

# **Establishment of a forestry research network for ACP countries (FORENET)**

## **Concept note for research programme: Impacts of climate change on the practices and livelihoods of local people**

### **Context**

Climate change constitutes additional burden besides poverty, diseases, illiteracy, weak institutional capacity, wars, unstable political governments, poor infrastructure and other global environmental change issues (e.g. land use change, land degradation, desertification, biodiversity loss etc) limiting development in several ACP countries from realizing major global targets like the millennium development goals. Although it is not just poor, rural people who are affected by climate change, but also wealthy urban elites, such as those with homes and holiday cottages on coasts or floodplains, there is a strong case for “putting the vulnerable first”.

Numerous factors underscore the vulnerability of the local people to climate change impacts. One notable aspect is that their livelihoods (especially of women) are highly dependent on climate-sensitive sectors (agriculture, fisheries) and on forest goods and services for energy, food security, water supply and health. This makes it imperative for climate change and climate variability measures to be taken seriously and for adaptation strategies to be integrated into strategies both in the private and public sectors in ACP countries.

Adaptation is the only available response for impacts that will occur over the next several decades before mitigation measures can have an effect. The value of forests to local livelihoods is however not fully captured in national development plans and their potential contribution to climate change adaptation and mitigation, is largely overlooked. Under climate change pressure often aggravated by human induced changes, there is need for forest protection through either conservation or sustainable management to ensure the continuous supply of goods and services for local people.

The impacts of climate change on the forest ecosystem and consequently on the provision of the multiple goods and services need to be elucidated. The implications on national development and household livelihoods pose major challenges for planning. There is also the need to understand climate change impacts and the implications for indigenous and traditional communities that live in the forests, as well as elucidating their unique adaptation strategies they have developed over time, particularly adaptation in marginal areas and ecosystem boundaries. How the natural resource-base will be affected by climate changes needs to be evaluated in order to plan for the special adaptation needs for women, elderly and other minority and under-represented groups constituting the poor majority and most vulnerable.

### **Conceptual framework and research themes**

The objective of this research programme would be to contribute to understanding the values of forest goods and services for local livelihoods and the vulnerability of forest dependent local people exposed to climate change.

For our purpose we consider that forests, their goods and services, local people, their practices and the livelihoods they derive from forests constitute a social ecological system (SES) and we would like to carry research on the evolution, resilience and vulnerability of this SES and of its components under exposure to climate change.

The vulnerability of the SES is a function of two main factors. The first one is the **potential impact** of climate change on the SES. It depends on the exposure (e.g. climate change) and the sensitivity of the system (e.g. the sensitivity of NTFP productivity to precipitation or temperature changes). Second the **adaptive capacity** of the system may decrease its vulnerability; an example is the capacity of local people to change their livelihoods for adapting to changes in the provision of goods.

We envision three main blocks of research:

1. Analyses and understanding of the **adaptive capacity** of local people livelihoods.
  - a. Field studies and syntheses about actual forest related practices and livelihoods.
  - b. Historical studies on how local people have adapted their livelihoods for coping with changes in the provision of forest good and services.
2. Analyses of the **potential impacts** of climate change on forests and the provision of goods and services under climate change scenarios.
  - a. Possible changes in forest composition and dynamics (for specific useful taxa)
  - b. Past and future evolution of forest cover
  - c. Provision of important ecosystem services (e.g. water)
3. Analyses (derived from 1 and 2) of the **vulnerability** of local people, their practices and livelihoods and of the need to develop, propose specific adaptation measures
  - a. Implications of the potential impacts on forests for local livelihoods
  - b. Local autonomous capacity to cope with these future changes
  - c. Possible planned adaptation measures