Landscape Land Use Planning : Lessons Learned from the CARPE Program

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Plantations of Azadiratha indica planted in front of the Lake Tanganyika

1 Introduction[1]

1.1 Overview

This chapter provides an overview of landscape-scale land-use planning and lessons learned from the implementing partners of the US Agency for International Development (USAID)/Central African Regional Program for the Environment (CARPE) in the development and implementation of Integrated Land-use Plans for the Congo Basin Forest Partnership (CBFP) Landscapes.

The CARPE programme works closely with its partners to improve Central African natural resource management capacities, contributing to national and regional objectives. Field efforts are concentrated on 12 landscapes, chosen and delineated across the Congo Basin as CBFP/CARPE areas of focus due to their particular importance and unique value to forest and biodiversity conservation. Actions are guided by participatory land-use planning (LUP). Landscape LUP is an integrated process composed of discrete parts (land management plans, macro-zone plans, annual work plans) joined to form a rational, logical management approach.

The landscape LUP framework promoted by the CARPE programme prioritizes three types of zones (macro-zones) to be delineated within the landscapes: Protected Area (PA), Community Based Natural Resource Management (CBNRM), and Extractive Resource Zones (ERZ). Each macro-zone should benefit from a management plan. These macro-zone plans link directly to the overall landscape plan and must articulate how they reflect, support and will contribute to the landscape desired conditions and objectives, as well as how they will address site-specific issues and needs. The objectives of

[1] Adapted from: US Forest Service. 2008. "US Forest Service Guide to Integrated Landscape Land Use Planning in Central Africa". Washington, DC: USFS. http://carpe.umd.edu/Plone/resources/carpemgmttools.

the three macro-zones of a landscape should therefore be harmonized, and not in conflict, with the objectives of the overall landscape.

1.2 Purpose of landscape planning

Landscape planning seeks to outline and implement planning processes so that: 1) the long-term ecosystem function of the forest and biodiversity present within landscapes is ensured; 2) the supply of products and income sources that local communities in the landscape have traditionally depended upon continues; 3) extractive zones within landscapes are contributing to the country's economy without negatively influencing local populations or the health of the ecosystem; and 4) in-country natural resource management capacity is strengthened.

Planning is the process in which stakeholders (community members, scientists, government representatives, private businesses, non-governmental organizations (NGOs), traditional authorities, etc.) come together to debate and discuss how to manage lands for the benefit of current and future generations, and to ensure ecological sustainability of lands and resources. The purpose of planning is to develop management and governance strategies that respond to a scientific understanding of natural and social systems as well as changing societal conditions and values. Effective planning processes promote decisions that are informed, understood, accepted and able to be implemented.

Planning can be complex depending upon the number of issues internal and external to the planning area. Planning requires risk assessments and forecasts about anticipated and uncertain future events and conditions. Consequently, even the best plan will need to be altered to adjust to improving data and information; changing social, economic or other conditions; evolving threats; or feedback from monitoring efforts. Therefore, plans are **adaptive** in nature, and amendments or entire revisions will be an outcome of monitoring and evaluation efforts.

Central to planning is the recognition that in most cases not all of the desired data on the landscape and its resources will be available in detail. This is true around the world, regardless of the financial and human resources available to the management authority. Nevertheless, landscape planning must proceed with the view that the plan can call for additional data collection and be revised with that newly acquired data to make better informed decisions. Therefore, it is important not to delay plan development due to a perceived lack of complete data.

Plans around the world vary substantially in their content, level of detail, and complexity. When working through the planning process, it is important to keep in mind that, often, simpler plans are more effective plans. The likelihood that the plan will be more widely read and understood by local stakeholders, as well as the likelihood of their engagement in the process, will increase if the plan is relatively concise, focuses on what is important for resource conditions, and is light on jargon, both scientific and legal.

Landscape-level planning differs from macro-zone planning in that it plans at a larger, spatial scale and can assess broader, wide-ranging trends, influences and impacts. A broad, wide-ranging perspective is needed to adequately understand and assess ecological sustainability and to identify resource use opportunities that contribute to economic and social sustainability. Experience has demonstrated that planning for ecological sustainability requires larger areas. For example, wide-ranging wildlife species often do not confine themselves to particular geopolitical boundaries and therefore in order to plan for the conservation of such species, a broader understanding of ecological health is needed through analysis of impacts, trends and influences. Using landscapes will enable not only the development of comprehensive plans for the conservation of species and ecosystems, but also allow the cumulative effects of current and future management actions to be measured.

1.3 Landscape planning in the CARPE context

Integrated landscape land-use plans developed for the CARPE programme demonstrate how

CARPE implementing partners have: 1) assessed and analyzed activities, resources and uses on the entire landscape; 2) developed and formulated long-term desired conditions and objectives for the landscape; 3) identified current planning and resource protection priorities and future trends; 4) consulted, collaborated and integrated stakeholders in plan development; and 5) focused management activities to achieve desired conditions and priority objectives. These plans are meant to promote stakeholder collaboration across the landscape, focus efforts on prioritizing land use, and stimulate land-use planning processes throughout the region. The generalized steps involved in landscape LUP are included in Box 1.

BOX 1. STEPS IN A LANDSCAPE PLANNING PROCESS

The following steps form the basis of the landscape land-use planning process:

1. Identify planning team members and define individuals' specific roles;
2. Identify existing and needed ecological, social and economic information on the landscape;
3. Create a Public Participation Strategy (PPS);
4. Landscape plan development :
    a. Describe the landscape's unique value;
    b. Describe characteristics of the landscape;
    c. Develop landscape desired conditions;
    d. Develop landscape objectives which reflect and address the desired conditions for the landscape;
    e. Develop and map macro-zones, taking into consideration already legally designated areas, concessions, and contracts;
    f. Define landscape-wide guidelines (optional);
    g. Outline a work plan and activity implementation schedule; and
    h. Design a monitoring and evaluation system and schedule.

The guidance and activities outlined in the landscape plans and the subsequent macro-zone plans aim to contribute to the long-term management, benefit and sustainability of forest resources in the region and thereby contribute to the development of sustainable livelihood strategies and economic development activities for those dependent upon these resources.

As a precursor and in order to orient the development of more formal management plans at multiple levels, CARPE implementing partners have produced a Strategy Document (SD) for each management unit. Each SD describes how CARPE implementing partners will develop a landscape plan, what is needed to develop the plan, and how much time and resources it will take. The elements and analysis needed to develop the SD are part of the landscape planning process. Box 2 outlines the CARPE management approach to landscape LUP.

1.4 Governance and management authority

CARPE landscape partners do not, and will not, have a mandate to exercise governance authority. This authority lies rather with national, local and community entities depending on the national legal framework and structures in place. As government capacity and presence in the landscapes varies widely throughout the region, engagement and policy influence is challenging at best. In order to influence the development of good governance practices and structures on the ground, CARPE partners can strategically use the management plan development process to engage local communities, government agency representatives, concession holders and other stakeholders. This critical stakeholder engagement process requires significant investment of time and resources in order to support the various stakeholders in developing an integrated landscape plan and subsequent institutional capacity to meet concomitant needs for resource use and conservation.

BOX 2. CARPE MANAGEMENT APPROACH TO THE LAND-USE PLANNING PROCESS*

Both entire landscapes and macro-zones follow a four-stage land-use planning process, with the degree of completion of each step being characterized by a percentage benchmark.

A land-use planning process is "convened" when a finished, written Strategy Document has been prepared which stipulates and defines the tasks and responsibilities necessary to produce a Management Plan. After the macro-zone or landscape reaches the convened stage, the partner will then proceed with the steps outlined in the Strategy Document to produce the Management Plan. Finally, an "Adopted Land-use Plan" is recognized by the legal controlling authorities that govern the specific land use types (Parks Services, Forestry Ministry, etc.). Implementation of a land-use plan indicates that the activities specified in the management plan are being executed.

*Source: http://carpe-infotool.umd.edu/IMT/

2 A review of the landscape land-use planning case studies

2.1 Introduction

This review of lessons learned from the CARPE experiences in landscape LUP includes three case studies: 1) the Sangha Tri-National Landscape, 2) the Maringa-Lopori-Wamba Landscape, and 3) the Maiko Tayna Kahuzi-Biega Landscape. This section highlights and synthesizes the key lessons from each case study as identified by the authors.

2.2 Sangha Tri-National Landscape case study[2]

2.2.1 Planning activities implemented

The Sangha Tri-National (TNS) Landscape includes, broadly speaking, a transboundary core protection zone and a peripheral zone. The core protection zone is managed such that human activities are either forbidden or controlled and consists of the National Parks of Lobéké (Cameroon), Dzanga-Ndoki (Central African Republic) and Nouabalé-Ndoki (Republic of Congo). The peripheral zone is managed for participatory and sustainable management of wildlife and forest resources and includes production forests, sport hunting concessions, community hunting zones and agro-forestry areas.

Land-use planning in the TNS Landscape has existed in one form or another for many years :

1. Planning, or more accurately de facto zoning, for parts of the TNS Landscape date back to the colonial era with large rubber exploitation concessions and more recently with logging concessions in the mid twentieth century. More "conscious" planning

[2] Adapted from: Usongo, L. 2009. "Lessons Learned in the Sangha Tri-National Landscape Land-Use Planning Process". CARPE Lessons Learned. Yaoundé: IUCN and USAID.

was initiated in the mid 1980s with a series of biological and socio-economic surveys of the region to better understand its biodiversity conservation importance and pressures.

2. The Yaoundé Declaration was then signed in 1999 along with the forming of the Central African Forest Commission (COMIFAC) to promote sub-regional collaboration on natural resource management and economic development.
3. During the 1990s, land-use plans for various zones/management units were developed under the differing policy regimes in each of the three TNS countries.
4. In the early 2000s, several institutional agreements were signed and implemented by the three countries to facilitate and promote transboundary collaboration (e.g., anti-poaching patrols and free circulation).
5. Since the late 1990s, technical support from various donors and NGOs has been offered for community natural resource management in both forestry and hunting zones.
6. In late 2005, TNS partners, notably World Wildlife Fund (WWF), Wildlife Conservation Society (WCS), German Development Cooperation (GTZ) and national government forest administration staff from the three countries held meetings to discuss thematic issues to be captured in the TNS Land-Use Plan.
7. This led to a process convened by the TNS planning and coordination committee (CTPE – Comité Technique de Planification et Exécution) in which over the course of two years a land-use plan was developed by a consultant in consultation with geographical information system (GIS) experts and regular reviews by the CTPE. As of late 2008, a final draft was submitted to the respective national governments for review and approval.

2.2.2 Lessons learned

The LUP process in the TNS has evolved over time concurrently with national policies and the regional context. Harmonization of the three countries' legal frameworks vis-à-vis land and resource management would undoubtedly improve LUP and ease implementation. For a LUP process to be successful it is necessary to understand that time and resources (technical and financial) are needed to gain the necessary trust with the relevant stakeholders. National government technical capacity building and involvement is critical to successful LUP processes. Lastly, due to the time and effort required to develop a land-use plan, it is important that the planning team develop and implement a work plan for the production of the plan.

Another key lesson learned presented by the authors concerns the establishment of a trust fund. The TNS Landscape team has invested significant energy over recent years developing a trust fund to sustainably fund core management operations on the Landscape. For a trust fund to work it was necessary to develop not only a land-use plan for the protected areas but also a business plan. It was determined that business planning required an outside specialized skill set and therefore the CTPE engaged consultants to develop and harmonize the TNS management plans and the broader landscape business plan. Additionally, the implication of key stakeholders, notably the national governments and the technical NGOs, in developing a common vision, objectives and management structure for the trust fund was also noted as critical to its success.

Lastly the authors highlighted lessons learned in participatory management as an important element in the process. Planning for communities' access and use rights happened (or did not) based on the differing legal frameworks, policies, and on-the-ground realities in each country as of the initiation of conservation activities. Regardless of the history, it was noted that it is key to engage all stakeholders early in the planning

[3] Adapted from: Dupain, J., Degrande, A., De Marcken, P., Elliott, J. and Nackoney, J. 2009. "Lessons Learned in the CARPE Maringa-Lopori-Wamba Landscape Land-Use Planning Process". CARPE Lessons Learned. Yaoundé: IUCN and USAID.

process. Indeed, the authors suggest that this approach led to the significant progress in recent years towards the improved integration of local communities into natural resource management activities.

2.3 Maringa-Lopori-Wamba Landscape case study[3]

2.3.1 Planning activities implemented

The Maringa-Lopori-Wamba (MLW) Landscape covers 74,000 km2 in the Equateur province of the Democratic Republic of Congo (DRC). The MLW Landscape boundaries are the watersheds of the Lopori and Maringa Rivers with forests dominating over 90 percent of the Landscape. Rural villages, farms and plantations comprise less than seven percent of the Landscape. The Landscape retains high biodiversity values despite continued forest conversion, slash–and-burn agriculture, commercial and illegal logging, and the bushmeat trade.

Land-use planning in the MLW Landscape was carried out as follows:

1. Prior to 2004, which coincided with Phase 2 of the CARPE programme of activities, very little planning had occurred in the MLW Landscape. There was minimal data available on biodiversity, stakeholders, land-use patterns and socio-economic conditions, and discussions with the government and local communities had not been undertaken. Therefore a “Threats and Opportunities Analysis” workshop was held to identify, in a participatory manner, site-based conservation targets and goals and ensure local ownership of these goals.
2. In 2007 with the initiation of CARPE Phase 2b, the MLW Landscape Consortium adjusted the approach based on experiences gathered since 2004. Changes were centred around the following elements:
    - Consortium structure;
    - Implemention of the African Wildlife Foundation’s (AWF) Heartland Conservation Process (HCP) and identifying priority activities;
    - Stakeholder consultation and participation;
    - Participatory data collection and analysis;
    - Zoning based on desired outcomes; and
    - Spatial modelling and monitoring.

2.3.2 Lessons learned

A summary of the lessons learned identified by the MLW consortium in the MLW Landscape are as follows. The AWF HCP fits well with the USFS/CARPE landscape LUP framework as there is significant overlap and consistency between the planning approaches.

The authors highlighted the importance and value to the LUP process of the proposed MLW Consortium governance structure and function. The Consortium was improved as it evolved beyond individual partners focusing on geographically distinct interventions to a more integrated planning unit wherein a technically competent, compatible and complementary team of partners was formed with each member bringing thematic expertise that contributed to a holistic approach to planning. Moreover the structure included focal points serving as an interface between local stakeholders and partners at the central level in Kinshasa. These interlocutors proved invaluable as local, traditional authorities did not always possess the skills needed to transmit and manage information (e.g., communication, conflict resolution, public participation, etc.). Additionally, the Consortium was structured with both local and national committees empowered and mandated to relay information in both directions (local to national, and national to local) which helped ensure Consortium members were not only well informed but also working together.

Another key to planning in the MLW Landscape is promoting ownership of the process as early in the process as possible. This ownership of the process by local authorities and civil society should best be guided by a public participation strategy to maximize and facilitate participation. Challenges were encountered however in engaging local communities in joint decision making

as previous participation they had provided in such processes was characterized as "participation through information giving and/or consultation". To surmount these and other related challenges it was found to be important that a public participation strategy be flexible and adaptive to respond to shifting political and social realities. The authors underlined the value of the plan being a "living document" through a regular review of the landscape vision, objectives and desired conditions to take into account changes in the Landscape over time. Changes such as the conversion of old logging titles to concessions, changing values for cash crops, the installation of new private companies, evolving priorities of the national government, and new initiatives of major funding agencies could all have an impact on the strategic direction of planning and operational interventions.

Lastly, the MLW Consortium found that satellite data and spatial modelling when ground-truthed with field data proved valuable to both planning as well as monitoring actions. The authors suggest that this sophisticated approach could be replicated to support planning efforts elsewhere in the Congo Basin.

2.4 Maiko Tayna Kahuzi-Biega Landscape case study[4]

2.4.1 Planning activities implemented

The Maiko Tayna Kahuzi-Biega (MTKB) Landscape in Eastern Democratic Republic of Congo covers approximately 10 million hectares with large blocks of intact forest that provide many vital ecosystem services (e.g., local climate regulation, prevention of soil erosion, and water purification, retention, and flood control) for eastern central Africa. The MTKB Landscape is also an area of significant poverty, where more than an estimated one million inhabitants rely heavily on subsistence agriculture, hunting, and collection of forest products. In addition, illegal mining of gold, casserite, diamonds and other valuable ores is taking place often under the control of illegal armed militias, a legacy of the region's civil wars.

Land-use planning in the MTKB Landscape has occurred in various forms over the years :

1. In the course of the three decades prior to 2003, significant baseline investment was made in the Landscape namely through the official gazetting of two National Parks (Maiko and Kahuzi-Biega); long-term GTZ support to the state wildlife authority from the Ministry of the Environment, the Institut Congolais pour la Conservation de la Nature (ICCN) in highland areas of the Kahuzi-Biega NP; the Dian Fossey Gorilla Fund International (DFGFI) support of a community conservation programme yielding a land-use plan with local and central level buy-in; and the work of a federation of local NGOs called UGADEC[5] scaling up the DFGFI model to create a community-supported biological corridor between the Maiko and Kahuzi-Biega National Parks.
2. From 2003 to 2005, increased USAID CARPE funding to the Landscape supported the hiring and capacity building of field and management project staff. Additionally, resources were deployed to secure basic equipment for field operations and to carry out a series of socio-economic and biological analyses. The Landscape consortium directed resources towards these basic start-up activities in order to enable the subsequent ramping up of planning efforts.
3. In 2006, more formal LUP discussions and consultations were held at the landscape and macro-zone scale. Notably, co-management contracts were signed and implemented between the ICCN and local NGOs (UGADEC) for the Tayna and Kisimba-Ikobo Reserves which effectively demonstrated the evolution of a formally recognized protected area created out of a broader CBNRM zone. Moreover during this period

[4] Adapted from: Mehlman, P. 2009. "The Evolution of Macro-zoning in the Maiko Tayna Kahuzi-Biega Landscape, Eastern Democratic Republic of Congo". CARPE Lessons Learned. Yaoundé: IUCN and USAID.

[5] Union des Associations de Conservation des Gorilles pour le Développement Communautaire à l'Est de la République Démocratique de Congo.

the Landscape partnership enlarged its vision beyond the protected areas towards a more comprehensive vision for the CBNRM zones in the Landscape, effectively refocusing "attention on the needs of these communities in these zones, rather than continuing a perspective where these areas were seen as buffer zone projects only related to the National Parks".

4. From 2007 to the present, the Landscape partnership moved to adjust the Landscape and macro-zone boundaries to reflect the "government administrative units wherever possible (i.e., provincial, territorial, collectivité and groupement boundaries)". The partnership promoted such changes thinking that it would "substantially improve governance and long-term management of natural resources at all levels (including local communities) and would ensure that these units remained meaningful well into the future".

2.4.2 Lessons learned

First and foremost the authors suggest that landscape LUP and zoning interventions should build upon ongoing local initiatives and existing local contexts and aspirations.

Secondly, to maximize the efficacy of limited resources, local capacity should first be strengthened (where necessary) before attempting broad landscape-scale macro-zoning and LUP. Without certain fundamental capacities, planning efforts are unlikely to succeed and might actually be detrimental to future conservation and development interventions.

Macro-zones within a landscape are not static entities as they must evolve concurrently with the socio-political context. Informed planning will take this into account and adapt as necessary to stay current and relevant.

In order to constructively engage and gain the support of local communities for natural resource management in CBNRM macro-zones, these zones should not simply be viewed as buffer zones for PAs. Rather CBNRM planning and subsequent zoning should focus explicitly on supporting the local communities to meet their needs for well managed resources.

The position of landscape and macro-zone boundaries matter. If macro-zone and landscape boundaries follow government administrative unit boundaries as closely as possible, and not just biological criteria, the land-use plan will more likely be accepted by government authorities at all levels.

Lastly the authors argue that a land-use plan should be a guide for the future sustainable management and use of resources throughout the entire Landscape. As such, with stakeholder participation, it should identify macro-zones for the entire area of the Landscape.

3. Conclusions and recommendations

A number of common themes have emerged from the lessons learned over the last five years in these three Landscapes:

3.1 Lasting LUP requires significant investment of time and resources

The TNS team noted that for a LUP process to be successful it is necessary to understand that time and resources (technical and financial) are needed to gain the necessary trust with the relevant stakeholders. The MLW Consortium suggested that "the process of stakeholder consultation is in a sense never-ending, and must be integrated into all aspects of intervention design, implementation and monitoring". The MTKB partnership spoke to the realities of LUP in Central Africa and the investment required for suc-

[6] The overall co-management vision in the TNS landscape "is to ensure greater integration of the surrounding local population in natural resource management processes, facilitate access to resources, support alternative income-generating activities, build strong local management institutions and facilitate benefit-sharing mechanisms for local communities from revenues generated from the exploitation of wildlife and timber, as well as from ecotourism".

cess: "It would be disingenuous to suggest that at the onset of the programme, the Landscape partnership developed a comprehensive land-use plan and then went forward and implemented it, including the designation of macro-zones. In reality, this has been very much an organic process relying on inputs and insights from many sources, and perhaps the most important lesson learned is that the process takes time".

3.2 Engage stakeholders early and often for successful LUP

The TNS team highlighted the need to engage stakeholders early in the planning process and beyond through the joint articulation of a co-management vision between stakeholders.[6] Likewise, the MTKB team suggested that planning interventions should build upon ongoing local initiatives and existing local contexts and aspirations. The MLW team echoed that early stakeholder engagement is important and moreover that it would promote the ownership of the process.

3.3 Successful LUP requires certain basic capacities and therefore investments in technical capacity building are important

The TNS team observed the key role to be played by the national and local government authorities in any LUP process and underscored the need to provide technical capacity building to help ensure their effective participation. The MTKB team highlighted the value of local capacity and that it should first be strengthened (where necessary) before attempting broad landscape LUP.

3.4 Effective LUP depends on functional and broadly supported governance and management structures

The MLW team highlighted the importance and value to the LUP process of the proposed MLW Consortium governance structure and functions. The TNS team noted that bringing all parties to develop a common vision, objectives and management structure for the trust fund creation and implementation was critical to its successes thus far.

3.5 The Landscapes' context (social, political, economic, biological, etc.) are dynamic and therefore the plans should be as well

The MLW team underlined the value of the plan being a "living document" through a regular review of the Landscape vision, objectives and desired conditions to take into account changes in the Landscape over time. The MTKB team suggested that macro-zones within a Landscape are not static entities as they must evolve concurrently with the socio-political contexts. Informed planning will take this into account and adapt as necessary to stay current and relevant.

In conclusion, although land management decisions are ultimately political, law and best practice dictates that such decisions can be greatly influenced by a technical process focused on balancing trade-offs between the sometimes opposing objectives of conservation and development.[7] Landscape LUP is intended to accomplish just that by bringing diverse interests to the table to work out the long-term vision leading to mutually beneficial agreement on the desired conditions and objectives for the landscape. This common vision and these high-level objectives, once articulated, will then orient, through annual work planning exercises, what actions are needed in the landscape. While the reality of LUP in Central Africa has been very much an organic process, the lessons learned to date provide a solid foundation going forward to help bring practitioners, policy makers, local communities and others together to work constructively to maintain the ecosystem services critical to human well-being.

[7] Opposing in the context of the current predominant economic framework that necessarily undervalues natural capital and therefore does not adequately incorporate conservation actions as critical to sustainable development.