

## Case Study 3 - Landscape Land Use Planning : Lessons Learned from the Maringa - Lopori -Wamba Landscape

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### Introduction : Landscape land-use planning

The objective of a land-use planning strategy is to outline a procedure to consolidate the needs of local people and biodiversity into a Land-Use Plan (LUP), the implementation of which will render the landscape ecologically, socially and economically viable.

A CARPE landscape is synonymous with an African Wildlife Foundation (AWF) Heartland. AWF developed the Heartland Conservation Process (HCP) as the framework to plan, implement, and measure conservation and social impacts at a landscape scale. As part of the HCP, AWF uses a landscape-level planning process which was developed with help from The Nature Conservancy (TNC)<sup>1</sup> to work with partners and stake-

holders to establish conservation goals for each Heartland, to identify threats to conservation targets, and to design threat-reduction activities. AWF has used this process to develop strategies to measure and monitor impacts on conservation targets and to set priorities for future threat-targeted interventions in each Heartland. Although the AWF HCP is an iterative process that takes different forms depending on the local conditions of each Landscape or Heartland, the primary components of the process remain consistent across all Heartlands.

The Landscape Land-Use Planning (LLUP) methods used in the CARPE Maringa/Lopori-Wamba (MLW) Landscape are based on the HCP with adaptations influenced by the United States Forest Service (USFS) Integrated Land Use Planning document (December 2006)<sup>2</sup>. Over the last four years, through continuous feed-

<sup>1</sup> In the early stages of developing the HCP, AWF borrowed heavily from TNC's Site Conservation Planning process as described in "Site Conservation Planning: A Framework for Developing and Measuring the Impact of Effective Biodiversity Conservation Strategies, April 2000".

<sup>2</sup> See <http://carpe.umd.edu/resources/Documents/USFS%20Landscape%20Guide%20Dec2006.pdf>.

back and adaptive management, the LLUP strategy has been adapted, refined and strengthened. Although a single universal land-use planning methodology cannot exist due to the variability of unique local characteristics across landscapes, AWF's work in MLW so far demonstrates a robust structure and approach as a useful model for LLUP elsewhere in the Congo Basin.

In this paper we begin by presenting an overview of the MLW Landscape. This is followed by a review of select LLUP methods based on Phase 2 of CARPE (incorporating Phase 2A from 2004–6 and initial learning from Phase 2B, scheduled to run from 2007–11). The final section presents a summary of lessons learned.

## Background : The Maringa/Lopori-Wamba Landscape

### Physical characteristics

The Maringa/Lopori-Wamba (MLW) Landscape spans 74,000 km<sup>2</sup> and covers the four territories of Basankusu, Bongandanga, Djolu and Befale in the Equateur province of the Democratic Republic of Congo (DRC). The MLW Landscape boundaries are the watersheds of the Lopori and Maringa Rivers. Forests dominate over 90 percent of the landscape; about one quarter of these forests are swamp and floodplain forests (or forested wetlands), reflecting the landscape's low relief (just under 300 m on average) and high rainfall (more than 1.9 m annually). Rural complexes, i.e., human-dominated areas, mostly farms and plantations, comprise less than seven percent of the landscape.

### Ecological characteristics

The ecological value of the MLW Landscape is very high and globally significant as MLW comprises a sizeable portion of the Congo Basin forest ecosystem and is home to diverse and

important species, including the endangered Bonobo as well as the Giant pangolin, the Golden cat, the Forest elephant, the Congo peacock, and many other rare primates, amphibians and reptiles. The Landscape has an extremely diverse avifauna and abundant fish species. The biodiversity value of this Landscape continues to be high despite the negative impacts of forest conversion, slash-and-burn agriculture, commercial and illegal logging, and the bushmeat trade.

### Socio-economic conditions

Recent spatial modelling on human distribution suggests that human density is on average eight people per km<sup>2</sup> (Kibambe, 2007)<sup>3</sup>, with estimated densities of seven, seven, ten and nine people per km<sup>2</sup> respectively in the territories of Befale, Djolu, Basankusu and Bongandanga. The total human population in the MLW Landscape is estimated at 587,000.

Ethnic groups living in the Landscape are mainly Mongo people and their relatives of the Mongando ethnic group. The Ngombe ethnic group is mainly present in the north, on the axis of Bongandanga-Basankusu, and southwards in the Lomako Forest. Small groups of pygmies are scattered in the northern part of the Landscape and a concentration of Kitiwalists (Jehovah's Witnesses) resides mainly between the headwater areas of the Lomako and Yokokala rivers. The Kitiwalists retreated into the forest years ago and essentially do not accept any jurisdiction from the DRC government (Nduire, 2008)<sup>4</sup>.

Equateur Province was severely impacted during six years of war and unrest (1998–2004) and today remains one of the poorest and least developed parts of the country. Mainly dependent on wild resources for their livelihoods, local communities have indicated a strong desire to be included as partners in the development of improved natural resource management in their landscape.

<sup>3</sup> Modélisation spatiale multisectorielle des dynamiques territoriales: étude de cas à l'échelle régionale dans la RDC. DEA, Univ.Cath.Louv.

<sup>4</sup> Les populations de Maringa/Lopori-Wamba, accès aux ressources naturelles et les conflits fonciers: cas de la zone K7/K2. Rapport AWF.

## Principal threats to conservation

The principal threats to conservation in the MLW Landscape are associated with livelihood activities of local people, including subsistence agriculture and unsustainable bushmeat hunting, but also unsustainable commercial hunting, and traditional and industrial logging. These threats are further exacerbated by inadequate agricultural policies and lack of market access. Researchers from South Dakota State University and the University of Maryland analyzed forest cover loss in the MLW Landscape from 1990–2000 using satellite imagery (see Figure 1). Roughly 56,000 ha (about 0.9 percent) of the forest was converted during this period for the expansion of slash-and-burn agricultural activities. Over half of the observed conversion occurred within 2 km of a road.

## Human settlement and economic activities

The principal towns in the MLW Landscape are Basankusu, Djolu, Bongandanga and Befale with populations ranging from 41,000–135,000. Many surrounding cities such as Lisala, Bumba and Boende influence economic activities within the Landscape. Roads between these towns and cities are very poor and are often only passable by motorbike. Villages are stretched along road axes, with agriculture concentrated around human settlements. The agricultural activities practised in the Landscape are primarily for subsistence, with less opportunity for cash crops given difficult market access. Cassava, maize and groundnuts are the main agricultural products. Most of the formerly active industrial plantations of palm oil, rubber and coffee have been

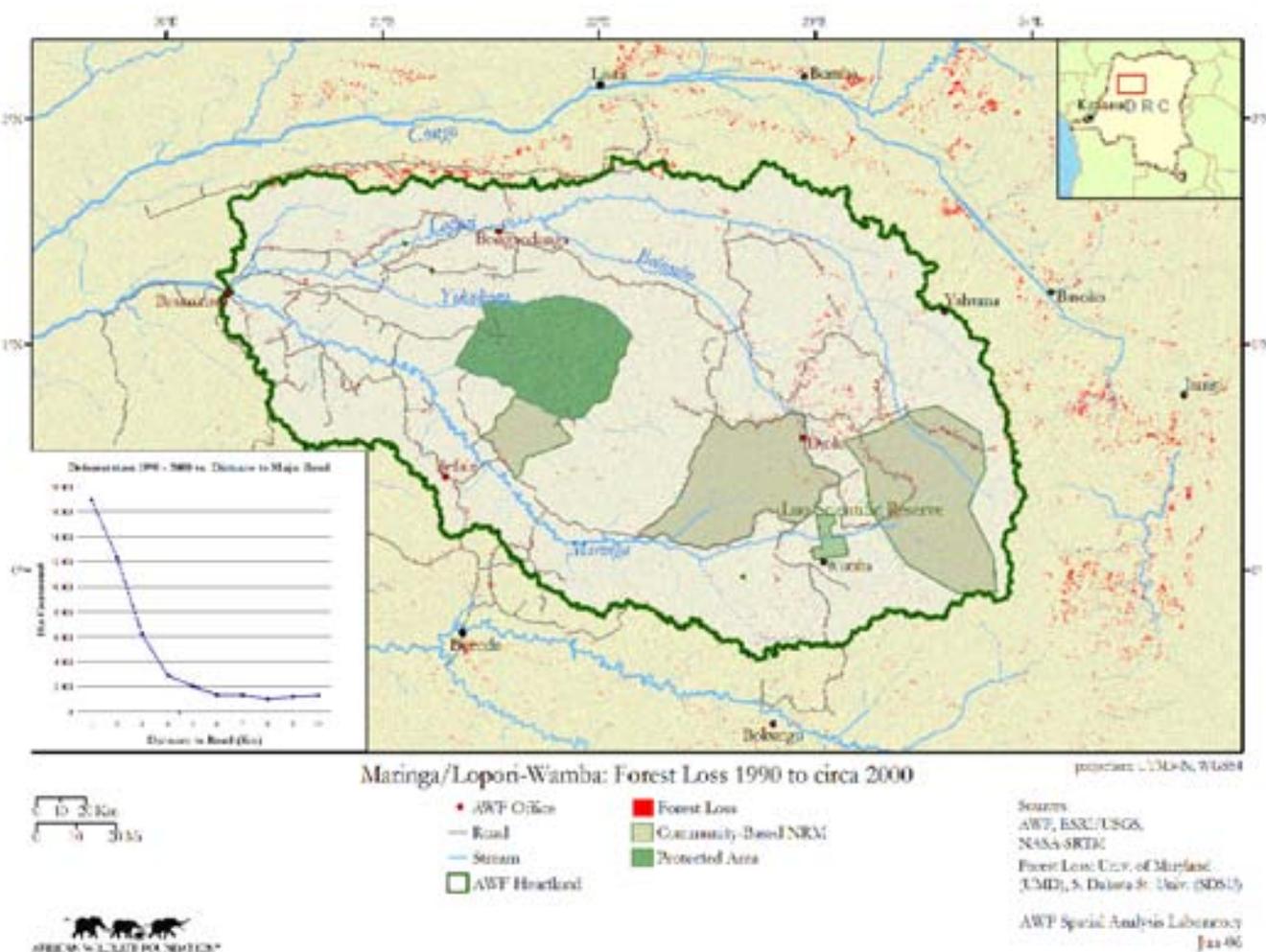


Figure 1. Forest loss within the MLW Landscape

abandoned.

Bushmeat market data indicates that local people are highly dependent on bushmeat hunting, consumption and trade for both protein and trade (Dupain, 1998). A one-year study of bushmeat availability at the market in Basankusu showed that more than 30 percent of the 12,000 carcasses recorded for sale originated from the Lomako area of the Landscape (Dupain, 1998). This confirms that the Lomako area is an important source of bushmeat for both commercial and nutritional purposes.

## Landscape land-use planning methods and results

### Early approach : 2004–2006 (CARPE Phase 2A)

The flowchart in Figure 2 describes the initial

HCP methodology as applied in the MLW Landscape from 2004–2006.

Prior to the commencement of CARPE Phase 2, very little was known about the MLW Landscape. Little data was available on biodiversity, stakeholders, land-use patterns, socio-economic conditions, and the expectations of government and local communities. The sequence of planning activities was adapted to accommodate this paucity of information. At the onset of Phase 2, the CARPE Strategic Objective was translated into site-based conservation targets and goals based on a programme of participatory data collection and analysis (through a “Threats and Opportunities Analysis” workshop). This participatory process aimed to ensure ownership of the programme by the local stakeholders and led to the identification of a priori goals centred on the reactivation and/or sustainable management of a number of natural-resource use zones. These zones, called “macro-zones”, included Commu-

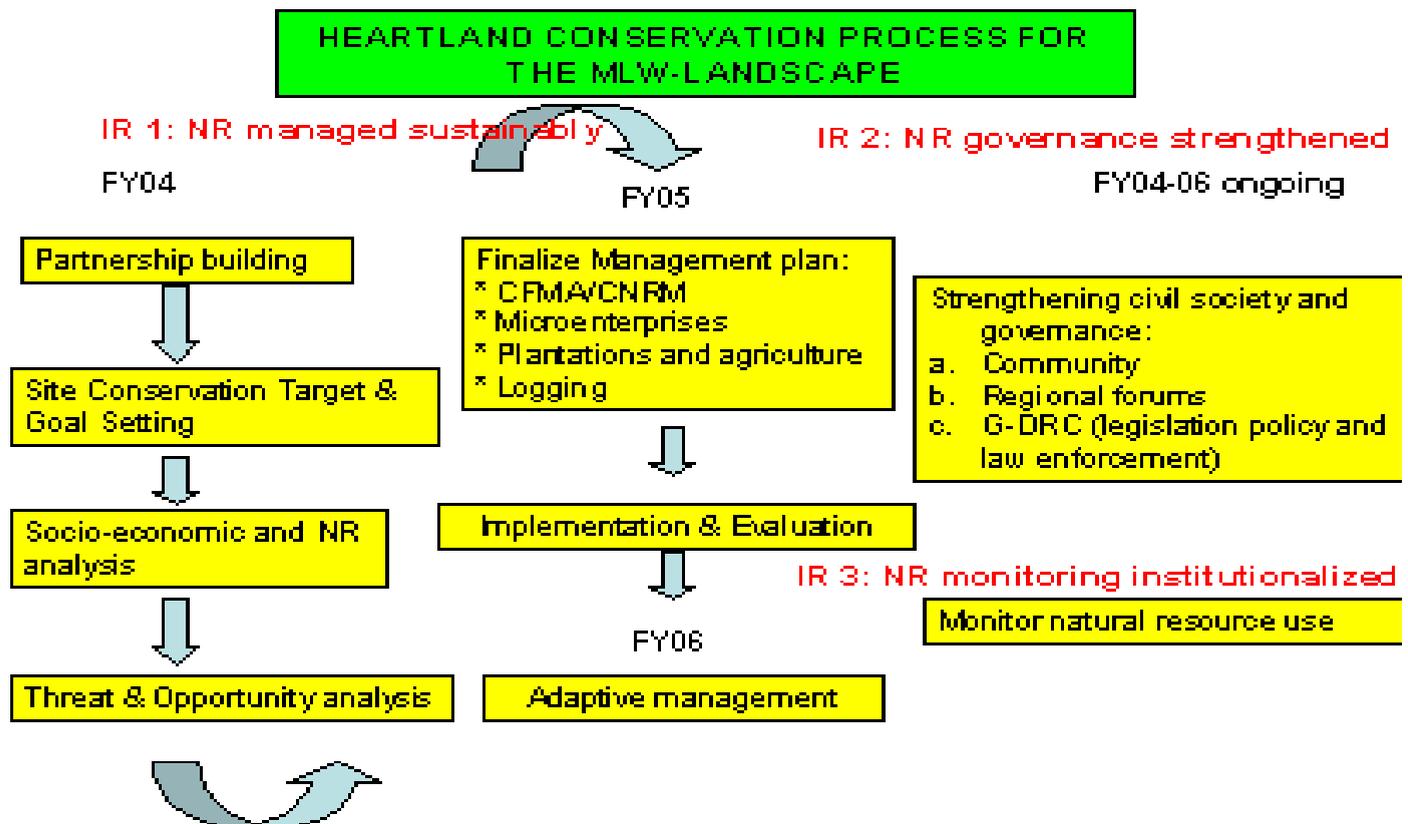


Figure 2. Heartland Conservation Process for the MLW Landscape

IR: intermediate result set by CARPE/USAID Programme

NR: natural resources

CFMA/CNRM: community forest management activities/community natural resource management

G-DRC: Government of the Democratic Republic of Congo

nity-Based Natural Resource Management (CBNRM) areas, Protected Areas, logging concessions and plantations. The structure of the first AWF-led MLW Consortium was oriented to these a priori objectives, with partners CARE International, Conservation International (CI) and AWF each focusing primarily on one type of natural-resource use zone.

## From 2007 onwards : CARPE Phase 2B

Experiences and analyses of results from Phase 2A indicated the need for a slightly different approach in CARPE Phase 2B, (2007–2011). Elements of LLUP were adapted and new elements initiated, including:

- a. Consortium structure;
- b. HCP and identifying priority activities;
- c. Stakeholder consultation and participation;
- d. Participatory data collection and analysis;
- e. Zoning based on desired outcomes;
- f. Spatial modeling and monitoring.

The lessons learned and adaptations made in each of these six areas are discussed below.

### Consortium building

During Phase 2A, the MLW Consortium consisted of AWF, CARE International and CI. This was based on the perception at the time of the expertise needed. The expertise was macro-zone-directed as opposed to thematic. The work plan referred to a specific number of community forests, plantations and protected areas to be ultimately covered by a sustainable natural resource management plan. CI was responsible for assessing the potential for conservation concessions and the reactivation of an industrial plantation. CARE focused on community forestry and AWF was the overall leader with a focus on protected areas and biodiversity. As MLW-consortium members focused on delineated macro-zones, there was a lack of cohesion at the landscape level. One major consequence was the absence of a solid Public Participation Strategy (PPS).

The LLUP consortium for the current CARPE Phase 2B is structured and organized very differ-

ently. Instead of being geographically focused, consortium members now work together on common objectives and implement carefully coordinated activities. Consortium members have specific thematic expertise:

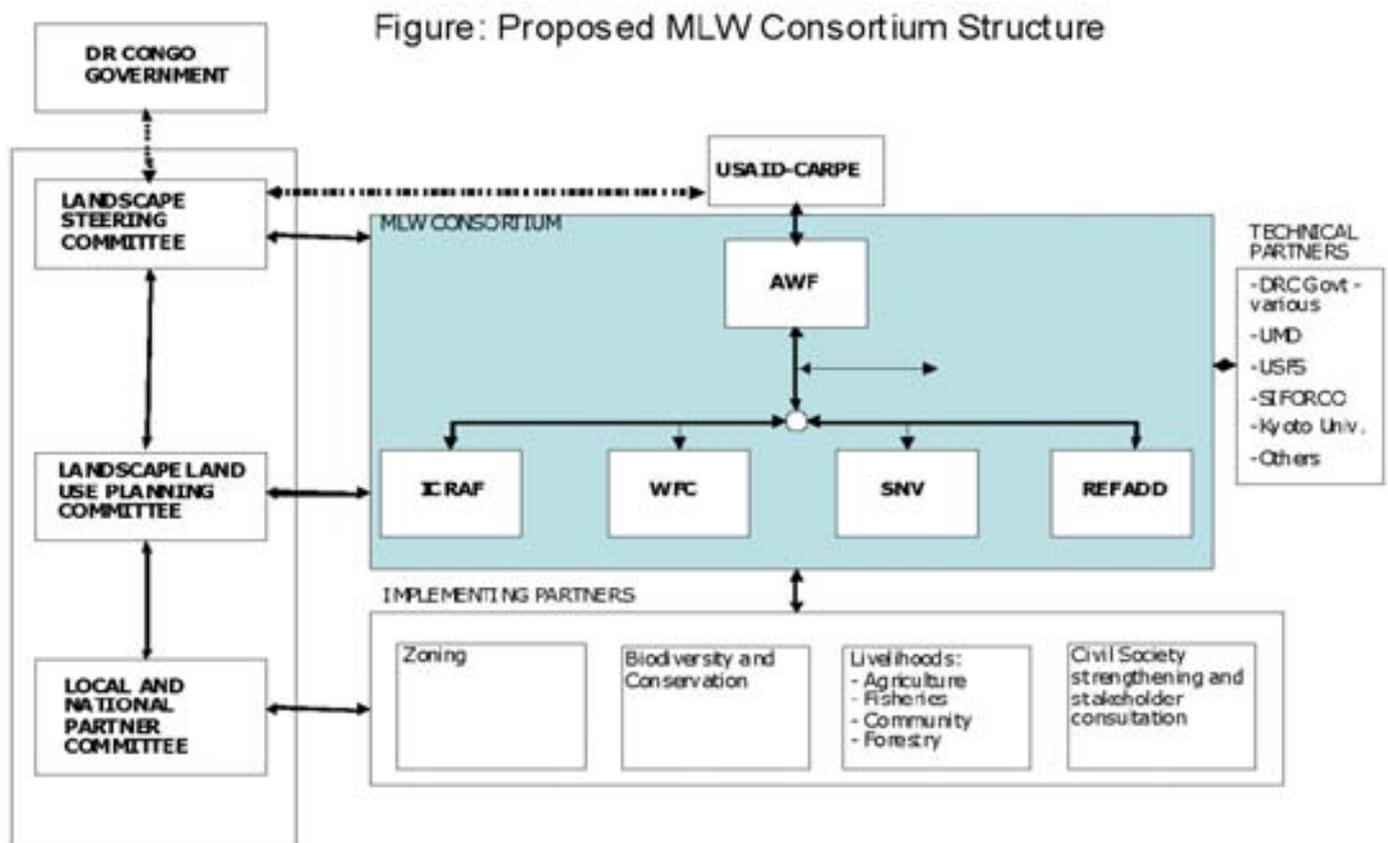
- AWF: biodiversity management and sustainable land-use practices, enterprise development and applied GIS processes.
- World Agroforestry Centre (ICRAF): development and promotion of improved agriculture and agroforestry practices.
- Stichting Nederlandse Vrijwilligers (SNV): strengthening civil society institutions, capacity building, conflict resolution and participatory approaches.
- Réseau des Femmes Africaines pour le Développement Durable (REFADD): strengthening the role of women and minorities in natural-resource use decision making.
- WorldFish Center (WF): development and promotion of improved fishery practices.
- University of Maryland and Université Catholique de Louvain: analysis of satellite imagery and implementation of GIS modeling for land-use planning and monitoring.

Local and national partner committees have been created for the Landscape. At each of the four local “territory” levels, a Committee has been established, with representatives of the various stakeholders and civil society groups involved. These committees meet once a year and serve as information-sharing platforms between the local communities and the LLUP team.

At the national level, a Landscape Steering Committee has been created. This Committee is composed of stakeholders of the national government. The committee reviews whether the MLW programme is compatible with and responds to the priority agenda of the DRC government. Figure 3 summarizes the overall Phase 2 Consortium structure, developed from lessons learned during the initial phase of work in MLW.

### HCP and identifying priority activities

In December 2004, a two-day participative “Threats and Opportunities Analysis” workshop brought together government, civil society and local NGO representatives from each of the four



**Figure 3: Phase 2 structure of MLW Consortium**

MLW territories, as well as representatives from provincial and national governments, international NGOs and the private sector. Using the AWF HCP approach, the workshop :

- increased stakeholder understanding of the value of working at the landscape level and the need for landscape land-use planning;
- resulted in the identification of priority activities for specific areas.

At the workshop, participants agreed on the following:

- The Lomako-Yokokala forest should be protected to support the livelihoods of local communities.
- Substantial support for agricultural activities is needed to decrease the pressure on fauna from commercial bushmeat hunting. Participants agreed to give priority to improving access to markets for the sale of agricultural crops.
- A potential site for controlled hunting was selected.

In addition to these principal activities, the

consortium also initiated a process of detailed stakeholder scoping, data collection and analysis. The results helped to refine priorities in each macro-zone. Direct support for local NGOs was obtained to implement priority agricultural activities. At the start of Phase 2, priority MLW activities consisted of:

- The creation of a protected area: the Faunal Reserve of Lomako Yokokala;
- Indicative zoning of 40 percent of the Landscape;
- Significant support for agricultural activities, including improving access to markets;
- A decision to cancel proposed plans to establish a forest with controlled hunting. The results of the field data indicated that the proposed area was not suitable, and that the MLW Consortium's approach should be adapted. Thanks to participatory data collection and decision making, local stakeholders did not dispute the necessary changes in objectives for the proposed area.

## Stakeholder consultation and participation

Ownership of the LLUP process by the primary stakeholders has proved to be a critical prerequisite for success. In the MLW Landscape, this has meant enabling full participation by the socio-political groups in the different levels of government administration (groupement, territory, province), traditional chiefs and civil society (preferably umbrella and network organizations), as well as specialized organizations (representing women, indigenous people) and private-sector representatives (including logging companies, agro-industry, small planter groups, and service providers).

The MLW Consortium team initiated widespread discussions on the concept of LLUP and focused on the need to look at a landscape scale rather than macro- or micro-zones. The planning team met with representatives of government and local communities in Kinshasa and in the Landscape. It was important that stakeholders understood that no specific decisions would be taken on zoning without widespread consultation and agreement. These meetings draw attention to some of the main challenges posed by trying to implement a LLUP programme that is about both serving the needs of local people and conserving biodiversity, which are often conflicting objectives in areas such as MLW where people rely heavily on the ecosystem for their livelihoods and well-being.

Attendance at the open meetings with representatives in Kinshasa grew rapidly from an initial eight people to more than thirty. Over time, however, the numbers fell back to a core group of 10–15. The Consortium held open meetings and made presentations at provincial level and in each of the four administrative territories. The open meetings were very much welcomed and initiated a process of growing local ownership. This ownership translated into real participation, with representatives of the stakeholders increasingly involved in the development of the LLUP strategy, vision, objectives and work plans.

The MLW Consortium learned important lessons from this process. First we recognized that, while

the meetings are key to real participation and to the project's long-term success, they also create expectations and attract opposition as no specific implementation activities are agreed in this initial consultation phase. Second, we learned 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. These lessons have been fed into MLW Consortium best practice, with our overall Public Participation Strategy adapted as appropriate.

## Participatory data collection and analysis

From the start of Phase 2, stakeholders were also invited to participate directly in the compilation and analysis of landscape-level data. This participative approach both improved the quality of field data collection and strengthened the partnership between the MLW Consortium and stakeholders.

As a result of the meetings, participatory data collection and informal discussions with stakeholders, the MLW planning team could develop a large-scale rough data collection system that focused simultaneously on biological and socio-economic issues. The data collection covered an estimated 60 percent of the Landscape (USAID/CARPE MLW Annual Report FY05, AWF).

Data collection was stratified (see Figure 4), and partially based on satellite imagery :

- Socio-economic surveys were conducted along the axes of human habitation, i.e., along the roads. Focus was on the historically flourishing coffee and cocoa plantations, with some attention given to other agricultural activities. A total of about 1,200 km of roads (50 percent of the 2,400 km of roads in the Landscape) were covered, and data was collected at about 50 localities. Approximately 250 agricultural fields were geo-referenced.
- The biological surveys had two foci:
  - a. the status of fauna hunted for animal proteins, usually in areas located closer

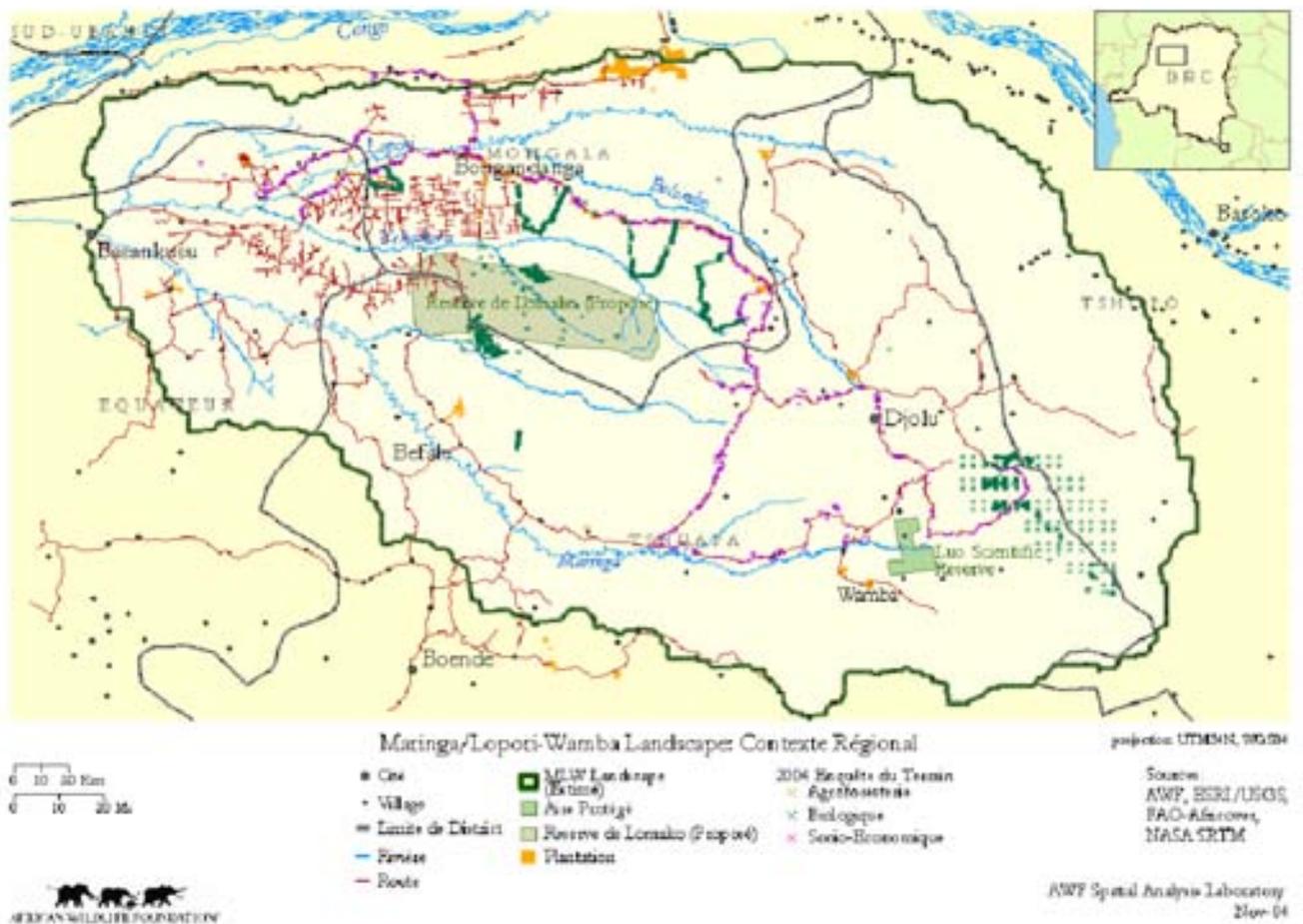


Figure 4. Example of mapped data for MLW Landscape

- to human settlements;
- the status of endemic and/or protected species located further away from the roads, in forest that might be suitable for protection.

The surveys were also designed to examine the linkages between socio-economic and biological factors. All data was collected in a participative way. Socio-economic surveys used focus groups; biological surveys were preceded by focus group discussions and the surveys were conducted with selected representatives of the villages. By using this approach we ensured complete transparency of the data collection approach and built trust with local communities.

The surveys also allowed the MLW team to scope out stakeholders more extensively. Stakeholder scoping is probably the biggest challenge in a situation where there is very weak governance, extreme poverty and an absence of effective means of communication. The expectations of a number

of stakeholders were high and we encountered situations where individuals with a competing agenda were intentionally raising these expectations.

In addition to collecting data on the ground, satellite images were analyzed and basemap features such as rivers, roads, vegetation and others were digitized. Other spatial data collected for the MLW Landscape included previously derived products such as the 1990–2000 forest change dataset developed by South Dakota State University and the University of Maryland.

Combining field data with mapping techniques such as GIS and map-based visualization resulted in the first comprehensive, though rough, picture of the Landscape in terms of biodiversity, land use, socio-economic conditions and the spatial distribution of human populations. A total of 15 young Congolese researchers executed the data collection, entry and analysis.

## Zoning and desired outcomes

Thinking about how to develop a strategic vision and objective outcomes for the Landscape, we translated the AWF strategic objective “to make the landscape ecologically, socially and economically viable” into desired outcomes specific to the MLW Landscape. Local communities consider making agriculture more profitable as the top priority for their livelihood security, closely followed by increasing producer values of non-timber forest products (e.g., animal proteins, medicines). This information was considered in conjunction with general theories of biodiversity conservation, notably the need to avoid fragmentation and destruction of the habitat for key species. This led to a focus on better spatial planning for the expansion of agriculture and other activities that require the conversion of forest habitat.

Using these general concepts, desired outcomes can then be translated into expected surface areas of land that should be included in different land-use zones, such as CBNRM areas, Protected Areas (PA) and Extractive Resource Zones (ERZ). However, considering that CBNRM allows for some habitat destruction for agricultural activities, AWF strongly urged the breakdown of CBNRM areas into “Permanent Forest CBNRM” and “Non-permanent Forest CBNRM”.

Based on information and understanding acquired during Phase 2A, and taking into consideration the DRC national strategy for nature conservation, the general objectives for work in the MLW Landscape in Phase 2B were translated into the following indicative figures:

- Protected Areas: the national strategy for nature conservation states that 15 percent of the country’s territory should be defined as protected areas, equivalent to at least 11,100 km<sup>2</sup> of the MLW Landscape.
- Non-permanent Forest CBNRM areas: based on the estimated number of inhabitants, and rough estimates of agricultural land needed per household, the Consortium estimated that approximately 9,000 km<sup>2</sup> of the MLW Landscape be identified as current and future agricultural land (i.e., 12 percent of the Landscape).
- Wetlands: satellite imagery shows impor-

tant areas for water, covering about 10 percent of the Landscape.

- ERZ (Extractive Resource Zones): 33 percent of the Landscape is covered by old logging concessions that are under revision for conversion to ERZ. Considering the criteria for conversion, we assume that only Concessions K7 and K2 are really eligible, i.e., 10 percent of the Landscape. Thus, ERZs will cover 10–33 percent of the landscape, depending on decisions by the government on conversion.
- Permanent Forest CBNRM areas cover the remaining 30–53 percent of the Landscape.

## Spatial modelling and monitoring

The MLW Consortium is using both analysis of satellite imagery and execution of spatial modelling as tools for land-use planning and monitoring. Marxan is a spatially explicit site-selection software used for spatial modelling to help understand landscape suitability. Marxan is being used in the MLW Landscape to identify areas most suitable for future human expansion, taking into account current needs for agriculture and livelihood activities. Simultaneously, a habitat suitability analysis for biodiversity conservation is being carried out. Both results are combined for identification of compatibility and potential conflict. Priority areas are identified that might need conflict resolution. Proposed protected areas are either justified or identified as better suited for conversion to agricultural land, based on model data and assumptions.

Similar spatially explicit tools are used for monitoring within the MLW Landscape. Locations of active bush/forest fires can be identified using satellite imagery and then used as an indication of human presence and habitat destruction. Analyses such as these serve as powerful tools for predicting patterns of land-cover change and further monitoring of the impact of the MLW programme. In addition to monitoring changes in habitats, a methodology has been developed and will be implemented to monitor changes in livelihoods in the MLW Landscape.

## Summary of lessons learned

### Heartland Conservation Process fits well with LLUP

Despite the absence of a LLUP Strategy Document<sup>5</sup> at the start of the MLW programme in 2004, we learned a posteriori that the implementation of the HCP responds well to the USFS guidelines for LLUP. Some of the requirements of the Strategy Document (desired outcomes, PPS, definition of the role of planning team members) were particularly well articulated using the USFS guidelines, by comparison with other approaches.

HCP includes stakeholder scoping, conservation target setting, data collection, analysis focused on threats and opportunities based on prioritization of actions, and well developed impact assessment. HCP aligns well with USFS-LLUP, particularly through the participatory “Threats and Opportunities Analysis” workshop. During this workshop, the results of stakeholder scoping and data collection/gathering are pulled together and the following are pushed forward: desired outcomes, creation of goal setting and objectives, identification of macro-zones, and elaboration of an implementation plan.

During Phase 2B (2007–11), we are implementing this merged HCP-LLUP strategy at a macro-zone level. Today, this process is focusing on a potential new Protected Area (the Iyondje forest or Congo-Lopori) and on priority CBNRM areas (the Lomako forest, the Lomako-Luo corridor, and/or Yahuma). Implementation in one of the ERZs (K7 and/or K2) will start soon. We hope to learn from this how the AWF-led landscape approach is replicable on a macro-zone level. The first findings are encouraging.

Together, these accomplishments suggest that this HCP-LLUP model can be a strong tool for participative land-use planning at the landscape, macro-zone and micro-zone level.

### The LLUP team : Consortium building through thematic strengths

It is important to put together a LLUP team with thematic strengths. The partnership should enforce the possibility of joint activities that allow increased synergy between the different types of expertise present. Equally the partnership should be open to new partners that can come with needed, but so far absent, expertise.

The MLW Consortium in Phase 2B is much more effective than that in 2A because of its synergistic composition. For each activity the need for specific expertise is identified and mixed teams of Consortium members are created. One example of this is the development of a management plan for the Lomako forest CBNRM area, co-financed by the French government donor AFD/FFEM. In this area we are working with the local committees to develop alternatives to commercial bushmeat hunting and we are evaluating the potential for controlled hunting. REFADD analyzes potential alternatives to the unsustainable bushmeat trade with a focus on gender, and calls upon the expertise of ICRAF to develop and promote agriculture and agroforestry techniques and that of the WorldFish Center in order to improve post-harvest technologies for fish. AWF focuses on hunting off-take assessment. As a result, most field trips to the Lomako area are nowadays joint missions of REFADD, ICRAF, AWF and WF experts.

In August 2006, a field mission comprised of AWF, ICRAF and SNV staff was organized to Basankusu, Bongandanga, Djolu, Lingunda and back to Basankusu. More than 1,000 km was covered on motorbikes and in canoes. In each location AWF led stakeholder discussions on HCP and LLUP. SNV facilitated the further development of the PPS. Within this framework of LLUP and PPS, ICRAF then further developed the support for agriculture and agroforestry.

This collaborative multi-institutional approach has ensured effective use of Consortium resources and the best possible outcomes for the MLW programme. It is important to recognize that using

<sup>5</sup> A document required by the CARPE programme, outlining a strategy for completing a landscape management plan.

this approach, we have been able to develop MLW infrastructure throughout the Landscape, with shared MLW Consortium offices and Joint MLW Focal Points in each of the four territories and in Mbandaka, the capital of the Equateur Province.

### **Ownership of the process : The crucial initial step**

Ownership of the planning and prioritization process by local stakeholders, in particular by various public-sector authorities and civil society representatives, is vital. The inclusion of an initial phase of participative exploratory meetings during which general concepts of LLUP are presented and discussed is an important lesson learned. Through intensive consultations, the MLW Consortium enabled sound understanding of the LLUP concept by stakeholders. This understanding underpinned the meaningful and valuable participative approach and enabled stakeholders to influence LLUP strategy development. The local stakeholders became co-owners of the MLW programme. Through this approach, the Consortium ended up focusing on priority activities that were not prioritized prior to programme implementation (e.g., the focus on improved market access for agricultural products).

However, we did not fully succeed in our attempt due to the difficulties of communication with most programme sites in the Landscape, which are extremely isolated. No matter how often we organized meetings, the majority of the local people were not able to participate. This leads us to the conclusion that a formal PPS (see below) is an essential complementary mechanism to the process of wide consultation.

### **Consultation supported with a Public Participation Strategy**

Through the PPS we aim for real ownership of the project by the local communities. We have learned that local communities are not used to an approach that allows them to influence general and specific methodologies during the conception

of a multi-year programme. This confirms that, for most people and organizations, the meaning of true participation is not well understood. Local communities are used to “participation through information giving” and/or “participation by consultation” which do not concede any share in decision making; however, they are not used to participating in joint analysis and the preparation of joint action plans (Pretty, 1995).<sup>6</sup>

In addition, we learned that a good PPS is flexible and adaptive to the often rapidly changing reality on the ground. During the creation of the local committees, we learned that in Bongandanga, traditional chiefs are of high importance, in Basankusu, business people should be considered, while in Djolu the focus is on the well organized local associations. The composition of today’s representative committees and their dynamics are different from those anticipated in Kinshasa. The MLW Consortium, together with representatives of the local communities, is therefore actively and permanently adapting the PPS.

The impact and reach of the PPS is constrained by poor communications infrastructure in the MLW Landscape. No matter how well developed the PPS, it is only by being present in the field that one can try to mitigate the impact of distorted information. Often, this information is spread by people with competing agendas. In July–September 2006, during elections, AWF was not present in the field. During this period, misinformation against the MLW Consortium was launched by some individuals. It took at least 3–4 months to correct the situation. Therefore during the elections in Befale, May 2008, we decided to be present both in Basankusu and Befale, and were able to intervene and mitigate potential detrimental rumours spread by politicians.

### **Focal points as interface between local stakeholders and partners in Kinshasa**

After the “Threats and Opportunities Analysis” workshop, we decided to appoint MLW focal points on a provincial level (Mbandaka) and in each territory (Basankusu, Bongandanga, Befale and Djolu). Focal points are the interface bet-

<sup>6</sup> Pretty, J.N. (1995). *Regenerating Agriculture*. London: Earthscan.

ween partners in Kinshasa and the local stakeholders. This mechanism proved very useful in two ways: the focal points could ensure that partners in Kinshasa are informed about activities in the field, and also provide a means to increase local stakeholder understanding of the MLW programme objectives.

In 2007, when requested by local communities, we tested giving local representatives the responsibility of serving as this interface. At the end of 2007, however, it was decided to re-install the MLW focal points. The decision was prompted by a participative SWOT<sup>7</sup> analysis, during which participants expressed the need to strengthen local representatives' capacities in domains such as communication, public participation and conflict resolution before transferring the role of interface to them.

This experience teaches us that: a) the importance of engaging focal points is acknowledged by local communities, b) local leaders currently lack the skills to play the role of interface between the MLW programme and the local populations, and c) our approach engages local communities in analyzing performance and implementing adaptive management.

## The use of local and national committees as key to the Consortium structure

The Phase 2B MLW Consortium structure is working quite well, and is a great improvement on that in Phase 2A. However, there is always room for improvement. For example, the functioning of the Landscape Steering Committee, composed of stakeholders of the national government and members of the MLW Consortium, would benefit from more intensive contacts with and between members. This is extremely important because the Committee is supposed to enable formal recognition of the LLUP management plan and its integration into national policies and strategies. Without formal recognition, all the effort that is put

into land-use planning is at risk. If functioning well, the Landscape Steering Committee would also inform the MLW Consortium on other initiatives going on or planned in the Landscape, but this has not been happening, for example with regard to planned logging within the Landscape.

At a local level, the MLW Consortium regularly consults with local authorities, though a more in-depth strategy is needed that incorporates the role of authorities at national, provincial and local level. In the past, thanks to close contact with provincial authorities, the MLW team was contacted directly when activities were under development in the Landscape. For example, when a logging company wanted to have a logging concession in the Landscape, the provincial authorities contacted MLW for advice. As a result of this consultation, the logging title was never attributed.

At times there has been insufficient sharing of information between local communities and associations, and the Consortium. Several NGOs in the Befale and Djolu territories are collaborating with projects similar to those in the MLW programme. For example, in some villages, SECID/RE-COMMIT<sup>8</sup> is supporting cassava production, while ICRAF/MLW is working at improving food crop production with the same farmer associations. This in itself is not a problem as long as the approaches do not conflict with one another and interactions are transparent. On the other hand, some projects in the Landscape pursue objectives that are at odds with those of the MLW programme. This is the case, for example, with the international NGO Bonobo Conservation Initiative (BCI), which follows a fairly unilateral conservation concession approach through collaboration with a small elite in the same area where the MLW Consortium is promoting combined spatial planning for sustainable hunting and expansion for agriculture based on broader public participation. Local communities are confused and competition to get access to the resources employed by the different programmes is increasing. This leads to distorted information and a

<sup>7</sup> Strengths, Weaknesses, Opportunities, Threats

<sup>8</sup> South-East Consortium for International Development/Reintegration, Conservation and Community Recovery Project.

loss of credibility for the conservation and/or development programmes. We have learned again that a permanent field presence can help mitigate at least partially for misunderstandings and conflicts. It allows for responsiveness to questions from stakeholders. But it is not a substitute for the good will of implementing agencies in looking for and reinforcing synergies.

### **Regular review of vision, objectives and desired conditions for LLUP**

At all times, activities and planning in individual zones should reflect the overall objectives for the Landscape. Having a harmonized vision for the Landscape has also facilitated the presentation of the MLW programme to authorities, local communities and other stakeholders. The set of objectives and related approaches evolves as a result of changing dynamics on the ground. The conversion of old logging titles, changing values for cash crops, arrival of private companies, changes in the priority agenda of the national government and new initiatives of major funding agencies, all have an impact on how desired conditions are translated into achievable objectives.

In 2004, the MLW Consortium focused on a landscape approach, identifying overall conservation objectives, desired conditions and priority areas. The priorities at that time were creation and participative management of the Faunal Reserve of Lomako Yokokala (RFLY), a communal hunting area in Cadjobe and small enterprises or community forestry in Lomako. Due to its focus on these few areas, the landscape vision disappeared little by little into the background and local stakeholders disengaged or even opposed the MLW programme. This is for example the case for the people living north of the RFLY.

Only in 2008 did the MLW Consortium re-invigorate efforts and vision in a landscape-wide context. Several actions helped to achieve adapted management of landscape objective setting, notably the further development of the PPS and the Consortium workshop on “development of a methodology to monitor the impact of the MLW program on decreased habitat destruction and on

poverty reduction”. Regularly reviewing the vision for the Landscape not only supports successful LLUP, but also enables Consortium members to join with partners to try to access new funding mechanisms. At the time of writing this paper, three joint proposals have been submitted for funding.

### **Imaginative use of geospatial tools**

The MLW Consortium use of spatial modelling and satellite data for planning and monitoring simultaneously may prove an efficient strategy that could be replicated elsewhere in the Congo Basin. In order to be meaningful at the local level, these approaches must be combined with in-situ datasets from the ground, and feedback mechanisms must be established as part of the PPS to ensure data validation.

Results of the spatial modelling in the MLW Landscape are being used for further priority setting during participative meetings. Participative field data collection related to human activities, vegetation and biodiversity is fed into the modelling process and allows for regular updating of outputs. For example, faunal surveys in Cadjobe informed the team about depleted fauna, despite predictions to the contrary.

In consultation with local communities, the MLW Consortium has decided to prioritize support for agricultural livelihoods through Phase 2B. This decision has been confirmed and justified both by feedback received from local communities as well as results from the Marxan spatial modelling tool. In addition, we have used spatial data and models to understand the importance of certain areas in the Cadjobe forest for maintaining connectivity for wildlife between the RFLY and the Luo Scientific Reserve.

We will further develop these ideas and methods through implementation on the ground and will build HCP-LLUP as a tool for planning and adaptive management at landscape level, thus, we hope, contributing to a methodology that will be replicable elsewhere in the Congo Basin.