### Purpose of the project

**Facts**
- Most African cocoa plantations are in a phase of decline in their productivity (70% of world production).
- Until recently, yields could be maintained by planting new cocoa plantations in new areas in forest zone. Deforestation.
- But in West Africa, forest reserves are becoming scarce and less accessible physically, legally (land laws) and politically (international pressures).
- Cocoa cultivation is the main monetary source for millions of small farmers (6% of world production comes from farms having less than 5 ha) and is still the main source of funds and rural development in producing countries.
- Cocoa still ensures a good protection of environment (against erosion, etc.), maintenance of biodiversity and land reconstitution.

**Thus**
- Enabling cocoa producers (farmers and countries) implies a rapid transformation of development systems from plantations to stabilised systems, which are:
  - Agronomic reproducible;
  - Economic lasting;
  - Allowing social improvements;
  - Environment-friendly.

**Organisation**

The Regional Project is sponsored by [CORAF/WECARD](http://www.coraf-wecard.net) (West & Central African Council for Research and Development) and the [COPAL](http://www.copal.org) (Cocoa Producers Alliance).

The coordination unit is:
- Based at the College of Agriculture & Consumer Sciences, University of Ghana, Accra – Legon
- Under the responsibility of the Cultural and Cooperation Service (SCAC) of the French Embassy in Accra.

Contact: sccsproj@ug.edu.gh or www.sccs-project.net
- The Project started in January 2002, for a period of 5 years.

**Objectives**

**Main**
- Find and adapt best possible methods to renew cocoa plantations in order to produce sustainable and competitive cocoa systems in West and Central Africa by undertaking studies and research operations with farmers in their fields.

**Specific**
- Production of knowledge on agricultural dynamics used in farms (replanting, substitution and diversification) and on production zones to be improved;
- Setting up experimental networks together with cocoa producers, in order to validate innovations enabling farmers to stay and intensify their cocoa plantation;
- Increase researchers’ awareness and train them in methods using systemic and multidisciplinary approaches of cocoa production as well as participating methods;
- Develop and animate a regional partnership between countries and partners of various natures (research centres, universities, NGO, agricultural organisations, extension services, etc.).

**A few data**
- 20 research proposals were submitted to the project and 7 were accepted;
- 32 Research and agricultural extension institutes, private or public, are concerned;
- More than 110 pilot farms are followed;
- More than 3000 farms were surveyed;
- 35 researchers and agents are working and trained to the research methodologies.

**Trainings**
- "Olympe" software for modelling the functioning of farms. (2 sessions in 2003 & 2006).
- Participatory Research Methodologies. (1 session in 2004).
- Cocoa Soil Diagnostic method. (2 sessions in 2003).
- Statistical analysis and modelling to analyse their own data. (2 sessions 2003 & 2005).

**SCCS Network**

**Countries Involved**
- Côte d'Ivoire (39% of world production)
- Ghana (17%)
- Nigeria (7%)
- Cameroon (6%)
- Togo (1%)
- France (CIRAD Researchers based in Africa)

**Samples of Software outputs**

- Olympe : Labour
- Soil Diagnostic

**Studies and Research Activities**

**Activities**
- Characterization of cocoa farming systems.
- Determination of farmers’ strategies.
- Evaluation of rehabilitation techniques and replanting of the old cocoa trees.
- Identification of competitive and sustainable production systems for a sensibility intensification.

**Results**
- Creation of a database on farming systems.
- Development of sustainable options of rehabilitation and replanting techniques in old cocoa plantations.
- Sensible farming practices for better management of producing cocoa farms.
- Agro-economic model to appreciate the level of adoption of recommended cultural techniques by farmers.
- Contribution to the development of the Olympe modelling tool to give better advices to the farmers.

**Activities**
- Analysis of results from existing trials.
- Early detection of hybrids sensitivity to swollen shoot virus strains and to Phytophthora sp. age.
- Selection of cocoa hybrids adapted to the environment of the production zones in collaboration with farmers.

**Results**
- Selection of cocoa hybrids adapted to the environment through a participative method in collaboration with the farmers.
- Creation of a database of the genetic material adapted to the various ecologies.
- Identification of the variability of the Swollen Shoot Virus strains and development of early detection tests.
- Distribution of new hybrids more tolerant to the main diseases (Black pod diseases and Cocoa Swollen Shoot Virus) and pests (mirlins) in the region.

**Activities**
- Elaboration of a decision making model to establish recommendations to control diseases pests in collaboration with farmers.

**Results**
- Identification of the factors involved in the elaboration of the yield.
- Creation of a database with full description of 30 trees in cocoa plots in some farms of the main cocoa growing areas.
- Study of spatiotemporal dynamics of the main pests and diseases.
- Set up of a decision making model to establish recommendations for integrated pests and diseases management.

**Activities**
- Development of the Soil Diagnostic tool.
- Analysis of the results of existing trials and surveys done within the framework of the project with the help of the model.

**Results**
- Creation of a database of the soil analyses in the region.
- Development of fertilization recommendations based on the soil diagnostic method.