



**National partnerships
in Asian countries to collaborate
with **Global Program Plantwise** as
diagnostic and advisory services
in agriculture**

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LOSE LESS, FEED MORE
www.plantwise.org



The Need

- Nearly one billion going hungry
- Water and energy scarcity
- Climate change
- 40% of the food currently grown is lost to pests and diseases¹
- Reducing crop losses by 1% will feed millions more
- The key is **knowledge**

¹ Oerke 2006





The Goal

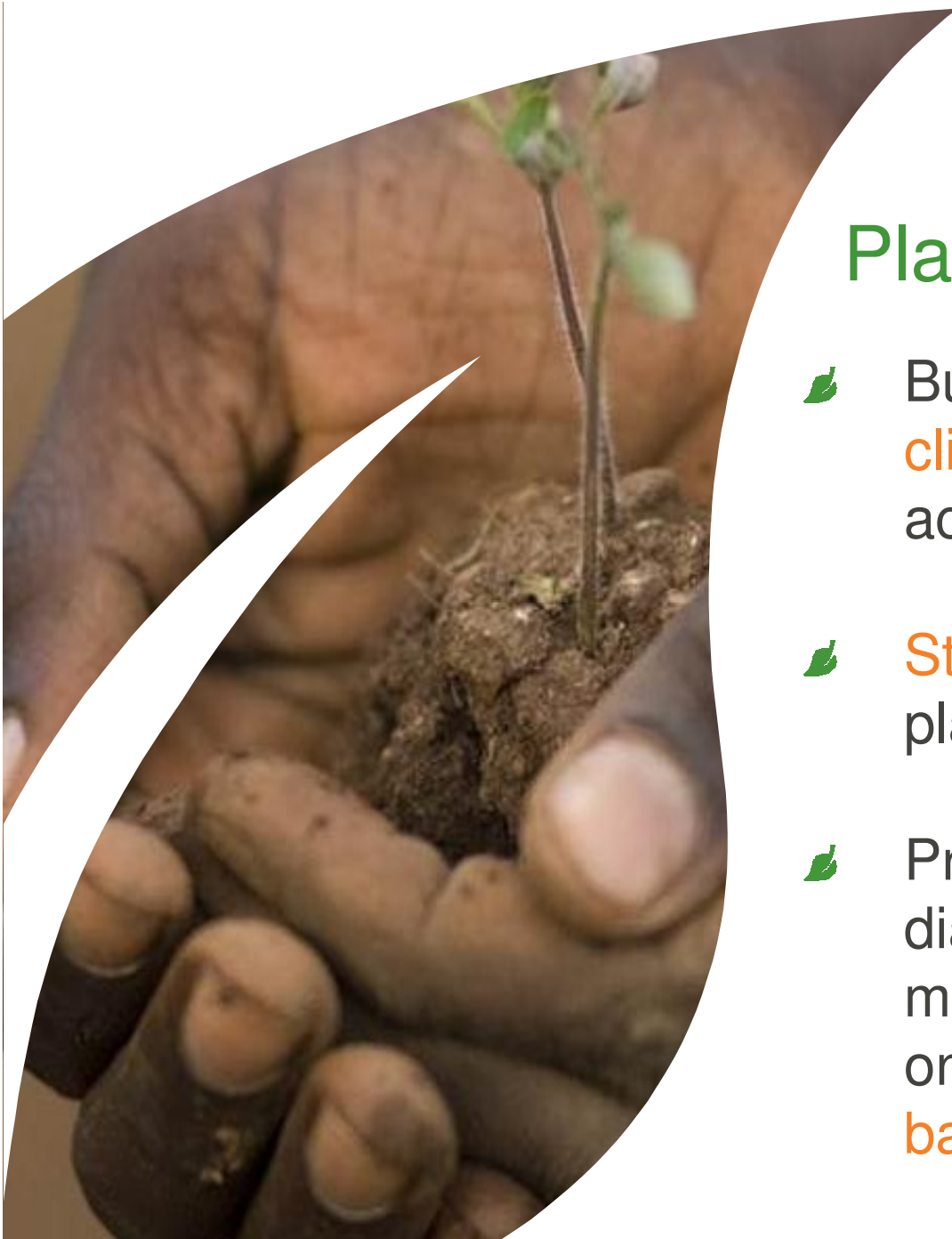
Plantwise is a global programme, led by CABI, to increase food security and improve rural livelihoods by reducing crop losses.

Lose less, feed more
Collect and share knowledge

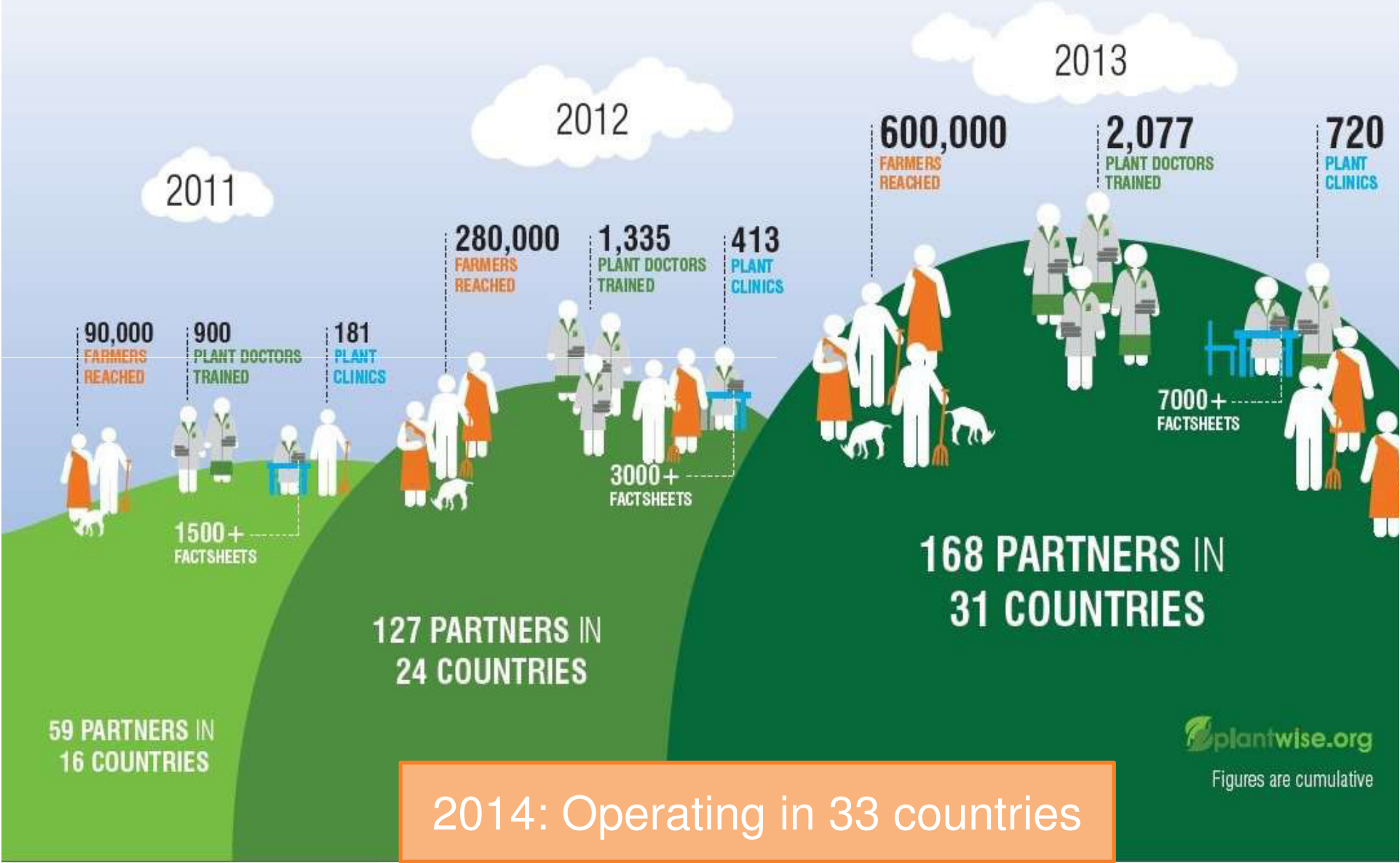


Plantwise concept

- Building a **network of plant clinics** that are readily accessible to farmers
- **Strengthening linkages** within plant health systems
- Providing information on pest diagnostics, distribution and management through the online **Plantwise knowledge bank**



Plantwise growing year-on-year



2014: Operating in 33 countries



Core training for plant doctors

MODULE 1: How to become a plant doctor

- 🌿 Field diagnosis
- 🌿 Operation of clinics

MODULE 2: Plant healthcare

- 🌿 Managing plant health problems
- 🌿 Choosing options





Training in Nepal



Plant clinics

- Work like human health clinics (doctors, linked to pharmacies, diagnostic services and other expert groups)
- Demand-driven
- Plant doctors (= extension staff) record data about the farmer, the problem, and the advice they give
- Plant clinics therefore serve as channels for the two-way flow of information to and from farmers





Plant Clinics in SriLanka



Additional Plantwise Training

- 🌿 Monitoring Plant Clinic Performance
 - 🌿 introduces M&E methods
- 🌿 Extension Messages
 - 🌿 develops locally-relevant extension materials (PMDGs)
- 🌿 Data Management
 - 🌿 introduces ways to use plant clinic data for national purposes

四川省植物智慧 (Plantwise)



Pest management decision guides




(Green and Yellow Lists)



PEST MANAGEMENT DECISION GUIDE: GREEN AND YELLOW LIST



Cowpea mosaic virus on cowpea

	Prevention	Monitoring	Direct Control	Direct Control	Restrictions
 Aphids (<i>Aphis craccivora</i>) on cowpea stem (J. Libinger, CAB)	<ul style="list-style-type: none"> Use clean seed Select aphid-resistant varieties, such as Silpea 1, 2 or 3 Use the correct planting density: <ul style="list-style-type: none"> 50 x 20 cm (erect variety) 50 x 30 cm (spreading variety) 1.0 x 1.0 m (local: Tabe spreading variety) Remove alternative aphid host plants from around the field (Weeds are generally host plants) Avoid planting between November and March (dry season). Plant during the early rains, especially if using the local Tabe variety. Plant a trap crop (e.g., <i>Chromolaena odorata</i> – Nuwba [Mende], Bupi-bupi [Terne]) around the field to trap the aphids which spread the disease 	<ul style="list-style-type: none"> Scout/make regular visits to the farm to look for signs of aphid infestation: <ul style="list-style-type: none"> Presence of aphid colonies on the underside of leaves Presence of ants at apical part of plants Presence of honeydew on leaves, peduncles and stems Leaf shedding in severe infestations Look for signs of cowpea mosaic virus infection <ul style="list-style-type: none"> Leaf yellowing and deformation (folding at margin) Stunted plants 	<ul style="list-style-type: none"> Early in the aphid infestation and during the early stages of the aphid life cycle, apply a botanical mixture consisting of leaf extracts from papaya, teabush, Siam weed (<i>C. odorata</i>) and neem. See related factsheet for more information on how to prepare and apply the mixture Uproot and bury infected plants away from the crop field 	<ul style="list-style-type: none"> Early in the aphid infestation and during the early stages of the aphid life cycle, apply <ul style="list-style-type: none"> cypermethrin + dimethoate 	<ul style="list-style-type: none"> Moderately hazardous (WHO Class II) Apply at most two times per planting season
 Aphids on stems (J. Libinger, CAB)				<ul style="list-style-type: none"> cypermethrin + dimethoate 	<ul style="list-style-type: none"> Moderately hazardous (WHO Class II) Apply at most two times per planting season Apply early in the morning or late evening
 Infection (M. Kanyo-Isak, CAB)				<ul style="list-style-type: none"> There are no chemicals against viruses. Once a cowpea plant has been infected with Cowpea mosaic virus, spraying with a pesticide will not cure the plant. 	

Sierra Leone

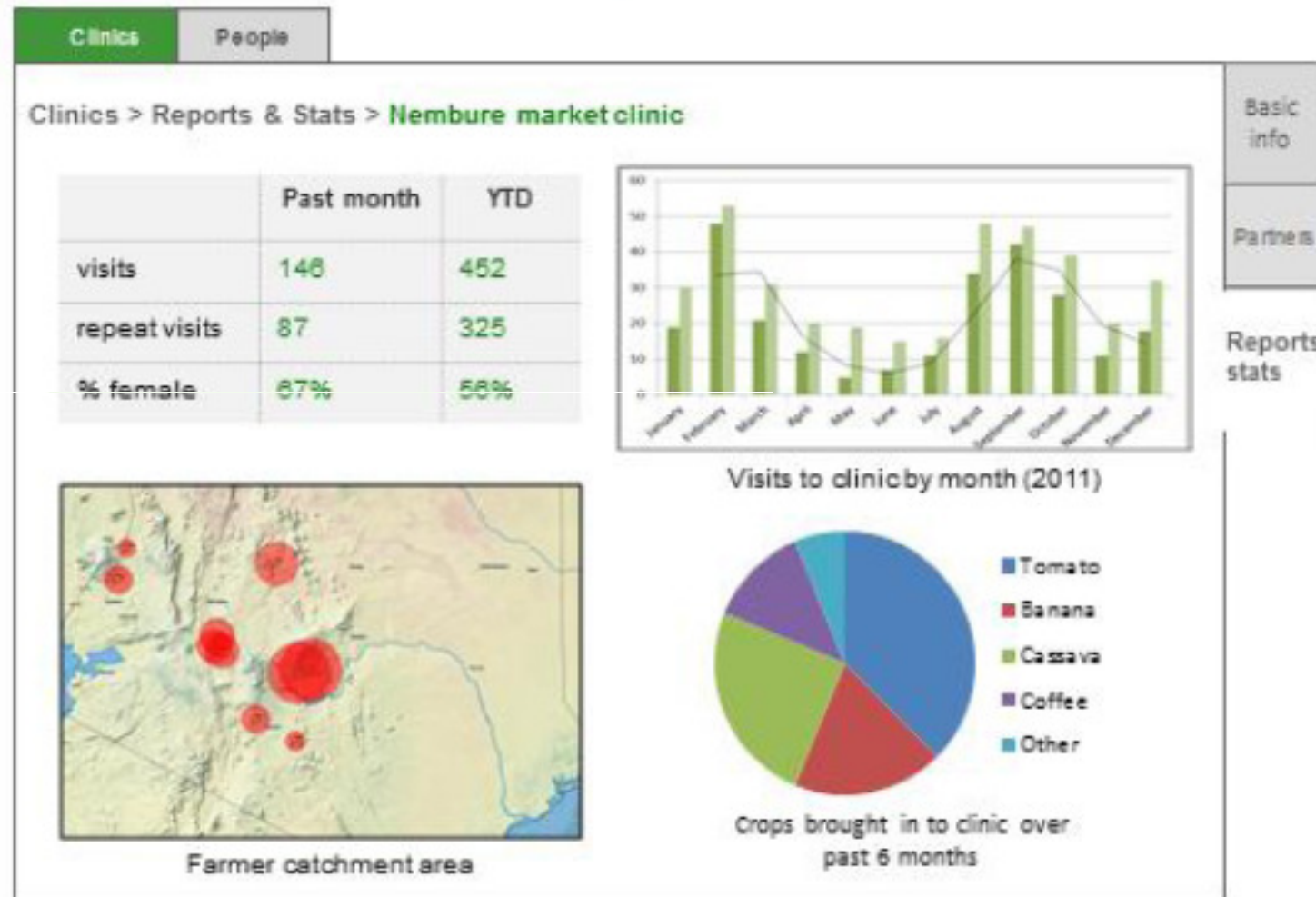


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Plant clinic data analysed through Knowledge Bank



🌿 Open/restricted access to national plant clinic data

Knowledge Bank

<http://www.plantwise.org/KnowledgeBank>



- 🌿 A comprehensive online resource, continuously updated according to user needs for pest diagnosis and mapping, as well as plant health management

IDENTIFY A PEST PROBLEM

SEARCH BY: Symptoms, Plant type, Major pests, Diseases

SEARCH BY: Search results: 8 (Sorted by relevance)

Leaf miner	Grasshopper	Whitefly
Scale	Spider mite	Black fly
Mealybug	Leaf miner	Grasshopper
Scale	Spider mite	Black fly
Mealybug	Leaf miner	Grasshopper
Scale	Spider mite	Black fly
Mealybug	Leaf miner	Grasshopper
Scale	Spider mite	Black fly

Go to diagnostic tool...

FIND A FACTSHEET

Enter pest problem or crop here

Search factsheets

Factsheet Booklet Builder (0)

PEST DISTRIBUTION

Pest distribution map

Go to distribution map page...

NEW PEST REPORTS

PLANT HEALTH NEWS

PLANTWISE BLOG

Country-specific sites



Plantwise Kenya

[Plantwise Clinics Login](#)

[Change Country](#)

Pest Management

Recently added factsheets for Kenya

- [Aflatoxins in maize.](#)
- [Soap controls aphids in beans.](#)
- [Coffee wilt disease.](#)
- [Preventing coffee wilt disease.](#)
- [Fusarium wilt of banana](#)

[See all factsheets for Kenya...](#)

Common pests being seen in Kenya

- Coffee
 - [coffee berry disease](#)
 - [coffee leaf rust](#)
- Bananas/plantain
 - [banana weevil](#)
 - [Panama disease of banana](#)
- Maize
 - [African maize stalk borer](#)
 - [Maize streak virus](#)

[Go to full pest list...](#)



FIND A FACTSHEET

Enter pest problem or crop here

[Search factsheets](#)

[Go to treatment support page...](#)



HELP IDENTIFY A PEST PROBLEM

Crops

Please select a crop...

Part of plant being affected

--Select a plant part--

[See results](#)

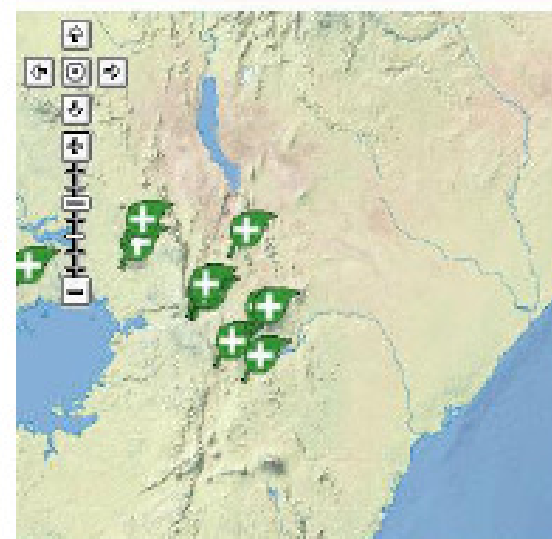
[Go to full diagnostic search...](#)



plantwise

www.plantwise.org

Clinic Locations



[Go to map...](#)



Plant health news and Pest alerts for **Kenya**

[ICIPE to strengthen fight against fruit...](#)

[Army Worms Invade Meru, Tharaka Farms](#)

[New Maize Breed to Fight Striga](#)



In-country partnerships

- With national governments as the key partner, Plantwise strengthens national plant health systems by linking stakeholders:
 - extension services
 - plant protection services (NPPO)
 - diagnostic/research services
 - agro-input suppliers
 - farmers and community-based organisations
 - post-secondary educational institutions
 - NGOs



Nepal



Cambodia



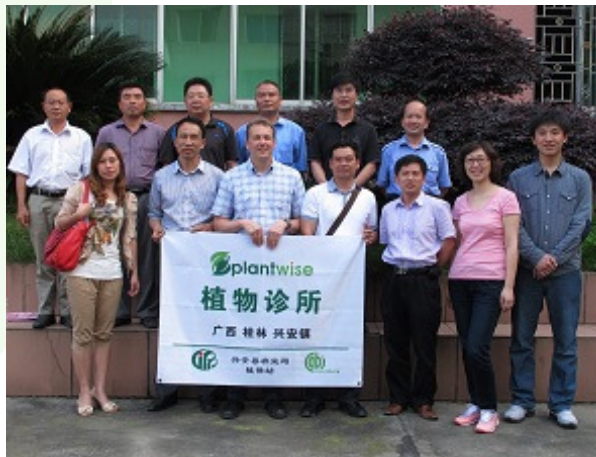
Srilanka



Afghanistan



China



India





Myanmar



Pakistan



Thailand

Vietnam



Country intervention strategy: Theory of Action

Assessment

Pilot

Consolidation

Scale-up

Sustainability

PLANT CLINICS

Plan with partners

Train plant doctors and establish first plant clinics

Consolidate operations and quality assurance

Train trainers; support expansion of clinic networks

Backstop and advise on operations; share lessons learnt

STAKEHOLDER LINKAGES

Carry out rapid stakeholder assessment

Facilitate stakeholder linkages ; constitute national forum

Forge and strengthen links

Promote maintenances of functional links

Promote more effective and dynamic relationships between stakeholders

DATA MANAGEMENT AND USE

Raise awareness of data potential

Train partners in data management; identify key problems

Establish data systems; run mass extension campaigns

Support use of data to inform PHS services; research, vigilance etc.

Support data sharing and use as required; central data resource continues to be updated

INFORMATION EXCHANGE AND KNOWLEDGE BANK

Analyse existing knowledge systems

Facilitate development of information resources

Facilitate information exchange between stakeholders

Explore additional opportunities for information exchange

Maintain high quality content that can be used for materials as needed

MONITORING & EVALUATION

Carry out baseline surveys

Put in place basic monitoring including training

Research to evaluate progress / outcomes, and learn lessons

Support national monitoring; research on scaling up and impact

Share lessons and support regional and global PHS knowledge exchange

ADVOCACY : Community, regional, national and international engagement . Includes national forum; publicity, publications, meetings, workshops, exchange visits and Plantwise website (www.plantwise.org)



Each PW country is different!!

- 🌱 Programmes evolve and the pathways followed towards sustainability will depend on
 - 🌱 country context
 - 🌱 political systems
 - 🌱 the way extension, crop protection and research stakeholders currently function
 - 🌱 services delivered
 - 🌱 Culture and agriculture systems

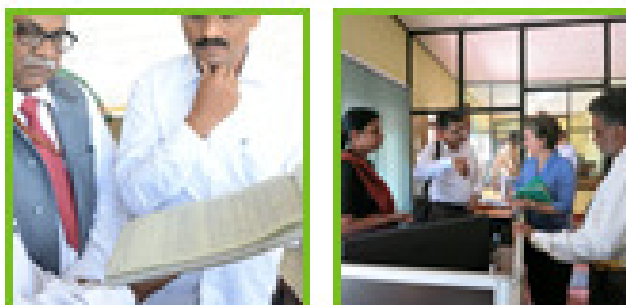


Plantwise donor feedback

- Work towards **sustainability** by 2020: phase-out the role of donors & phase-in role of Plantwise country governments
- Continue investment into data capturing and analysis for the benefit of Plantwise countries
- Expand reach of PW information and knowledge through other extension methods
- External evaluation of Plantwise in Asia in 2015 and CLA in 2016

Sustainability

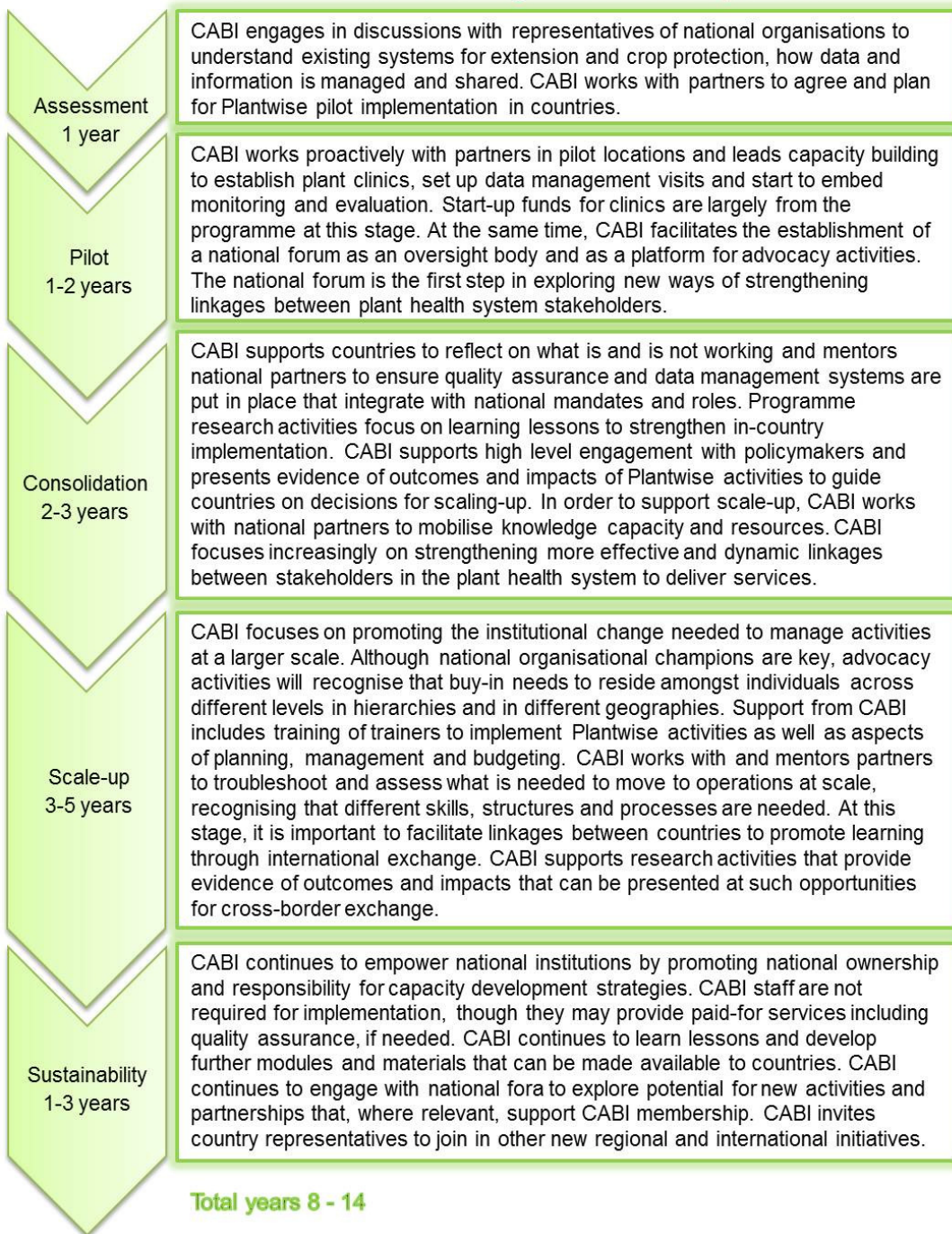
- Positive changes **will continue** beyond the lifetime of the programme
 - **independent** of direct support from CABI or donors.
- **Stakeholder Interaction**
 - To fulfil their **mandates**
- Implementation of **Plantwise Approach**



Sustainability -Indicators

- Plant Clinics: incorporated with sustained budgets
- Plant health system stakeholders interact in novel manner established under PW approach
- Data from plant clinic records integrated with other sources of information for utilisation
- access to appropriate, timely and locally relevant information
- Increased adoption of improved technologies and practices

Role of CABI in country intervention phases





International partnerships



International Plant Protection Convention
Protecting the world's plant resources from pests

- CABI is collaborating with the IPPC Secretariat to identify ways in which Plantwise can support NPPO mandates for appropriate and timely pest reporting
- Plantwise should collaborate with the IPPC Contact Point in each country to ensure information exchange



Award winning programme  plantwise

NEF Innovation Award 2013

**‘Best example of
government policy supporting
innovation’**



Shortlisted:

**The Queen's Award for
Enterprise 2014**

Sustainable Development Category



Partner countries



Plantwise is operating in 33 partner countries (2014)



Thank you

We wish to acknowledge the support of our donors, as well as our national and international partners who make Plantwise possible



Ministry of Foreign Affairs of the Netherlands



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC



Ministry of Agriculture, People's Republic of China

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