

Sustainable development indicators for community forest mangement in West Africa: some thoughts

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CIFOR (Center for International Forestry Research) has published a collection of indicators and criteria for SD of forests¹. These indicators are analysed here to consider their appropriateness for CFM projects in West Africa. The objective is to find indicators for measuring the sustainability of such projects. The set of indicators presented here for the W African region includes some elements proposed by CIFOR as well as others which they did not include. In addition, the advantages and the limits of the CIFOR set of indicators is presented.

CIFOR distinguishes between 4 different domains which relate to SD: political, ecological, social and production of goods and services. In addition, there are different levels of analysis; ie principles, criteria, indicators and verifiers. This report doesn't follow these levels strictly, rather, it gives a framework for development of indicators and combines CIFOR's elements with others which are better adapted to the W African context. The domains recommended by CIFOR are not adopted totally; instead, three domains are identified: institutional, socio-economic and ecological (see tables for each of these). The elements which fall under CIFOR's 'goods and services' are here included under institutional or under ecological, if they are relevant, otherwise they are ignored.

Institutional In the 'institutional' domain, one should include the experts, the project management, the NGOs etc, but also elements such as training and capacity building of the local people, accounting systems used and conflict resolution methods applied. In CIFOR's rendering, the policy elements are placed under the title "policy, planning and institutional framework are conducive to SFM" but their framework in this regards needs adaptation. The local capacity is not measured under CIFORs system. (CIFOR talks about participation only with regard to the social domain). A further problem with the CIFOR system is that some of the 'policy' criteria relate to things which are beyond the control of the project itself (eg national policy should not be contradictory to CFM).

Socio-economic In the socio-economic domain, the importance of the local population as regards the formulation and the supervision of the indicators is much greater than in the domain of institutions, reflecting the different nature of these two domains; the institutional domain is essentially preparatory, it provides the foundations for the community management. The socio-economic domain is more closely linked to local participation.

CIFOR suggests a good framework for the social criteria and indicators. Among other things, they underline the importance of inter-generational justice as regards

¹ www.cifor.cgiar.org/acm/pub/toolbox.html

access to resources. At the same time, CIFOR's system lacks attention to equality between genders. This is important to ensure favourable development of the entire community. In addition, reduction of poverty is not mentioned as a criterion or indicator of SD. The category CIFOR uses is 'social' while the term 'socio-economic' could be considered more appropriate if these other aspects are to be considered. I have left out the criteria and indicators which CIFOR suggested, relating to 'the health of forest actors, culture and the forest, is acceptable to all stakeholders'. As regards gender, the indicators related to the UN Millennium Goals could be useful². According to this, women are seen as principle sources of information concerning the use and management of plants. This underlines the importance of strongly integrating women into the CFM process. In addition, the Millennium Goals report mentions the different ways that men and women approach forest resources. Women collect forest products which they needs, such as fuel, food and medicine for their families, and for inputs to income generating activities. Men on the other hand hardly use forest products except for wood for construction or for sale. That is to say, the interests of men and women are different and this needs to be recognised in the forest management plan (and thus also in the criteria and indicators).

Ecological Only some of CIFOR's criteria and indicators are adopted here, because they do not all reflect participation on the part of the local population. Moreover, CIFOR's indicators apply mainly to biodiversity, although there are other aspects of ecology besides this to be considered. So I have included those elements from CIFOR which concern the products and services both woody and non-woody. The list in the table is intended to contribute to better management of the forest which will lead to more sustainable development. Clearly, ecology is a domain where outside experts may be needed, but all the necessary measurements and assessments should be carried out by the local population. Therefore the local population should be involved as far as possible also in the setting of these standards, in determining what means should be used to make such measurements, since they have lived in the forest all their lives and probably know it rather well.

In general, CIFOR neglects participation of the community. In the framework presented here, I have tried to underline the importance of the local population and to allow them to integrate their own concerns into it. If one is serious about community management, it is clear that one should not impose a complete system of evaluation on the community, which they are supposed to use. The local people themselves should participate in setting up this system of evaluation. In this way, they will recognise it as their own system.

² Indicators for Monitoring Millennium Development Goals. UN, 2003. Indicator #25; proportion of land covered by forest, p 57

Table 1 Institutional domain

Indicator	Explanation of indicator	Formulated and supervised by whom?	What are the implications for the different actors?
National capacity - legal framework, civil society	Qualitative. Does the law permit CFM (ownership laws etc). Policy related to CFM? Is there support for CFM in civil society?	Project management and the NGOs who are involved in preparatory work	A legal framework is needed plus the support of civil society groups and the support of the local community
The organisation of the local population – Local capacity as regards CM	Qualitative. Identification of the relevant local population and informing them. Have they any experience of CFM?	The institution which is responsible for the project in the country, in cooperation with the local population	<i>The local population</i> should participate as much as possible in the formation of the local infrastructure, ie forming a group to take charge of the project, but also informing everyone else about the project, its objectives and its benefits. <i>Women</i> should be integrated and able to gain from the project. <i>Young people</i> need to be motivated and well informed about the project, since the project could give them prospective work.
The management at local level is well planned	Qualitative. There is a coherent framework for the forest management. There are objectives which people are working towards.	The local population should be responsible for the formulation of the objectives of the management plan (with help of NGO) and should be able to supervise it	The general objectives of the CFM have to be developed by the local population themselves, in order to increase their motivation. They will then identify with the plan for management.
The finance is secure	Quantitative. There are funds to cover the estimated budget	The budget is supervised by project management or NGOs	
Financial capacity	Qualitative. There are skills available to	The project management,	The local population should be party to the financial

	d the book keeping/handle funds. Who are the donors?	NGOs but also local people may be involved	management, and may be trained in skills which can also be useful for other projects
There is a system for managing conflicts	Qualitative. The local group which is taking responsibility or an alternative organisation representing the community is empowered to deal with any conflicts arising.	NGOs should supervise the formation of this 'conflict management' group. The rules for resolution of conflicts should be discussed first with the local population	The local population needs to be involved in the setting of norms for resolution of conflicts, in order that they gain local legitimacy.

Table 2 Socio-economic domain

Indicator	Explanation of indicator	Formulated and supervised by whom?	What are the implications for the different actors?
Incorporation of the rules of the project in the daily lives of the local people	Qualitative. All the local people recognise and respect the rules	The group within the community which is responsible	The responsible group informs the people about the rules, and if they are not followed, either this group or the conflict resolution group has to find solutions
Identification of the local population with the project. The forest is seen as the future, development	Qualitative. Not only must the rules be respected, people must also know their rights and responsibilities in connection with CFM	The responsible group formulates the objectives, in consultation with the community	The <i>local population</i> has a perspective for the future <i>Parents/women</i> have confidence that the project can provide for their families <i>Young people</i> see the value of the project. Children are educated on the importance of forest
CFM generates enough income to reduce poverty in the community	Quantitative. The number of people below the poverty line is reduced	Records concerning poverty may be kept by the local group, or by external organisations	<i>The inhabitants</i> may escape from poverty as a result of CFM
Proportion of	Quantitative. Are	The local	Recognition of forestry as

the community involved in CFM	large numbers of people involved and benefiting?	group can maintain records	an economic sector will help the local population identify with the project
“Fair shares 1” – an equitable distribution of benefits	There are rules which ensure equitable access of different groups to the benefits of the CFM	The community itself must decide what is “equitable”	All the inhabitant who would like to participate, should have this possibility
“Fair shares 2” – gender equality	The sharing rules must clearly reflect equality between men and women	See “Fair shares 1” - the women should be involved in forming the rules	
“Fair shares 3” - future generations should also benefit	Qualitative. The rules are such that the forest will continue to bear benefits for the future generations	Formulated by local people together with outside experts. It is necessary to consider regeneration characteristics.	The presence of agreed, well defined rules will assure continuation of benefits in the future, the local population will have confidence that there is a future for CFM and this may reduce the rural exodus.
There is just remuneration for those who do the work	Quantitative. The level of payments reflects the contribution of each individual	The responsible group (in consultation with NGOs sets the payments and respects the rules regarding these	The inhabitants will be encouraged by getting a return which reflects their input. Women have an opportunity to earn money.

Table 3 Ecological domain “Exploitation of forest resources in a system which allows for sustainable development”. Possible application of the ‘wood harvesting principle’ (see note below)

Indicator	Explanation of indicator	Formulated and supervised by whom?	What are the implications for the various actors?
All exploitation of forest products is done under a plan which takes into consideration ecological aspects	Qualitative. This is incorporated in the management plan. It might include eg the number of trees of each species permitted for harvesting, and the minimum diameter allowed	Experts in consultation with locals, particularly those who are locally known as experts. Supervised by the responsible group.	People are allowed to use resources up to a certain point but must respect limits.
The management plan has a long term perspective	Quantitative. It is essential to some extent to renounce short term gains in favour of long term	Will be in the management plan which (see policy domain) will be drawn up by local population with NGOs	See policy domain.
The systems of production should be efficient so as not to waste	Qualitative. Waste should be minimised, and recycling should be encouraged	Use existing standards for processing of wood products. Supervision by the responsible group.	The local people may need training in efficient use of wood
Road construction should be minimised. Maintenance of roads	Quantitative.	The responsible group decides on roads (in management plan) and is also responsible for arranging maintenance of roads	The local population takes part in road construction and maintenance
Ban (or limit) on forest exploitation in the rainy season	Forest needs time to regenerate in rainy season.	The responsible group sets and supervises the rule	The local population has to adapt to such limitations
Protection of sensitive zones	Qualitative. Parts of the forest may need complete, or stricter, protection	The group responsible together with outside experts will identify such areas	The group responsible has to explain the need for such protection to local community
Protection of endangered species	Qualitative. There may be some	Outside experts will identify such	The group responsible has to

	species which need special attention	species together with the group responsible	explain to the local community
No chemical contamination	Samples may need to be taken	Standards may be adopted from elsewhere or may be set for the local situation	
Biodiversity is maintained	Quantitative. The numbers of different species remains stable, and the size of populations is also stable	Experts train the local people to observe and record the numbers of flora and fauna.	People should be trained to take part in observations.

Note: Wood Harvesting Principle

This is taken from the UN framework of indicators for sustainable development (ISD) (<http://www.un.org/esa/sustdev/natlinfo/indicators/isdm2001/isd-ms2001environmentalA.htm#wood>).

It is:

- The ratio of total forest felling over net annual increment; sustained yield principle, ie when this ratio is $<$ or $=$ 1
- Problem: data on forest annual increment is only available for developed countries and plantations, for tropical forests it is being developed, but not much progress for the case of dry forests
- It considers only timber production, not non-wood goods and services (nor even minor timber products harvested without felling trees).