How can we nationally, regionally & globally work together to build capacity?

WEBINAR
Forest Invasive Species
the next global pandemic?

29 July 2020
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- Established in 2007;
- Nine member countries;
- Region characterized by semi-arid to desert conditions with scarce forest cover.

Objectives:
- Promote collaboration;
- Share expertise and information;
- Facilitate technology exchange;
- Communicate and coordinate;
- Identify problems;
- Encourage compliance with international phytosanitary regulations.
Invasive Insects Species in the NENA Region

- Majority of invasive species are linked to the exotic plant species *Eucalyptus* (introduced from Australia);
- Population of these pests is regulated by the presence of their natural enemies (population is so controlled);
- The dangerous invasive species is *Leptoglossus occidentalis* observed in Tunisia since 2013.

<table>
<thead>
<tr>
<th>Species</th>
<th>Adults</th>
<th>Host species</th>
<th>Countries</th>
<th>Parasitoids</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Phoracantha semipunctata</em></td>
<td><img src="https://example.com/bug" alt="Image" /></td>
<td><em>Eucalyptus</em> sp.</td>
<td>Tunisia (1962), Morocco (1987), Algeria, Lebanon</td>
<td><em>Avetianella longoi</em> (Tunisia)</td>
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<tr>
<td>(Coleoptera: Cerambycidae)</td>
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<tr>
<td><em>Phoracantha recurva</em></td>
<td><img src="https://example.com/bug2" alt="Image" /></td>
<td><em>Eucalyptus</em> sp.</td>
<td>Tunisia (1999), Algeria, Morocco, Lebanon</td>
<td><em>Avetianella longoi</em> (Tunisia)</td>
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<tr>
<td>(Coleoptera: Cerambycidae)</td>
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<tr>
<td><em>Leptocybe invasa</em></td>
<td><img src="https://example.com/bug3" alt="Image" /></td>
<td><em>E. camaldulensis</em></td>
<td>Tunisia (2004), Algeria (2016), Morocco, Iran, Syria</td>
<td><em>Quadrastichus mendeli</em> (Tunisia)</td>
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<tr>
<td>(Hymenoptera: Eulophidae)</td>
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<tr>
<td><em>Ophelimus maskelli</em></td>
<td><img src="https://example.com/bug4" alt="Image" /></td>
<td><em>E. camaldulensis</em> <em>E. rudds E. tereticornis</em></td>
<td>Tunisia (2006), Algeria, Morocco, Iran</td>
<td><em>Closterocerus chamaeleon</em> (Tunisia)</td>
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<tr>
<td>(Hymenoptera: Eulophidae)</td>
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<tr>
<td>(Hemiptera: Psyllidae)</td>
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<tr>
<td><em>Leptoglossus occidentalis</em></td>
<td><img src="https://example.com/bug6" alt="Image" /></td>
<td><em>Pinus pinea</em></td>
<td>Tunisia (2013)</td>
<td>?</td>
</tr>
<tr>
<td>(Heteroptera: Coreida)</td>
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<tr>
<td><em>Deudorix livia</em></td>
<td><img src="https://example.com/bug7" alt="Image" /></td>
<td><em>Acacia farnesiana</em></td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>(Lepidoptera, Lycaenidae)</td>
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</tbody>
</table>
Invasive Insects Species in the NENA Region

**Dactylopius opuntiae**, a new invasive pest of the cactus plants *Opuntia ficus-indica* (Prickly pear).


- The prickly pear *(photo from internet)*
  - can develop in the semi-arid and arid areas (resistance to drought);
  - plays an essential role in the desertification control;
  - plays an essential role in the conservation of the biological diversity around it;
  - barbary figs fruits constitute additional income sources for farmers of the region;
  - used as forage for the regional semiarid animals.

- Dactylopius opuntiae *(photo from internet)*
  - A new invasive pest becoming a big concern for the prickly pear production in different countries and an eradication program should be implemented.
  - The arrival of this insect to Morocco is a high threat to the rest of the NENA countries regarding the geographical, economic and social continuity between these countries.

Photo credit: Vahe Martirosyan
NATIONALLY: Establishment of Technical Working Groups (TWG)

**NATIONALLY**: Establishment of Technical Working Groups (TWG)

- **TWG**
  - Coordinated awareness raising activities with NPPO and other institutions and private sector;
  - Evaluation of impacts of climate change on pest and disease management;
  - Assessment of risks of new introduction of invasive alien species;
  - Increase the resilience of forests towards pest outbreaks using sustainable forest management;

*Forest Invasive Species – The next global pandemic?*

*Image: Dactylopius opuntiae on The prickly pear (photo from internet)*
Member Countries have to interact in between meetings, participants of the WG mainly collaborate through:

- training and sharing information (short term training school/program);
- joint scientific research on common invasive species;
- Implement regional surveillance activities;
How can we work together to build capacity?

- Coordinated mechanism for critical research between regions
- Cross sectoral (private and public, production, travel, transport) cooperation and coordination on prevention activities;
- Establishment of information systems as well as training programs targeting best practices for management of forest invasive species
**Regional project:** Red Palm Weevil (RPW) Eradication (GCP/RNE/012/MUL).
The expected overall result of the FAO’s program is to contain the outbreak of RPW in the NENA Region by coordinating the effort to help farmers manage the RPW in order to limit crop damage to a minimum and to avoid a further spread of the pest.

**Global action:** Sustainable Management of the Fall Armyworm in Africa
FAO Program for Action
Program divided into six components:
1. Management of FAW: Immediate Recommendations & Actions
2. Short-term Research Priorities
3. Communications & Training
4. Monitoring & Early Warning
5. Policy & Regulatory Support
6. Coordination

**Suggestion!!**

Establishment of a regional Project to manage and control *Dactylopius opuntiae*, a new invasive pest of the cactus plants *Opuntia ficus-indica*
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Thank you
Merci
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