Invasive Species

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Member Countries Regional Consultation: Africa

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KNOWLEDGE FOR LIFE

CABI

CABI and Invasive Species (IS)

- A focus since CABI established >100 years ago
- Member countries repeatedly identify IS as a priority
- 700+ years of experience in IS management
- CABI's strength: IPM with a focus on biological control (due diligence in regard to Nagoya protocol)
- Collaborative applied research on IS management core to CABI's Science Strategy
- Expertise and resources in knowledge management and dissemination: www.cabi.org/isc
- Awareness creation: www.invasive-species.org
- Facilitates cooperation and collaboration amongst stakeholders
- Member of the Inter-Agency Liaison Group on Invasive Species (www.cbd.int/invasive/lg)
- New "Action on Invasives" programme aims to protect and improve the livelihoods of over 50 million poor rural households

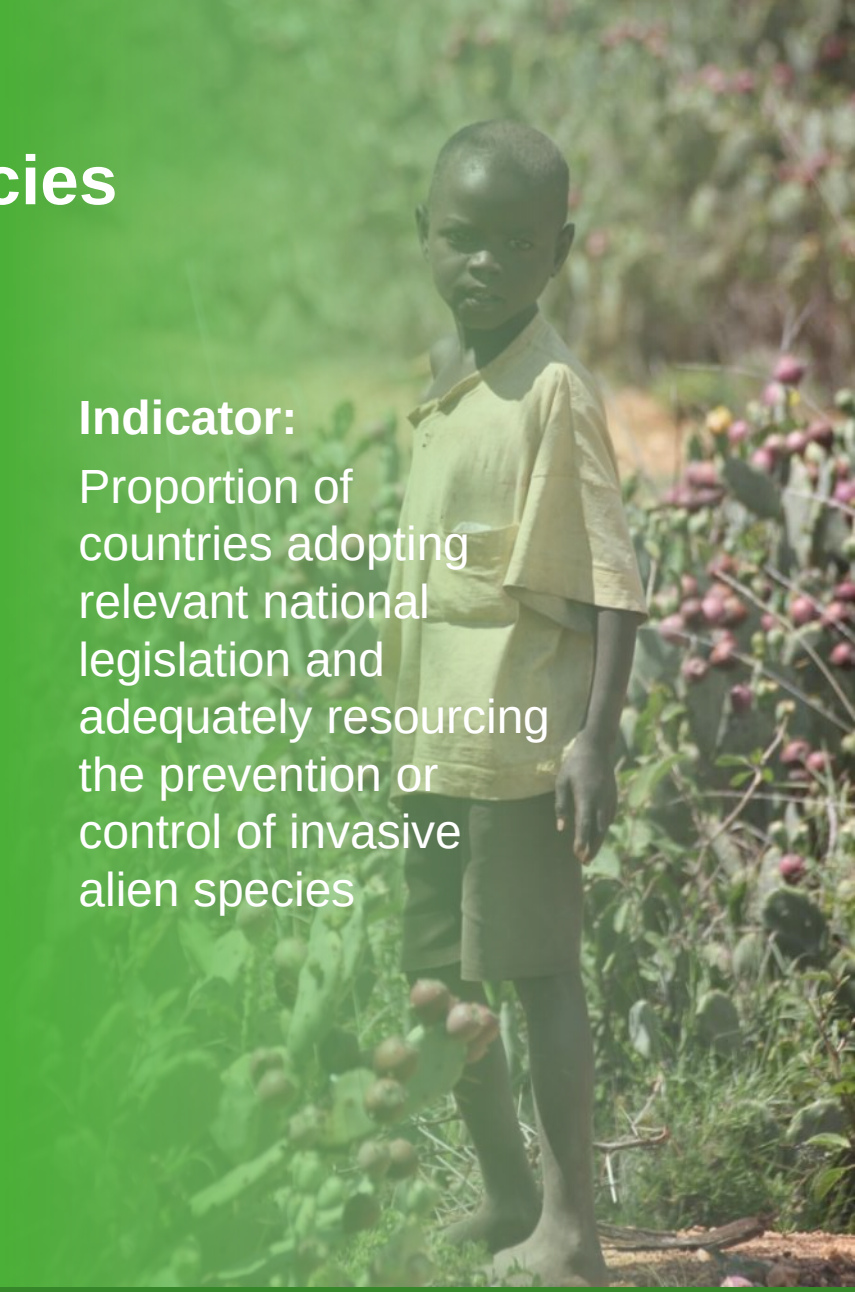
SDG 15.8 – Invasive Alien Species

Goal:

By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems, and control or eradicate the priority species

Indicator:

Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species



CABI's goals and activities in Invasive Species (IS)

1. Increased awareness of the presence, risks and costs of IS
2. Enhanced capacities of countries to respond to the threat of IS
3. Strengthened strategies/policies for IS management
4. Effective management of IS including prevention, EDRR and control (IPM)

- Action on Invasives (AoI) programme contributes to all goals
- Specific projects contribute to one or more goals

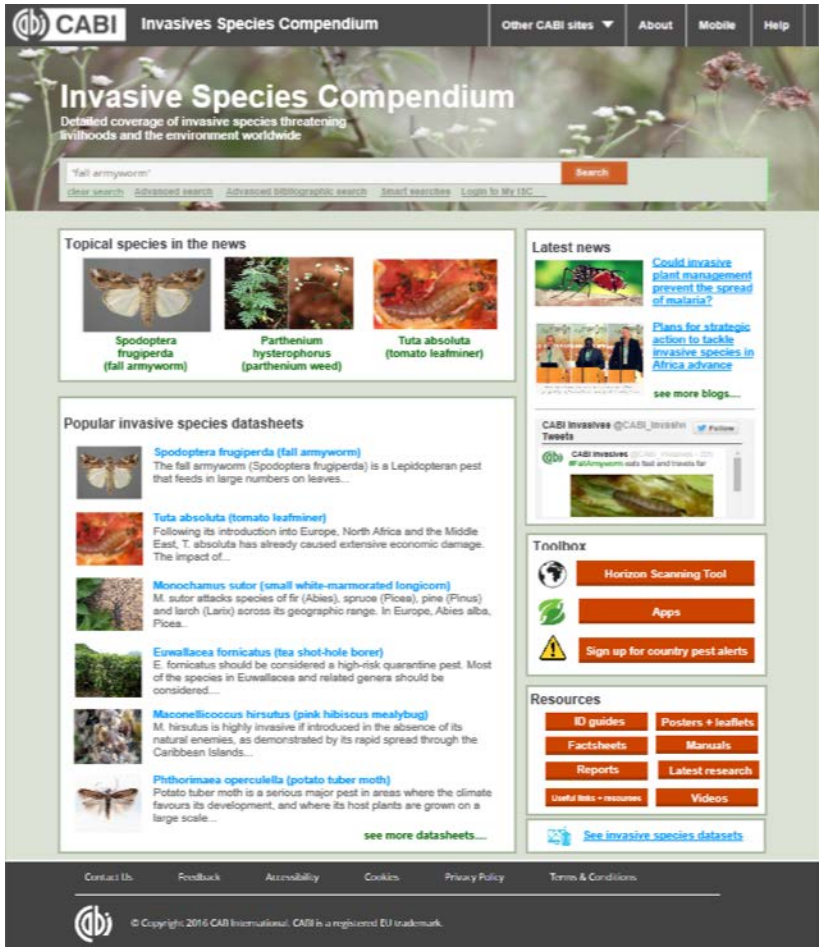
1. Increased awareness of the presence, risks and costs of Invasive Species (IS)

- Undertake surveys to determine the presence and distribution of IS
- Develop, implement and evaluate the effectiveness of IS communication strategies
- Develop and apply methods for assessing and communicating the risks and costs of IS
- Strengthen areas of
  - Monitoring and evaluation
  - Gender and diversity
  - Management and analysis of big data sets

2. Enhanced capacities of countries to respond to the threat of Invasive Species (IS)

- Facilitate national and regional cross-sectoral cooperation/collaboration, building on Plantwise achievements
- Further develop knowledge and information resources and tools to support decision-making
- Provide training to national agricultural and environment organisations on the identification and management of IS

Enhanced Invasive Species Compendium



www.cabi.org/isc

Enhancements

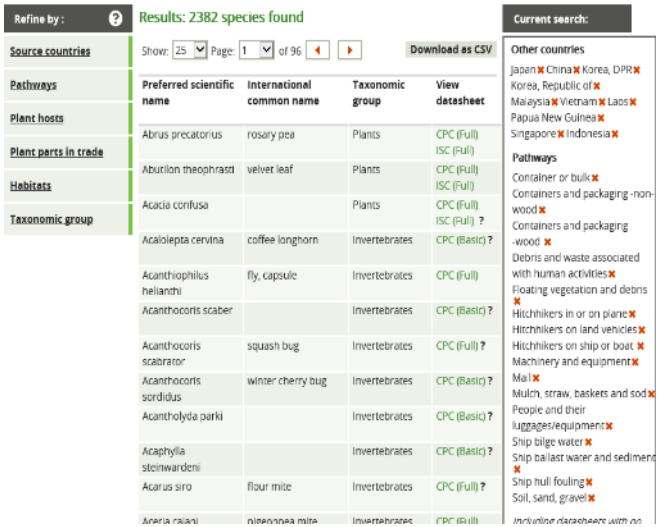
- Species “portals”
- Improved mapping
- Toolbox
  - Horizon scanning
  - Pest risk analysis (PRA)
- Resources
  - Diagnostics
  - Communication materials
  - Data
- Abstracts
- News

Horizon Scanning Tool (beta)

Prioritizing invasive species threats

The Horizon Scanning Tool is a decision support aid that helps you identify and categorize species that might enter a particular country from another country.

Using the Horizon Scanning Tool



Targeted users: risk assessors, plant protection officers, quarantine officers, protected area managers and researchers

Potential threats can be prioritised by:

- Habitats
- Pathways
- Plant hosts
- Plant parts in trade
- Taxonomic group

Results output as a list with links to datasheets in the ISC and CPC. Exportable as .csv for analysis

https://www.cabi.org/horizonscanningtool

Supported by USDA

3. Strengthened policies/ strategies for Invasive Species (IS) management

- Assist countries to strengthen and/or develop and implement National Invasive Species Strategies and Action Plans (NISSAPs), Ecosystem Management Plans (EMPs) and biosecurity plans

- Assist countries to strengthen regulatory frameworks for the improved management of IS

Australia-Africa Plant Biosecurity Partnership (AAPBP)

- Funded by ACIAR, led by PBCRC and CABI
- Focus on capacity development
  - 10 countries in East and South Africa
  - 15 Senior Fellows (NPPOs)
  - 30 Associates (NPPOs, private sector)
  - Six week study tour in Australia
  - Series of four training workshops
  - Mentoring, building networks

Impact pathway

Activities	Outputs	Outcomes	Impacts
Workshops Training courses Mentoring	More knowledge Improved skills More "Capacity"	Using knowledge, skills, capacity New measures Better P-P cooperation	More trade Fewer interceptions More productivity "Development"

4. Effective management of Invasive Species (IS), including prevention, EDRR and control

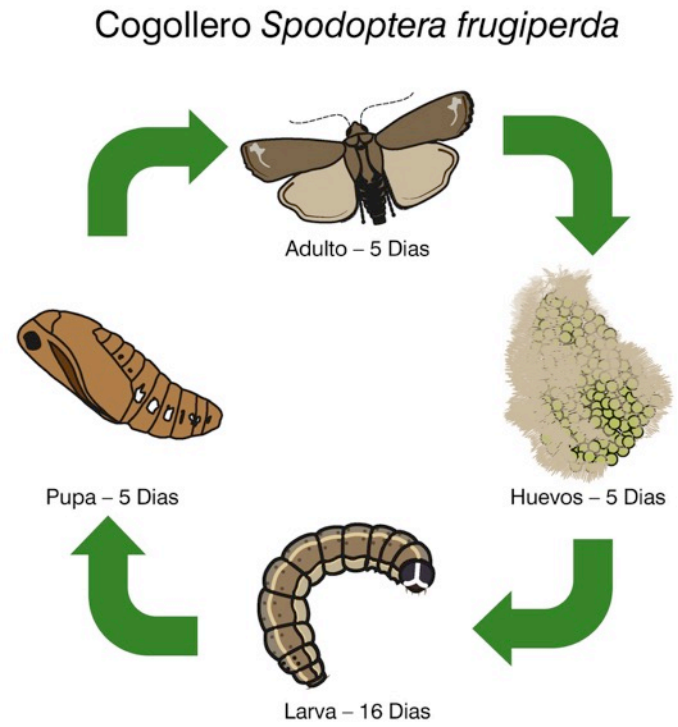
- Prioritise risks and threats from IS in agriculture and the environment
- Undertake collaborative research on improved methods for the management of prioritised IS
- Provide the information/tools needed by stakeholders (particularly the men and women most impacted) to take action against IS
- Promote Integrated Pest Management (IPM), especially the use of host specific and damaging biocontrol agents and other low-risk methods for improved IS control

Example: Biological control of Cassava mealybug

- Native to South America it was accidentally introduced to Africa in the early 1970s
- Reduced cassava yields by 80%
- Biological control research conducted by CABI in collaboration with other organizations resulted in the introduction of the biocontrol agent *Epidinocarsis loepezi*
- Improved yields by 2 ½ tons/hectare
- Benefit:cost ratio of 149:1

Example: Biological control of Mango mealybug

- Native to Asia it was accidentally introduced to Africa in the 1980s
- Biological control research conducted by CABI in collaboration with other organizations resulted in the introduction of the biocontrol agent *Gyranusoidea tebygi*
- Improved fruit production by 142% with each mango producer gaining US$328/year
- Benefit:cost ratio of 145:1 in Benin alone



Potential for biological control of fall armyworm (FAW) in Africa

- FAW originates in South/Central America and has become a major invasive species in Africa and has now also reached Asia (India)
- Crop losses in key crops, especially maize
- Search for classical biological control agents in South America have started for eventual export to Africa
- Classical biocontrol approach relies on free exchange of genetic resources
- Experience on the management of these species from LAC
- **South – South Cooperation**

Review Article

REVISÃO DA BIOLOGIA, OCORRÊNCIA E CONTROLE DE *Spodoptera frugiperda* (LEPIDOPTERA, NOCTUIDAE) EM MILHO NO BRASIL

BIOLOGY REVIEW, OCCURRENCE AND CONTROL OF Spodoptera frugiperda (LEPIDOPTERA, NOCTUIDAE) IN CORN IN BRAZIL

Biological control of invasive alien plants

Target	Agent	Country
Salvinia molesta	*Cyrtobagous salviniae*	Zambia, Uganda
Lantana camara	*Uroplata girardi*	Zambia
Eichhornia crassipes	*Neochetina* spp.	Ethiopia, Maramba R – Zambia
E. crassipes	*Eccritotarsus catariensis*	Ghana
Opuntia stricta	*Dactylopius opuntiae*	Kenya
O. monacantha	*Dactylopius ceylonicus*	Kenya
Parthenium hysterophorus	*Zygogramma bicolorata*	Tanzania
Chromolaena odorata	*Cecidochares connexa*	Tanzania
Opuntia engelmannii	*Dactylopius opuntiae*	Kenya*
Lantana camara	*Aceria lantanae*	Malawi*
Pistia stratiotes	*Neohydronomus affinis*	Malawi*
Mimosa diplotricha	*Heteropsylla spinulosa*	Malawi*
Acacia mearnsii	*Dasineura rubiformis*	Malawi


STOP
WELCOME TO CALIFORNIA!

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

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Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Agency for Development and Cooperation SDC