The European and Mediterranean Plant Protection Organisation

An update on EPPO activities

Event: TC of RPPOs, Lima

Date: 2018-10-30

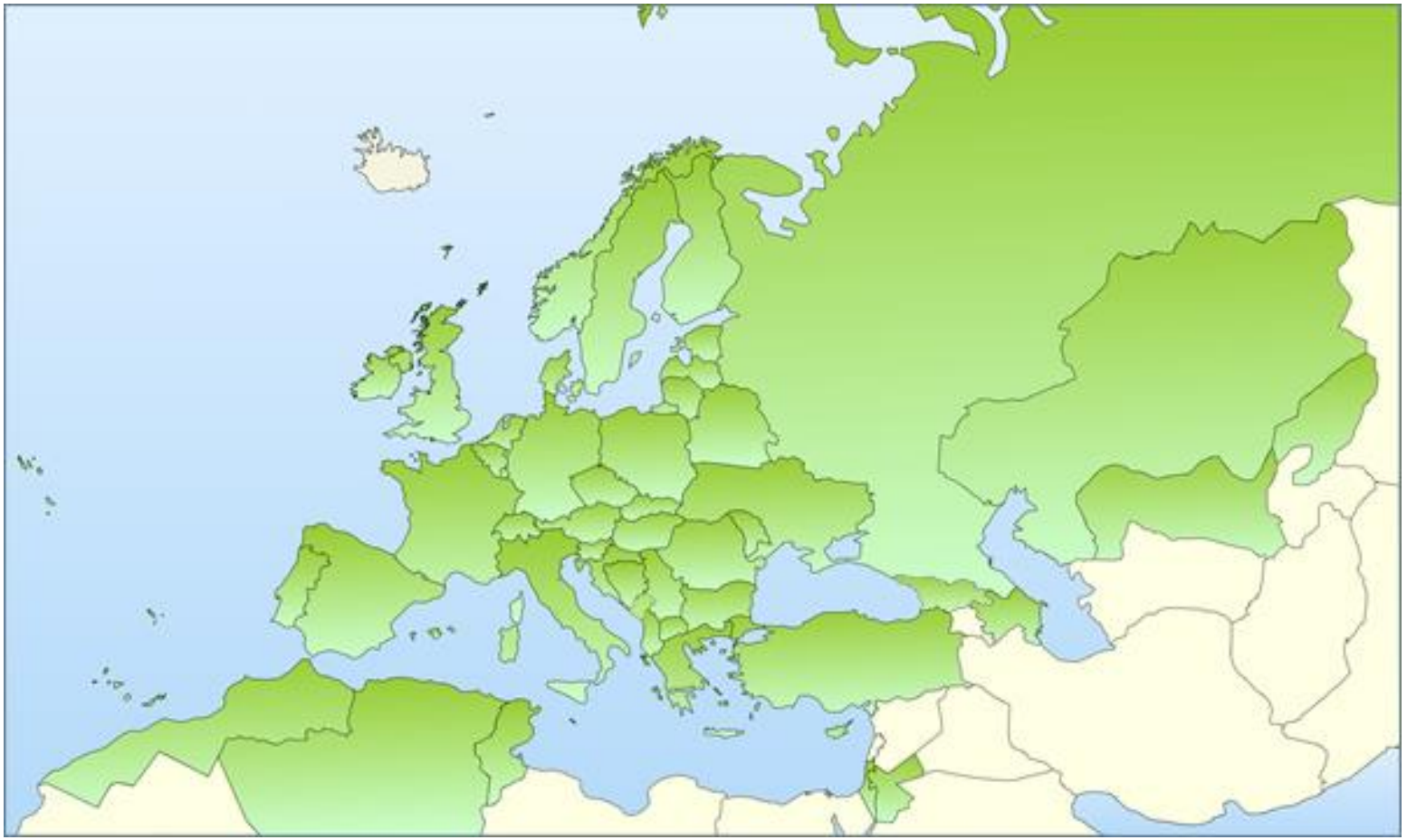
Martin Ward (Director General) - hq@eppo.int

1951 EPPO Convention – 15 countries

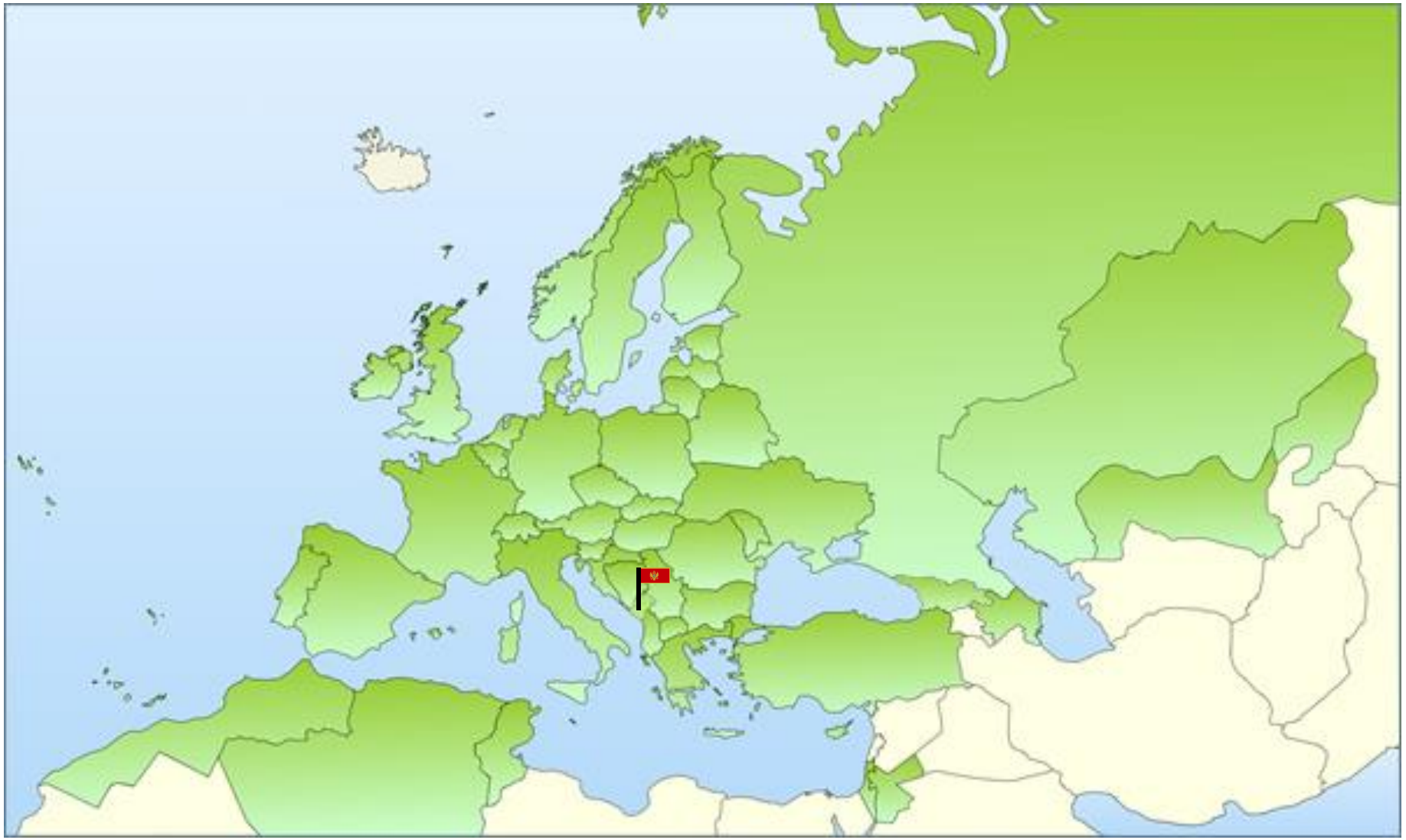
Now 52 member countries

Two Permanent Observers (EEC and EC)

One of 10 RPPOs recognised under IPPC



2018 - welcome to Montenegro!



Remit

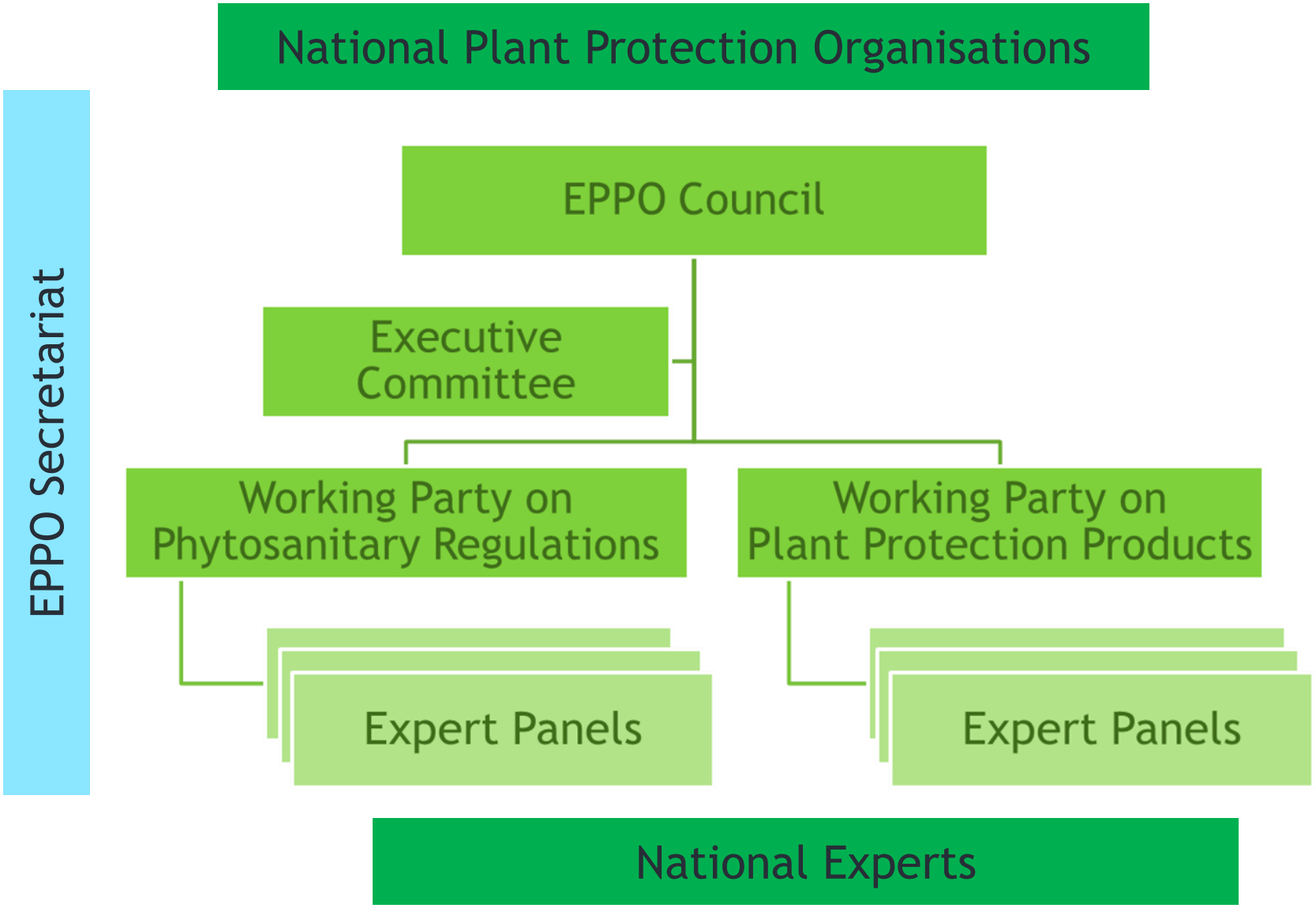
- Plant quarantine
- Plant certification and Regulated Non Quarantine Pests
- Invasive alien plants
- Biological control agents
- Efficacy of plant protection products

by:

- Drafting and adopting regional technical standards
- Input to development of international standards
- Sharing information and expertise through networks

EPPO hosts Euphresco and the EU Minor Uses Co-ordination Facility which have their own funding and governance

Organisation



Active Panels

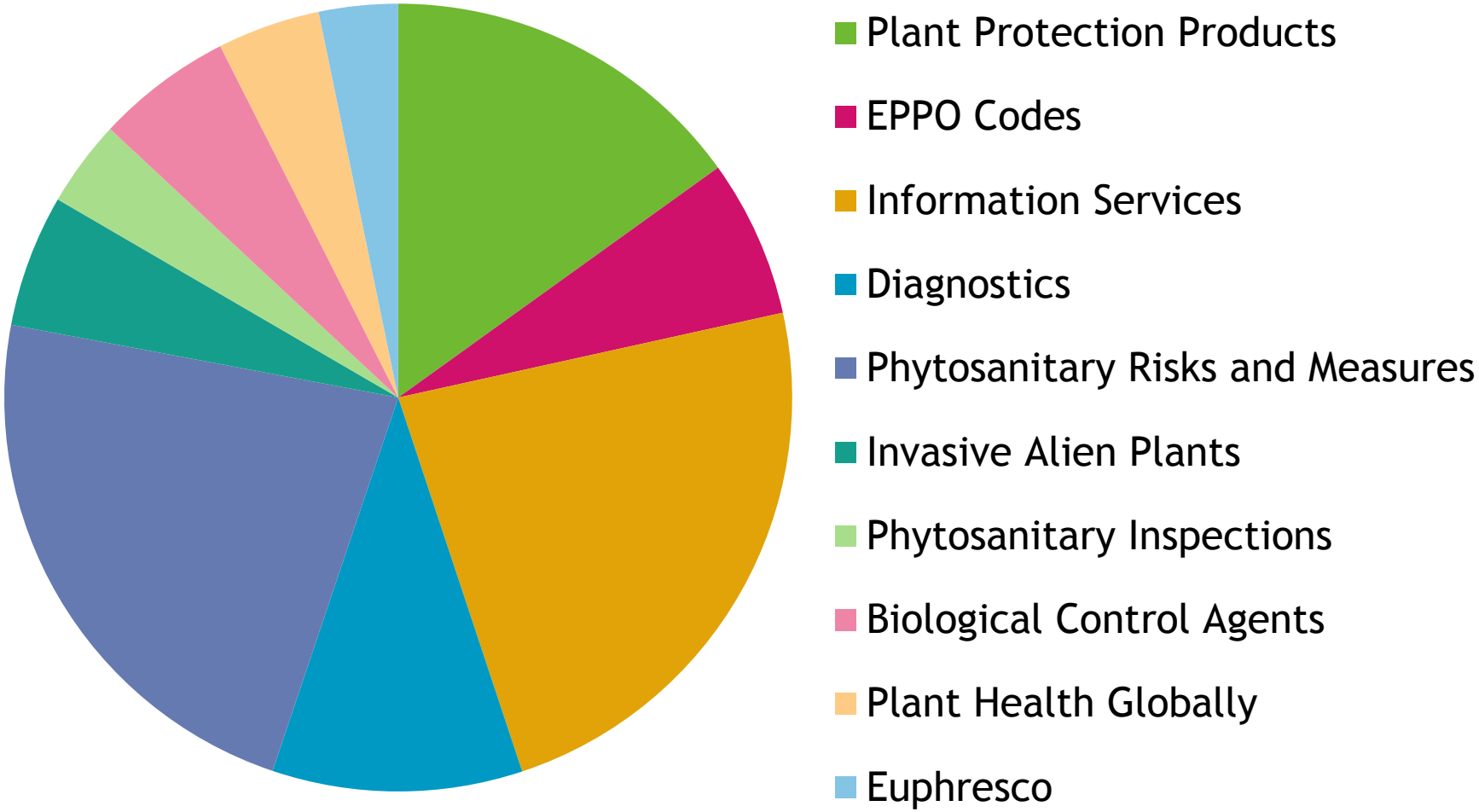
Plant Protection Products

- General Standards
- Herbicides
- Insecticides and Fungicides
- Resistance
- Harmonisation of Data Requirements

Phytosanitary Regulations

- Global Phytosanitary Affairs
- Phytosanitary Measures
- Forestry
- Potatoes
- Inspection Procedures
- Information
- Diagnostics (General) +
  - Entomology
  - Nematodes
  - Bacteria
  - Fungi
  - Virology
- Invasive Alien Plants
- Biological Control Agents

Core programme spend by activity

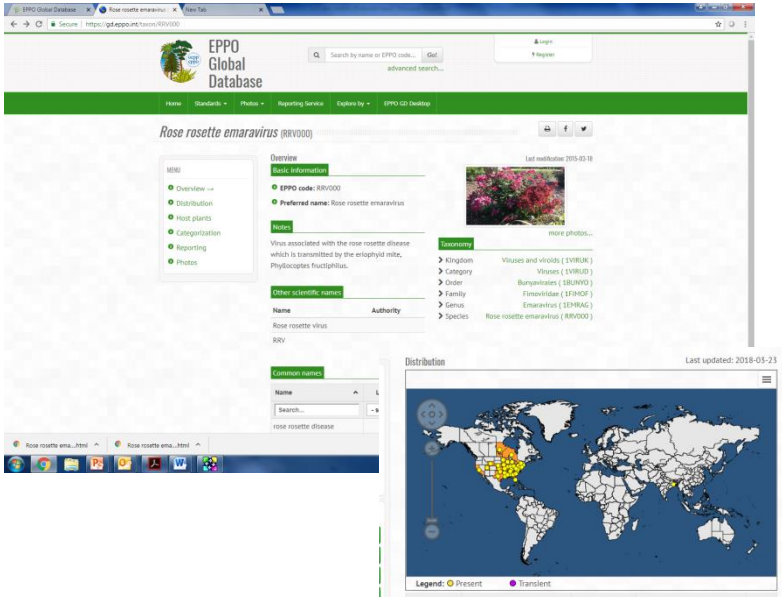


Resources, funding and work programme

- 19 staff (13 scientific, 2 IT, 4 admin)
- Two thirds on core programme funded by countries
  - Annual work programme and budget agreed by Council
- One third on projects funded (or part funded) by others
  - Euphresco network of research funders and managers
  - EU Minor Uses Co-ordination Facility
  - Regulated Non-Quarantine Pests project
  - Invasive Alien Plants Risks
  - Research projects (EMPHASIS, XFactors, Valitest)

Ongoing activities

- EPPO Global Database



- EPPO Codes

Kingdom	Animalia	1ANIMK
Phylum	Arthropoda	1ARTHP
Subphylum	Hexapoda	1HEXAQ
Class	Insecta	1INSEC
Order	Hemiptera	1HEMIO
Suborder	Sternorrhyncha	1STERR
Family	Aleyrodidae	1ALEYF
Genus	Bemisia	1BEMIG
Species	Bemisia tabaci	BEMITA

- EPPO Reporting Service

2018/138 First report of *Anoplophora chinensis* in France

The NPPO of France, recently informed the EPPO Secretariat of the first report of *Anoplophora chinensis* (Coleoptera: Cerambycidae – EPPO A2 List) on its territory. On 2018-07-04, adult specimens were caught on *Acer negundo* trees in a private garden in Royan (Charente-Maritime department). These trees were also showing signs of presence of the pest. The identity of the insect was confirmed by the Anses laboratory in 2018-07-06. All infested trees were destroyed on 2018-07-11. An infested zone (100 m radius) and a buffer zone (2 km radius) have been delimited around the finding site. Intensive surveys will be carried out to determine the extent of the outbreak and investigations will be made to identify the possible source of introduction of *A. chinensis*. An information leaflet has also been published to encourage members of the public to report the pest.
The pest status of *Anoplophora chinensis* in France is officially declared as: **Transient, actionable, under eradication.**

- EPPO Alert List

Agrilus fleischeri (Coleoptera: Buprestidae)
2018-03

Asian wood borer of poplars (*Populus* spp.) proposed by the UK NPPO.
Emerging pest in parts of China. Tree mortality has been reported.
Lombardy poplar (*P. nigra* var. *italica*) is a susceptible host.
Data lacking on willows (*Salix* spp.)
Could be moved on wood packaging material (e.g. pallets)

Neonectria neomacrospora
2017-06

Emerging canker disease of *Abies* in Northwestern Europe

Main host: *Abies* spp. Also found on *Picea*, *Pseudotsuga* and *Tsuga*,
Outbreaks in Denmark and Norway. Also found in BE and GB.

EPPO Standards

- PM3 Phytosanitary Procedures
- PM5 Pest Risk Analysis

- PM6 Guidance on biological control agents

- PM7 Diagnostic protocols

- PM9 Standards on regulatory controls
- PP1 Standards on efficacy of plant protection products

Information services

- Continuing "don't risk it" campaign to passengers
- "Toolkits" on pests for countries to use in awareness campaigns - three examples:
  - *Popillia japonica*
  - *Agrilus planipennis*
  - Citrus greening (Huanglongbing)
- New EPPO website - easier to update
- More EPPO Codes to support e-Phyto
- EPPO Project to revise datasheets and link to databases
- Developing Standard on raising public awareness

Don’t Risk It

Portuguese

Polish

Romanian

Poster templates

How to recognize it?

Adult beetles are about 10-12 mm long with iridescent copper-coloured elytra and metallic green thorax and head. The presence of 12 tufts of white hair can be seen on their body (5 along each side of the abdomen and 2 larger ones near the bottom end). The presence of these white hair tufts is quite distinctive of *Popillia japonica*. Adults can be seen mainly during late spring and summer. Other stages of the insect (eggs, larvae and pupae) live in the soil and are therefore more difficult to see. In addition, their identification is more complex.

Please help us!

Because *Popillia japonica* can seriously damage many wild and cultivated plants, it is important to report any sightings to plant protection authorities. Early detection will allow a rapid implementation of appropriate measures against *Popillia japonica*.

If you see *Popillia japonica*:

- Check the presence of tufts of white hairs on both sides of the abdomen
- Whenever possible, take a picture of the insect, record exact location and the name of the host plants on which it was observed
- Contact us (see below)

Contact details

CAN YOU HELP US?

Popillia japonica

An insect pest threatening our lawns, wood and crops

Logo and name of authority

Prepared in collaboration with EPPO – www.eppo.int

What is *Popillia japonica*?

Popillia japonica is a beetle originating from Japan which has been inadvertently introduced into other parts of the world such as the Azores islands and the USA. These introductions most probably resulted from human-mediated activities (e.g. agricultural trade, transports). In summer 2014, *Popillia japonica* was found for the first time in continental Europe. It was discovered in several localities near Milano in Italy. *Popillia japonica* is considered to be a serious threat to cultivated and wild plants.

At present, *Popillia japonica* has not been detected in XXX. However, in the event of its introduction in XXX, its presence should be reported immediately to us.

Damage

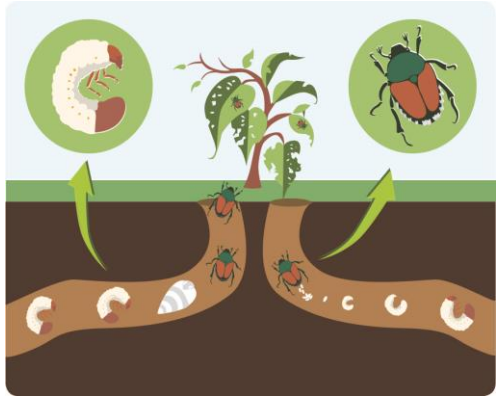
Larvae consume plant roots and are particularly damaging in lawns and meadows. Adult beetles are voracious feeders and can attack many different plant species (approximately 300 wild and cultivated plant species). Among the most vulnerable plants the following can be mentioned: apple, bramble, grasses, elm, grapevine, linden, maize, maple, rose, peach, soybean.

The adults skeletonize leaves by chewing out the tissue between the veins, thus leaving a vein skeleton. They can also feed on flowers and fruit. The adults are gregarious and many beetles group together on a single plant, so individual plants or trees may be completely defoliated.

Biology

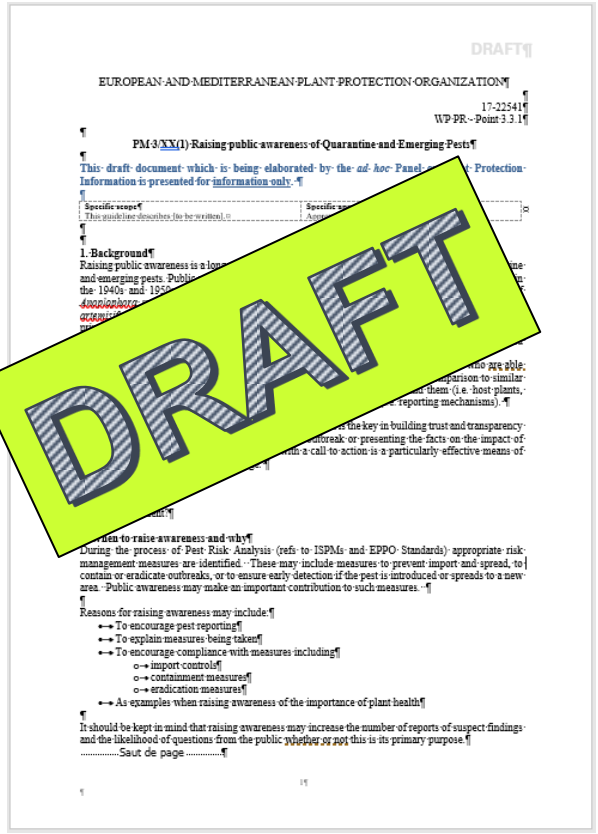
Popillia japonica (Coleoptera: Rutelidae) usually produces one generation per year but under cold climates, the life cycle can be extended to two years. Adult beetles usually emerge from the soil in May/June and mate. Females lay eggs in the soil. After hatching, larvae (white grubs) develop in the soil where they feed on roots of grasses. The insect overwinter in a larval stage in the soil. In spring, larvae resume feeding and become pupae (metamorphosis). After emergence, adult start feeding on the aerial parts of the plants and a new cycle begins again.

Life cycle



DRAFT PM 3 Standard - Raising public awareness

Work continuing with Information Panel
(next meeting in October 2018



Publicity campaign - Yes or No?

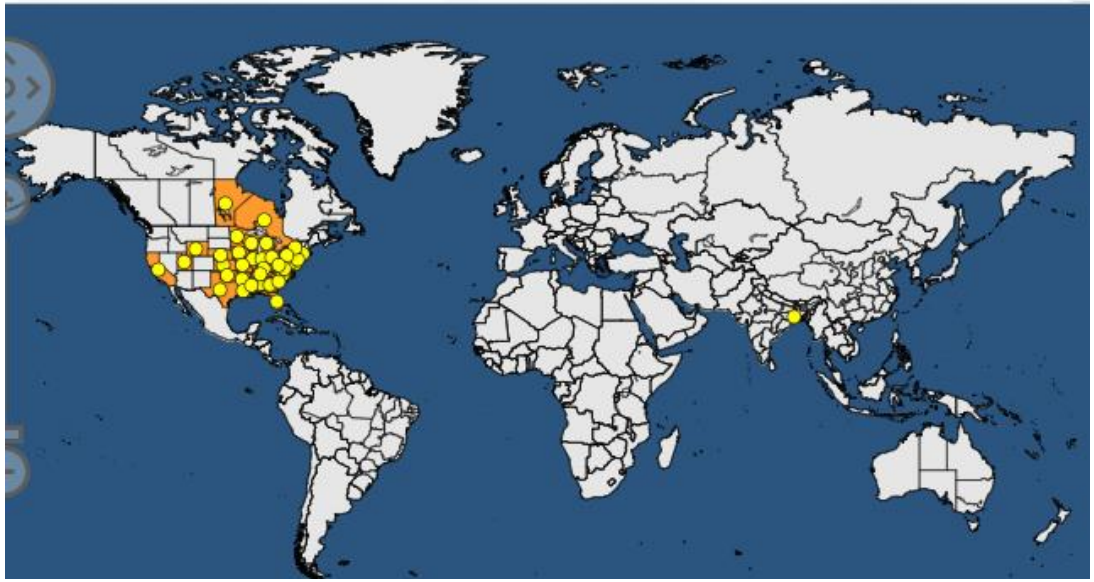
In favour	Against
Of concern to the public (e.g. risks to gardens, street trees, environment or iconic species)	Of concern mostly to growers
Early detection may lead to successful eradication	Low chance of eradication even with early detection
Increased awareness may encourage compliance with measures	Little public role in compliance with measures
Pest or symptoms are clear and distinct	Pest and symptoms are difficult to spot or easy to confuse
Outbreaks likely to be found first in parks, gardens, or the wider environment to which the public has access	Outbreaks likely to be seen first in commercial crops
	High risk to trade if messages are confused or unclear
	High risk of action being taken accidentally against rare, important “lookalikes”

Risks and Measures

- 5 pests and 10 alien invasive plants agreed by Council 2018 for listing
- Priorities for PRA 2018/19:
  - *Agrilus fleischeri*
  - *Naupactus xanthographus* [help please to identify experts]
  - viruses on grapevine breeding material
- Standard under development on "sentinel plants"
- Review of EPPO PRA process completed
- Platform to share information on national PRAs
- Guidance being developed on setting buffer zones for quarantine pests

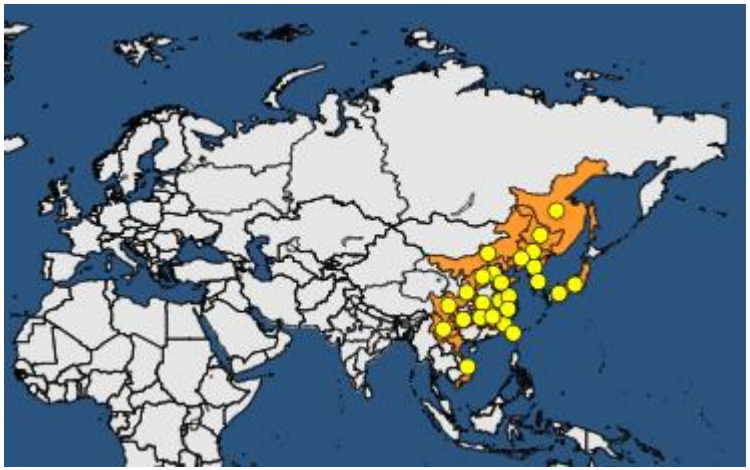
Rose rosette virus and its vector *Phyllocoptes fructiphilus*

- Rose rosette disease since 1940s, RRV identified in 2011
- Systemic virus; transmitted by an eriophyoid mite (*Phyllocoptes fructiphilus)* and by grafting
- Host plant: *Rosa* spp.
- Damages: rapid shoot elongation, red shoots, witches' broom, excessive thorn production, reduced flowering, general decline leading to plant death in 1-5 years



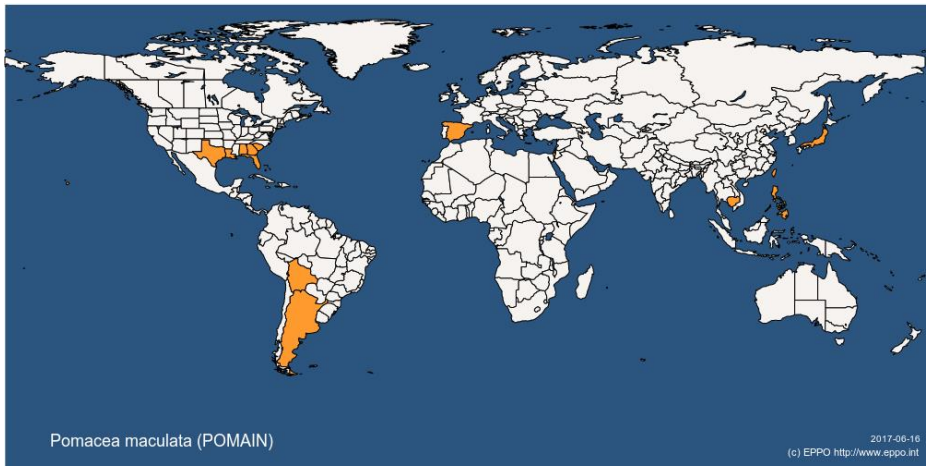
Massicus raddei- oak longhorn beetle

- **Coleoptera: Cerambycidae**
- Wood borer, 1 generation in 3-4 years
- Host plants: Fagaceae (only Asian species): Castanea, Quercus
- Larvae bore into trees (not in roots), affect tree growth, reduce wood quality, may cause mortality



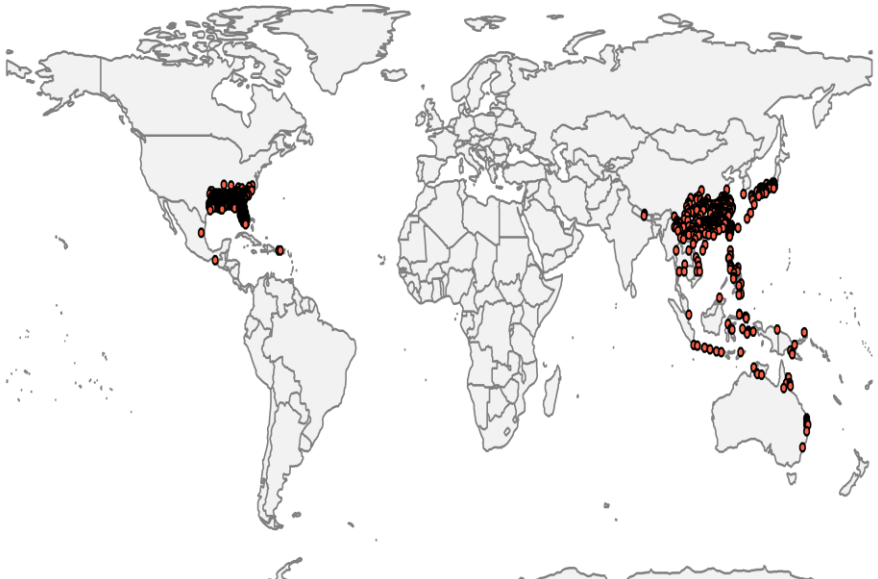
Pomacea maculata and P. canaliculata

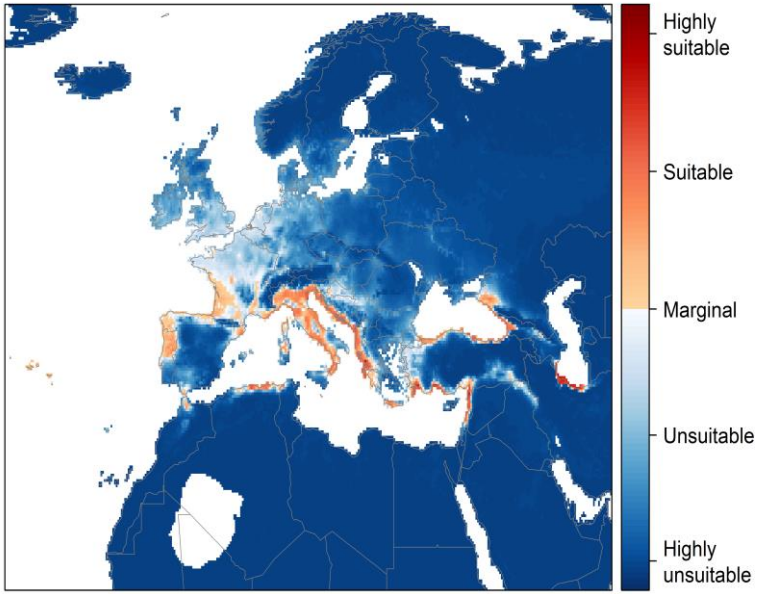
- Apple snail
- Recommendations based on EFSA PRA
- Main hosts /habitats :
  - Rice (*Oryza sativa*) fields
  - Natural wetlands such as rivers, shallow lakes and ponds
- Impact on rice production, and ecosystem services in wetlands



Lygodium japonicum (Thunb.) Sw.

- Native: Asia
- Introduced: Australia, North America (invasive south-eastern States).
- EPPO: Absent.
- Pathways: Plants for planting; contaminant of growing medium,
- Impacts: Reduce biodiversity, alters fire regime in managed plantations,





Diagnostics

- Over 130 pests now covered by EPPO Diagnostic Protocols
- Work continues on the implications of High Throughput Sequencing
- Engagement with EU Commission on how best to support diagnostics in the region following appointment of EU Reference Laboratories

Phytosanitary Inspections

- Two Standards for adoption at Council
  - inspection of vines
  - inspection for *Phytoplasma pyri*
- Revised PM9 Standard on *Bursaphelenchus xylophilus*
- PM9 Standard on Huanglongbing under development
- Contingency exercise workshop on a forest pest outbreak - Zlatibor, Serbia 27-29 November 2018 - places available for any country not yet registered!

Biological Control Agents

- Decision Support Scheme for release of Biological Control Agents for adoption at Council
  - considers risks and benefits of releases
- Formalised procedure for adding to the list of "widely used BCAs" (EPPO Standard PM6/3)
- Questionnaire on how member countries regulate biological control agents - 24 responses so far
- More harmonisation still needed in this area

Links between phytosanitary regulations and plant protection products policy

- Paper requested by EPPO Council 2016 and presented to Council 2018
- Includes recommendations on strengthening links
- Recommendations:

Globally

- EPPO should remain engaged with other RPPOs in discussions within the FAO/IPPC framework about ‘emerging pests’: how they are defined and identified, and who is responsible for what actions against them

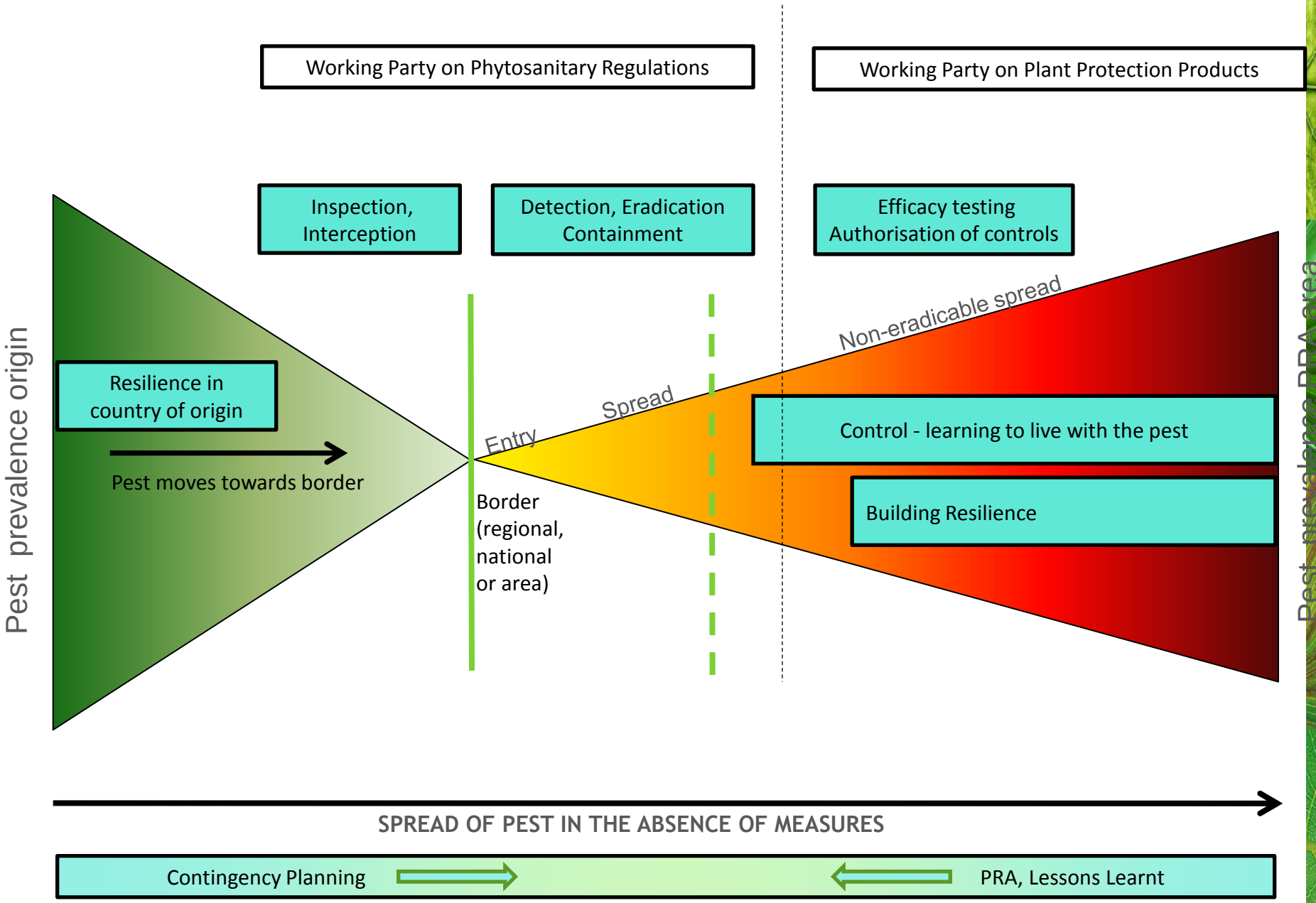
At EPPO level

- ii) between the two areas in the next EPPO Strategy
- iii) Joint session of both Working Parties in 2020
- v) Involving experts from both areas in workshops etc.
- vi) Pest Risk Analysis (PRA) should communicate results - not only to regulators but to relevant stakeholders
- viii) EPPO Alert List presented to the Working Party on Plant Protection Products and to the Panel on BCAs
- ix) All Panels encouraged to identify 'emerging pests'
- xi) Explore mechanisms for identifying control options for emerging pests.
- xii) IPM approaches for emerging pests developed through project-funded Expert Working Groups?

At national level

- xiv) Member countries should be encouraged to maintain or build links between different policy and regulatory areas related to plant protection, and to share examples of good practice (e.g. through articles in the EPPO Bulletin).

- xv) Member countries should consider adopting strategies for managing risks from emerging pests, whether or not they are regulated.



Source: Adapted from a diagram by Bob Griffin, USDA APHIS PERAL, by Alan McLeod and Glyn Jones, Fera, UK, with help from Defra colleagues

Two activities hosted by EPPO with their own funding and governance

Euphresco (Plant Health Research Co-ordination)

- A network of partners who are funders and managers of plant health research
- Annual call for transnational research projects
- 2016 - 20 projects, total budget 2.5M€
- 2017 - 8 projects, total budget 1.3M€
- Projects typically small and short (relatively)
- All EPPO countries are now Euphresco members
- Additional members within EPPO region and beyond
- Could be model for other regions

Minor Uses Co-ordination Facility

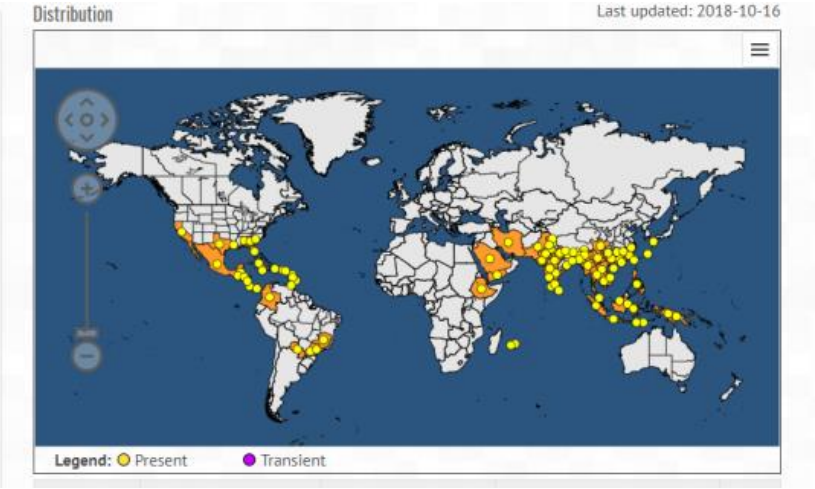
- Minor uses of pesticides "... on plants ... which are not widely grown in that Member State, or ... to meet an exceptional plant protection need"
- Funded 2015-2017 by EU, FR, DE and NL
- EU funding has now ended but member countries are being asked to commit funds to maintain the work
- Steering Group of CH, DE, IT, NL, SE
- EUMUDA database of
  - minor use needs
  - projects to find solutions

MinorUses
EU Minor Uses Coordination Facility

Some Emerging Risks for the EPPO Region

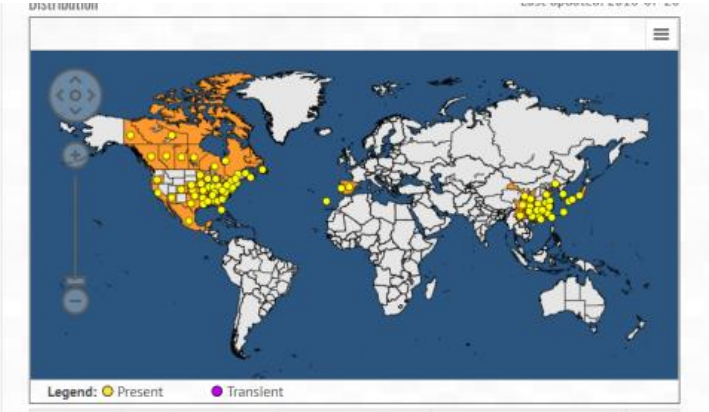
Huanglongbing (citrus greening) caused by *Candidatus* Liberibacter species

- 1984 EPPO A1 List
- Threat to Mediterranean citrus production
- One vector (*Trioza erytraea*) present in northern Spain and Portugal, subject to official action
- July 2018 EWG held to develop EPPO Standard
- Four experts nominated by other RPPOs (thank you!)
- Standard for country consultation and adoption in 2019



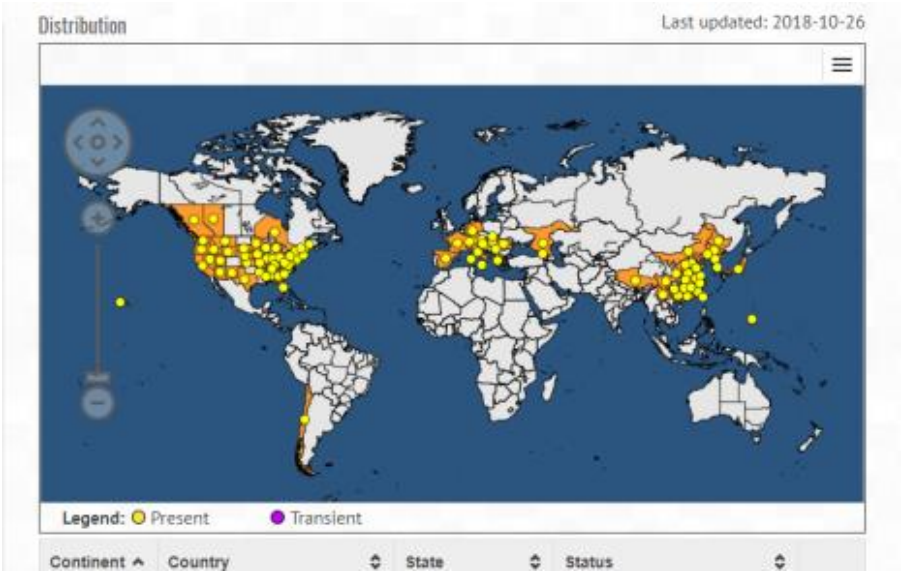
Pine wood nematode
Bursaphelenchus xylophilus

- 1985 EPPO A1 List (damage in Japan)
- 1999 Found in Portugal
- Contained since in Portugal - some oubreaks in adjoining areas of Spain
- Major risk of spread
- 2018 Revised EPPO Standard - takes account of improved trapping, testing and modelling
- Still emerging or now stable?

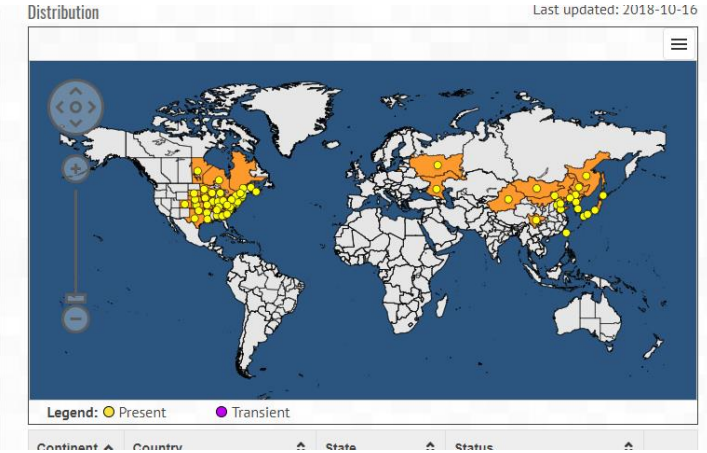


Brown Marmorated Stink Bug
Halyomorpha halys

- Found in Liechtenstein 2004
- Switzerland 2007, no damage seen
- EPPO Alert List 2008-2013
- No EPPO PRA carried out
- Damage noted in USA in 2010 and 2011
- Damage now seen in Italy, Georgia etc.



Emerald Ash Borer
Agrilus planipennis



- 2002 - Michigan, USA
- 2004 - EPPO A1 List
- 2006 present in Moscow region (native to Far East)
- Risks include natural spread to western Europe
- 2013 EPPO Standard on control
- Biological controls researched, but legislative obstacles to release in much of EPPO region

Xylella fastidiosa

- 1981 EPPO A1 List (because of risks to vines and citrus)
- 2013 found killing olive trees in Italy
- Vector *Philaenus spumarius* is widespread in Europe
- Findings since in some other EPPO countries, but transient, under eradication, and mostly different strains from the one killing olives
- Strong containment but risk of spread remains
- 2017 EPPO inspection and revised diagnosis standards