Agriculture and Climate Change

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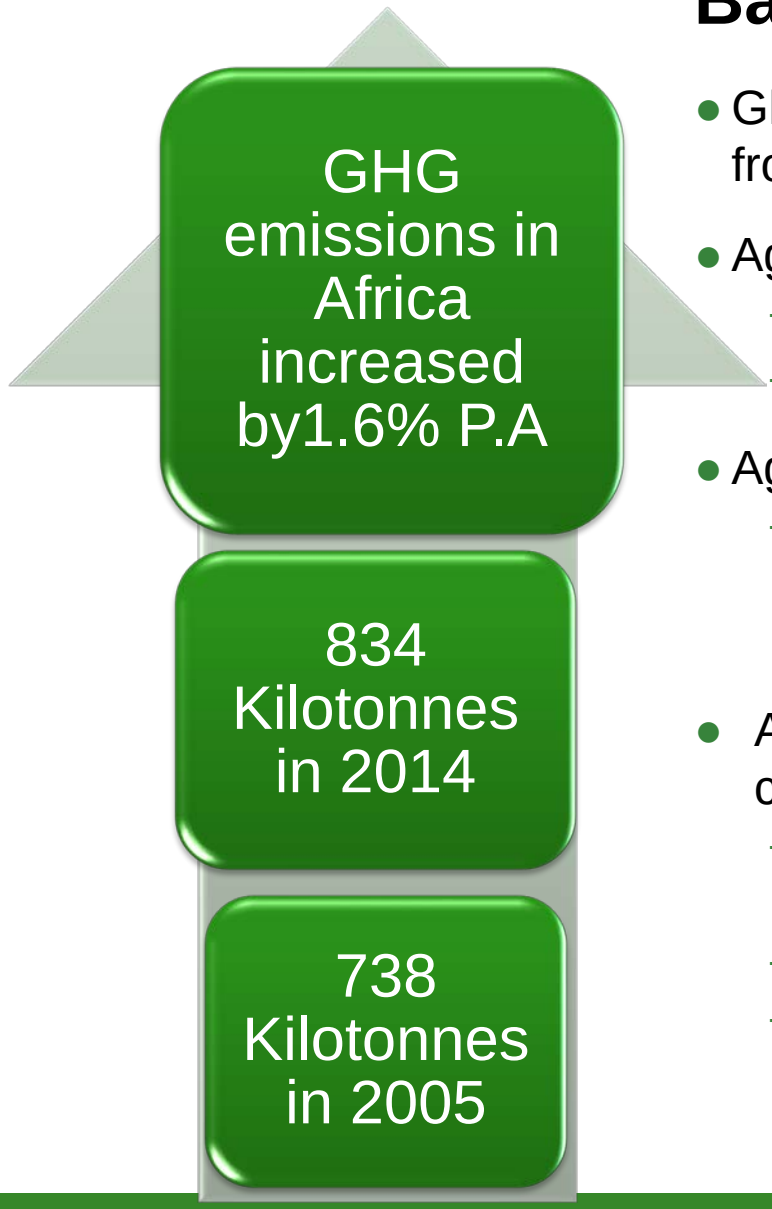
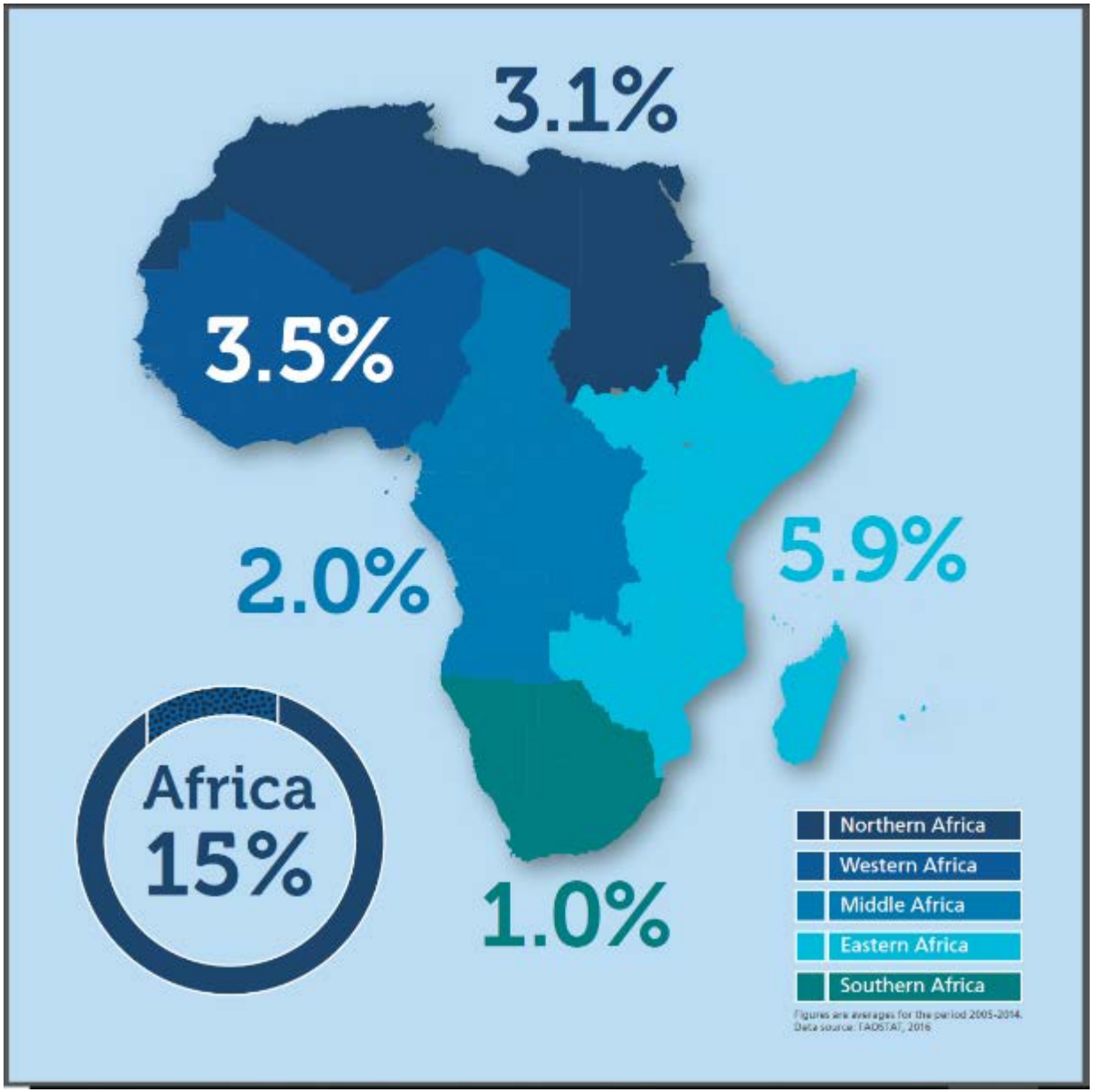
Background



- Global food supply needs to increase by 60 percent 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
- 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

Africa's emissions from agriculture



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)
- COP24 (2018) agreed on new international climate regime under which all countries will have to report their emissions – and progress in cutting them – every two years from 2024
- Donors have also recognised the need for increased in 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 are of high relevance for climate resilience
- Expertise:
  - 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

- Further build 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’

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

- Developed the concept of ‘Climate Smart Pest Management’ (CSPM)

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: Building resilience and adaptation to climate extremes and disasters

- BRACED is helping people become more resilient to climate extremes in the African Sahel and its neighbouring countries.
- To improve the integration of disaster risk reduction and climate adaptation methods into development approaches.
- BRACED seeks to influence policies and practices at the local, national and international level.
- CABI's contributions in the BRACED programme in Burkina Faso:
  - Increased awareness to consider pest management as a critical component in CSA
  - Providing better outreach to farmers through plant clinics while ensuring community surveillance on pests and diseases

Partners in B. Faso: Welthungerhilfe; Self Help Africa; Ministry of Agriculture

PRACTICE BRIEF Climate-smart agriculture

CGIAR Research Program on Climate Change, Agriculture and Food Security CCAFS

A Gender-responsive Approach to Climate-Smart Agriculture

Evidence and guidance for practitioners

Overview of practice

Taking a gender-responsive approach to Climate-Smart Agriculture (CSA) means that the particular needs, priorities, and realities of men and women are recognized and adequately addressed in the design and application of CSA so that both men and women can equally benefit.

Nelson S. & Huyer S. 2016.

The practice brief explains how to take into account the gender gap in agriculture in the development of site-specific CSA-sensitive practices

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

Climate Change Knowledge Management

- **Weather and Climate Information Services for Africa** (WISER) programme's mission is to deliver transformational change in the quality, accessibility and use of **weather and climate information services** at all levels of decision making for sustainable development in **Africa**.

- **WASCAL** (***West African Science Service Centre on Climate Change and Adapted Land Use***) is a large-scale research-focused Climate Service Centre designed to help tackle this challenge and thereby enhance the resilience of human and environmental systems to climate change and increased variability.

WISER
Weather and Climate Information Services for Africa

WASCAL
West African Science Service Centre on Climate Change and Adapted Land Use

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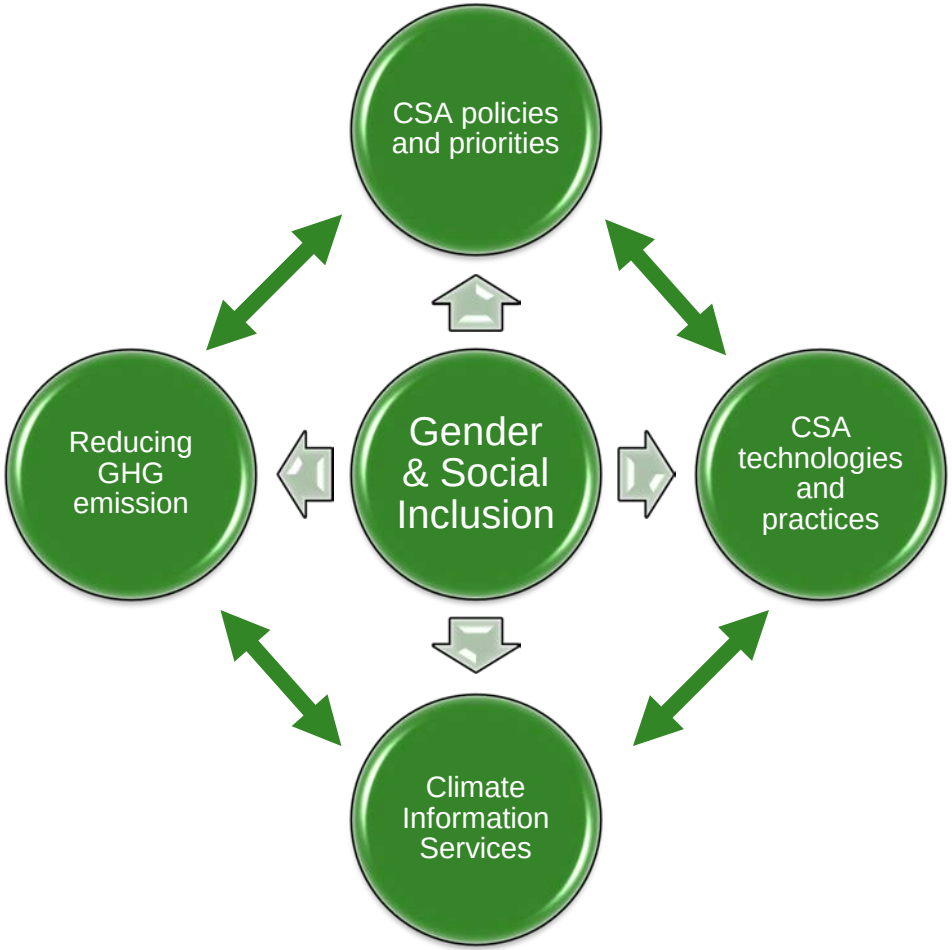
CABI can partner with these organisations through the Pest Risk Information Services (PRISE) programme

The Climate Smart Agriculture East Africa (CSA-EA) program (2018—2022)

- The programme will increase the availability of climate-smart foods for the growing population in Kenya, Tanzania and Uganda through:
  - Climate risk analysis of major food value chains and identification of business opportunities in CSA
  - Business case development and matching grant funding to the private sector, small- and medium-sized enterprises (SMEs), and farmer cooperatives
  - Investment leveraging through facilitating access to finance
  - Policy influencing and operationalization of climate plans
  - Feedback on practical applicability of CSA technologies, models and climate science
  - Knowledge sharing among countries and networks

Areas to reflect on:



During breakout groups, please remember:

- 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?

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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Australian Government
Australian Centre for International Agricultural Research

Agriculture and Agri-Food Canada

Ministry of Foreign Affairs of the Netherlands

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