

## **GHANA**

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### **Local collaborating institutions:**

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NGO: Ghana Rural Reconstruction Movement (Gh.R.R.M)

NGO: Ghana Association for the Conservation of Nature (GACON)

**Description of Activity:**

In Ghana PLEC work started in 1993 with a pilot study of environmental changes and farmers reactions to them with reference to sites within the southern sector of the semi-humid forest-savanna transition zone. The study resulted in:

- a technical report;
- a workshop;
- a published scientific paper;
- a book; and,
- creation of contacts with farmers and others for further work.

Subsequently, but most especially from 1997, work became more applied with a focus on agrodiversity conservation through a participatory approach led by farmers with support of scientists. A major output is establishment of five principal agrodiversity demonstration sites and two subsidiary ones. They are located in the three main agroecological zones (humid forest, dry savanna and semi-humid forest-savanna mosaic), and managed by over 1300 farmers who include experts in biodiversity conservation. PLEC has organized the farmers into associations that serve as a medium for:

- farmer - scientist interactions and collaborative work;
- farmer - to - farmer interactions including exchange of knowledge and germ-plasm;
- reaching out to farmers and sensitizing them to issues of conservation and development;
- mobilizing the latent knowledge, energy and other resources of farmers for the purpose of conservation and development;
- tapping or accessing external support for farmers;
- carrying out demonstrations; and,
- in general, empowering farmers politically, socially and economically.

Through the farmer associations PLEC interventions have achieved the following:

- by systematic assessment involving scientists and over 50 farmer expert ethno-botanists, scientific insights into plant-biodiversity;
- identification of over 12 traditional farm management practices that favour biodiversity;
- promotion of use of the practices identified as favouring biodiversity, and of other modes of conservation.

As a result of the conservation promotion drive, mulching with chopped vegetation in a practice called *oprowka* (or *proka*), which avoids ecologically destructive burning, is on the increase, as are the following practices:

- management of assorted yams within agroforestry systems;
- usage of forests conserved nearby for beekeeping, honey and wax, which has grown to involves over 70 households with great prospects for further expansion;
- establishment of woodlots and plant nurseries which yield poles, firewood and seedlings in commercial quantities;
- conservation and production of local varieties of rare domestic fowls and rice, *Oryza glaberrima*, on a commercial scale;
- management of medicinal plants within conserved forest or arboretum;
- growing of foodcrops among trees conserved in situ in farms;

- propagation of plantain and certain other crops through the split-corm technique; and,
- grafting and budding of plants.

Because of the commercial orientation of these and other conservation practices encouraged by PLEC, rural livelihoods and incomes are being improved. The process is encouraged by enthusiastic response of farmers to other value addition or income generating activities, notably the following, which are promoted by PLEC to motivate farmers to conserve:

- processing of cassava, a primary cash crop, into flour for bread and pastry, which involves a sizeable number of females;
- spinning and weaving of cotton, another important cash crop, into cloth by youthful women, which is helping to curb rural out-migration;
- raising of snails, a delicacy in some of the demonstration sites; and,
- piggery, introduced as the nucleus of a swine dispersal project.

Enrichment of biodiversity through PLEC interventions, above all those focused on promotion of agrodiversity and related activities, is manifested, among other things, by:

- an apparent increased plant pollination and utilization of nectar by bees kept in home gardens and forests conserved nearby;
- conservation and development of arboreta harboring various species of medicinal plants;
- production of rare types of yam, *Dioscorea*, within agroforestry systems;
- integration of citrus and oil palms into traditional systems of food cropping;
- development, by a local farmer, of an unique system of crop management based on a combination of traditional and modern practices that has become a model because of its biodiverse character and high productivity;
- regeneration of deforested areas;
- a revival of the traditional agroforestry practice of growing crops alongside trees conserved in situ within farms; and,
- increased number of biodiverse school gardens.

Against this background and recalling the enthusiasm of farmers and their children for PLEC work, the demonstrated commitment of scientists to the PLEC cause, the co-operation and support of government, and the capacity developed by PLEC for improvement of rural livelihoods through agrodiversity, we can confidently expect the PLEC initiative to be sustained.