

# **Stakeholders Participatory Approach in the Identification of Development Sectors for TroFCCA research focus in West Africa**

## **Introduction**

This report highlights the participation of stakeholders in the process of identifying areas of regional priority that now constitutes TroFCCA West Africa research domain. We consider our stakeholders to be people who are directly or indirectly linked to the region, and whose interests are directly or indirectly implicated in TroFCCA's activities in the region. The stakeholders were drawn from multiple disciplines, and from various establishments which included government representatives from the Ministries of Environment, Forestry, Energy, and Water resources departments, universities, national and international research institutions, NGOs and regional initiatives and organizations such as ECOWAS, CILSS, UEMOA, national UNFCCC focal points for Ghana, Burkina Faso and Mali, and community groups' representatives.

The aim was to engage the stakeholders from the onset of the project in order to facilitate future science-policy dialogue particularly at a time when discussions on development strategies in developing countries place much emphasis on seeking ways of ensuring adequate participation of stakeholders in defining development pathways and priorities. The idea behind this procedure was to ensure that stakeholders themselves identify the sectors of the forest ecosystem which they consider as important to their national economy and for livelihood at the household, but yet vulnerable to climate impacts. The assumption here is that this procedure will eliminate the fear and risk of any single group dominating or imposing its own agenda. Furthermore, this will also help orientate future adaptation strategies to address urgent needs from a country-wide perspective.

## **Approach**

The participants were grouped by their various countries of residence and asked to identify and select sectors linked to the forest ecosystem that were of relevance to their national development agenda, and particularly crucial in meeting the MDGs. As a starting point, forest was presented to them as an ecosystem providing multiple goods and services through several sectors rather than just a sector for lumber as it is often regarded. To facilitate the process, there was a simplified presentation (Table 1) of examples of sectors directly linked to the forest ecosystem and some of the goods and services associated with the sector.

Table 1. Forest-based sectors and the associated goods and services

Sectors	Goods and services
Food	Non forest timber products
Energy	Fuel wood
Health	Medicinal plants
Water	Catchments
Construction	Timber
Recreation	Hunting, tourism, park
Security	Bonds
Science	Training research

In total, there were 3 groups representing the three participating countries. Each group appointed a moderator who was charged with guiding the group discussion and responding to the questions, collating and analyzing the responses, and making the final presentation on the group's outcome from the break out session during the reconvened plenary session. In demonstration of the procedure, if the first choice of a group for example, is the role of forest in achieving poverty reduction, then food from the forest, energy, health or water become priorities. This was then linked to the goods and services from the forest that was linked to the identified sector.

The groups also identified their own criteria for prioritizing the sectors with a focus on the current status of that sector compared to the past in their individual countries. That was viewed more or less as stakeholders' judgement of the sector's sustainability to climate change and other anthropogenic pressures.

Some criteria and indicators were set and used by the countries. These included the contribution of forests to the well being of the population and to food security, their degree of exploitation, and in general, their economic importance to the population and the current status. With these, each country came up with the tables below after a session of brainstorming.

### **The identified sectors by country and the criteria for selection**

#### **Burkina Faso**

The scoring by the Burkina Faso group in selecting their sectors is summarized in Table 2. Sectors were identified by their degree of dependence, degree of vulnerability and economic

importance in poverty alleviation. The sectors were scored by all participants in the group and ranked with the highest scored sector emerging as the most important sector to their national development but perceived as being vulnerable to climate change today than in the past.

Table 2. Scoring and ranking for the prioritization of sectors from the forest by the Burkina Faso group

Sectors	Degree of dependence (0-5)	Degree of vulnerability to climate change (0-5)	Economic importance in poverty alleviation (0-5)	Total	Services
Breeding	4	5	5	14	Fodder resource during dry season
Water	4	5	5	14	basins and rivers protection
Energy	5	3	5	13	Fuel Wood
Heath	4	4	5	13	Drugs for traditional medicine
Biodiversity Conservation	4	5	4	13	Fauna and flora
Human Nutrition	4	4	5	13	Fruits and some trees leaf
Non Timber Forest Products	5	4	5	14	Forest Products
Agriculture	2	5	5	12	Fight against erosion, soil conservation
Handicraft	4	1	4	9	Handicraft Wood
Culture	3	1	3	7	Habitat, rites, Custom

The Burkina Faso group chose the sectors listed in Table 3 as the ones with gaps in research, which TroFCCA could focus on. Hence, for the Burkina Faso group, water and NTFP for food for human and livestock were considered as the most important sectors followed by energy.

Table 3. Identified sectors by the Burkina Faso group and their research priorities for TroFCCA

Sector	Current Situation	Research orientations for TroFCCA
Cattle nutrition	In dry season, cattle nutrition depends on forest	<ul style="list-style-type: none"> <li>• Integrated sylvo-pastoral laying out</li> <li>• Forest ecosystem monitoring</li> <li>• Research on species adapted to climate change</li> </ul>
Water	High deforestation which perturbs hydrologic cycle	<ul style="list-style-type: none"> <li>• Changes in vegetation cover, and the role of (adapted) native species in water regime management</li> </ul>
Energy	Over 97% of the population uses wood as the principal domestic energy source	<ul style="list-style-type: none"> <li>• Development of technologies to reduce fuel wood consumption.</li> <li>• Developing and promoting domestic alternative source of energy</li> </ul>

## **Mali**

The Mali group initially identified 4 criteria (listed below), which they ranked and used to evaluate and to select their sectors. They selected the highest scored sector as the most important. Energy came up as most vulnerable followed by food, water and health (Table 4).

### Criteria for selection of sectors.

- 1 Contribution to the improvement of the wellbeing of the population;
- 2 Contribution to the improvement of climatic conditions;
- 3 Contribution to the improvement of household and national incomes;
- 4 Contribution to food safety

Table 4. Scoring and ranking for the prioritization of sectors from the forest by the Mali group

Sectors	Criteria				Total	Range
	1	2	3	4		
Energy	4	1	4	5	14	1st
Health	4	1	3	1	9	4th
Construction	3	0	3	0	6	7th
Food	4	1	4	4	13	2nd
Water	4	3	2	2	11	3rd
Culture	3	3	0	0	6	7th
Security	3	2	0	2	7	6th
Education	3	1	2	2	8	5th

## Ghana

The Ghana group chose the transitional zone of Ghana between the humid forest zone and the savanna as most vulnerable due to certain criteria and indicators they identified (table 5) such as high level of erosion in the zone, degraded water shed of major river, low soil productivity, high incidence of wild fire and very low vegetation cover yet over exploited for fuel wood collection. They identified water as the most vulnerable sector base on evidence from current low quality due to chemical pollution, and irregular supplies. They also identified food, health and energy as other vulnerable sectors using over dependence, low life expentancy, low productivity level and frequent out break of diseases.

Table 5. Selection and prioritization of sectors from the forest by the Ghana group

PRIORITY SECTOR	VULNERABILITY CRITERIA <sup>1</sup>	INDICATORS <sup>2</sup>
<b>Natural system (biophysical)</b>		
Land	Transitional Zones (between humid forest zone and the savanna zone) High degradation	<ul style="list-style-type: none"> <li>• High level of erosion</li> <li>• Degraded water-shed of major river</li> <li>• Low soil productivity</li> <li>• Characterized by wild fire</li> <li>• Very low vegetation cover</li> </ul>
Water	Sustainable water supply	<ul style="list-style-type: none"> <li>• Regular supply (quantity)</li> <li>• Low quality due to pollution by chemicals</li> </ul>
<b>Human system</b>		
Food	Food security	<ul style="list-style-type: none"> <li>• Reduced bushmeat</li> <li>• Decreased crop yield</li> </ul>
Health	State of health	<ul style="list-style-type: none"> <li>• Outbreak of diseases</li> <li>• Poor health</li> <li>• Low life expectancy</li> <li>• Low productivity</li> <li>• Malnutrition</li> </ul>
Energy	Source and supply of energy	<ul style="list-style-type: none"> <li>• Over-exploitation for fuelwood and charcoal production</li> <li>• High demand (local and urban)</li> <li>• Exportation of charcoal</li> </ul>

<sup>1</sup>criteria are drawn from the knowledge about the activities. One criterion can have more than one indicator

<sup>2</sup>indicators are direct measures of criteria that convey a single meaningful message or information, that are measurable.

### Summary

As a compromise across all three countries, the sectors listed below were ranked as commonly occurring research areas/topics of priority by the three countries for TroFCCA to focus on in the next 3 years, and for which specific methodologies for vulnerability assessments needed to be elaborated, followed by the development of adaptation strategies for these sectors.

1) **Bio-energy**: Over 90% of the population in the three countries depends on fuel wood and charcoal for their domestic energy supply. Forests are the major sources of bio-energy; but current high rates of exploitation under demographic pressure, together with climate change impacts on the forest ecosystems, threatens the supply from the forest and consequently the economies of these nations.

2) **Water**: Water (for human and animal consumption, irrigation etc) is a recurrent limiting resource, particularly in the Sahel where drought is prevalent. Major water sources are located in catchments under forest cover that are severely affected by degradation and deforestation. As climate changes, forests further degrade and so does the water resource.

3) **Non- timber forest products (for healthcare and food)**: Forests are direct providers of health and food products for human and animals. About 90% of the population in the region depend on forest herbs and tree products as first line of primary healthcare. Likewise, forests also play important roles in nutrition and food security, especially during periods of food shortages that usually coincide with drought periods.

In general, the participatory approach in the identification and prioritization of the sectors illustrate stakeholders appraisal of the state of their resources and the implications of climate change on the provision of these forest goods and services.