



# Agriculture and Climate Change

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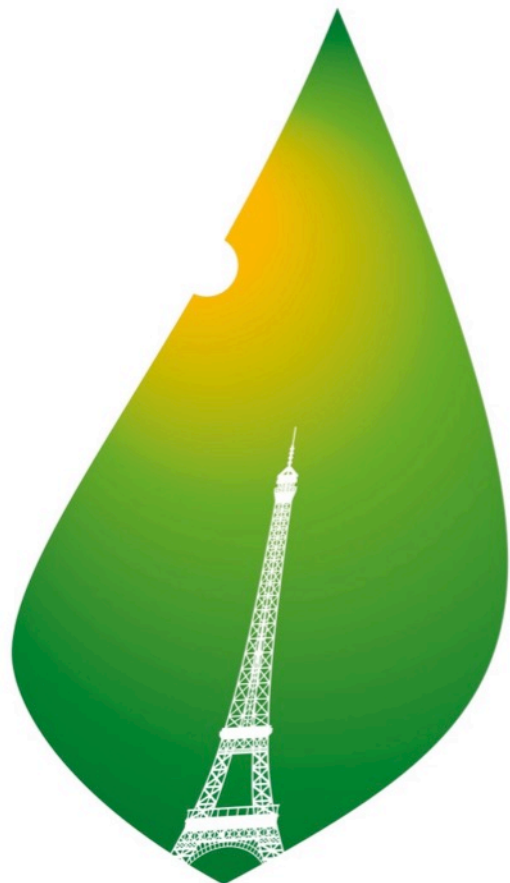


# Background

- Global food supply needs to increase by 60% from 2006 to 2050
- Agriculture is affected by climate change
  - Increase/decrease of production
  - Increased variability of production
- Agriculture drives climate change
  - Emissions from agriculture, forestry and other land use account for roughly 24% of global GHG emissions

This means that agriculture needs to overcome three interlinked challenges:

- Sustainably increase agricultural productivity to meet global demand
- Adapt to the impacts of climate change
- Contribute to reducing the accumulation of GHGs in the atmosphere



COP21 • CMP11

**PARIS 2015**

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## Background (cont.)

- ‘Little progress’ to address climate adaptation and mitigation made since COP17 (2011)
- COP23 (2017) paved the road for more consolidated climate action in the agricultural arena
  - This is now reflected in the parties’ Nationally Determined Contributions (NDCs)
- Donors have also recognised the need for increased climate financing which has led to:
  - Increase in ODA allocation for climate change
  - Creation of dedicated funds (e.g. GCF)

**These developments open up exciting opportunities for CABI to help make agricultural systems become more resilient to climate change (and contribute to climate change mitigation)**



# CABI's contributions

- CABI can support countries to fulfil their NDCs
- CABI's core expertise in the following are of high relevance for climate resilience
  - Knowledge creation, management and dissemination
  - Strengthening capacities of national stakeholders
  - Research
- CABI's broad network of partners (at global, regional, country-levels) enhances the potential for innovation and implementation of climate responsive action



## CABI's vision

**CABI** envisions a world in which the agricultural sector is able to supply **sufficient**, **safe**, and **nutritious** food, and is embedded in a healthy and climate resilient landscape with clean water and air, healthy soils, and functional ecosystem services.

- **Sufficient food**: because climate change affects global crop yields
- **Safe food**: because climate change can affect pests and diseases and pest management strategies
- **Nutritious food**: because climate change can impact nutrient levels in important staple crops
- **Healthy ecosystems**: because intact ecosystems provide the best defence against climate change



# CABI's approach

- For this vision to become a reality, CABI recognises the need for action on three interlinked stakeholder levels:
  - **Farm/landscape level:** Farmers need to implement locally-adapted best management approaches and use climate-friendly technologies
  - **Supporting function level:** Coordinated support from various sources, including extension and research, is needed to enable farmers to make informed decisions
  - **Enabling environment level:** To catalyse adoption of climate adaptation/mitigation actions, appropriate policies/incentives, financial services, funding mechanisms, etc. are important
- CABI also recognises the need to work on multiple geographical scales, i.e. global/regional/country



# CABI goals

- To be able to deliver, CABI is working towards three overarching goals at corporate, project/programme, and member-country levels

## Goal 1: Corporate

Strengthened coordination and delivery of CABI's work on climate change adaptation and mitigation

## Goal 2: Project/programme

Enhanced sustainability and climate resilience of agricultural systems, their dependant livelihoods, and surrounding environments

## Goal 3: Member country

Enhanced capacities of member countries in climate change adaptation and mitigation

# Goal 1: Strengthened coordination and delivery of CABI's work on climate change adaptation and mitigation



- Increase the organisation's core expertise in climate change
- Develop CABI's expertise in new topics of relevance to agriculture and climate change
- Ensure that climate change is reflected in all major projects/programmes
- Develop organisation-wide climate change strategy
- Invest in order to obtain full accreditation for dedicated climate change funds
- Continue CABI's engagement with key alliances (e.g. Global Alliance for Climate Smart Agriculture; regional CSA alliances)



# Example 1: Engagement with Global Alliance for Climate Smart Agriculture (GACSA)

- Contribution to GACSA compendia on 'Supporting agricultural extension towards 'Climate-Smart Agriculture'
- Developed the concept of 'Climate Smart Pest Management' (CSPM)



Available at: <http://www.fao.org/3/a-bl361e.pdf>



Available at: <http://www.fao.org/gacsa/en/>

## Goal 2: Enhanced sustainability and climate resilience of agricultural systems, their dependant livelihoods, and surrounding environments



- Promote integrated crop management approaches (with special focus on climate smart pest management)
- Build institutional capacities of extension support systems (e.g. through Plantwise)
- Provide higher education programmes for agricultural professionals and policymakers
- Promote climate-resilient production of agricultural commodities
- Encourage agricultural diversification
- Capitalise on CABI's expertise in development of information resources and ICT tools
- Lead research projects aimed at improving understanding and forecasting of climate change impact on pests and pest management strategies
- Increase commissioning and publication of climate change related books/ebooks

## Example 2: Climate Smart Villages in South East Asia



- Collaboration between CABI-SEA and CGIAR-led Climate Smart Village (CSV) approach
- CABI's contributions in Climate Smart Villages in Vietnam, Laos, and Cambodia:
  - Increased awareness to consider pest management as a critical component in CSVs
  - Developed and promoted Pest Smart environment-friendly practices such as ecological engineering, pheromone traps, to increase resilience and sustainability of farmers
  - Provided better outreach and early warning system against pests and diseases to farmers through plant clinics
  - Developed a Pest Smart Manual for extension officers
  - Provided gender-based training using innovative extension approaches (e.g. use of ethno-science)



# Pest-Smart Practices and Early Warning System under Climate Change

# Goal 3: Enhanced capacities of member countries on climate change adaptation and mitigation



- Promote interaction between CABI and UNFCCC focal points
- Facilitate linkages between countries and regional CSA-alliances
- Joint development of project and programmes
  - Support member countries in accessing climate financing
  - Support countries to implement their Nationally Determined Contributions



## Example 3: Climate change knowledge management in India

- National partners approached CABI for support to develop project idea for Green Climate Fund
- Project aims at supporting implementation of State Action Plan on Climate Change
- Key problem: Smallholder farmers in Telangana State face a number of barriers to adoption of climate resilient technologies and making use of decision support tools to adapt to climate change
- CABI's contributions is expected to be in the area of:
  - Development of integrated knowledge management platform on climate resilience
  - Support upscale of data driven ICM-tools for extension workers, farmers and policymakers
  - Promoting complementary extension approaches for increased outreach and adoption



# Key questions for breakout groups

- What do you think of CABI's proposed goals and activities?
- Within these areas, what are the key opportunities that you see?
- What ongoing country/regional-level initiatives on climate adaptation/mitigation offer potential for collaboration?
- With CABI's three goals and proposed intervention areas, do you think that CABI needs to consider other member country priorities?

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