

Theme: Managing the Global Commons: Climate Change and other Challenges

Carbon credits: a renewed opportunity for securing resources rights in Africa

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Africa still depends on low input and extensive agriculture. The continent also relies on forests for generating foreign exchange and more importantly for meeting the energy needs of both the rural and urban populations. Therefore, conversion of forests into other land uses is one of the major causes of deforestation. In addition, selective harvesting of high commercial value species is a common practice. The reduction of the commercial value of the forest leads to their subsequent conversion. Combating deforestation and degradation through compensation for sustainable forest management ensuing carbon sequestration is a topical discussion on forests and their role in mitigating climate change. Many countries in Africa have been promoting participatory natural resources management, having adopted legal instruments to enable security of rights to forest resources by local communities while only few have legal provisions for security of rights to both land and forests. The latter is the case of Mozambique. Other countries such as Ghana have strong traditional authorities and customary rights are not only entrenched in the Constitution, but determine the allocation of land resources and revenue sharing. One peculiarity of the reforms on resources rights in the continent is the focus on devolving resources for development of enterprises and derivation of economic benefits from the products. The forest services such as conservation of biodiversity, watershed protection, carbon sequestration are often not valued. Therefore, sustainable forest management by communities has a high opportunity cost. In view of these, the paper analyses the extent to which the implementation of the REDD mechanism and carbon payments can reinvigorate participatory resources management in the continent, add value to resources under community control, contribute to improvement of the livelihoods and simultaneously enhance mitigation to climate change.

Key words: rights, products, services, carbon payments

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1. INTRODUCTION

Sustainable management of natural resources, in particular of forests has been advocated for several decades. Several approaches have been used to enforce responsible practices by the private sector and communities. However, command and control measures have failed to produce desired results. Among significant reasons is the weak capacity of the government to have sufficient number of qualified officers to enforce legal provisions and combat corruption. Participatory natural resources management has also been implemented for few decades. The premise behind this approach was that strengthening ownership of resources by communities, with clear boundaries, rules and local institutions to enforce the same, sustainable management of the resources would be widely adopted and save forests, its biodiversity and secure livelihoods. Southern African countries led by CAMPFIRE in Zimbabwe, Controlled Hunting Areas in Botswana, conservancies in Namibia, joint (collaborative) forest management in Zambia, Tanzania, Malawi and Mozambique popularized the implementation of devolution of rights and decentralization of natural resources management as an approach that yields conservation and livelihoods benefits. Similar approaches were tested in other regions of Africa. However, FAO Statistics still indicate that Africa loses about 4 million ha of forests every year. The continent is the largest producer of biomass energy accounting for 66% of the global harvests and use of rudimentary and low input agriculture are major culprits for conversion of forests. As to forest tenure, a study of 17 countries in Africa, FAO (2008) indicate that 95% of forests are still under public ownership managed by governments.

Climate change and realization that 17% of the total emissions of green house gases result from land use and land use change brought a new impetus into the discussion of how to improve land use practices in Africa to reduce the continuous encroachment into the forestland. Once more, the issue of tenure arises. Who owns carbon rights? How ownership patterns will affect generation and distribution of potential benefits and participation of communities in mitigation of climate change impacts? This paper looks at cases studies of Ghana, Tanzania, Uganda and Mozambique to discuss the extent to which forest tenure patterns are likely to influence implementation of endeavors towards Reduction of Emission from Deforestation and Forest Degradation as well as contributing to achieving sustainable forest management and enhancement of carbon sequestration capacity (REDD+).

2. WHO OWNS CARBON RIGHTS?

Start with ownership of lands and forests

Trees and forests for many decades were valued based on the market price of timber and non-timber products. However, the value of forests has recently increased due to the recognition of the role they play in mitigating effects of climate change (Angelsen, 2009). The risk associated with higher value of forests is however that forest-dependent people may once more see their rights threatened as opportunities for further benefits are also of interest to the government and private sector. This would confirm the assertion made by Mayers and Cotula (2009) that insecure tenure makes people more vulnerable to dispossession as land values increase. Furthermore, these authors conclude in a review of tenure arrangements in tropical forest countries that many countries do not yet have the necessary provisions to ensure that REDD benefits local people. Ghana and Botswana illustrate this point. Contrary to the overwhelming majority of countries in Africa where the State is main owner of the land and renewable and nonrenewable resources including forests, 80% of the land in Ghana is customarily owned while the rest belongs to the State. In a review of forest tenure in Southern Africa (Nhantumbo, 2007) Botswana is indicated as being consistent and progressive in devolving land rights to local communities since its independence. As a result more than 71% of land in Botswana is under community control. However, in both Botswana and Ghana the state holds the rights over forest resources. In Botswana more than 70% of the forests as well as 71% of woodlands are under government control and only 24% are likely to be under community control. In Ghana 'all forest lands are held in trust by the government, which manages them on behalf of the stool landowners' (Boakey and Baffoe, 2008). In an attempt to bring more inclusiveness to forest management, the Forest and Wildlife Policy of 1994 introduces collaborative management. However, this is not consubstantiating provisions for explicit devolution of tree and forest ownership rights. The aim of the policy is to promote conservation and sustainable development of the nation's forest and wildlife resources for the maintenance of environmental quality and a steady flow of optimum benefits to all segments of society (ibid).

In Mozambique, land as well as renewable and non renewable resources belongs to the State. However, the Constitution and land legislation also acknowledge the customary rights to land by local communities and allows delimitation of community boundaries and subsequent registration of rights. This is a very strong provision that is not found in the legislation of many countries in the continent. However, similarly to the previous countries, land and tree/forest ownership are dissimilar. An especial license needs to be emitted for short and long term harvesting rights.

In Tanzania, State maintained central control over land and forests. However, social, economic, environmental, cultural and political dynamics prompted recognition of the

role of forest in society and legislation was adjusted accordingly (Akiya and Bromley, 2008). The Village Land Act brought provisions strengthening and formalizing the role of the local leadership (village councils) in land and forest management. The 2002 Forest Act acknowledges a range of stakeholders including government at different levels, groups and private individuals who share responsibilities for forest protection, utilization and conservation (ibid). This forms the basis for co-management regimes that are considered a strategy for achieving sustainable use of forest resources.

According to Kigenyi (2008) Uganda, the 1998 Land Act several ownership rights to land including government, private, customary, freehold, mailo and leasehold systems while forest ownership is limited to government and private. The latter are managed by landowners as private registered or customary property. FAO statistics² indicates that 76% of forests in Uganda are privately owned. This change is entrenched in the 2001 Forest Policy which is strong on devolution and decentralization.

While the 1990 and 2000's policies and legislation governing land and forest tenure in many African countries have been innovative in devolving resources to local communities and on acknowledging the contribution to improvement of livelihoods of forest dependent people, there is generally some hesitation from the State to relinquish *de jure* the rights to forest resources to the local communities. This is partly due to the fact that the government needs to generate income from the use of resources and conserve biodiversity despite the fact that capacity to enforce good harvesting practices has been weak. The question that rises then is whether the government would be willing to relinquish carbon rights to local communities and/or other stakeholders.

In recent years there have been a number of studies on the forest tenure in Africa and elsewhere to highlight the importance of reforming tenure in order to promote sustainable forest management. One particular study highlighted the links between land resources tenure, including forests and the challenges that need to be addressed for achieving MDGs in Africa (The Drylands Imperative, 2009). Participatory natural resources management was used to gauge the impact on livelihoods (poverty) and its multiplier effect and wellbeing of the forests (environment). Although climate change brings a more explicit extension of the need to strengthen the role of forests beyond its goods to the environmental services in particular the regulation services, the underlying issues that need to be addressed remain relevant (Box1). For example, it should not be assumed that customary ownership guarantees equitable access to the resources and to the benefits generated. Therefore, while it is desirable that governments adopt legislation that make explicit what carbon rights are, to whom they belong and the boundaries in which the different rights can be exercised, it is important to include social safeguards to ensure equity. Elite capture of benefits from forest services is an issue even in clear and formal common property regimes.

² <http://www.fao.org/forestry/39658/en/>

Box 1 Issues and Challenges of impact of land resources tenure on MDGs

Customary laws, structures and redistribution of benefits

Challenge 1: Reforming traditional institutions and customary norms to address rural poverty and ensure food security

Internal migration and climate change

Challenge 2: Addressing internal migration and new environmental challenges caused by climate change

Land grabbing by local elites

Challenge 3: Enforcement of land taxation and monitoring of land use to limit accumulation of productive land

Gender equity

Challenge 4: Establishing affirmative action for women's access to natural assets

Redistribution of productive land resources

Challenge 5: Correcting historical injustices without creating conditions for long-term conflicts between the rich and poor

Policy formulation and implementation

Challenge 6: Beyond participatory policy formulation, implementation is key

Common property and customary rights

Challenge 7: Monitoring implementation of the land resource policy with regard to delivery of rights to communities, the poor and the marginalized

Challenge 8: Enhancing, rather than undermining, customary rights and common property regimes through the power of the eminent domain

Monitoring impacts

Challenge 9: Resolving conflicts in common property regimes

From policy intentions to field level challenges in resource devolution

Challenge 10: Recognizing a business approach in the rights devolution process

Challenge 11: Elite capture and distribution of economic benefits

Challenge 12: Devolving high-value products: To whom?

Challenge 13: Diversifying economic opportunities, including deriving value from sustainable management of natural resources and ecological services

Challenge 14: Defining an exit strategy early on for facilitators to create and consolidate the capacity of communities to lead local development

Challenge 15: Equipping communities with the right business instruments

Challenge 16: Ensuring long-term commitment to support devolution of resources.

Although payments for carbon sequestration like any other service needs strong tenure over trees and forests the benefits need to be broader. Therefore, addressing challenges associated with diversification of livelihoods is equally relevant in the context of securing carbon rights and benefits. Trees should be more valuable standing other than harvested if alternative sources of income can be identified and supported. As such the Figure 1 highlights the fact that securing rights to carbon will bring a small portion of benefits to the resources owners, addressing larger development and

sustainable management will continue being essential for effective and efficient implementation of REDD to mitigate climate change and generation of co-benefits.

Carbon sequestration enhanced or avoided emissions from forest land conversion	Climate change mitigation funds – REDD+ and CDM (simplified process)
Biodiversity conservation – flora and fauna	Innovative conservation financing mechanisms including the integrated conservation and development (ICDs) initiatives
Watershed services – forest along the river basins, supplying water for consumption, hydropower, etc	CSR of water distribution and electricity companies to support local communities in the watershed
Production of crops and consumption of NTFP	Farmers' own income generation from sustainable land use

Figure 1 Benefit stream of forest good and services (adapted from Nhantumbo 2010a)

Devolution of forest resources to communities has faced challenges related to their commercial value and impact on livelihoods as illustrated Uganda. Kigenyi (2008) notes 'decentralization has the potential to promote SFM by devolving the various responsibilities from the centre. However, the following are some of the factors that make it difficult to implement the new responsibilities: (i) forests transferred to local governments are small and degraded; (ii) financial and human capacity is lacking; (iii) revenues from private and degraded local forest reserves are not secure, as most operations in these areas are illegal and local government has no capacity for policing.

The above situation is not unique to Uganda, protected forests are generally under Government management because of provision of public goods and services including maintenance of fragile ecosystems; productive forests are also managed by government and generally use rights are allocated to private sector because of the economic benefits. Multiple use forests with competing uses and users are generally the ones that are devolved to communities. Would these resources be valuable in the context of implementation of reduction of emissions from deforestation and degradation, sustainable forest management and enhancement of carbon sequestration? Implementation of REDD offers several opportunities and challenges for communities as sole managers or in partnership with private sector and public institutions:

- Sustainable management of forests of high commercial value – the involvement of communities and benefit sharing can decrease transaction costs of law

enforcement by government agencies; additional benefits could rise from carbon sequestration;

- Sustainable use of resources in protected areas – biodiversity-conservation linked livelihoods have shown that CBNRM can benefit communities. However, introducing the carbon metric in the total benefits stream resulting from reduced encroachment can also increase benefits to the communities. Plan Vivo is implementing a carbon credit scheme in the buffer zone of Gorongosa National Park (Nhambita) in Mozambique. Agroforestry systems are introduced to improve agriculture productivity and provide alternative sources of wood products and the carbon is sold in the voluntary market; similar scheme is also implemented in Uganda.
- Access to low commercial value and degraded forests – communities face an enormous challenge to turn such landscapes into high value resources. Nhantumbo (2007) and Akida and Blomley (2008) indicate that community-based natural resources management have contributed to restoring biodiversity and reducing unsustainable land practices. However, the drawback of the positive impacts on ecosystems restoration is that tenure is weakened with the increase in value of the resources. This is a case of Chipanje Chetu Programme implemented for over 10 years in the buffer zone of Niassa Reserve in Mozambique. Reduction of poaching and fire control by community guards contributed to restoring wildlife population. Despite the fact that the community had already secured and formalized land rights, these were transferred to a private entity allegedly to develop tourism in the area. Such threats are also likely to happen in case of improved management of forests for carbon sequestration. Private sector investors in large scale plantations claim to be restoring degraded lands and see REDD+ as an extension of CDM with potential benefits for the companies.

From the point of view of ensuring sustainable forest management for carbon sequestration, it is important to secure a bundle rights to resources at the disposal of communities. Land, tree/forests and carbon rights need to be associated. Control of these rights by different entities in the same space is likely to exacerbate conflicts over resources.

To whom does/should carbon belong?

Hepburn (2009) discussing the carbon rights in different states of Australia stress that 'carbon right is a new and unique form of land interest that confers upon the holder a right to the intangible benefit of carbon sequestration on a piece of forested land. Carbon right holders do not remove any produce from the land, although the stored carbon and potential carbon storage may create exogenous legal and economic benefits in the hands of the interest holder'. Whichever mechanism, market or non market that will be used to provide incentives for reduction of emission from land use and land use change in Africa, there is a need to define the right holder of augmented

carbon sequestration capacity. There are several situations to be considered in the context of African countries according to the prevalent forest ownership regimes:

- a) Despite devolution, States still own in average more than 90% of forests in Africa. They could claim rights to carbon. Given the fact that governments have to demonstrate additionality, permanence and management of leakage within the national boundaries, compensation/carbon credits could possibly finance the improvement of resources assessment, land use planning and monitoring of changes in land use and carbon stocks. There would be benefit from the point of view of information management, there would be a low transaction cost as normal government disbursement channels could be used to allocate the funds to address deforestation, degradation and increased carbon sequestration capacity. However, centralization of law enforcement has shown to yield limited benefits and this may prove ineffective in controlling land use change and consequent emissions.
- b) Communities own 80% of land in Ghana (in the kingdoms of Lesotho and Swaziland land belong to local chieftaincies) more than 70% in Botswana – In these countries the traditional leadership is strong with a difference of entrenched democratization and participatory decision making in Botswana which is not the case in other countries. In both Ghana and Botswana the government holds rights to forests. The Constitution of Ghana acknowledges the stools as the land holders and as such defines a benefit sharing over forest revenues between the State and the traditional leadership. Therefore, devolving carbon rights and management of forest resources for carbon sequestration to local communities is likely to have high opportunity cost in case of Ghana. The revenue from timber harvesting generates significant benefits in a short term. James et al (2010) underline that low carbon prices in Ghana and lower share of benefits going to farmers is likely to act as disincentive for adoption of REDD+ interventions. Conversely, in the case of Botswana, with lower value trees, carbon sequestration could fairly compensate the communities for maintaining the trees and forests standing. While the potential benefits to the communities are high, addressing challenges related to elite capture would be paramount. In case of Ghana, changing the Constitution to allow fair benefit sharing between the local leadership and community at large may be necessary. Gender equity is not entrenched on the traditional norms of tenure; therefore specific provisions for both men and women would have to be made. Overall, nature and accountability of local institutions do matter on who holds carbon rights and who benefits and the effectiveness in enforcing sustainable use of trees and forests for carbon sequestration.

- c) 76% of private forests in Uganda, 37% in Zimbabwe and 31% in South Africa – small private land holder and large scale land holder. Uganda could provide an interesting case in the case where individual community members own (relatively small) forests. In this case the relative clarity of forest ownership also clarifies carbon rights. Paying carbon credits to land owners can therefore increase the chance of success as the management unit is smaller and enforcement of sustainable land use practices would be controlled by the household. However, in case of large scale concessions of native forests, issues of equity arise as the forest dependent communities with limited access rights to using the resources are likely to be alienated from the benefit stream. In cases of South Africa and Zimbabwe carbon rights should be considered in the broader context of land reform and restitution and redistribution policies that are in place. Benefit sharing between the private sector and communities claiming rights over land would be essential.
- d) Acknowledged customary rights in Tanzania (through village councils) and Mozambique (community land delimitations) with elected institutions - this offers an opportunity to make payments to communities whose boundaries are clearly defined and institutions that should be accountable to the community are in place. This offers a relatively simple model for carbon payments. However, Akida and Bromley (2008) indicate that one of the drawbacks of provisions of forest devolution to local communities in Tanzania is absence of a legal instrument that determines benefit sharing. On the other hand, the legal framework in Mozambique establishes that 20% of revenues from forest royalties should be channeled to the communities. About USD 3,5 million were generated between 2005 to mid 2009 to benefit 1100 eligible communities. However, less than 50% of the communities have benefited (Nhantumbo, 2010). Similar provisions are implemented elsewhere in Africa and the process of distribution of benefits faces many challenges. In Cameroon for example Cerutti (2010) concludes that unreliable systems of revenue distribution undermine a potentially transformative mechanism for sharing revenues with local communities. While governments should be held accountable of the efficiency of systems for channeling finances, also use of the revenues needs to be looked at critically to draw lessons for carbon payments in the context of REDD. The funds presumed to contribute to local communities under the timber revenue sharing schemes are generally invested in social infrastructure that should have been provided by the government. Is this a genuine sharing of benefits?

There are no simple answers on ownership of carbon rights. The context of the drivers of deforestation and key players in the process should guide the legal provisions on carbon rights. Agriculture practices and biomass energy play an important role in land

use change. Rural communities, in subsistence or commercial agriculture and urban dwellers dependent on biomass energy are currently the major actors. Therefore, reduction of emissions would need to increase finances for alternative energies for the urban population while security carbon rights for communities relying on charcoal production can provide an alternative source of employment and income.

3. Conclusions

This paper looked at land and forest tenure in Ghana, Tanzania, Uganda and Mozambique and other countries in Africa to discuss the extent to which forest tenure patterns are likely to influence rights to carbon and implementation of REDD+. Despite the fact that governments adopted policies aiming at devolving during the 1990's as means to promote sustainable forest management and poverty alleviation, in practice the change has not been significant. States continue to hold the rights to forest resources and this is likely to affect the rights to carbon and benefit distribution.

- Legal definition of carbon rights is essential to ensure channeling of benefits to rightful beneficiaries of REDD+ and climate mitigation mechanisms.
 - Carbon rights and payments to government as forest resources right holders will maintain the status quo hence being ineffective in addressing the drivers of deforestation.
 - Carbon rights and payments to community private forest holders can link rights to services and easy measurement of performance.
 - Carbon rights and payments to traditional chieftaincies likely to exclude the majority of the communities in absence of reforms in some of the current provisions among which gender equity.
 - Carbon rights and payments to delimited communities with democratic institutions, has potential high benefits, but accountability should be strengthened.
- Carbon rights should be defined for all stakeholders including government, communities and private sector to enhance efforts towards conservation of forests and enhancement of carbon sequestration capacity.
- Carbon rights and payments are only one stream of benefits from forests and challenges associated with resources control, development of enterprises, generation of biodiversity and other services should constitute a bundle of

benefits likely to impact on livelihoods and stimulate conservation for mitigation of climate change.

- To effectively address drivers of deforestation and forest degradation, a bundle of rights (to land, forest products and services in particular carbon) should be devolved to communities.

References

Akida, Amina and Rosina Blomley (2008). Trends In Forest Ownership, Forest Resources Tenure and Institutional Arrangements: are they contributing to better Forest Management and Poverty Reduction? Case Study from The United Republic of Tanzania. FAO. Rome

Boakye, K. Akyeampong and K. Affum Baffoe (2008). Trends in forest ownership, Forest resource tenure and Institutional arrangements: Case study from Ghana. FAO. Rome.

Cotula, Lorenzo and James Mayers (2009). Tenure in REDD – starting point or afterthought? Natural Resources Series, 15. International Institute for Environment and Development, London, UK.

Hepburn, Samantha (2009). Carbon Rights as New property: The benefits of statutory verification. Sidney Law Revue. Vol. 31:239.

<http://www.fao.org/forestry/39658/en/>

Kigenyi, Frederick William (2008). Trends in Forest Ownership, Forest Resources Tenure and Institutional Arrangements: are they Contributing to better Forest Management and Poverty Reduction? A Case Study from Uganda. FAO. Rome

Mayers, James, Stewart Maginnis and Emilia Arthur (2010). REDD Readiness Requires Radical Reform. Prospects for making the big changes to prepare for REDD-plus in Ghana. The Forests Dialogue.

Nhantumbo, I. (2010). Forest sector analytical note: policy, challenges and future priorities. Environmental Donor Working Group, Sector Analytical Notes Series. Maputo.

Nhantumbo, I. (2010a). Payment for Environmental Services: forest policy issues in Mozambique. Contributed paper prepared for presentation at the International Conference on Payment for Environmental Services, Jinja, Uganda, October 20 – 22, 2010

Sitoe, Almeida A. and Flávia J. Tchaúque (2008). Institutional Arrangements in Mozambique: Are they Contributing to better Forest Management and Poverty Reduction? A Case Study From Mozambique. FAO. Rome

The Global Drylands Imperative (2009). Devolving Resource Rights and the MDGs in Africa. UNDP-DDC. Nairobi