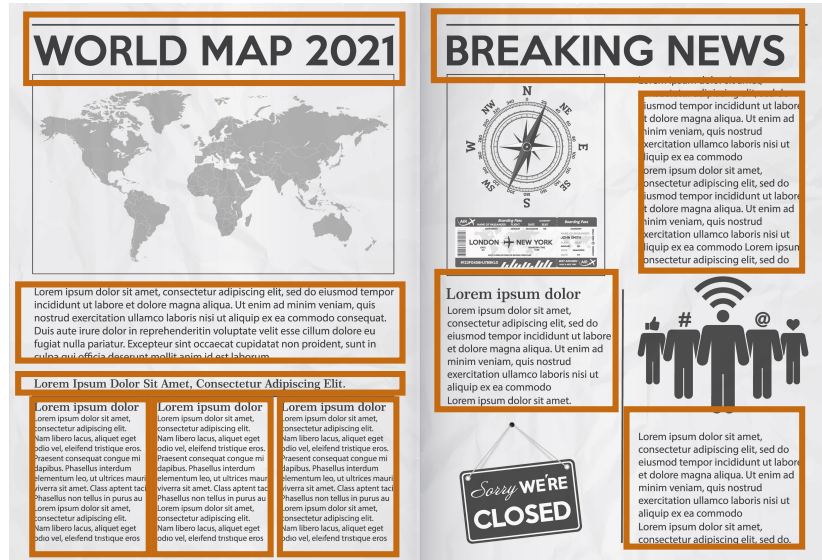
Business

Quis autem vel eum iure reprehenderit
qui in ea voluptate velit esse quam
nihil molestiae consequatur

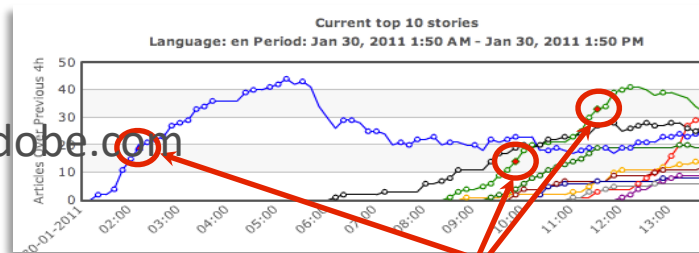
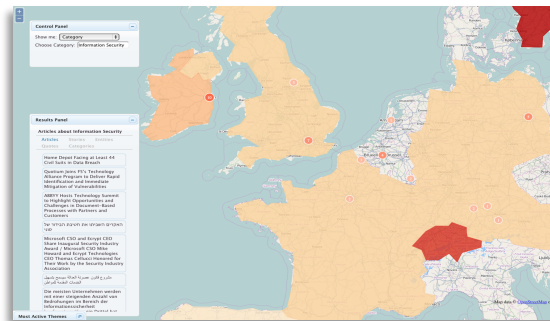
Nemo enim quibusdam ipsam
voluptatem quia voluptas sit
aspernatus aut odit aut fugit

A hand in a business suit reaches out to touch a glowing, translucent globe. The background is a blue-toned collage of digital and business elements, including a bar chart, a line graph, a city skyline, and binary code (0s and 1s). The globe has a grid of latitude and longitude lines and is surrounded by concentric circles, suggesting a digital or networked environment.

Europe Media Monitor



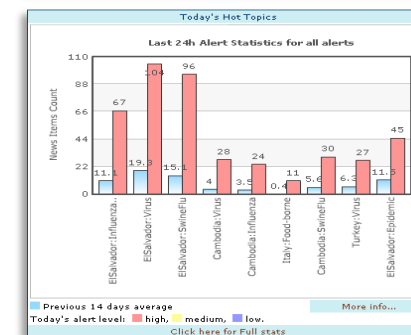
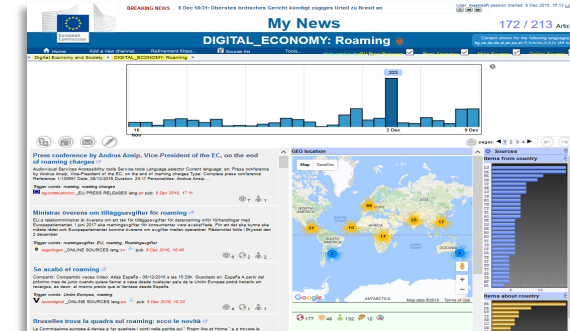
- 20,000 News Sites
- 500,000 articles per day
- 190 countries
- 80 Languages
- 8,000 Categories/Topics
- 400,000 keywords
- Runs 24/7



Breaking News

Domains:

- Socio Political Event Monitoring
- Public Health Threats & Food Safety
- Border Security, Cybercrime & Fighting Crime
- Conflict Early Warning
- Innovation



Getting (more) structured data



Language:
English

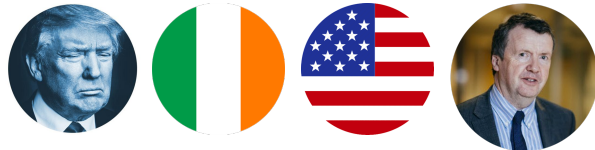
US president Donald Trump intention to cut the US corporate tax rate to 15 per cent may not be achievable with the border adjustment tax, which might have funded the reduction, now off the table. Irish tax experts remain convinced that US tax reform, whatever shape it takes, will not adversely damage Ireland's economic prospects, suggesting incentives for US multinationals to base operations here will continue.

"All in all, I wouldn't be unduly worried at this juncture," Alan McQuaid said.



Categorization:
Taxation
Economy
EU-US trade

Entities:



Quotes:

"All in all, I wouldn't be unduly worried at this juncture"

Geo:

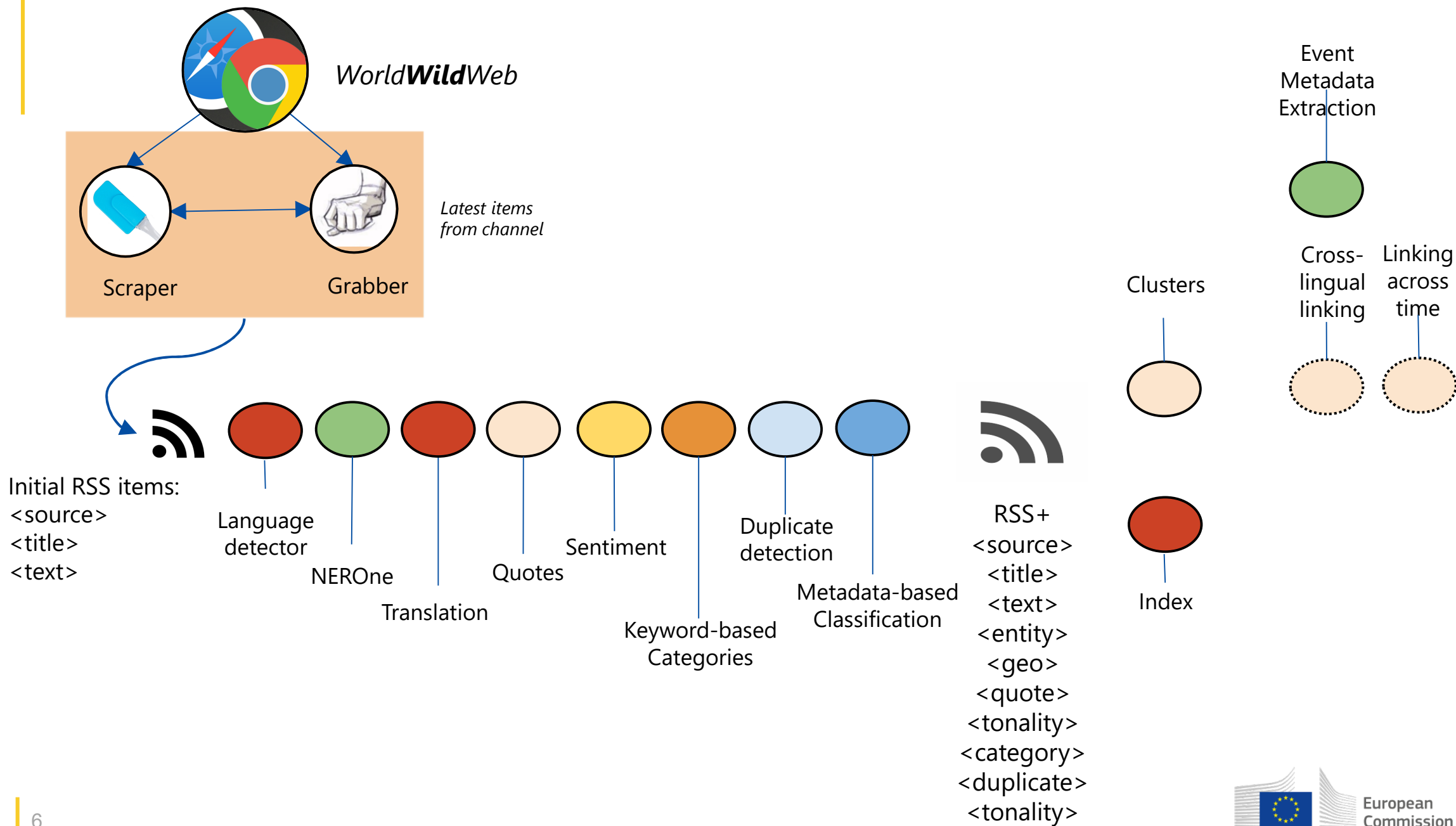


Sentiment:

+

POSITIVE





Source Editor

- Source Management tool in a multi-tenancy environment
- Flexibility for business-dependent source features
- Fine-grained control of various repositories, preventing divergence of source sets

Source Editor - flexible sets of features

021-rs

https://www.021.rs/

021

Channel Title

021-rs

Origin

opensource

Status

Active

URL

https://www.021.rs/

Description

021

Country

Serbia

Language

Serbian

Period

hourly

Frequency

4

Group Specific Attributes

Bundle/Group	Subject	Region	Category	Ranking	Type	Misinfo	
EMMBundle	General News	EU Candidate	National	3	webnews	-	
EMM	General News	EU Candidate	National	3	webnews	-	
WHOBundle	Medical Official	EU Candidate	International	2	socialmedia-facebook	No	
WHO	Medical Official	EU Candidate	International	2	socialmedia-facebook	No	

Showing 1 to 10 of 11 EOD entries

Source Editor – improved meta information at feed level

Feed Title / Language / Type / URL

021-rs	Serbian	rss	UTF-8
https://www.021.rs/			
021-rs-Najnovije	Serbian	rss	UTF-8
https://www.021.rs/Najnovije/3			
021-rs-more	Serbian	rss	UTF-8
https://www.021.rs/Novi%20Sad/4			
+ Add Feed			

Source Editor – describe changes when saving



The screenshot shows a 'Describe your changes' dialog box with a close button (X) in the top right corner. The dialog contains the following elements:

- Add a comment for this source**: A label above a large text input field.
- Comment**: The text input field, which is currently empty.
- Visibility**: A section with three radio button options:
 - ☒ Public
 - ☐ Restricted (business units in my bundle)
 - ☐ Private (only my business unit)
- Save**: A button with a floppy disk icon and the text 'Save' in the bottom right corner.

Category Editor

- Category: keyword-based definitions
- Tool to manage category definitions as well as extended functionality such as comparison, versioning, annotations of categories
- Improve collaboration between organizations

Category Editor - specialised networks

My Networks



Category Editor - access to your peers' definitions

The screenshot displays the 'Category Editor' interface, titled 'Shared Alerts / Filters in network Public'. The interface is divided into three main sections: 'Files', 'Groups', and a central configuration area for the selected category, 'WHO.AgricultureSubsidies'.

Files Section: A sidebar on the left contains a dropdown menu labeled 'Alerts' and a list of categories: 'Virus Infection', 'AgricultureSubsidies' (selected), 'EMMWorksttion', 'SafetyConcerns', 'Health', and 'Prevention'. Below this is a 'Filters' dropdown.

Groups Section: A text input field contains the value 'WHO'.

WHO.AgricultureSubsidies Configuration: The central area shows the configuration for the selected category. It includes a 'Copy' button and four tabs: 'Meta Information' (active), 'Labels', 'Words List', and 'Combinations'. The 'Meta Information' tab displays the following details:

- Version:** 0.1
- Display Name:** WHO.AgricultureSubsidies
- Description:**
- Languages:**
- Editor's Email:**
- Max Articles:** 100
- Max Article Age:** 0
- Class:**

A 'Close' button is located in the bottom right corner of the interface.

Category Editor - version history

Category Collaboration ALPHA 0.1.0

History Details

authorEmail: vlad.dragu@ext.ec.europa.eu

commitDate: 18 Jun 2022, 12:12:17

commitMessage: seconf word list

authorName: dragu vl

commitId: 9f2c8abb3a58e6b15f5513fa82760c3d10d6b4f3

objectType: 1

Close

[Revisions](#)[Recent Activity](#)

Saved by dragu vl
4 seconds ago

Saved by dragu vl
1 minutes ago

Saved by dragu vl
26 Apr 2022, 10:00:58

Saved by dragu vl
26 Apr 2022, 10:00:32

▼

Details
Compare With
Revert to this

▼

Category Editor - compare different versions

Compare alerts EMM.SafetyConcerns, current version with:

Public / EMM.SafetyConcerns / Saved by draguvi on 6 minutes ago

Meta InformationLabelsWords ListCombinations

Combinations (OR)

Combination (AND)

At least one of

asylum

freedom

At least one of

trouble

bother

disturb

Meta InformationLabelsWords ListCombinations

Combinations (OR)

Combination (AND)

At least one of

security

asylum

freedom

Apply Changes

Close

Category Editor - keyword expansion

Keyword expansion

Original Keywords [add all](#)
conflict* militaro military

Input Keywords
military

Languages
Input: en Output: en x fr x

de
en
fr
it
es
pt
ro
pl
bg
el
ru
sv
zh

Expand Close

Keyword expansion

Selected Keywords
esercito militare militairel militarist militarul

de add all	fr add all	it add all	ro add all
militärische	militaire	militare	militar
militärischen	militaires	militari	militară,
#militärische	militair	esercito	militaro
militär	militaire,	civile/militare	militară
unmilitärisch	militaire»	military	militară
militärischem	militaire...	armyesercito	militare
militärisch	militairel	militare#corso	militara
militärischer	militaires,	militaria	military
nichtmilitärisch	militaire	militara	militares
militärfort	militaireune	militar	militarist
militära	militaires»	militaru	militaru
nichtmilitärische	prémilitaire	militari,	militariste
unmilitärischen	military	#esercito	militaria
halbmilitärische	civil/militaire	militarizzato	militaristă
militärühr	militaires...	militare»	militaris
militärisches	militariser	militari	militarea
„militärische	armée	militarizzare	militanilor
„militärisch	militaireofficier	politico/militare	militarism
waffen/militär	militaro	militares	militarul
militärstreitkräfte	armées,,	guerra	, militari
militärkunde	militairement	smobilizare	comandanț
military	militarisé	militair	armată
militärtruppe	militaires	militarizzati	armatei
militäriker	militaireordre	militare,	militarii
militärfan	militairecroix	militarizzata	militarizat

Back Insert Close

Category editor - annotations

Meta Information Labels Words List Combinations

Health × Public × Pol +

Politics
Pollution

Category
level

Meta Information Labels Words List Combinations

Combinations (OR)

Combination (AND) Add Delete Annotate

Comment Add Comment +

Comment to be reviewd ×

Comment Base combination ×

Language en(English) × fr(Français) × Add Language

At least one of

trouble

bother

disturb

At least one of

asylum

freedom

Combination
level

Thank you

Ontology modelling for public health and crisis management: the plant health use case

2nd Workshop on horizon scanning in plant health (Paris, 11-13 January 2025)

Luigi SPAGNOLO

European Commission - Joint Research Centre

Context and needs: for whom?

- European Commission's [Health Emergency Preparedness and Response Authority \(HERA\)](#)
- **World Health Organization (WHO)**
[Hub for Pandemic and Epidemic Intelligence](#)
- European Commission's Secretariat General (SecGen), SANTE, ECHO, ECDC, **EFSA**

Advanced Technology for Health INtelligence and Action IT System (ATHINA)

- Future HERA's platform for intelligence gathering and threat assessment

[Epidemic Intelligence from Open Sources \(EIOS\)](#)

- Monitoring information from publicly available sources: all hazards, One Health

European Crisis Management Platform (ECMP)

- Coordinated by SecGen, bringing together **EU crisis management capacity in different sectors** (public health, nuclear safety, civil protection, etc.)

Context and needs: why?

Towards a **whole-of-government, cross-sectorial** approach:

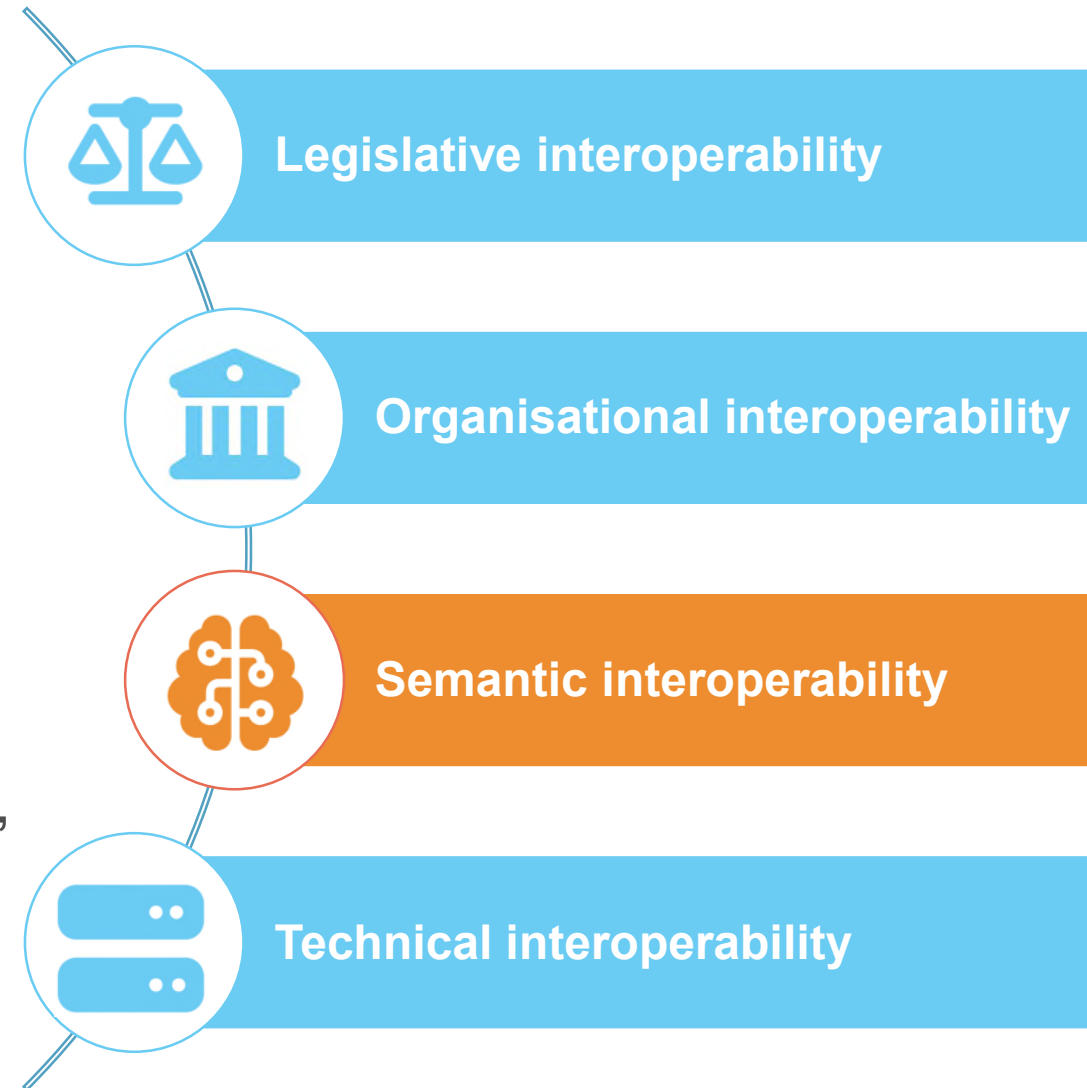
- Facilitate **harmonisation and mutual understanding** by disambiguating and linking concepts across different **communities of practice** using the system(s)
- Ensure **semantic interoperability across systems** facilitating the exchange and mapping of information
- Support the **integration of data sources, extraction of information and data analysis** (for cross-domain reporting and statistics, identification of patterns and trends, etc.).
- Achieve **better results when AI technologies are used** (e.g. ground LLM responses, improved recommender systems).

Benefits and opportunities for horizon scanning

- Complement **novel information** with **background knowledge** from **integrated sources/databases**
- Exploit a more comprehensive **classification and representation of knowledge** to **better define what you are looking for**
 - E.g. only news about *fungus diseases* that are affecting *crops* and show certain *symptoms*
 - Relationships between concepts can be used as suggestions to refine your search and/or prioritise (e.g. specific *symptoms* or *environmental factors* relevant for a given pest)
- Better interact with other communities (e.g. on one health surveillance)


Semantic interoperability

- The ability to **exchange data and information across systems** with **unambiguous, shared meaning**
- Information **accompanied by metadata explaining/clarifying its meaning** and ensuring **correct interpretation** and **data integration from multiple sources**
- Relies on **common reference data**: taxonomies, controlled vocabularies, thesauri, etc. and **reusable data structures/models**
- Supported by **semantic web technologies** (e.g. **ontologies**) and **linked data**



Ontologies: what they are


Informatics: **formal** representation of **knowledge** within a specific **domain**



Structured and **precise language** that follow exact rules of syntax and semantics, which can be interpreted and **processed by computers**, and deliver **unambiguous interpretations**



Collected **facts, concepts, and information**

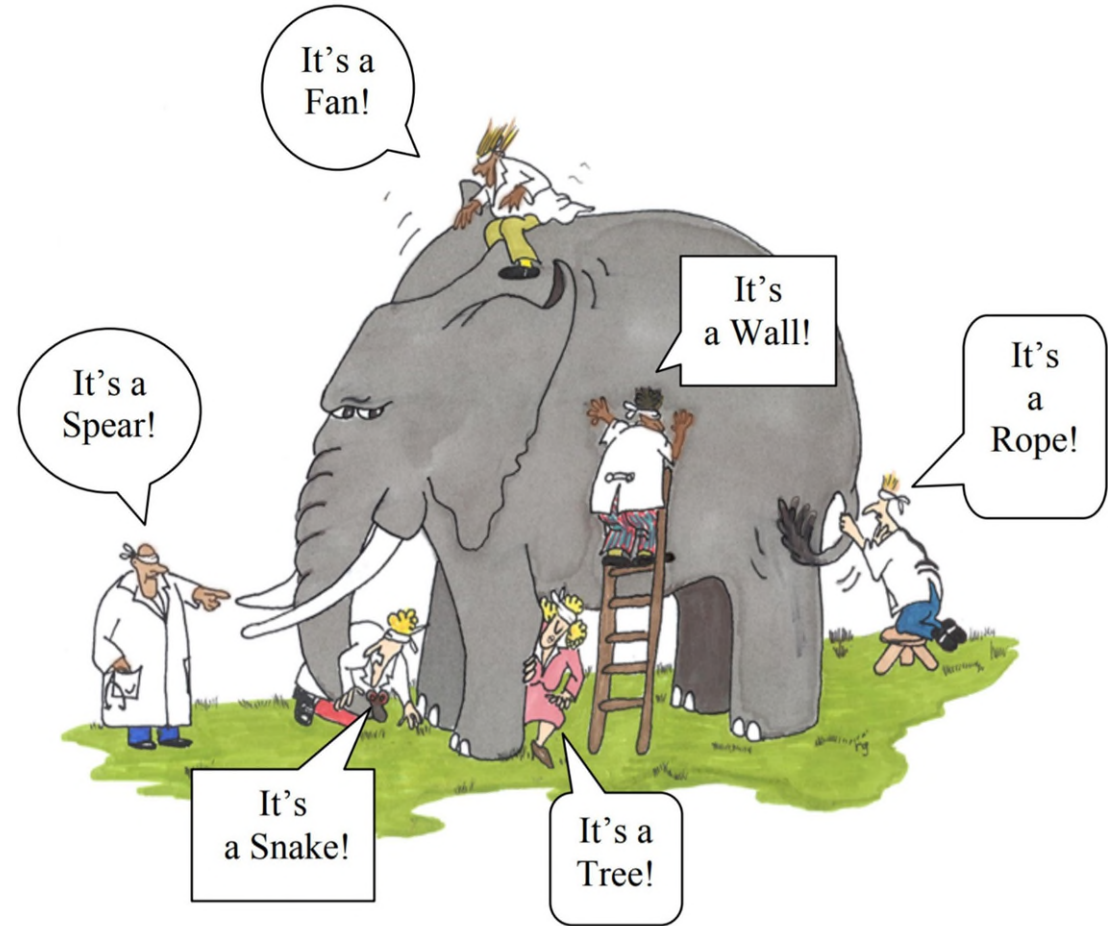


Scope and context of the ontology (can also encompass multiple domains)

Ontologies: a shared language for building common knowledge

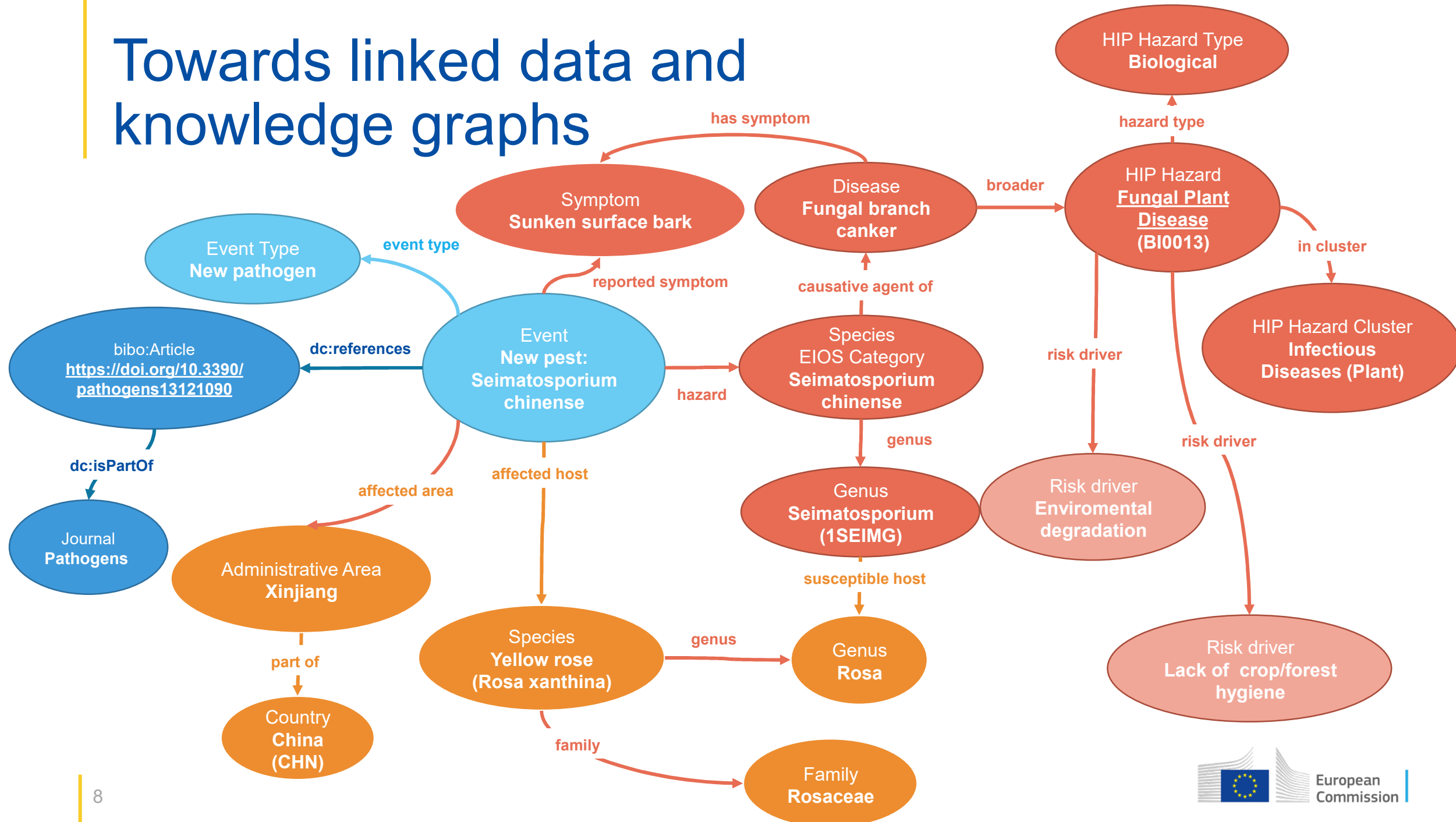


Understanding/linking perspectives



Breaking silos

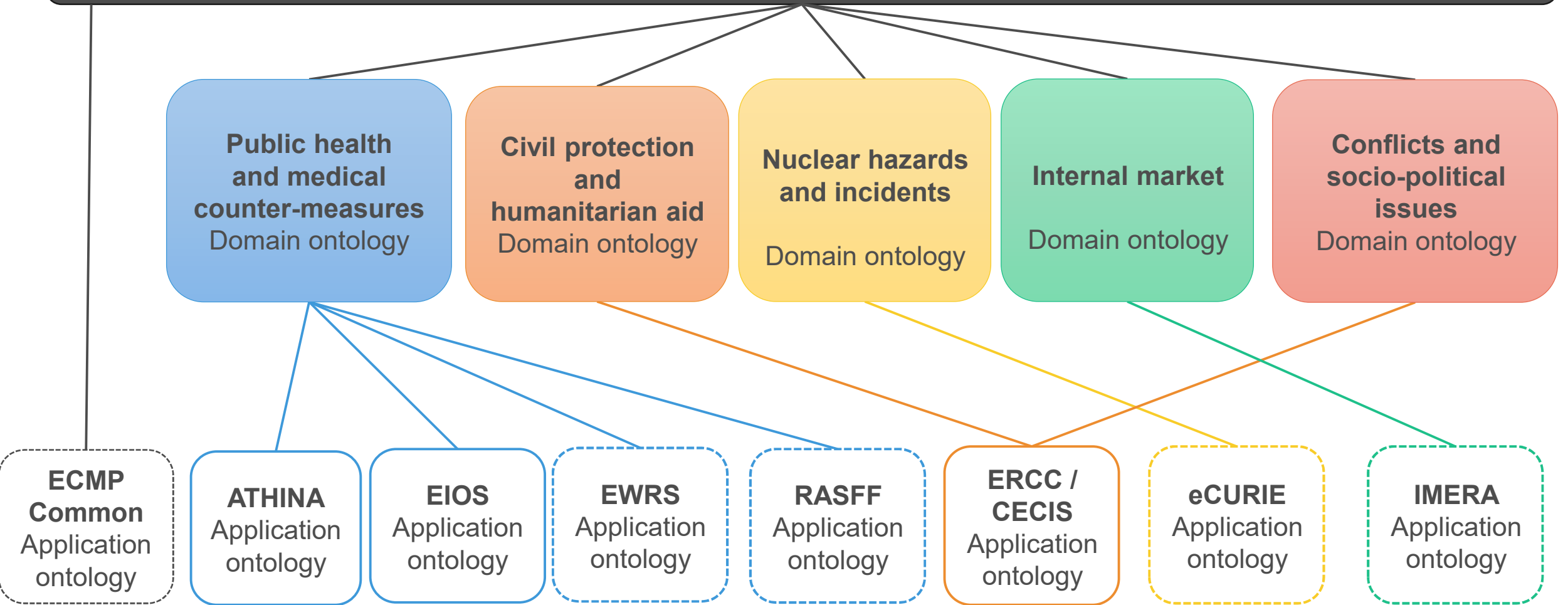
Towards linked data and knowledge graphs



Ongoing and envisaged work

- Define multiple ontologies and/or link to existing standards
 - Core concepts and relationships that are **common to all sectors**
 - **Specific policy sectors / domains** (initial priority: public health)
 - **Institution and application-specific concepts** (e.g. documents and other products)
- Support exchange of data across systems by exposing web APIs (Application Programming Interfaces) in standard formats (e.g. JSON-LD – JSON for linked data)
- Extract and integrate information in a knowledge graph based on the ontologies
- Investigate solutions for ontology curation and governance

Cross-sectorial crisis management ontology



Approach: conceptual modelling

- Identify relevant entities (core and domain-specific)
 - Review existing terminologies, documentation & legislation, Also with potential support of AI
 - Building on previous work
https://showvoc.op.europa.eu/#/datasets/JRC_DRMKC_Vocabulary/data
- Find a **ground common between different communities of practice**
 - Disambiguate between concepts that may have a different meaning in different domains (e.g. emergency, alert, incident, event, signal)
 - Link together different concepts towards a **shared (cross-domain) meaning**

Approach: formal representation

- Relevant entities represented by a hierarchy of **Web Ontology Language (OWL)** classes, linked by relevant OWL object properties to model relevant semantic relationships.
- Terminology to be used as metadata represented as:
 - instances of OWL classes / **Simple Knowledge Organisation System (SKOS)** concepts
 - Link to existing terminologies/standards: e.g. [ICD-11](#), [ICHI](#), [MeSH](#), [MedDRA](#), [UNDRR Hazard Information Profiles](#), [EPPO Global Database](#), [CABI databases](#)
 - **Mapping to EIOS categories/metadata**
- Each concept should come with one or more definitions (and their reference)

Challenges

- Different nuances in meaning across different communities (e.g. “threat” may be synonym of hazard, or indicate an incident with high risk/severity)
- Knowledge changing over time: e.g. **new pest species**
 - Need to feed from **horizon scanning / intelligence gathering**
- Entities playing different “roles”:
 - E.g. A virus can be both a pathogen (hazard) and a medical countermeasure (vaccines, anti-cancer therapies, etc.)
 - Critical infrastructures (e.g. Health and emergency systems, MCM supply chain) are both a capacity and an exposed assets to hazards/threats
- Different levels of granularity (e.g. hazards, events/incidents)

Scope: cross-sectorial ontology

- Hazard/threats and related features
- Exposure
- Vulnerability(lack of) coping capacity factors
- Hazardous events and related impacts
- Severity scales/measures for risk/impact assessment
- Risk scenarios (potential events and impacts)
- Risk drivers
- Measures, with a particular focus on preparedness and response
- Risk management actors, both in terms of functions/roles and of organisations and related mandates
- Risk management instruments, mechanisms and tools (including legislation)

Scope: public health sector

Public health threats:

- Diseases, pathogens and vectors
- Other hazards (environmental, technological, etc.) and hazards amplifiers (e.g. anti-microbial resistance)
- Event/signal types (e.g. reporting of cases/clusters, implementation/violation of measures, critical infrastructure failures / display chain disruptions, etc.)
- Other relevant features: hosts, transmission route, pandemic potential, etc.
- Health conditions that are affected by shortages + comorbidities
- Symptoms and outcomes
- Epidemiological impacts (incidence, excess mortality, etc.)

Medical countermeasures:

- Medicinal products, medical equipment, PPE + raw materials/ingredients + suppliers
- Link to addressed diseases

The plant health perspective

- **Susceptible hosts**, by **scientific taxa** and/or **function** (e.g. crop vs. forestry)
- Specific **symptoms**
- Specific **risk drivers**, including other **hazards** (e.g. conflicts)
- Specific **measures / interventions** and **phytopharmaceuticals**
- **One health** and **food security/safety aspects**

Thank you! Questions?

Contact: Luigi.Spagnolo@ec.europa.eu

Exploración de horizontes ante amenazas fitosanitarias

Horizon scanning new threats to plant health for plant pests

Detección temprana de posibles amenazas y oportunidades realizando un examen de las distintas fuentes de información de plagas de manera sistemática.

Early detection of possible threats and opportunities by systematically examining the different sources of pest information.

Ing. Agr. Esp. Sandra Patricia Savarese

 **senasa**



**Ministerio
de Economía**
República Argentina

**Secretaría de Agricultura,
Ganadería y Pesca**



International trade data analysis

Francesca Torti

European Commission

Joint Research Center

Text and Data Mining Unit

Data Science for Economic Competitiveness and Trade

Trade data: TAXUD Surveillance

- EU Single Customs declarations: both EU imports and EU exports
- Numerical fields: value, weight, units
- Product code precision: 10 (TARIC-import) or 8 (CN-export) digits
- Real time data
- Drawback: possible correction of errors

Trade data: ESTAT COMEXT

- Official trade statistics: both EU imports and EU exports
- Numerical fields: value, weight, units
- Aggregates of Customs declarations at Product-Origin-Destination-Month level.
- Product code precision: 8 (CN)
- Delay of about 3 months
- Drawback: censorship of small aggregates for privacy reasons

Trade data: UN COMTRADE

- Extra EU trade
- Numerical fields: value, weight, units
- Aggregates of Customs declarations at Product-Origin-Destination-Month level.
- Product code precision: 6 (HS)
- Delay of about 1 month

Systematic analysis we conduct

- Monthly EU price import estimate for each product-origin (CN, COMEXT)
- Yearly EU price import estimate for each product-origin (CN, COMEXT)
- 4-year MS price import estimate for each product-origin-destination (CN, COMEXT)
- Cluster of prices for each product (CN, COMEXT)
- Systematic under-over pricing
- Detection of concomitant structural breaks (HS, Surveillance)

Exploración de horizontes ante amenazas fitosanitarias - Argentina

Horizon scanning new threats to plant health in the for plant pests - Argentina

- 1 **Organización Nacional/National Organization**
- 2 **Intercambio y Riesgo de Dispersión de plagas/Exchange and Risk of Pest Dispersal**
- 3 **Priorización de amenazas/Threat prioritization**
- 4 **Fuentes de información/Information sources**
- 5 **Metodología de previsión/Forecast methodology**
- 6 **Ponderación de plagas por perfil biológico/
Pest weighting by biological profile**
- 7 **Gestión de la información/Information management**



**Organización
Nacional**

**National
Organization**



Organización Nacional de Protección Vegetal en Argentina

Dirección Nacional de Protección Vegetal

National Directorate of Plant Protection

IPPC Community / Países / ▼

Argentina 



Convención Internacional
de Protección
Fitosanitaria

IPPC Official Contact Point, Bureau



Mr. Diego Quiroga

Director Nacional de Protección Vegetal - SENASA

Servicio Nacional de Sanidad y Calidad Agroalimentaria,
SENASA

Av. Paseo Colon 367 6º (1063), Ciudad Autonoma de Buenos

Aires, Argentina

Teléfono: (+5411) 4121-5176 / 5495

Fax: (+5411) 4121-5495

Correo electrónico: dquiroga@senasa.gov.ar

Otra dirección de correo electrónico: dnpv@senasa.gov.ar

Idiomas preferidos: Spanish

Sitio web: <http://www.senasa.gov.ar/>

Fecha de registro de contacto: 06 Abr 2008

SERVICIO NACIONAL DE
SANIDAD Y CALIDAD
AGROALIMENTARIA

Ing. Agr. Pablo Luis CORTESE

Jurisdicción: Ministerio de Economía

Reporta a: Secretaría de Agricultura, Ganadería
y Pesca

Sigla: SENASA

Organismo Descentralizado

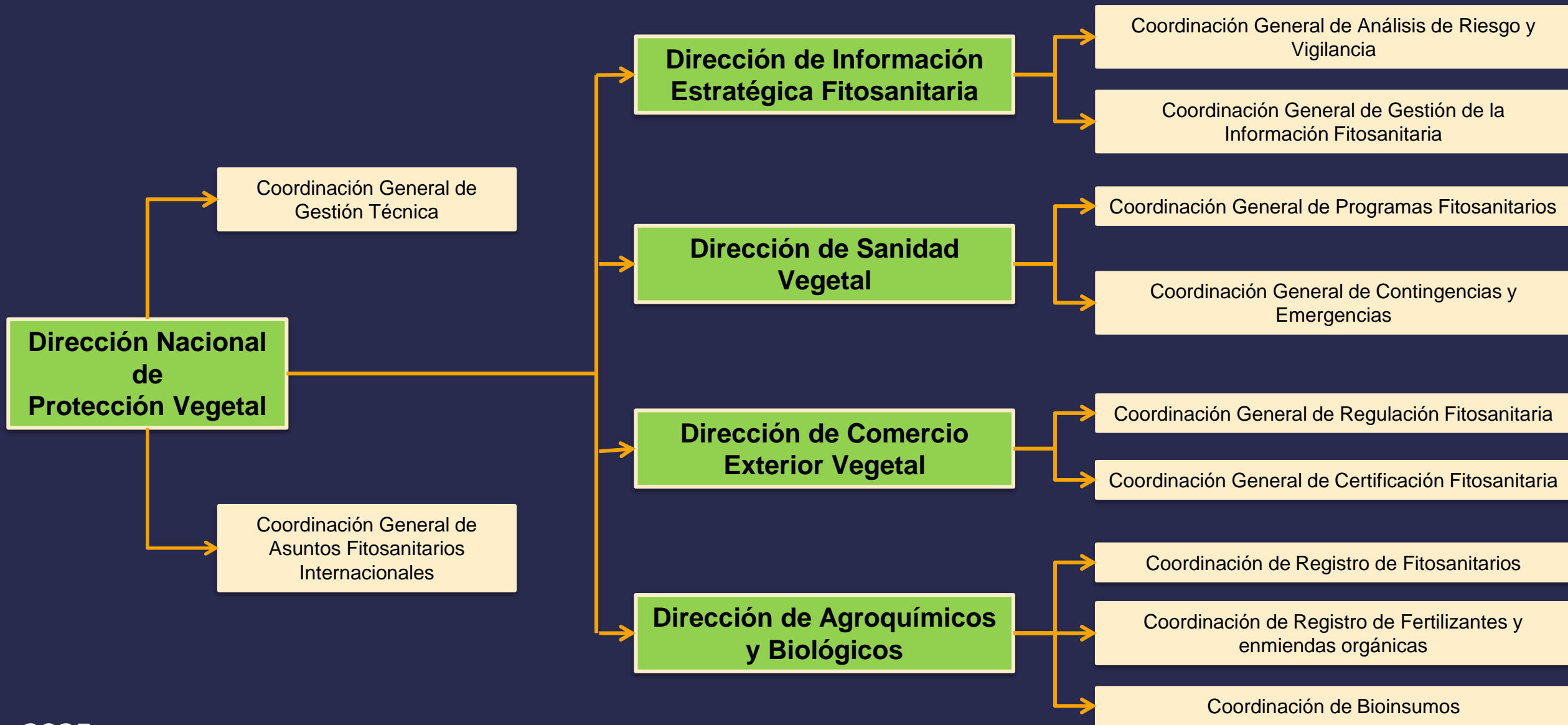


Es el organismo *sanitario* rector de la
República Argentina.

It is the governing health organization of the
Argentine Republic.

Estructura Organizativa Dirección Nacional de Protección Vegetal

Organizational Structure National Directorate of Plant Protection



1

Organización
Nacional

National
Organization

Misión de la DNPV/ DNPV Mission

Protecting the national phytosanitary heritage, contributing to market access, food security and sustainable development, meeting the needs of the global consumer.

VISIÓN/ VISION

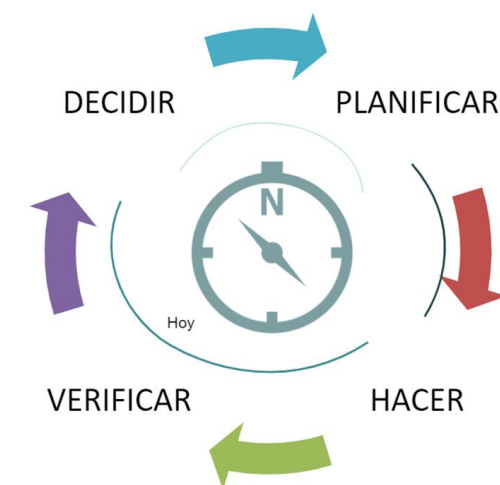
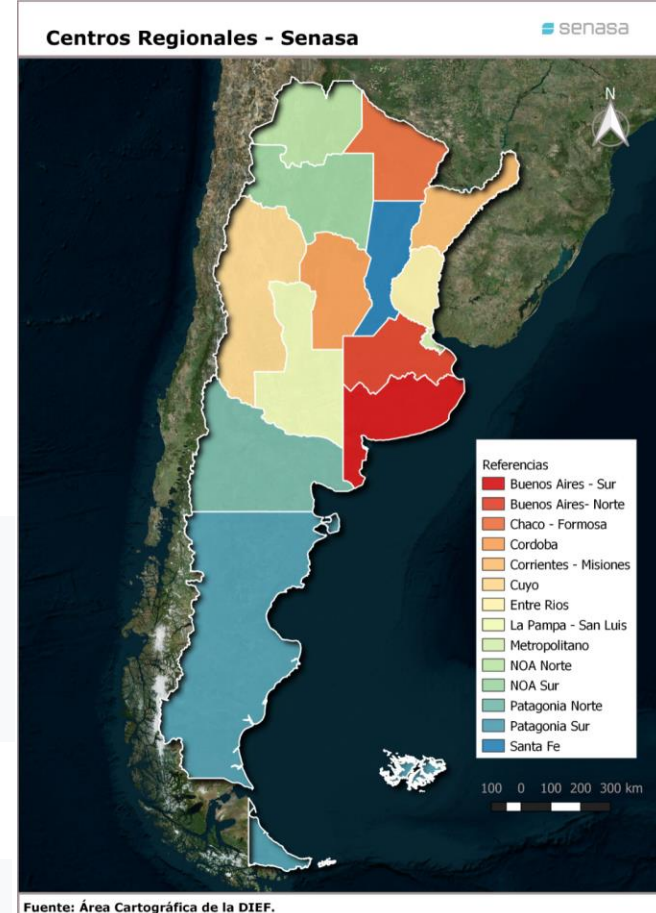
Being the organization that leads and coordinates innovation processes and collective work networks, prepared for changes in trade, regulatory framework, climate change and socioeconomic changes.

Modelo de Gestión Descentralizado/ Decentralized Management Model

National Directorate of Plant Protection (DNPV):

It dictates rules and standardizes procedures throughout the territory, respecting the particularities of each region or province. Establishes technical guidelines in relation to aspects of plant protection.

Regional Centers: They are the executing arm of the regulations developed in central Senasa.





**Intercambio y Riesgo de
Dispersión de plagas**

**Exchanging and Risking of
Pest Dispersal**

2

Intercambio y
Riesgo de
Dispersión
de plagas



Exchange and
Risk of Pest
Dispersal

EL PROBLEMA/THE PROBLEM

The National and International exchange and trade of products of plant origin implies a RISK of dispersion of PESTS, which can affect food security, the environment and regional economies.

¿Como identificar y priorizar las plagas que afectan a los vegetales a nivel Nacional e Internacional?

How to identify and prioritize pests that affect vegetables at the National and International level?

¿Como sistematizar la información disponible, analizar y tomar decisiones?

How to systematize the available information, analyze and make decisions?

Objetivos

Goals

It is essential to establish control mechanisms that allow trade to be streamlined, safeguarding the plant health of the producing regions and/or countries involved.



- Controles a la importación → Requirements for the entry of plant materials
Import controls
- Vigilancia en territorio → Early detection of agricultural pests
Surveillance in territory
- Need to conserve biodiversity (Prevent introduction, control or eradicate exotic species that threaten ecosystems, habitats or species).

PREVENTION

PREVENCIÓN



PREVENIR RIESGOS#GESTIONAR.PLAGAS

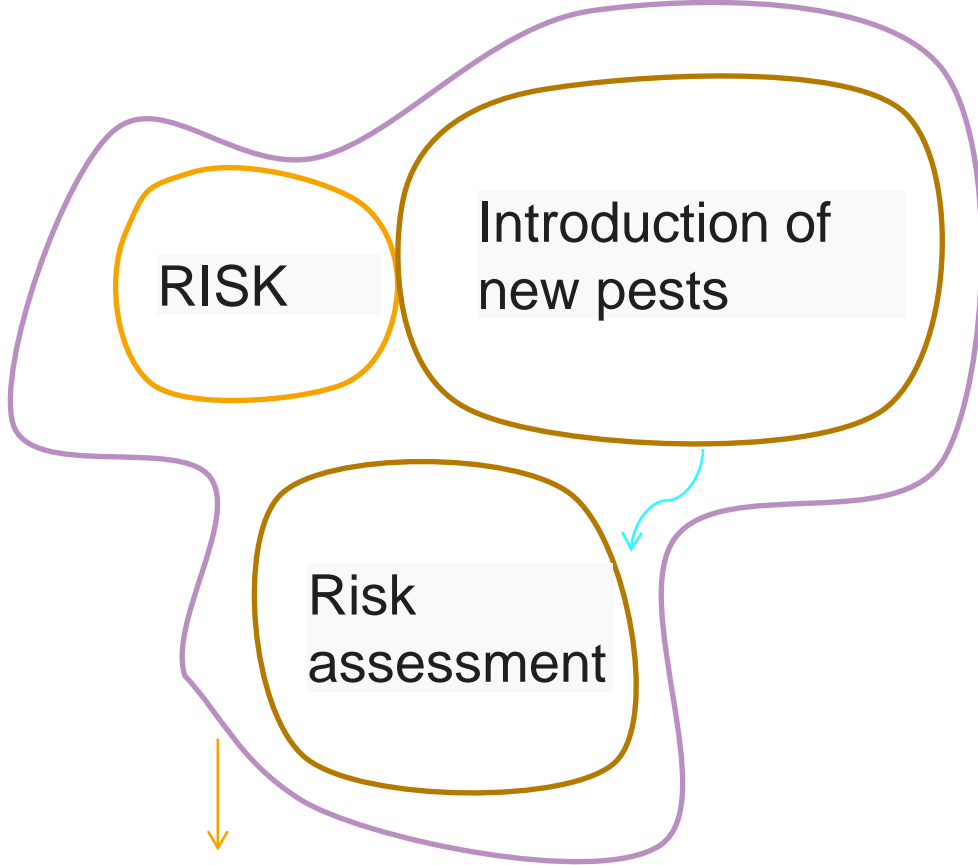
Comercio Trade



Movement of products, turist



Threat's prioritization



Determination of phytosanitary measures

DTV-e

National

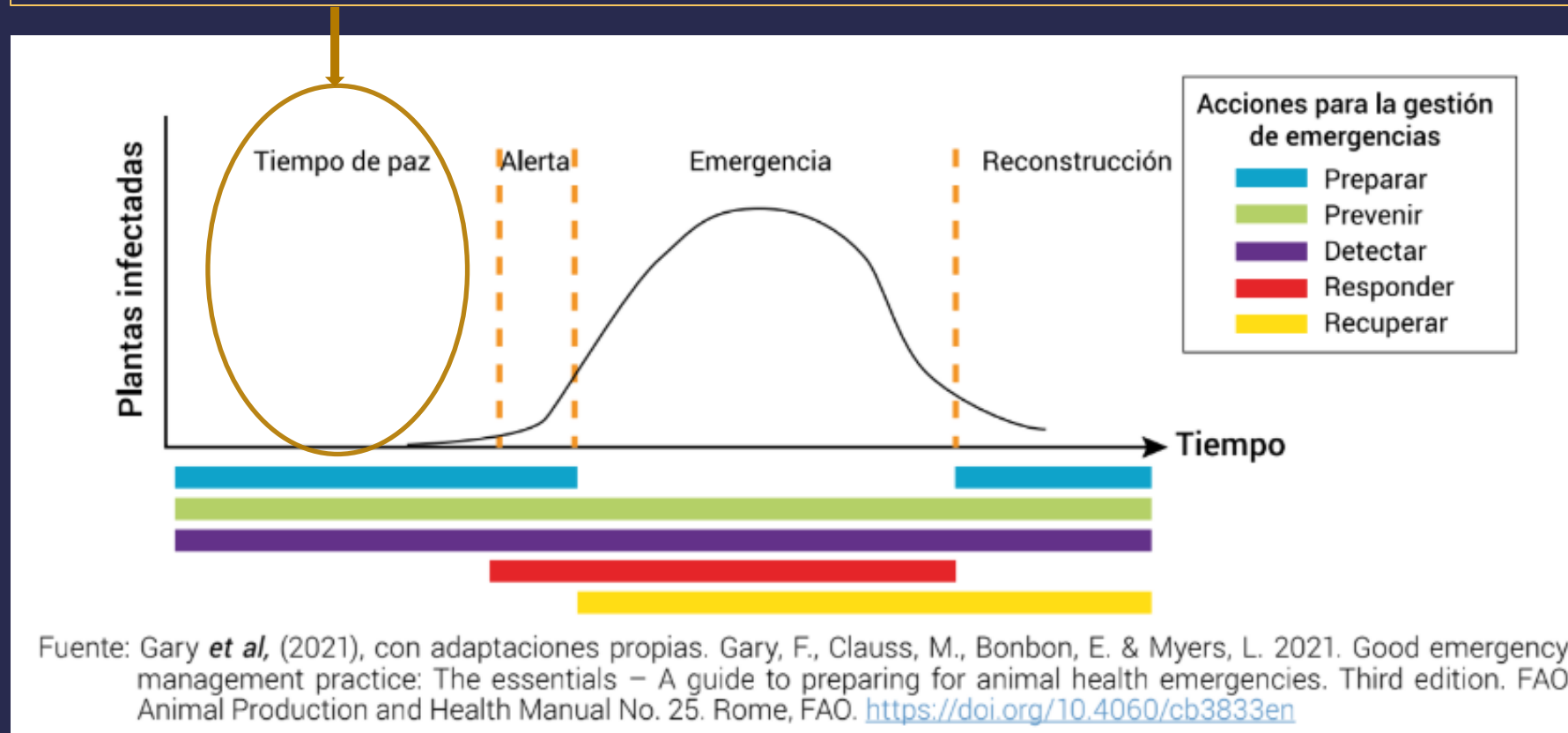
Phytosanitary certification

International



¿Estamos preparados para la gestión de una emergencia? Are we prepared for an emergency pregnancy?

Oportunidad de articulación para el fortalecimiento y la complementación de esfuerzos en la mitigación de riesgos / Articulation opportunity to strengthen and complement efforts in risk mitigation





**Priorización de
amenazas**

**Threat's
prioritization**

Priorización de amenazas

Threat's prioritization



<https://www.sinavimo.gob.ar/>

Plagas cuarentenarias
Quarantine pests

Plagas exóticas bajo control oficial
Exotic pests under official control

691

Plagas no cuarentenarias
reglamentadas
Regulated non-quarantine pests

Plagas que afectan a material de propagación
sometidas a control oficial
Pests affecting propagation material subject to
official control

32

Plagas ausentes
Absent pests

Plagas que no se encuentran bajo control
oficial
Pests that are not under official control

1611

Plagas emergentes
Emerging pests

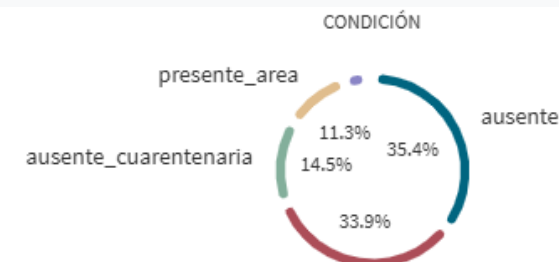
Plagas no reglamentadas que se han detectado y
que plantean nuevas amenazas (en nuevas zonas
de invasión, en nuevos hospedadores, etc.) o plagas
reglamentadas que requieran acciones más activas
por el peligro de ingreso.

Unregulated pests that have been detected and pose new
threats (found in new invasion zones, in new hosts, etc.) or
regulated pests that require more active actions due to the
danger of entry.

Fuentes de Información de plagas
Pest Information Sources

Total de plagas: 4648

Fuente: SINAVIMO



Fuentes de Información de plagas

Fuentes bibliográficas

Publicaciones científicas
Resumen de congresos
Libros
Noticias
Gacetillas

Red de expertos

888 investigadores

Encuestas

Cuestionarios específicos por cultivos
realizados a investigadores y
productores

Laboratorio de referencia y red de SENASA
Reuniones por cultivos con expertos y
productores

Reuniones semiestructuradas

85 NNC (Notificaciones de no cumplimiento
realizada a terceros países) Año 2024

59 NNC (Notificaciones de no cumplimiento
realizadas a Argentina) Año 2024

Intercepciones/Notificaciones





**Metodologías de
Previsión**

**Forecast's
Methodologies**

Metodologías de Previsión/ Forecast Methodologies

Detección temprana de posibles amenazas fitosanitarias
/ Early detection of possible phytosanitary threats

Revisión exhaustiva, sistemática y continua/
exhaustive, systematic and continuous review

Priorización de Plagas/ Pest's Prioritization:
Criterios

- Importancia del cultivo en cuanto a área, producción y valor económico/
products with risk for different hosts.
- Cultivos relacionados a mercados/ Crops related to markets
- Plagas presentes en países vecinos/ Pests present in neighboring countries
- Productos vegetales de importación con riesgo para diferentes hospedantes/
Imported plant products with risk for different hosts
- Atributos biológicos de las plagas/ Biological attributes of pests
- Supervivencia (facilidad de erradicación)/ Survival (ease of eradication)
- Capacidad reproductiva/ reproductive capacity
- Dispersabilidad/ Dispersibility
- Eventos de Resistencia/ Resistance Events
- Dificultad de detección temprana/ Difficulty of early detection

Plagas cuarentenarias/
Quarantine pests



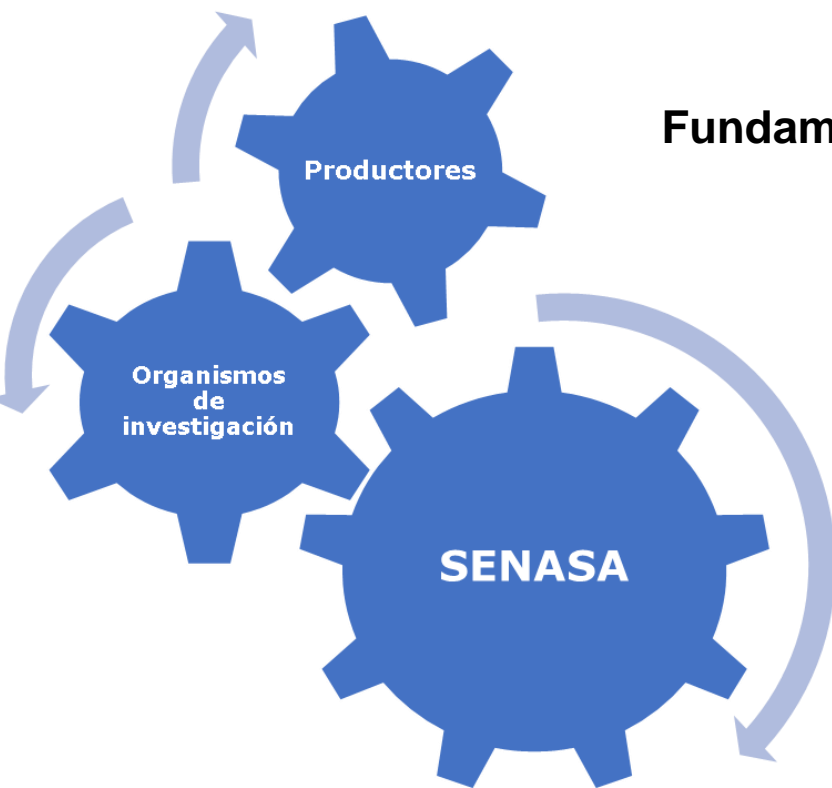
Metodologías de Previsión/ Forecast's Methodologies

Detección temprana de posibles amenazas fitosanitarias/ Early detection of possible phytosanitary threats

A. Priorización de plagas/ Pest's prioritization: Identificar futuras necesidades de análisis de riesgos/ Identify future risk analysis needs

Riesgos emergentes Emerging risks: Fuentes de información/ Information's sources

Intercambio de Información sobre riesgos emergentes (con partes interesadas, productores, comunidad científica)/
Exchange of information on emerging risks (with interested parties, producers, scientific community)



Fundamental → Establecer confianza entre las partes/
Establish trust between the parties

Mejora la comunicación y el dialogo/
Improves communication and dialogue

Se utilizan cuestionarios para explorar sobre un cultivo o temática en particular/
Questionnaires are used to explore a particular crop or topic.

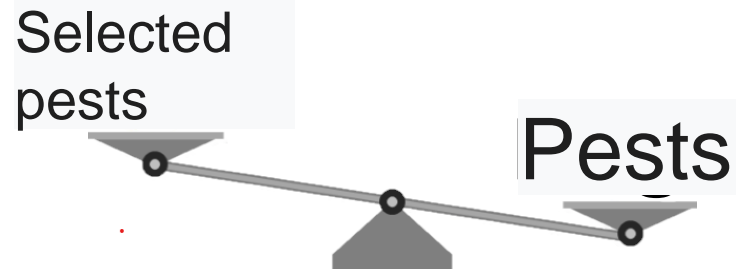


Metodologías de Previsión/Forecast's Methodologies



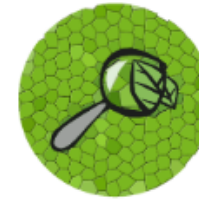
B. Selección de artículos clave/ Selection of key articles:
(avance de plagas en distintos territorios, opinión de expertos en previsión, etc.)/
advance of pests in different territories, opinion of forecasting experts, etc.)

Proceso de validación de la información/
Information validation process

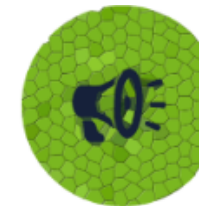


Recopila, analiza y sistematiza toda la información disponible sobre las **plagas que afectan a los vegetales en la Argentina.**/
Collects, analyzes and systematizes all available information on pests that affect vegetables in Argentina.

Resolución Senasa N° 218/2002 Aprueba el diseño y operación del Sistema Nacional Argentino de Vigilancia y Monitoreo de Plagas/ Approves the design and operation of the Argentine National Pest Surveillance and Monitoring System.

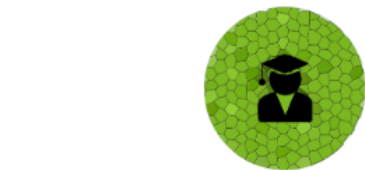


↑
SINAVIMO



Comunicación oficial de plagas/
Official pest communication

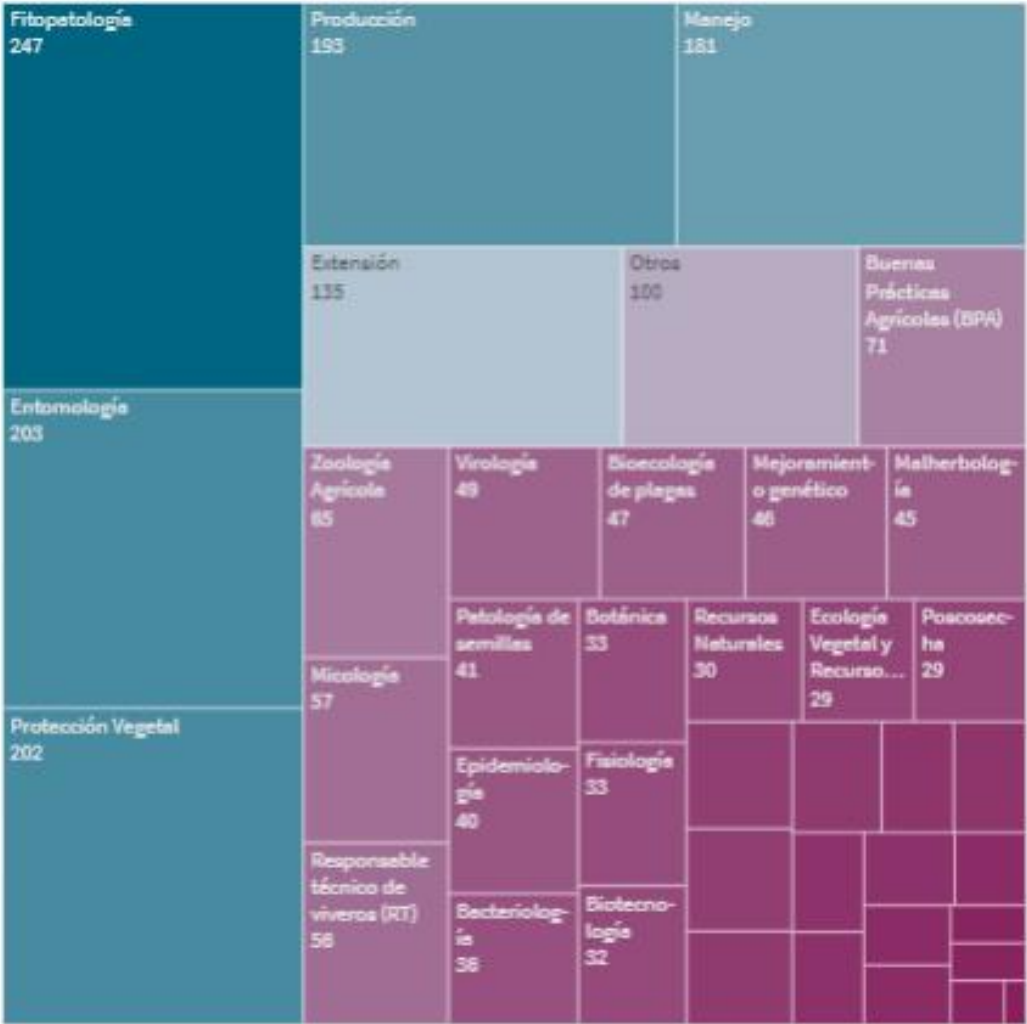
Senasa Resolution No. 778/2004 Establishes that any research organization or other institution in the private or official sphere that develops activities in Argentine territory and under whose responsibility tasks are carried out in the phytosanitary area or any other related area, must notify SENASA of the detection. or characterization of plant pests that until now have been considered not present in the country, before disseminating the discovery by any means.



Metodologías de Previsión/ Forecast's Methodologies

C. Consulta directa a expertos, a través de cuestionarios y reuniones en una temática específica/
Direct consultation with experts, through questionnaires and meetings on a specific topic

EXPERTOS x ESPECIALIDAD



Red de expertos/
Expert network

888

- ✓ Identifican problemas emergentes/
They identify emerging problems
- ✓ Colaboran con el sistema Nacional de Protección Fitosanitaria/
They collaborate with the National Plant Protection System
- ✓ Responden encuestas/ They answer surveys.
- ✓ Participan de reuniones por temas específicos/They participate in meetings owing to specific topics.
- ✓ Colaboran con los protocolos para el manejo de plagas/
They collaborate with pest management protocols

Fuente: tableros dinámicos SENASA

Metodologías de Previsión/Forecast's Methodologies

C. Exploración manual/ Manual scan
(sobre campos de investigación científica)/ (on scientific research fields)

- ✓ Búsquedas bibliográficas (Scopus: base de datos bibliográfica que permite el acceso a información científica que contiene artículos académicos, revistas especializadas, libros y conferencias en todo el mundo)/ Bibliographic searches (Scopus: bibliographic database that allows access to scientific information containing academic articles, specialized journals, books and conferences around the world)
- ✓ Reportes de la EPPO (Organización europea y mediterránea de Protección Fitosanitaria)
- ✓ Reportes del Cosave (Comité de Sanidad Vegetal/ Plant Health Committee)
- ✓ Nappo North American Plant Protection Organization
- ✓ Cabi (Centre for Agricultural Bioscience Internacional)
- ✓ Pestlens (sistema web de alerta temprana fitosanitaria de APHIS-PPQ)
- ✓ Consultas a ONPFs/Consultations to NPPOs

Scopus®





5

**Ponderación de plagas en
función del perfil biológico**

**Pest weighting based on
biological profile**

Pest weighting based on biological profile

PAUTAS PARA LA PRIORIZACIÓN DE UN SISTEMA DE VIGILANCIA FITOSANITARIA: CONSTRUCCIÓN DE UN ÍNDICE DE POTENCIAL EPIDEMIOLÓGICO DE FITOPATÓGENOS CUARENTENARIOS

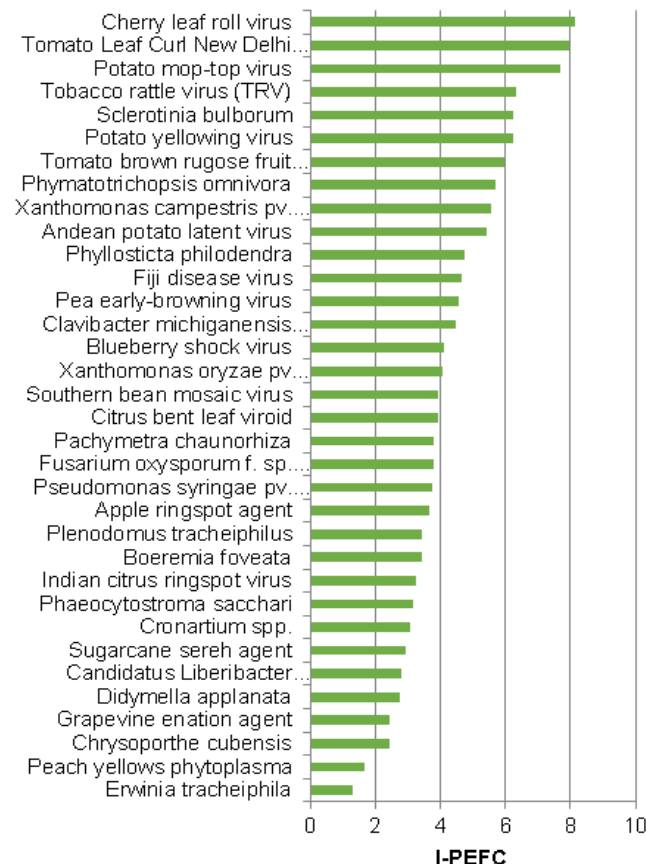


Figura: Muestra del I-PEFC calculado para fitopatógenos cuarentenarios ausentes en Argentina



**Gestión de la
Información**

**Information
Management**

6

Gestión de la
Información



Certificación de Importaciones / Exportaciones Import/Export Certification

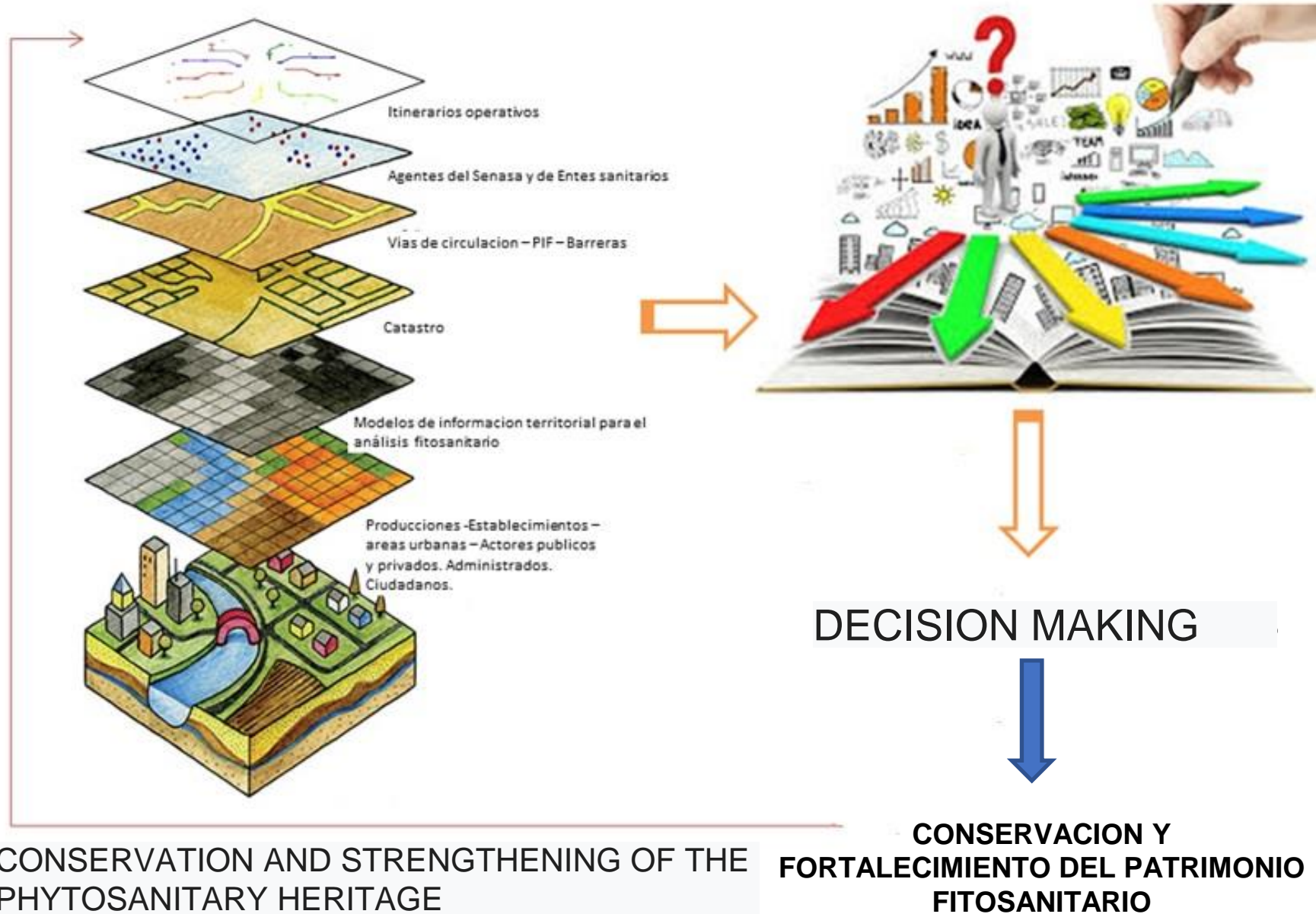
Importaciones/Imports: 8,626,402,71 Tn

Exportaciones/Exports: 79,424,149,04 Tn

88.150.552,04 Tn

Año:2024

Gestión de la Información/ Information Management



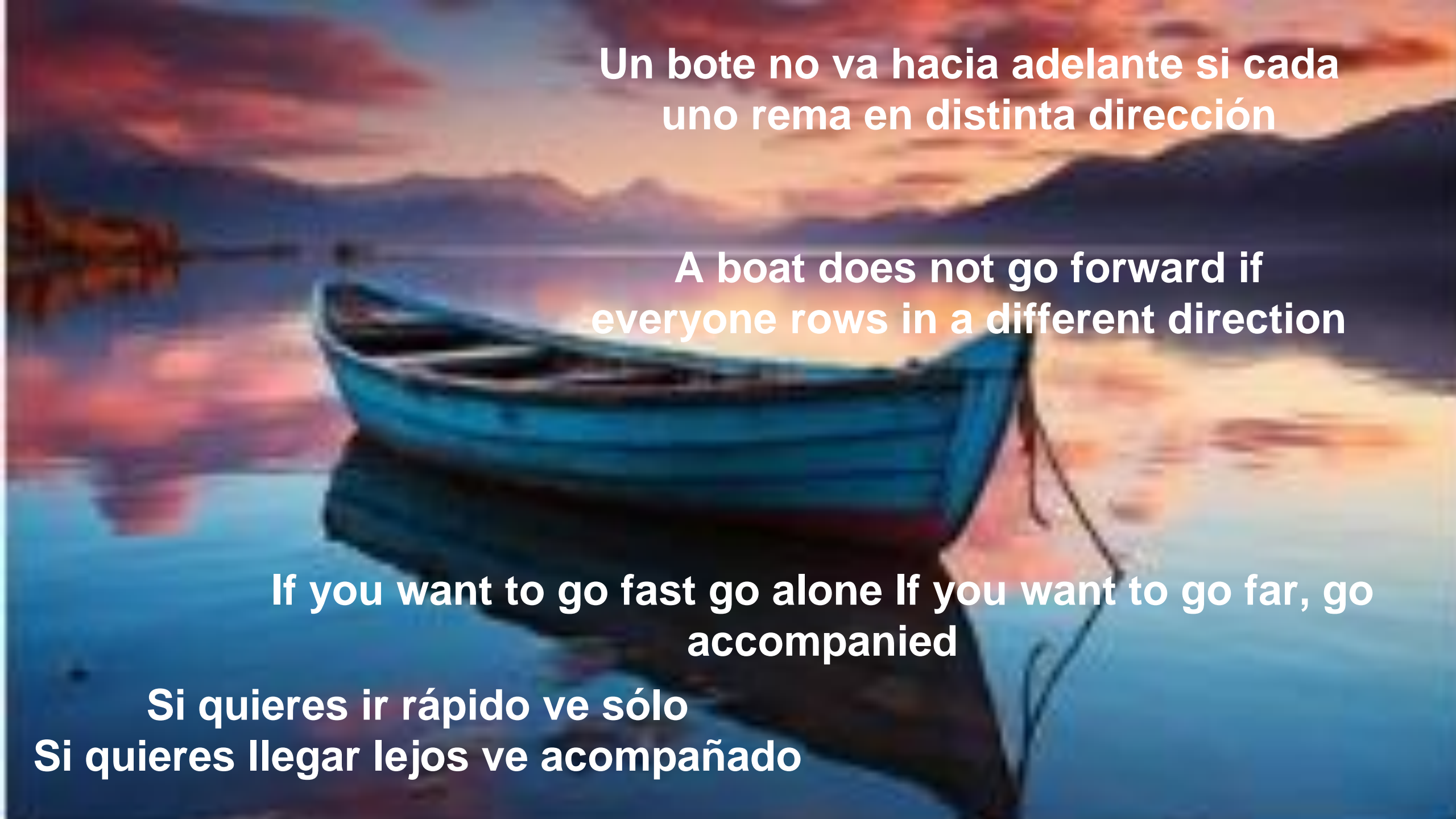
Sinavimo: contains validated information on the phytosanitary condition of pests for the country's main crops.

Information layers: the analysis and standardization of geographic information is carried out and data interoperability is managed.

Equipo de la Dirección Nacional de Protección Vegetal



Team of the National Directorate of Plant Protection

A blue wooden boat is moored on a calm lake. The sky is a mix of orange, pink, and purple, suggesting a sunset or sunrise. The boat's reflection is visible in the still water.

**Un bote no va hacia adelante si cada
uno rema en distinta dirección**

**A boat does not go forward if
everyone rows in a different direction**

**If you want to go fast go alone If you want to go far, go
accompanied**

**Si quieres ir rápido ve sólo
Si quieres llegar lejos ve acompañado**

Collaborating is feeling that by doing your bit, you are contributing to building the world.



Colaborar es sentir, que al poner tu granito de arena, estas contribuyendo a construir el mundo.

Ing. Agr. Sandra Patricia Savarese

Senasa

Dirección Nacional de Protección Vegetal (DNPV)

TE: 0054-11-4121-5091

ssavares@senasa.gob.ar



**Ministerio
de Economía**
República Argentina

**Secretaría de Agricultura,
Ganadería y Pesca**