



# People, Land Management & Environmental Change

## A GLOBAL PROJECT ON 'AGRODIVERSITY' – PLEC

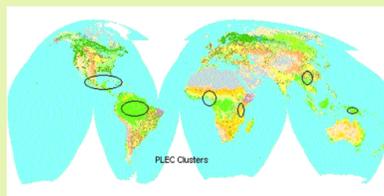
### The 'Agrodiversity' challenge

Smallholder farmers throughout the tropics have been adept at using the natural diversity of the environment for choosing their crops, for managing the soil, water, land and vegetation, and for production. Arguably, they have conserved more biological diversity and more economically-important species than all protected areas combined. They have systems of land use and practices that have stood the test of population growth and environmental change. There is a large untapped source of knowledge, which could potentially contribute to:

- conservation of biological diversity
- protection of important systems of land use
- control of land degradation
- food security and rural livelihoods

PLEC calls this agrodiversity. With its funding and scientific partners, PLEC's more than 200 scientists and many hundreds more collaborating farmers are discovering just how and why agrodiversity is important and worth promoting for a future sustainable earth.

### Working globally

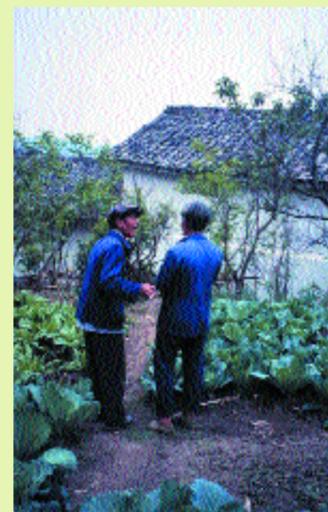


PLEC works through a network of locally-based Clusters in areas of high biological diversity interest. Participating countries are Brazil, China, Ghana, Guinea, Jamaica, Kenya, Mexico, Papua New Guinea, Peru, Tanzania, Thailand, Uganda.

### Working locally

Around the globe, PLEC has some 30 demonstration sites that are the farmers' own enterprises, where they can collaborate with scientists, other professionals and policy-makers to show how and why agrodiversity is worth supporting.

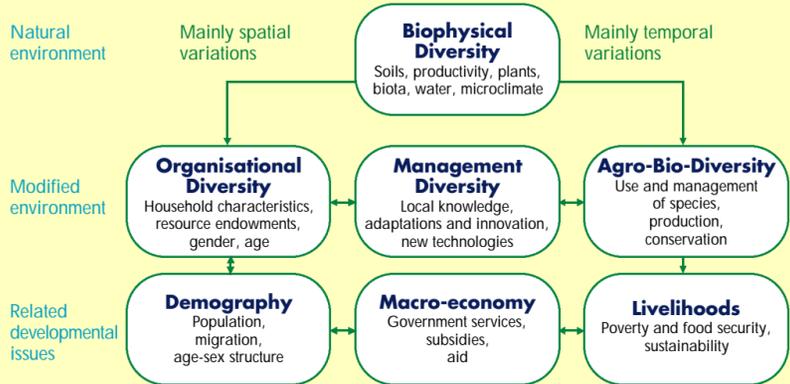
The PLEC approach is to work with the most skilled or 'expert' farmers, in devising ways of using natural resources that combine superior production along with enhancement of biological diversity at the farm and community level. Successful farmers in turn train other farmers. They host policy forums to discuss better and more sustainable ways of protecting fragile natural environments.



Mr Wu – Yunnan Demonstration site, China.

### Agrodiversity

Elements of agrodiversity – main components and principal development issues



### PLEC in Action

As just one example of many, PLEC scientists in northern Ghana are working with local farmers to conserve *Oryza glaberrima*, the indigenous African rice. African farmers have traditionally relied on a diversity of varieties of this rice as an important food and livelihood security in the face of difficult water availability and ecological change. PLEC is experimenting with ten varieties



Farmers' own varietal trials, N. Ghana.

Source: PLEC News & Views No. 17, February 2001

– C. Anane-Sakyi and Saa Dittoh

### Qualities of *Oryza glaberrima* making it superior to paddy rice – identified by farmers

1. Short cooking time
2. Keeps well after cooking
3. Tastes good with only salt and pepper
4. Better for traditional dishes
5. Good for weaning babies
6. Does not spoil when harvest delayed
7. Performs better under low inputs
8. Gives higher yields under adverse conditions
9. Animals prefer the straw
10. Easily processed by women under local conditions



PLEC farmers display their rice at a food fair.



Mexican farmer demonstrates his soil management.



Stall feeding a goat, Tanzania.

### The Goal of PLEC

The project is developing sustainable and participatory approaches to conservation, especially of biodiversity, within small farmers' agricultural systems. It shows how agrodiversity not only supports global objectives towards conserving biodiversity, but also supports human needs and development. Its principal outputs are:

- tested models of on-farm management of agrodiversity
- database of agrodiversity in vulnerable small farm environments
- methodologies to measure, test and promote agrodiversity
- policy recommendations
- information exchange, networking and capacity-building



Visit the PLEC homepage at the United Nations University, Tokyo:  
[www.unu.edu/env/plec](http://www.unu.edu/env/plec)

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