Plantwise and Invasives

Presentation to GRA - September 2017

Janny Vos, Strategic Partnerships Director

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CABI

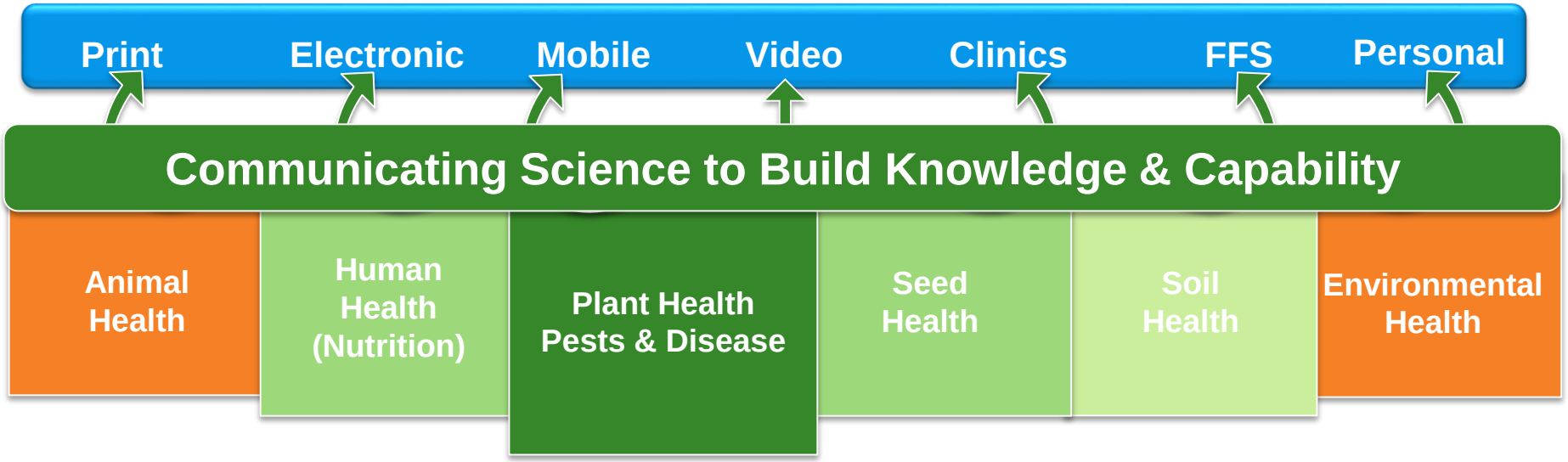
CABI

- **not-for-profit** intergovernmental organisation established in **1910** by a UN treaty
- Provides scientific expertise and information about **agriculture** and the **environment**
- Owned by **48 member countries**
- **500 dedicated staff worldwide** in 21 locations

CABI's mandate

"promote the advancement of agriculture and allied sciences through the provision of information, scientific and related services on a world-wide basis"

CABI's capacity to build knowledge and capability



Issue

40% of crops are lost to pests and diseases

- "*Climate change is altering the distribution, incidence, and intensity of plant pest and diseases*"

  Climate-Related Transboundary Pests and Diseases, FAO technical report, 2008

As a result

- Reliance on pesticides is increased
- Vulnerability to climate shocks is increased
- Farm productivity and incomes are reduced

*Associate member

Plantwise & Invasives

- Approximately 800 million people have inadequate access to food and their livelihoods are threatened by invasives
- **Reducing losses by just 1% would feed 25 million more people**
- In 2009, CABI MCs gave mandate to develop **Plantwise**, which was launched in 2011
- In 2016, we received a mandate to develop **Invasives,** which we aim to launch in 2018

Plantwise – reducing crop losses to increase food security and improve rural livelihoods

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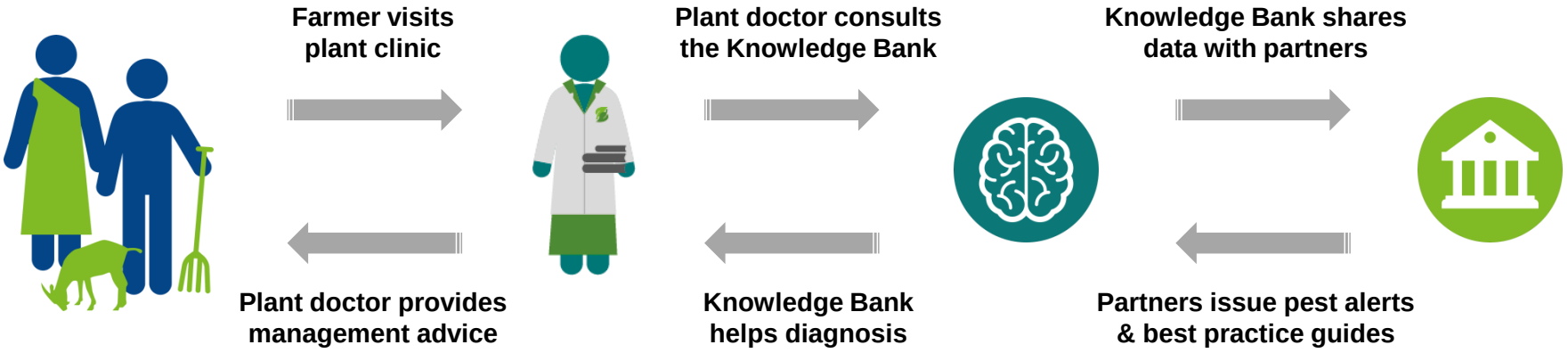
Lose less, feed more

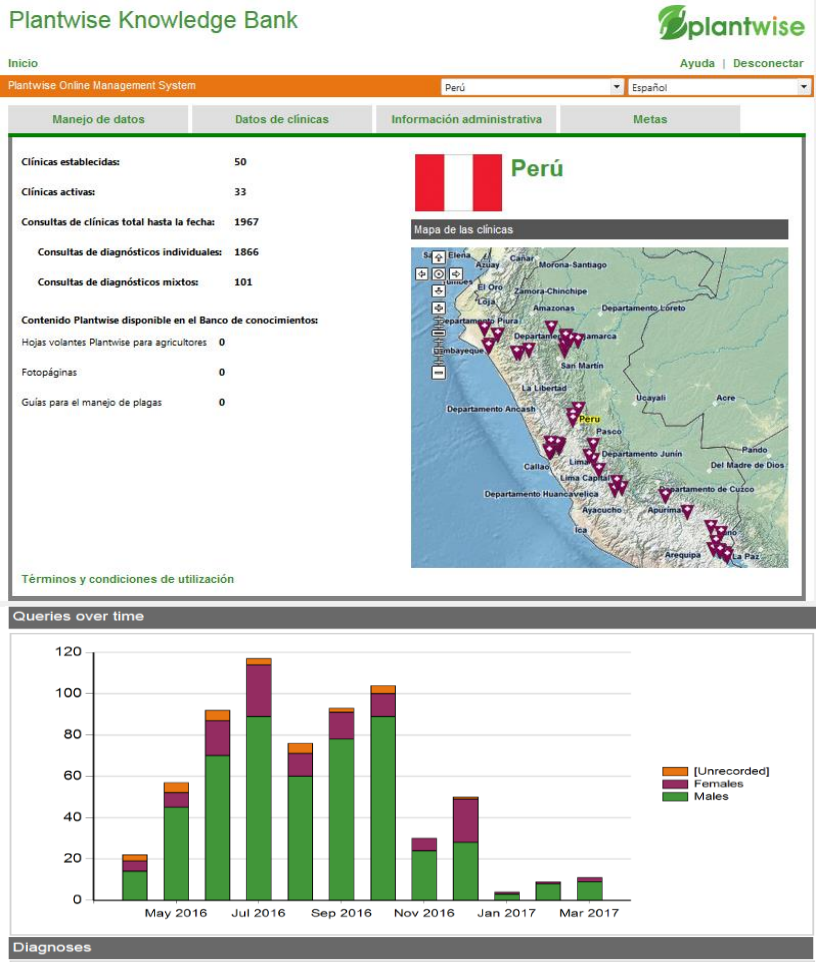
Replicate the human health clinic concept

Provide diagnosis and recommendation on any problem and any crop

Staffed with plant doctors from government, private sector, public sector

Record snapshot of problems on farmers fields fed back to global knowledge bank



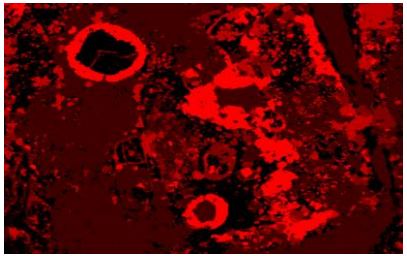


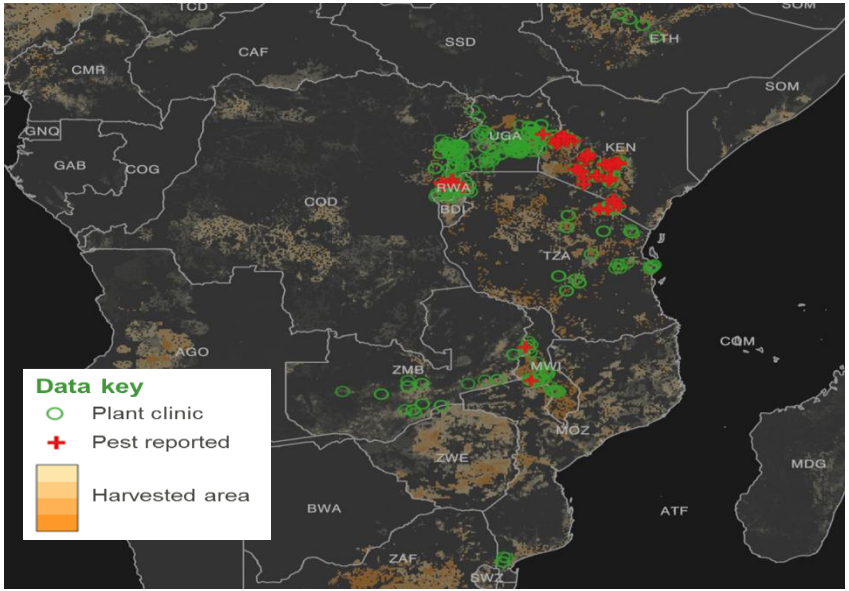
Plantwise Data

- Data analysis used in an increasing number of ways
- >300,000 plant clinic records from 30 countries
- Information on partner organisations, plant clinics, etc.
- Available in English, French, Spanish

Opportunities

- Making use of Geographic Information Systems (GIS)
  - Gaining insights by **combining clinic data** with other sources ➔
  - Using satellite data to **map the spread of invasive species** ➔





Spread

The Americas

Barbados
Bolivia
Brazil
Costa Rica
Grenada
Honduras
Jamaica
Nicaragua
Peru
Trinidad & Tobago

Africa

Burkina Faso
DR Congo
Ethiopia
Ghana
Kenya
Malawi
Mozambique
Rwanda
Sierra Leone
Tanzania
Uganda
Zambia

Asia

Afghanistan
Bangladesh
Cambodia
China
India
Myanmar
Nepal
Pakistan
Sri Lanka
Thailand
Vietnam

Reach

Farmer field schools

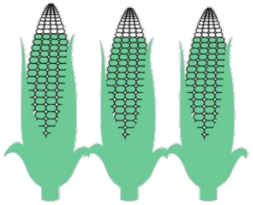
Plant clinics

Plant health rallies

Mobile messaging

Radio & TV broadcasts

Impact



79% of farmers reported yield increases after visiting a plant clinic

70% of farmers reported their income increased after visiting a plant clinic

Over half of plant clinic prescriptions recommend non-chemical inputs

25% of Plantwise plant doctors worldwide are female

All Plantwise countries contribute funds and/or staff time towards activities

Plantwise has linked with **70 private sector organisations**

Plantwise donors

UKaid
from the British people

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Ministry of Foreign Affairs of the Netherlands

Irish Aid
Rialtas na hÉireann
Government of Ireland

IFAD
INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

Australian Government
Australian Centre for International Agricultural Research

Ministry of Agriculture,
People's Republic of China

Invasive Species Threatening Livelihoods

Working together to manage biological invasions

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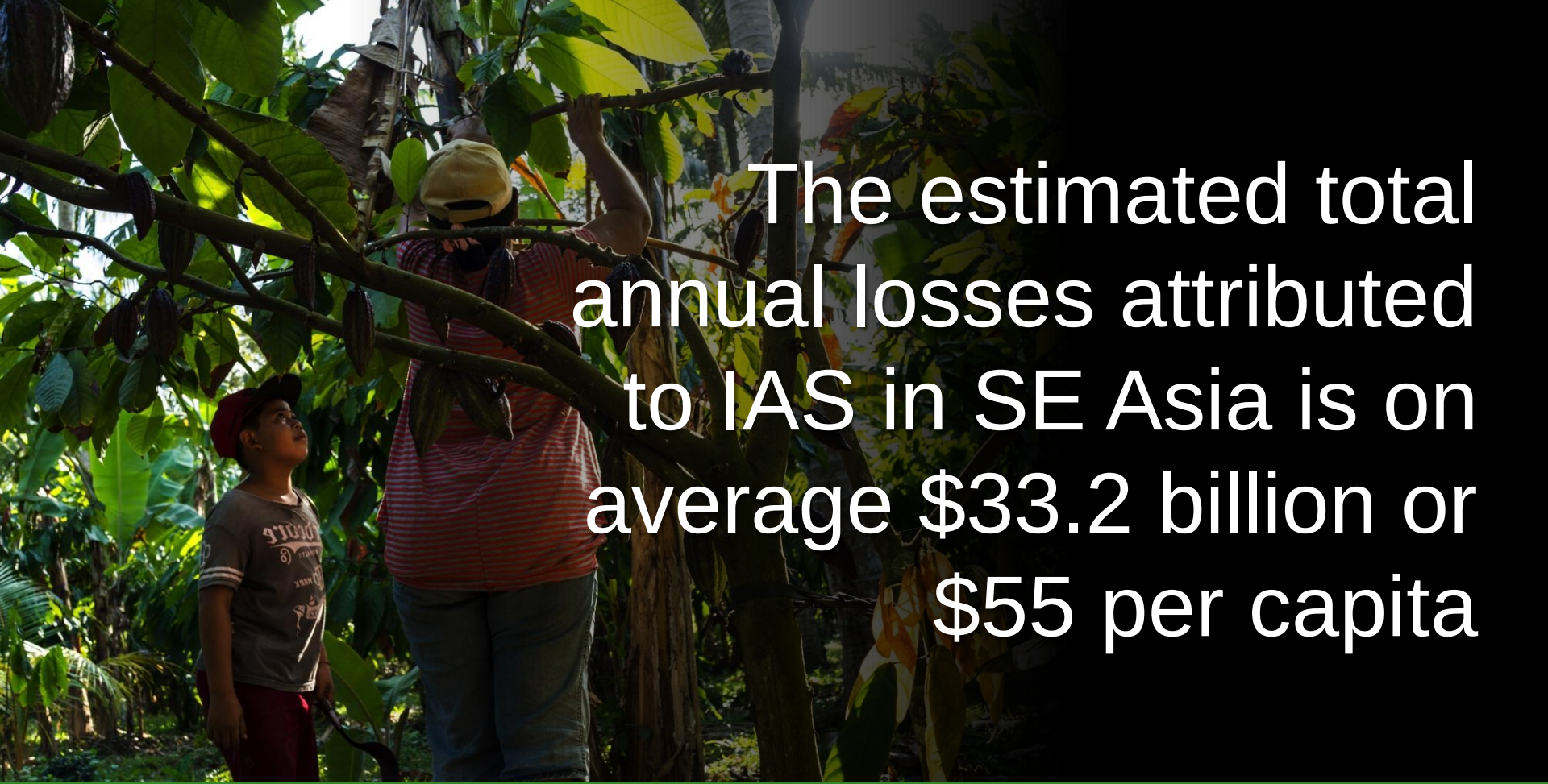
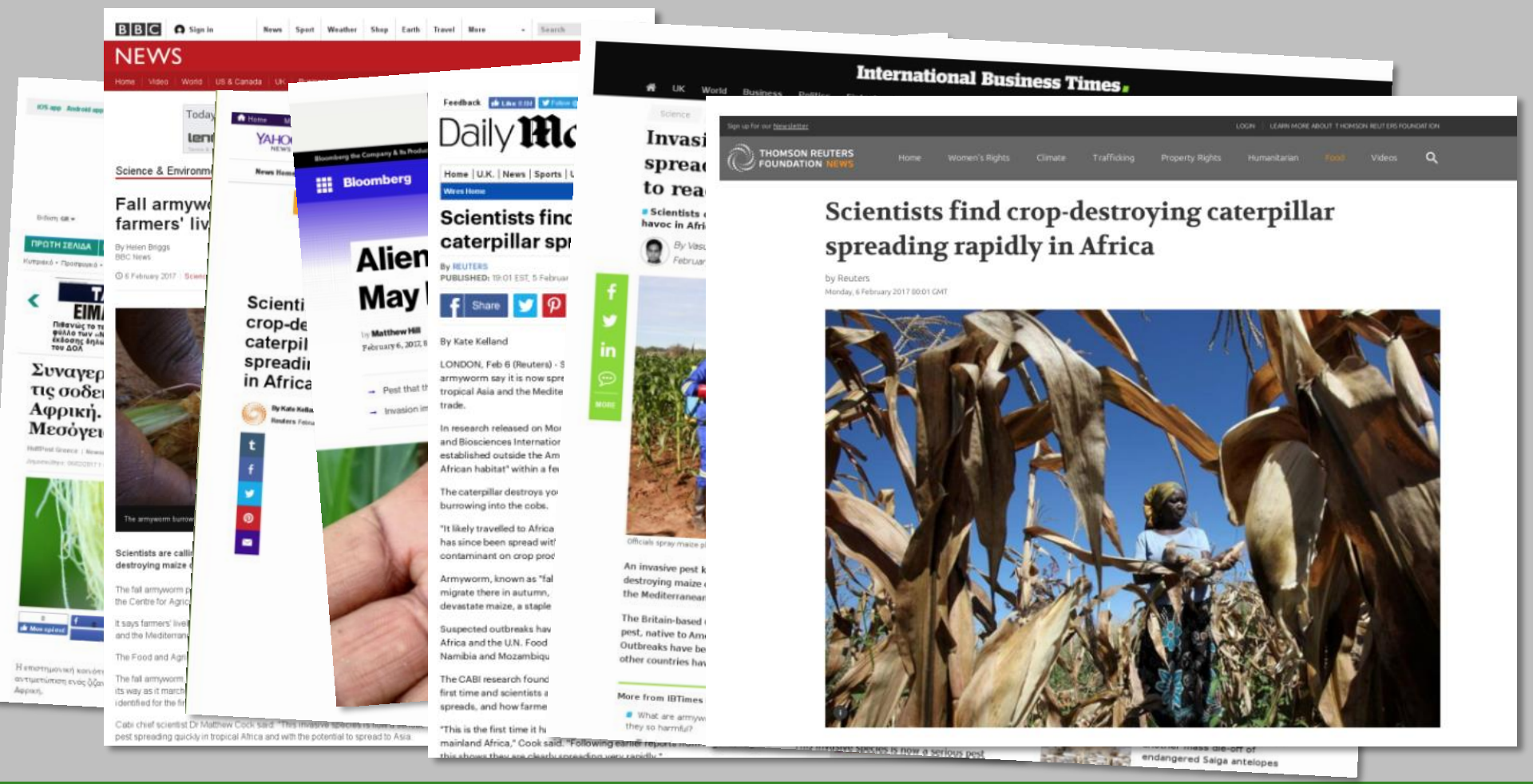
Invasive species are a **global issue** impacting the **lives of millions** of people



The estimated total annual losses attributed to IAS in SE Asia is on average $33.2 billion or $55 per capita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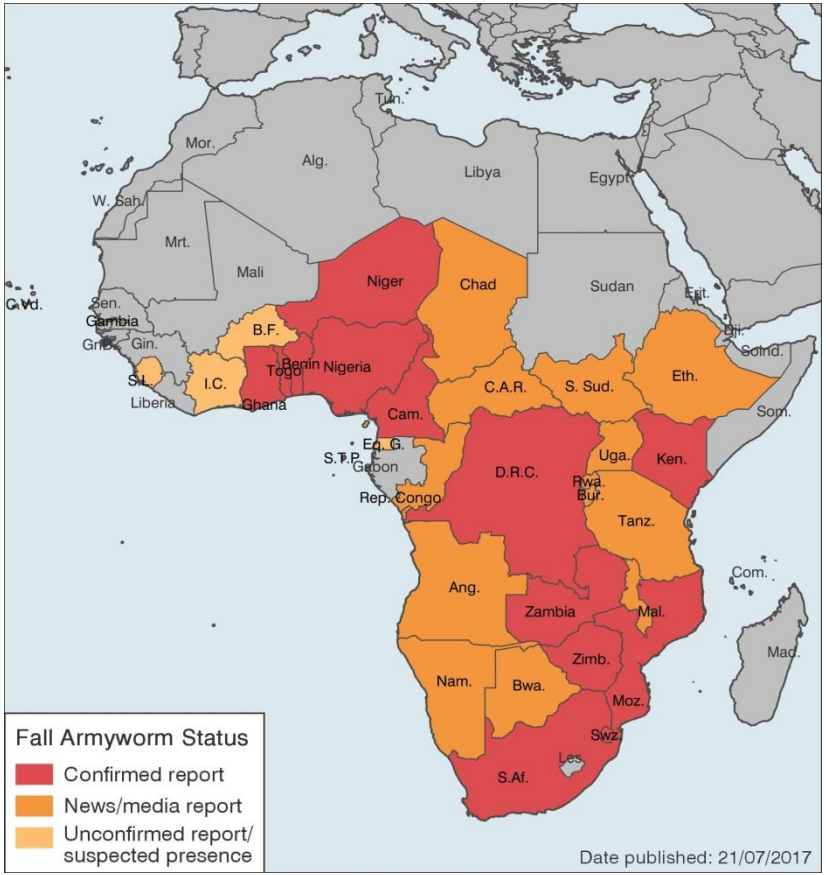
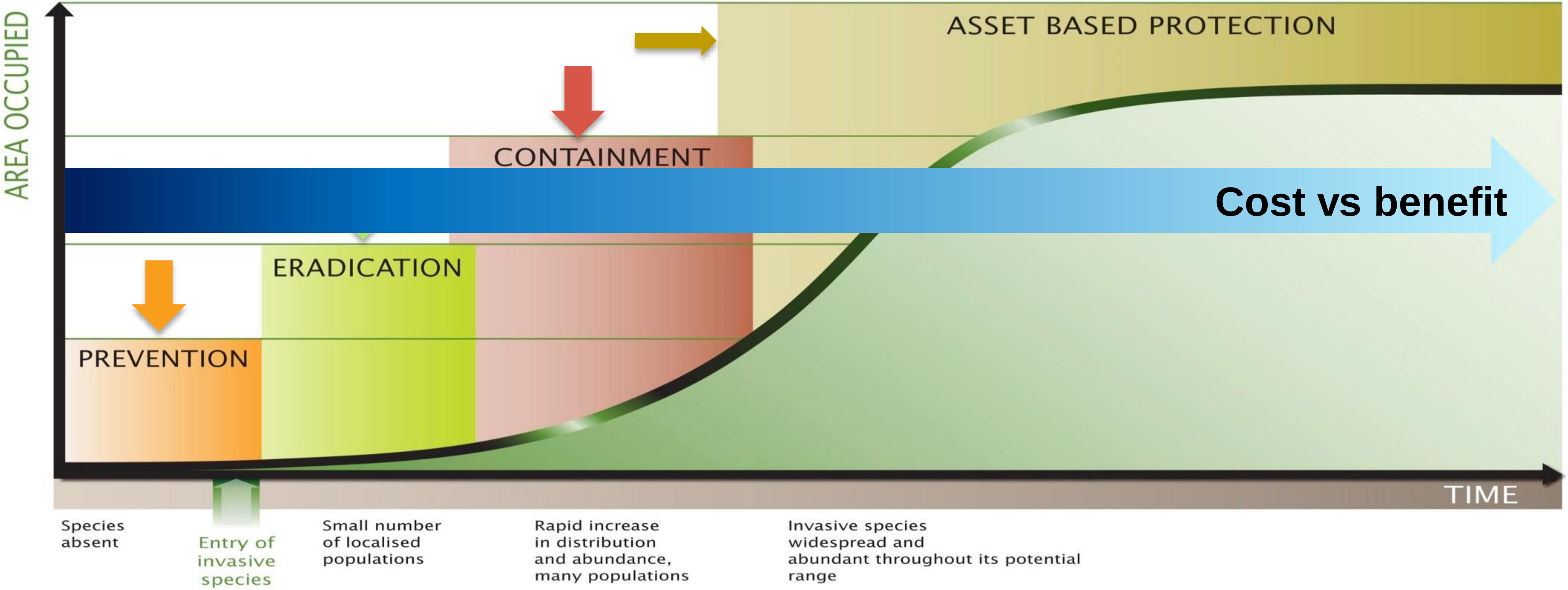
International Business Times
THOMSON REUTERS FOUNDATION NEWS
Scientists find crop-destroying caterpillar spreading rapidly in Africa
by Reuters
Monday, 6 February 2017 00:01 GMT
Daily Mail
Scientists find caterpillar
By REUTERS
By Kate Kelland
Bloomberg
Alien
May
Fall armyworm farmers' liv
By Helen Briggs
BBC News

Fall Armyworm status as of 21 July 2017





- Keep pests currently absent out of country
- Where an incursion is detected, rapid response is required to determine the extent of the incursion and
- Prevention … General surveillance, target species that are known risk
- Often not feasible either because incursion (arrival) of new species is not spotted early enough; therefore
- Not practical or economically justifiable for attempting to create pest free areas
- Eradication not feasible once a species becomes established
- Containment of the spread/distribution of the species in part of the area
- Concerned with preventing spread of the species that has established
- Involves regulatory activities like prevention of movement of planting materials and/or produce
- Involves sustained control activities like maintaining species free areas
- Responsibility falls on the owner of the crop or natural resource but needs advise on how to manage the problem
- Requires action by many stakeholders and may not be cost effective
- Feasible … if species detected and reported early
- Extension and solutions needed

Analogy: human health care

Targeted health care

General health care

Human health clinics

Addressing invasive species

Targeted approach to the worst species

Plantwise

Plant health clinics provide a touch point mechanism for advising individual farmers on invasive management options

Supporting the

SUSTAINABLE DEVELOPMENT GOALS

SDG 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

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*

Partnering for a sustainable future

Known species and solutions, new approach

To manage the worst invasive species:

- Three stage approach of prevention, early detection and rapid response, and control and restoration
- Multi-sectoral and multi-national systems approach
- Partnerships are key

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merci
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zikomo
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ありがとう
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gracias
kiitos
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thank you
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asante
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terima kasih
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Patricia Neenan
p.neenan@cabi.org