Climate Change, Agriculture and Food Security

The program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of the Consultative Group on International Agricultural Research (CGIAR) and the Earth System Science Partnership (ESSP).

The Challenge for Agriculture and Food Security
Climate change is an immediate and unprecedented threat to the food security of hundreds of millions of people who depend on small-scale agriculture for their livelihoods. Climate change affects agriculture and food security, and likewise, agriculture and natural resource management affect the climate system. The complex and dynamic relationships between climate change, agriculture and food security are also shaped by economic policies, political conflict and factors such as the spread of infectious diseases. The relationships between all these factors and how they interact are not currently well-understood, nor are the advantages and disadvantages of different responses to climate change.

The Research Challenge
The next step is to integrate knowledge about climate change, agriculture, and food security. Bringing together these domains in a meaningful way requires an urgent change in the way research is planned and carried out, and the way researchers explain their findings. As no single research organisation has the ability to tackle this work by itself, CCAFS is opening new opportunities for studying these interactions.

A New Way of Working
CCAFS brings together the world’s best researchers in agricultural science, development research, climate science, and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. CCAFS will also involve farmers, policy makers, donors and other stakeholders, to integrate their knowledge and needs into the tools and approaches that are developed. Research in CCAFS will be carried out by teams of partners with complementary skills and expertise, pairing institutions from the North and South, including South-South collaboration. These partnerships are expected to generate new ways of working, and broaden dialogue between science and policy.

Organisations leading CCAFS
Consultative Group on International Agricultural Research (CGIAR)
The CGIAR, established in 1971, is a strategic partnership of many members that support 15 international agricultural research centres. The centres collaborate with hundreds of government and civil society organisations, as well as private business around the world. Today, more than 8000 CGIAR scientists and staff work in over 100 countries.

Earth System Science Partnership (ESSP)
The ESSP was established in 2001 to promote cooperation for the integrated study of the Earth System, its changes, and the implications of these changes for global sustainability. The ESSP comprises four international research programs that specialise in different dimensions of global environmental change: biodiversity and agro-biodiversity; institutions, socioeconomics and human security; physical, chemical and biological processes; and climate science.
Goal and objectives
The overall goal of CCAFS is to overcome the additional threats posed by a changing climate to achieving food security, enhancing livelihoods and improving environmental management.

In order to meet this goal, the programme’s objectives are to
• Identify and develop pro-poor adaptation and mitigation practices, technologies and policies for agriculture and food systems.
• Support the inclusion of agriculture in climate change policies, and of climate issues in agricultural policies, at all levels.

Research themes
1. Adaptation to Progressive Climate Change
2. Adaptation through Managing Climate Risk
3. Pro-poor Climate Change Mitigation
4. Integration for Decision Making

Where CCAFS works
In 2011, CCAFS will focus on three regions: the Indo-Gangetic Plains, and West and East Africa. These regions were chosen to represent areas that are becoming both drier and wetter, and because they will generate results that can be applied and adapted in other regions worldwide as the program evolves.

How CCAFS will make a difference
Promoting more adaptable and resilient agriculture and food systems, leading to better food security, better livelihoods, and better environmental management.

Mainstreaming climate variability and climate change issues into national, regional and international development strategies and institutional agendas.

Enhancing peoples’ understanding of climate change issues, including the tradeoffs between food security, livelihoods and the environment, as well as measures for adapting to and mitigating climate change.

Informing actions to deal with climate change, and ensuring that decisions on policies and actions are based on the best information and data.

More resilient rural communities, in a better position to adapt to a changing climate and increase food security, while taking into account sustained livelihoods and the environment.

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