Food and Agriculture Organization
of the United Nations

COFO 24
World Forest Week

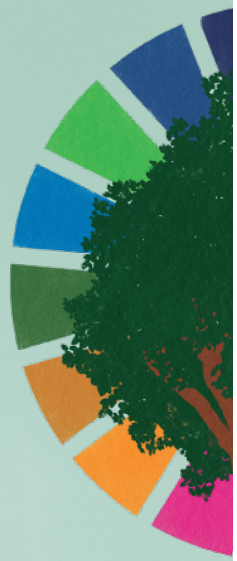
# Overview of current/future activities of Regional Forest Invasive Species Networks

Ferenc Lakatos REUFIS, U. of Sopron
& FISN colleagues

# ‘Invasive species’

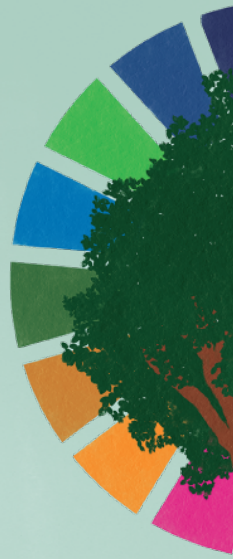
"On a global basis ... the two great destroyers of biodiversity are, first habitat destruction and, second, invasion by exotic species”

- E.O. Wilson

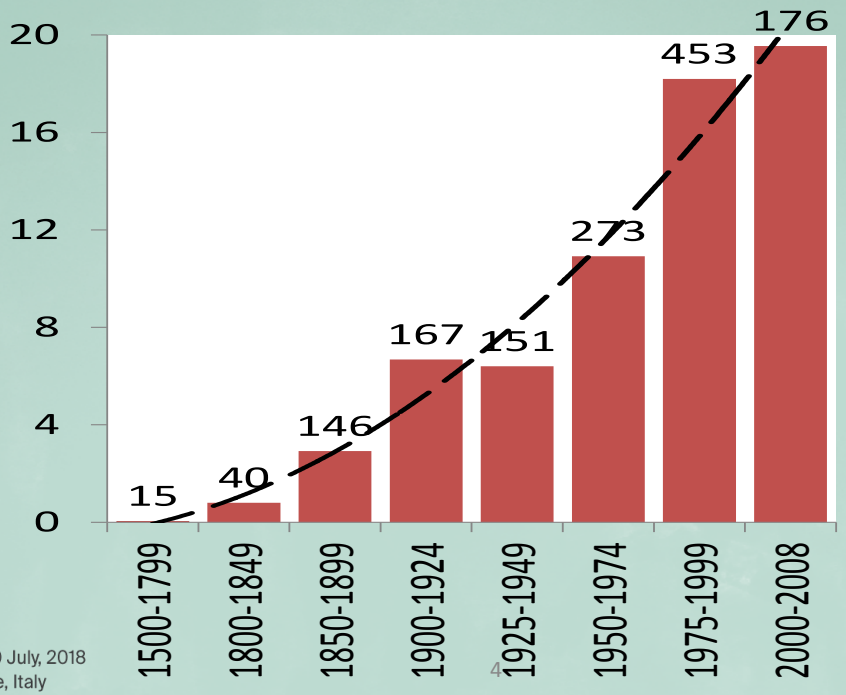


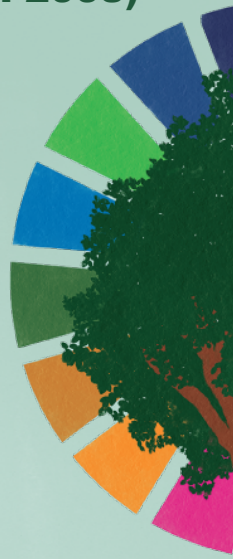
# ‘Invasive species’

- **FAO:** any species that are non-native to a particular ecosystem and whose introduction and spread causes, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.
- **Convention on Biological Diversity:** Invasive alien species (IAS) are species whose introduction and/or spread outside their natural past or present distribution threatens biological diversity.

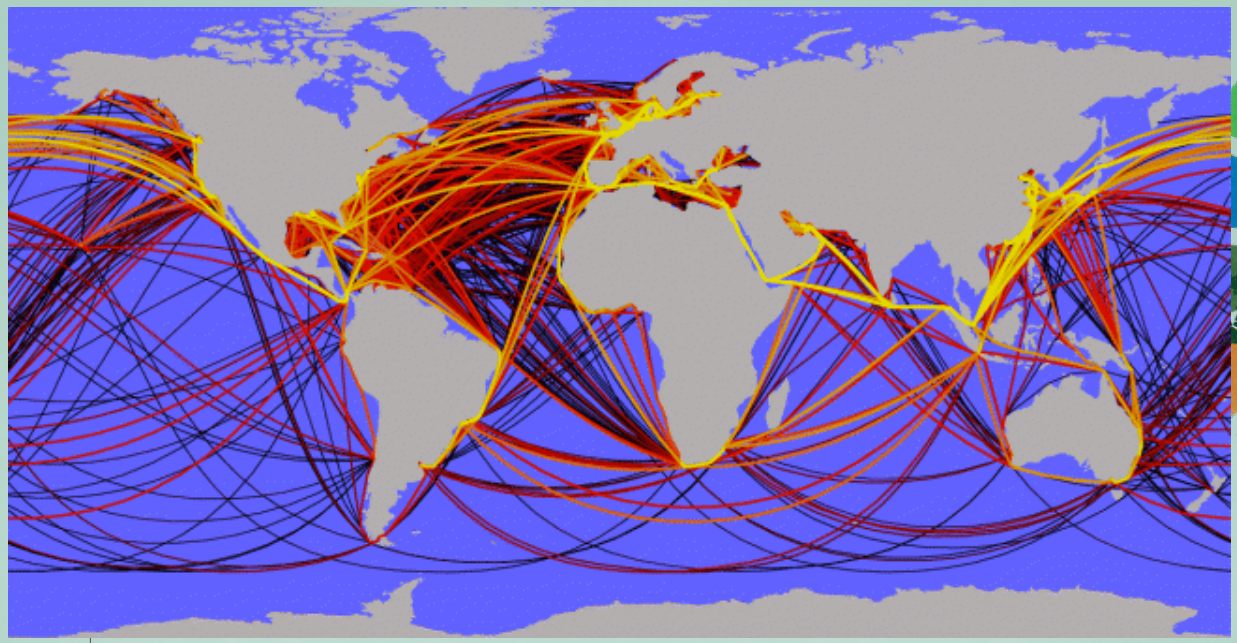


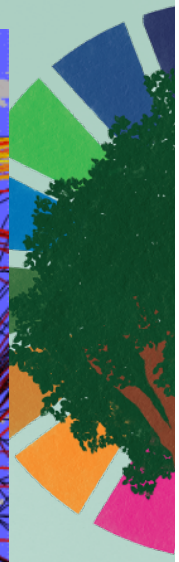
# Invasive insects in Europe (Roques et al. 2008)



# Where are they coming from?

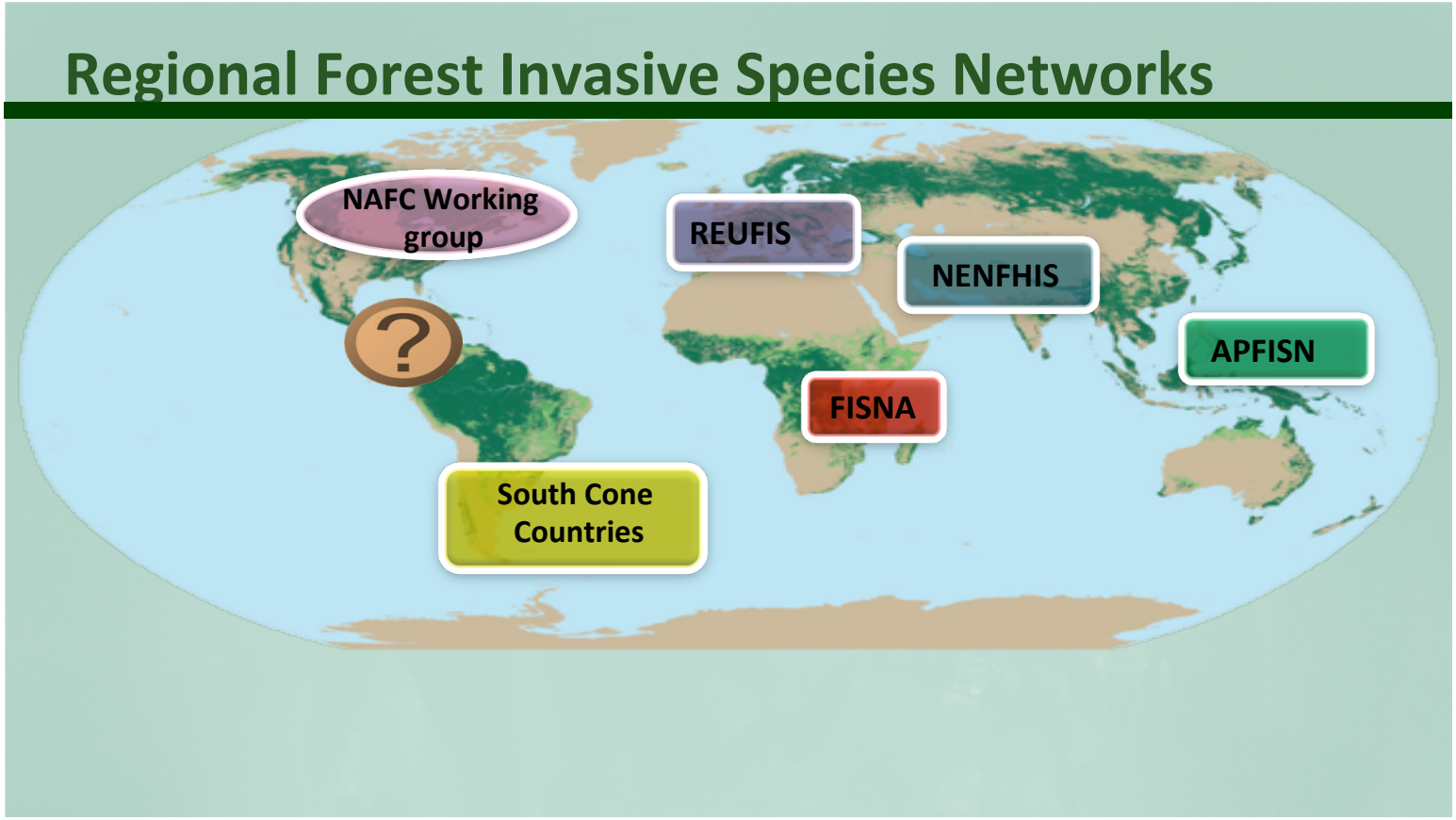






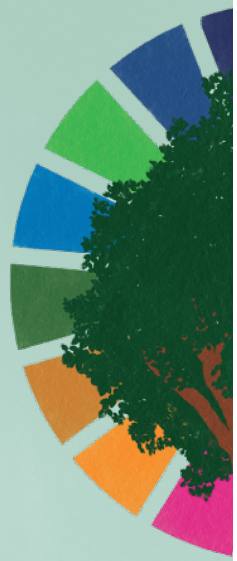
Kaluza et al. 2009

# Regional Forest Invasive Species Networks



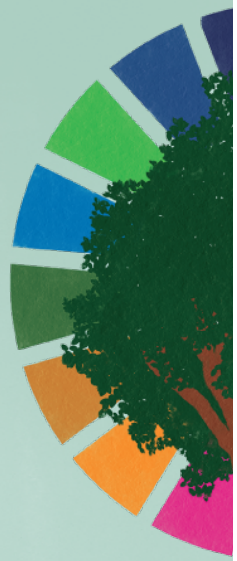
# **FISNA** - Forest Invasive Species Network for Africa

- Promoter: African Forest Pest Management Network, 1995
- Established: 2004
- Achievements/Meetings: e.g.
  - 2016: Biological Control of Eucalyptus Pests
  - 2019 (tentative): Training Workshop “Basic skills in Forest Entomology and Pathology”
- Webpage: http://www.fao.org/forestry/fisna/en/



# **NENFHIS** – Near East Network for Forest Health and Invasive Species

- Promoter: Near East Forestry Commission, 2006
- Established: 2007
- Achievements: e.g.
  - Standardized data collection on FIS



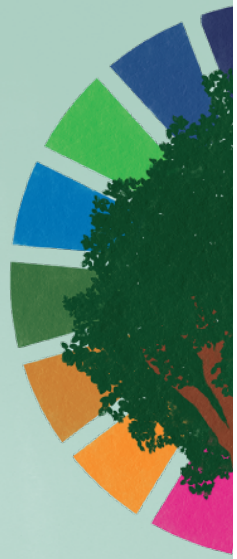
## Standardization of data collection

Fiche de l'Etat Phytosanitaire des Forêts
et des Espèces Envahissantes
*Forest Health and Invasive Species*
بطاقة الحالة الصحية للغابات و الأنواع الغازية

- Webpage: http://www.fao.org/forestry/51295/en/

# **APFISN** - Asia Pacific Forest Invasive Species Network

- Promoter: Asia Pacific Forestry Commission
- Established: 2004
- Achievements & meetings: e.g.
  - 2005: Developing an Asia-Pacific strategy for forest invasive species: the coconut beetle problem - bridging agriculture and forestry
  - 2007: International Workshop on Biological Control of Invasive Species of Forest
  - 2010: Pathways of Biological Invasions into Forests
- Webpage: http://apfisn.net



Asia-Pacific Forest Invasive Species Network
APFISN

# Invasives

Vol. 42 Sept - Oct 2017

Newsletter of the Asia-Pacific Forest Invasive Species Network (APFISN)

## Contents



## About APFISN

The Asia-Pacific Forest Invasive Species Network (APFISN) has been established as a response to the immense costs and dangers posed by invasive species to the sustainable management of forests in the Asia-Pacific region. APFISN is a cooperative alliance of the 33 member countries in the Asia-Pacific Forestry Commission (APFC) - a statutory body of the Food and Agriculture Organization of the United Nations (FAO). The network focuses on inter-country cooperation that helps to detect, prevent, monitor, eradicate and/or control forest invasive species in the Asia-Pacific region. Specific objectives of the network are: 1) raise awareness of invasive species throughout the Asia-Pacific region; 2) define and develop organizational structures; 3) build capacity within member countries; and 4) develop and share databases and information.

**Australian Pine (*Casuarina equisetifolia* )**

INVASIVES, the Newsletter of the Asia-Pacific Forest Invasive Species Network (APFISN) is intended to share information among countries in the Asia-Pacific region on Forest Invasive Species( FIS) and the threats they pose in the region. If you have any items of news value on FIS to share between national focal points of APFISN and more widely among foresters, agriculturists, quarantine personnel and policy makers, please pass them on to the editor - Dr. T. V. Sajeev, APFISN Coordinator, Kerala Forest Research Institute, Peechi-680 653, Kerala , India (tvsajeev@gmail.com). This newsletter is supported by the Food and Agriculture Organization of the United Nations (FAO) and the Asia Pacific Association of Forestry Research Institutions (APAFRI).

Invasive Pest Fact Sheet

Asia - Pacific Forest Invasive Species Network

APFISN

# Coconut leaf beetle

## *Brontispa longissima*

The Asia-Pacific Forest Invasive Species Network ( APFISN) has been established as a response to the immense costs and dangers posed by invasive species to the sustainable management of forests in the Asia-Pacific region. APFISN is a cooperative alliance of the 33 member countries in the Asia-Pacific Forestry Commission ( APFC) - a statutory body of the Food and Agricultural Organization of the United Nations (FAO). The network focuses on inter-country cooperation that helps to detect, prevent, monitor, eradicate and/ or control forest invasive species in the Asia-Pacific region. Specific objectives of the network are: 1) raise awareness of invasive species throughout the Asia-Pacific region; 2) define and develop organizational structures; 3) build capacity within member countries and 4) develop and share databases and information.

Symptom of leaf beetle attack on coconut palm

Typical damage on young leaves

**Scientific name**: *Brontispa longissima* (Gestro)

**Synonyms**: *Brontispa castanea, B. froggatti, B. longissima var. javana, B. reichertt, B. longissima var. selebensis, B. simmondsi, Oxycephala longipennis, O. longissima.*

**Common names**: Coconut hispine beetle, Coconut leaf hispid, Coconut leaf beetle, Palm leaf beetle.

**Taxonomic position**: Phylum: Arthropoda
Class: Hexapoda, Order: Coleoptera
Family: Chrysomelidae

**Introduction**: The coconut leaf beetle (*Brontispa longissima*) is one of the most damaging pests of coconut and other palms. The larvae and adults of the beetle feed on the soft tissues of the youngest leaf in the throat of the palm. Affected leaves dry up, resulting in stunting of the palm and reduced nut production. Prolonged attacks on young palms can lead to their death.

**Hosts**: The beetle attacks more than 20 palm species with coconut (*Cocos nucifera*) being the most favored host. Other hosts include Royal palm (*Roystonea* sp.), Alexandra palm (*Archontophoenix alexandrae*), Sago palm (*Metroxylon sagu),* California fan palm (*Washingtonia filifera),* Mexican fan palm *(W. robusta),* Bottle palm *(Hyophorbe lagenicaulis),* Chinese fan palm (*Livistonia chinensis),* Madagascar palm (*Chrysalidocarpus lutescens)* and Areca nut palm (*Areca catechu*).

**Distribution**: The leaf beetle is a native of Indonesia (i.e., Aru Islands, Maluku Province, Papua Province) and Papua New Guinea, including the Bismarck Archipelago. It is currently distributed in Australia (Darwin, Broome, Moa Island, Cooktown, Cairns, Innisfail, Marcoola and Townsville), many Pacific Islands, Malaysia, Singapore, Cambodia, Laos, Thailand, Vietnam, the Maldives, Philippines, Myanmar and China (Hainan, Guangdong and Taiwan provinces, with Hainan Islands, the worst affected).

Coconut leaf beetle- adult

**Biology of the beetle**: The adult coconut leaf beetle is 7.5 -10 mm long and 1.5 - 2 mm wide, with a flat body that is black in color and an orange head and shoulders. The adult male is generally smaller than the female. The larvae and adults are nocturnal in habit and remain in the unopened leaflets, moving outside only to infest nearby palms or for mating. The beetle is capable of only short flights - often only a few hundred meters - so its natural spread is slow. The eggs are brown and flat (1.4 mm long and 0.5 mm wide), commonly laid in longitudinal rows (surrounded by debris and excrement) in the unopened leaflets of both young and mature palms. They hatch in 3 - 7 days to form larvae that are white with two pincer-like spines at the rear end of the body.

This fact sheet is compiled and edited by Dr. K.V. Sankaran, APFISN Coordinator, Kerala Forest Research Institute, Peechi, Kerala, India (sankaran@kfri.org), on behalf of the Asia-Pacific Forest Invasive Species Network. For more information on APFISN and its activities, please contact your national focal point or the APFISN Coordinator or Mr. Patrick Durst, Senior Forestry Officer, FAO Regional Office for Asia and the Pacific, 39 Phra Atit Road, Bangkok. E-mail: patrick.durst@fao.org. The fact sheet is supported by the Food and Agriculture Organization of the United Nations (FAO) and USDA Forest Service.

# **REUFIS** – Forest Invasive Network For Europe and Central Asia

- Promoter: FAO & Regional workshop on implementation of phytosanitary standards in forestry
- Established: 2016
- Achievements & meetings:
  - Training on bark and ambrosia beetle identification

- Webpage: http://reufis.org

# **REUFIS** – Forest Invasive Network For Europe and Central Asia

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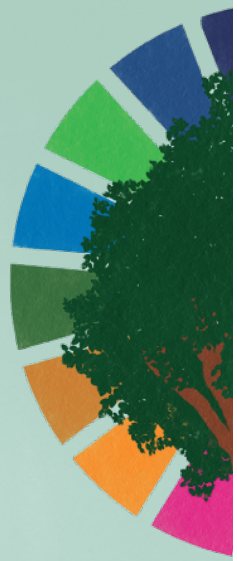
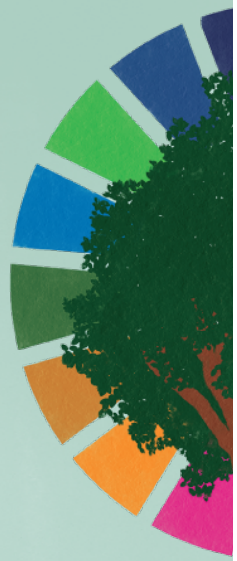
# North American Forestry Commission, Forest Insects, Disease and Invasive Plants Working Group

- Promoter: North American Forestry Commission
- Members: Mexico, U.S., Canada
- Established: 1961
- Achievements: e.g.
  - Advanced forest health monitoring & analysis
- Webpage: https://www.fs.fed.us/global/nafc/welcome.html



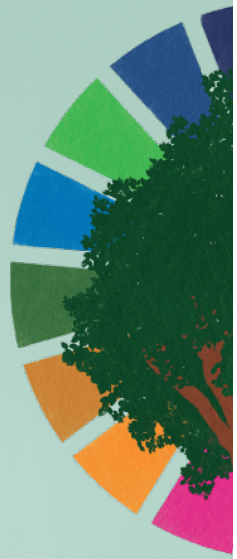
# Network objectives

1. To promote collaboration between members countries.
2. To share expertise and information.
3. To facilitate technology exchange.
4. To communicate and coordinate with existing international and regional organizations dealing with forest health and invasive species.
5. To identify problems and strategize regional prevention, monitoring, and management programs.
6. To encourage compliance of international phytosanitary regulations.



# Co-operations

- Co-operation with existing organisations and initiatives
  - FAO Forestry, IPPC, …
  - EPPO, NPPOs, …
  - EU & country governments,
  - Topic specific organizations, e.g. EUPHRESCO, …
  - Topic specific actions, e.g. COST actions
  - Research projects & activities




"The branches of forests and
trees reach out across the SDGs"
COFO 24
World Forest Week
16-20 July, 2018
Rome, Italy

# If you want to became famous...

- Potato beetle (*Leptinotarsa decemlineata*)
- Europe:
  - 1876 (1901), UK
- Hungary:
  - Hédervár, 1947

# If you want to became famous...

- Corn beetle (*Diabrotica virgifera*)
- Europe:
  - Belgrade (SR), 1992
- Hungary:
  - Mórahalom, 1995