

Case Study 1 - Landscape Land Use Planning : Lessons Learned from the Maiko - Tayna Kahuzi-Biega Landscape

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Introduction

In Libreville, Gabon in 2000, WWF¹ convened a scientific workshop to determine priority areas for the conservation of terrestrial ecosystems within the Guinean-Congolian Forest Region. This led to the identification of 11 large “Landscape Areas” that were identified as having the highest priority to receive support for biodiversity conservation and natural resource management (Figure 1). In September, 2002, at the World Summit on Sustainable Development in Johannesburg, the United States, South Africa and 27 public and private

partners launched the CBFP², which focused on these 11 landscapes³ in order to promote economic development, poverty alleviation, improved governance and sustainable natural resource management. A year later, in October 2003, the United States, through its USAID CARPE II Program⁴, began the first long-term support for these CBFP landscapes.

Central to the Strategic Objective of CARPE⁵ is the concept of landscape-level land-use planning. This planning, undertaken in partnership with local, national, and regional public and private stakeholders, is intended to provide a ratio-

¹ Worldwide Fund for Nature/World Wildlife Fund.

² Congo Basin Forest Partnership.

³ The Virunga National Park (and its surrounding buffer zones) in eastern Democratic Republic of Congo was subsequently added as a 12th Landscape Area.

⁴ CARPE is the Central African Regional Program for the Environment (Phase I began in 1995) with Phase II, begun in 2003, specifically designed to support the 11 priority landscapes (Figure 1) of the CBFP. CARPE II is divided into CARPE IIa (October 2003–September 2006) and CARPE IIb (October 2006–September 2011).

⁵ The Strategic Objective of CARPE II is to reduce the rate of forest degradation and loss of biodiversity by supporting increased local, national and regional natural resource management capacity.

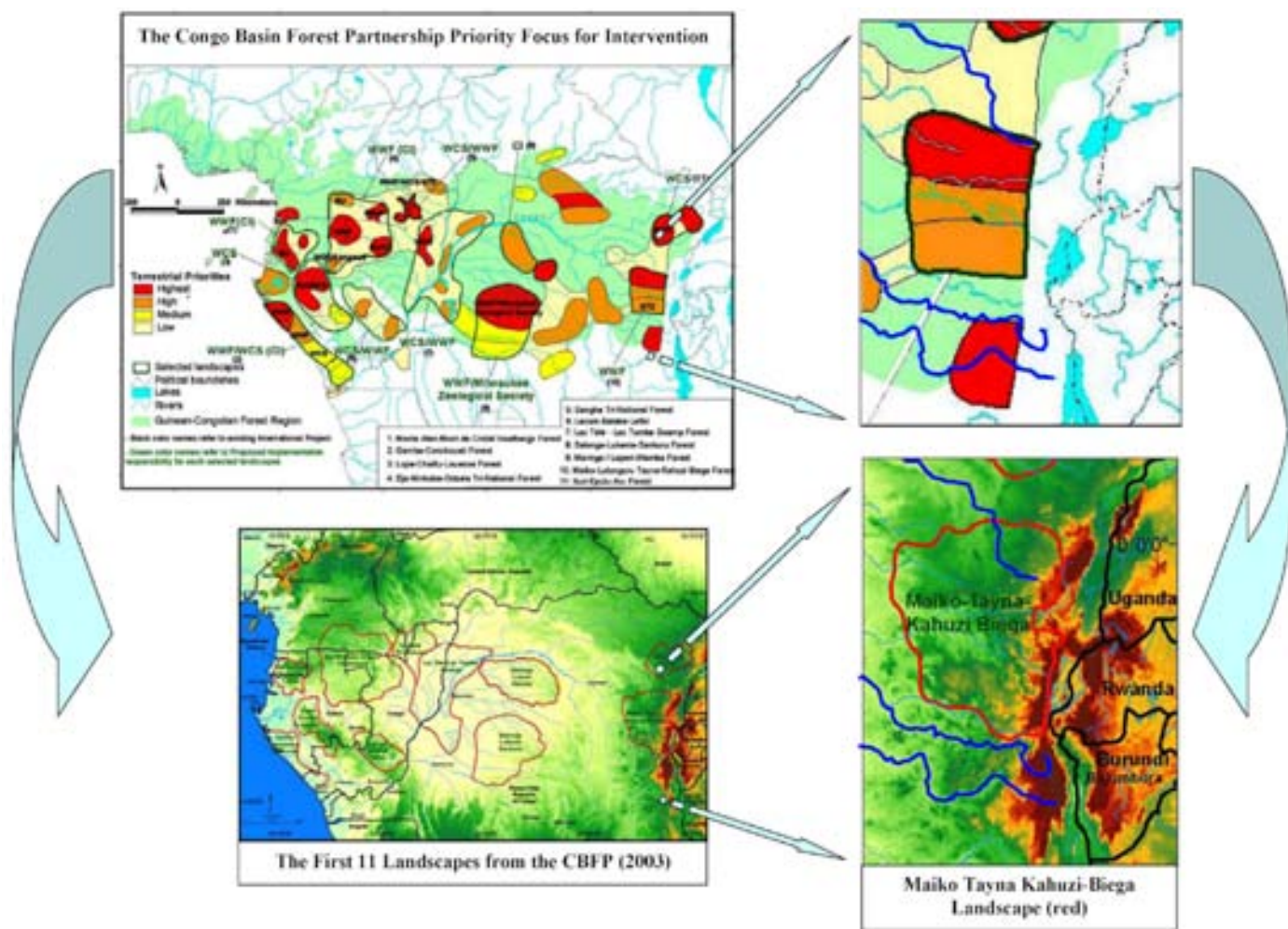


Figure 1: The development of 11 priority areas for the Congo Basin from the WWF-sponsored workshop in Gabon in 2000 (above). With the launch of the Congo Basin Forest Partnership (CBFP) in Johannesburg in 2002, and support provided by the USAID Central African Regional Program for the Environment (CARPE) when it began its second phase in 2003, these priority areas became formal “Landscapes” (below), and were targeted to receive substantial funding for natural resource management and conservation. The Maiko Tayna Kahuzi-Biega Landscape, first as a priority area, then in its Landscape configuration, is shown at right.

nal, logical management approach to natural resource utilization and conservation that can “... assess broader, wide-ranging trends, influences, and impacts in order to more adequately assess ecological sustainability and identify the appropriate management strategies to maintain these resources for the benefit of all.”⁶

In landscape-level land-use planning, as defined by the USDA⁷ Forest Service (which joined CARPE in 2004), landscape planning begins with a broad zoning process that identifies three types

of macro-zones: 1) Protected Area zones (PA); 2) Community-Based Natural Resource Management zones (CBNRM); and Extractive Resource Zones (ERZ). In the planning process, a planning team is expected to identify the number and types of macro-zones within a landscape, and then with stakeholders, subsequently develop macro-zone management plans that guide sustainable resource use and conservation objectives for each of the zones.

This chapter describes lessons learned relative

⁶ US Forest Service Guide to Integrated Landscape Land Use Planning in Central Africa, 2006, p.3.

⁷ United States Department of Agriculture.

⁸ The characteristics of the Maiko Tayna Kahuzi-Biega Landscape are described in full detail in The Forests of the Congo Basin: State of the Forest 2006, pp.198–204.

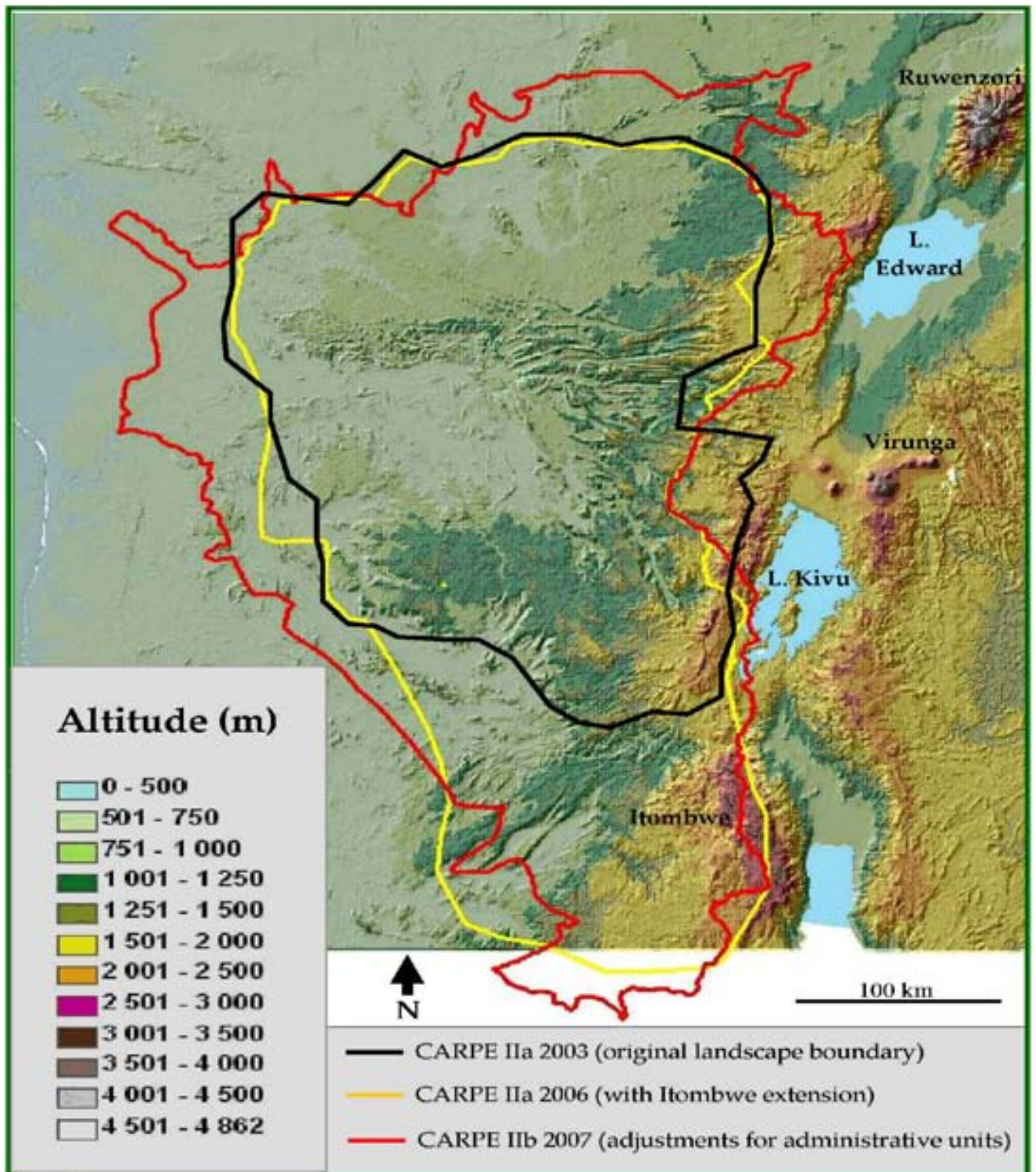


Figure 2: Evolving modifications of the boundary for the Maiko Tayna Kahuzi-Biega Landscape, from the original boundary in 2003 (black) to its most recent configuration in 2007 (red). See text for explanation.

to the process of identifying and designating macro-zones within one of the CBFP landscapes: the Maiko Tayna Kahuzi-Biega (MTKB) Landscape in eastern Democratic Republic of Congo (Figures 1 and 2). This landscape, approximately

10 million hectares in size, contains some of Central Africa's highest levels of species richness, high numbers of endemic species, and significant numbers of globally threatened species, including 95% of the range of Grauer's (eastern lowland)

gorilla. Its large blocks of intact forest not only regulate the local climate and prevent soil erosion, but also play an important role as a water catchment area in east central Africa. The MTKB Landscape is also an area of significant poverty, where more than an estimated 1,000,000 inhabitants rely heavily on subsistence agriculture, hunting, and gathering non-timber forest products. In addition, illegal mining of gold, cassiterite, diamonds and other valuable ores often takes place under the control of illegal armed militias, a legacy of the region's civil wars.

Since the inception of CARPE II in October 2003, Conservation International (CI) has led a consortium of international and in-country partners to support financially and technically environmental conservation and improved natural resource ma-

nagement, and to provide capacity building in natural resource governance. Fundamentally important to this effort has been the ongoing development of a comprehensive landscape land-use plan, underpinned by a process whereby CI and partners designated macro-zones for this landscape following US Forest Service (USFS) guidelines, which, "...[were based on] the expertise gained by the US Forest Service in managing large forested, multiple-use landscapes in the United States...., and... [whereby the USFS has attempted]... to tailor this guidance to the specific context of Central Africa and needs of implementing partners and government agencies in the region".¹⁰ In this chapter, through our lessons learned, we describe how the USFS macro-zone methodology has been adapted to the context of an eastern DRC landscape.

LESSON LEARNED 1

Build upon on-going local initiatives and adapt landscape land-use planning and zoning to existing local contexts and aspirations. In this particular case, resource management zoning was already being conducted by seven local communities who had developed a methodology with an international NGO (DFGFI) with implementation already occurring in a process largely driven by local stakeholders. These community-based groups had organized themselves into a large federation, and by scaling up a successful participatory mapping process from a flagship programme (Tayna) were already in the process of identifying conservation and development zones in their communal areas. This established zoning work was absorbed into the landscape land-use and macro-zone planning.

2001–2003: The pre-CARPE zoning context for the MTKB Landscape

Some significant baseline work had occurred in this landscape before the inception of CARPE II in October, 2003. Already in place were two government-authorized protected area zones, Maiko and Kahuzi-Biega National Parks, which were officially gazetted in the early 1970s, but the civil wars beginning in 1996 had effectively made "paper parks" of all of Maiko NP and most of Kahuzi-Biega NP (the lowland sector, Figure 3). GTZ⁹ had supported ICCN conservation efforts in the highland sector of Kahuzi-Biega NP (about 10 percent of the park's surface area) for more than two decades, and maintained a presence there during the DRC civil wars. In contrast, there had never been any international support for Maiko

⁹CI international partners are WWF, the Dian Fossey Gorilla Fund International (DFGFI), the Jane Goodall Institute (JGI), Innovative Resources Management (IRM), and the Wildlife Conservation Society (WCS). Local partners are the state wildlife authority from the Ministry of the Environment, the Institut Congolais pour la Conservation de la Nature (ICCN); a local federation of NGOs involved in conservation and development, the Union des Associations de Conservation des Gorilles pour le Développement Communautaire à l'Est de la République Démocratique de Congo (UGA-DEC); a flagship NGO that began community conservation in the region, the Tayna Gorilla Reserve Project; and a community-managed university providing three-year degrees in conservation biology, the Tayna Center for Conservation Biology (TCCB). The GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) is also a partner in the landscape.

¹⁰ See note 6, p.2.

¹¹ Supported in part by the USAID-funded U.S. Congressional Gorilla Directive.

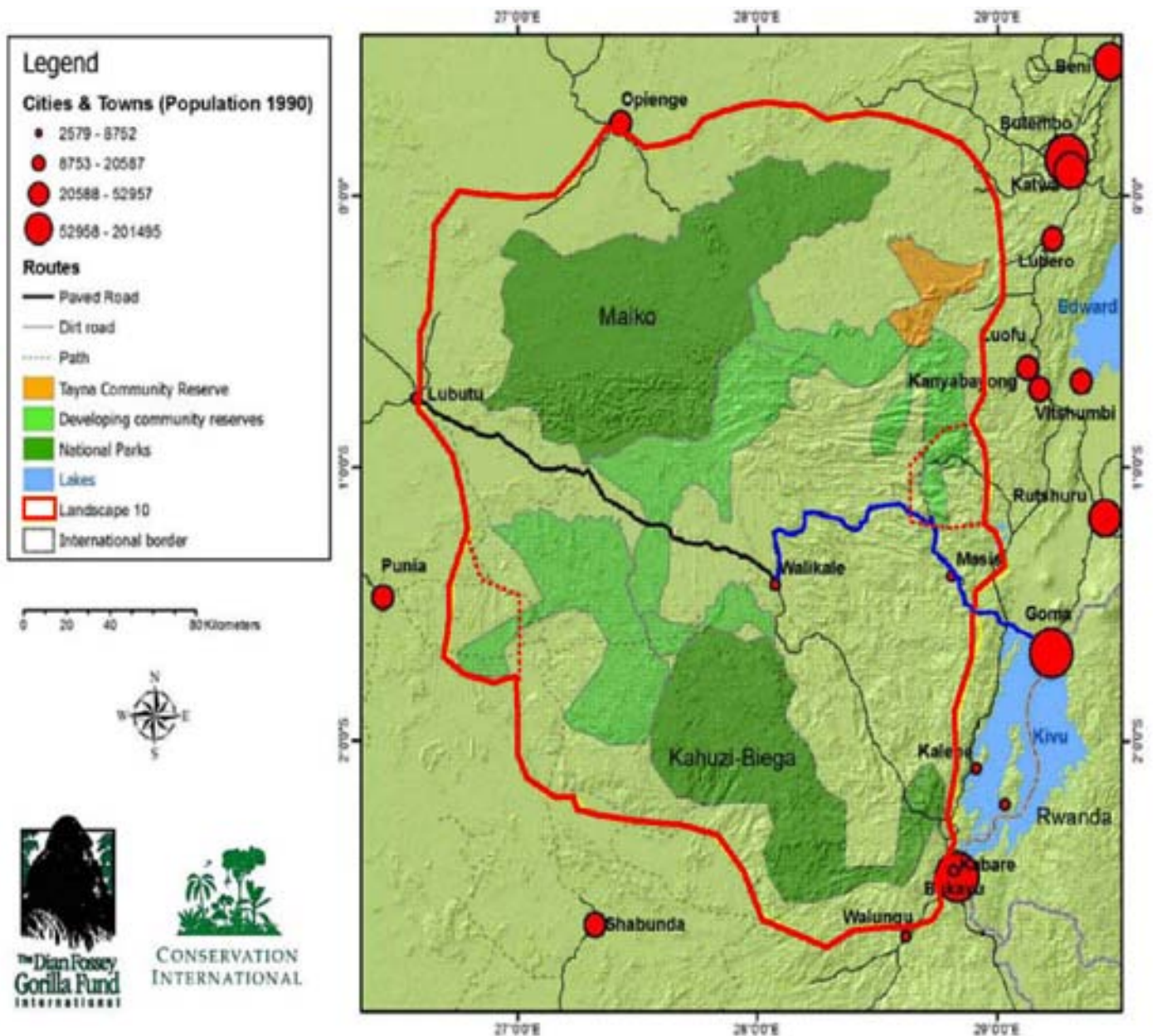


Figure 3: Zones for the Landscape during the startup phase, 2003-2005. Maiko and Kahuzi National Parks are shown in dark green, and the UGADEC CBNRM zone is shown in light green. The Tayna Nature Reserve, part of the UGADEC zone, is shown in orange. The dotted red lines represent minor modifications that were made to the original Landscape boundary from 2003 and were added to include areas of the UGADEC CBNRM.

NP since its inception in 1970, although WCS⁹ conducted surveys there in the early 1990s before the civil war.

In addition to these national park zones, DFGFI⁹ had also financially and technically supported a community conservation programme in the landscape since 2001.¹¹ This programme began with the Tayna Gorilla Reserve (Figure 3, orange area), set in motion by Congolese Traditional Chiefs in 1998 during the civil war, and catalyzed by Pierre Kakule Vwirasihikya, a former ICCN

Warden. Kakule and two chiefs (Mwami Stuka and Mwami Mukosasenge) made contact and partnered with DFGFI, and with their support, launched an initiative centred on the establishment of a land-use plan for their territories (Collectivités of the Batangi and Bamate Nations, Figure 6, area A), which would harmonize conservation and development. In 2002, 13 village chiefs ratified this plan, after participatory mapping delineated a community-based nature reserve and an economic development zone. Their first petition to the government took advan-

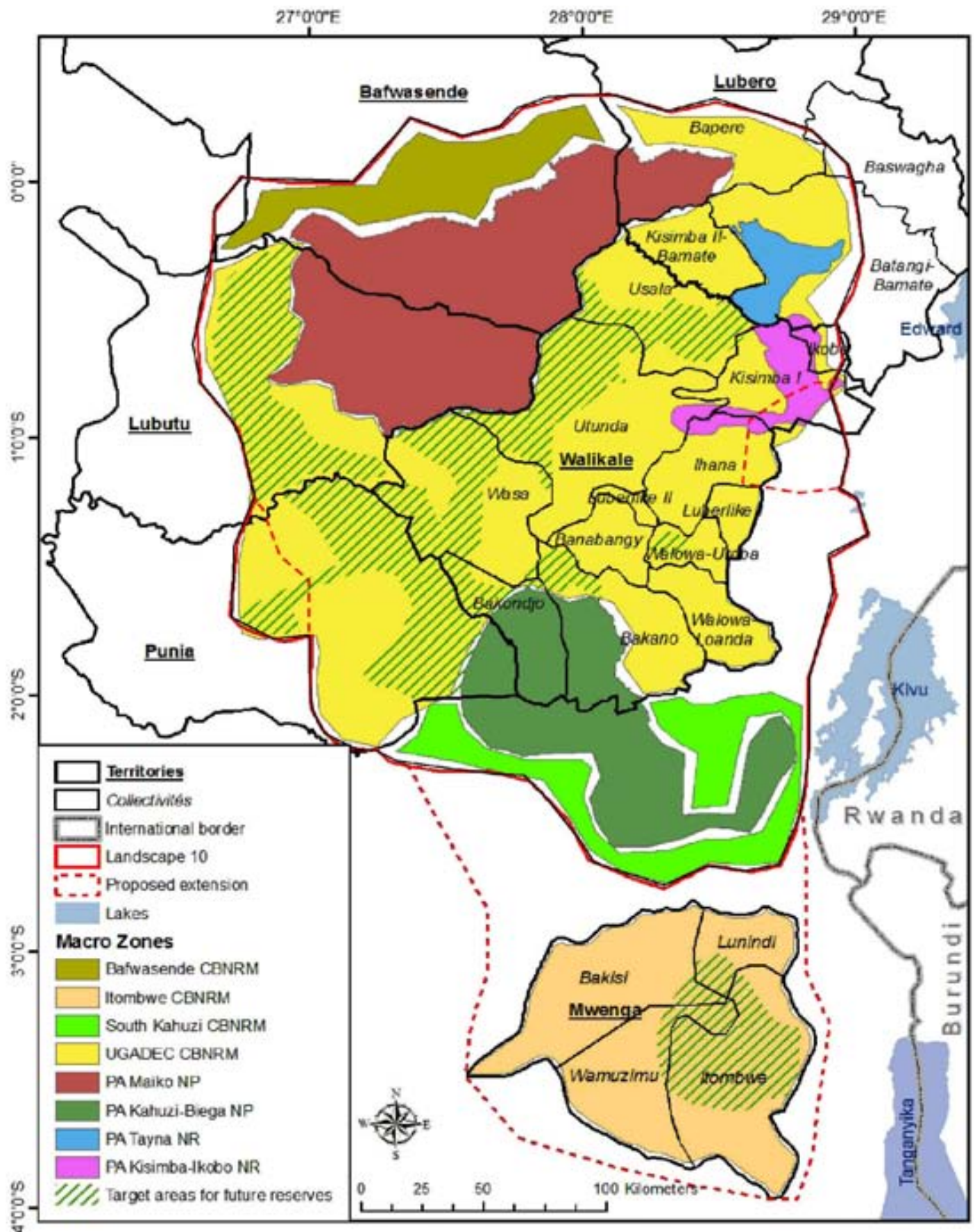


Figure 4: In 2006, a more comprehensive series of macro-zones were developed that: 1) included the Itombwe CBNRM extension; 2) included the Tayna and Kisimba-Ikobo Nature Reserves as newly created protected areas (blue and lavender); and 3) expanded the boundaries of the UGADEC CBNRM to the communities involved (yellow) in developing nature reserves similar to that of Tayna (shaded green).

tage of the reformed DRC Forestry Code allowing for private reserves. In 2002, the DRC government officially recognized the Tayna Gorilla Reserve with a Ministry of Environment Declaration, which included a core protection zone of 900 km² with complete protection. This model, which incorporated a number of significant development incentives, proved so successful that in 2002, six other community associations (formed as separate NGOs) joined the Tayna Reserve and created a political federation called UGADEC.⁹ UGADEC set a goal of establishing a corridor of similar community reserves for an area of more than 10,000 km², creating a biological corridor between Maiko and Kahuzi-Biega NPs (Figures 3 and 6).

Thus, by 2002, before the onset of CARPE support in the landscape, significant zoning work had been accomplished by local stakeholders under a community conservation programme supported by DFGFI. In the case of the Tayna Reserve, a local community was already functioning as a local CBNRM group that had received its NGO status from the government. Through field surveys and participatory mapping, the Tayna group had identified an intact, forested mountain zone with only a few local inhabitants that contained a significant population of gorilla and chimpanzee, as well as 12 other primate species, Forest elephant, Okapi and Congo peafowl. The Tayna communities chose to provide complete protection for this 900 km² core protection zone and obtained a Ministry of Environment Declaration designating it a Nature Reserve. Further, before the arrival of CARPE support, the UGADEC federation, composed of seven local NGOs, was already functioning as a CBNRM group attempting to replicate the Tayna Reserve model for their communities located between Maiko and Kahuzi-Biega NPs.

2003–2005: CARPE support arrives in the landscape, and macro-zones are initially focu-

sed on protected areas

CI began its leadership of this landscape with the onset of CARPE IIa support in October, 2003, and as Landscape Leader began to deploy a methodology described in the first version of their CARPE planning and monitoring matrix organized by three Intermediate Results (IRs): 1) natural resources managed sustainably; 2) natural resources governance strengthened; and 3) natural resources monitoring institutionalized. Most of the first interventions for this landscape centred around several important Sub-IRs: 1.1) Network of national parks and protected areas established and maintained in landscapes; 1.2) local community management of forests, other natural resources, and sustainable agriculture benefits local livelihoods; 2.2) policies and laws support CBNRM, decentralization and local-level management; 2.3) civil society and NGO sector capacity to engage in advocacy strengthened; and 2.5) human resources for improved natural resources governance are developed.

LESSON LEARNED 2

Build local capacity before attempting broad landscape-scale macro-zoning and land-use planning. Landscape-level land-use planning and macro-zoning could not really begin until local institutions had human resources in place, had developed administrative capacity, and had acquired the basic infrastructure and equipment to begin their operations using short-term interim planning. In this case, the first two years of the CARPE programme were devoted to developing this capacity for the staff of two national park zones as well as for the staff of a large CBNRM zone forming a corridor between the national parks. Landscape meetings brought partners and local institutional actors together to better understand a landscape-level approach.

¹² With the exception of the Tayna Reserve, which did develop long-term management planning in the first two years of CARPE support.

¹³ Despite the fact that the collectivités surrounding the proposed core protection zones of UGADEC (Figure 6) were actively participating in the community conservation programme.

In 2003, when CI began leadership of the partnership for this Landscape, two National Park PA zones and the UGADEC CBNRM zone (including the Tayna Reserve) were in place, but importantly, there had been very little financial and technical support for these areas (with the exception of the Tayna Reserve), and as a consequence, there were few administrative and human resource capacities in place. As a result it would have been almost impossible in this first phase to expand or refine macro-zoning or develop long-term management plans for any of the zones.¹² To address these gaps in capacity, for the first two years, CARPE support was therefore directed towards hiring and training field and management staff, providing infrastructural support and training to develop administrative capacity, providing basic equipment needs for the National Parks and UGADEC staff, and conducting the first systematic collection of biological and socio-economic data (the Sub-IRs noted above).

By necessity, management planning for these zones took the form of developing and following one-year interim plans, and landscape interventions focused on the existing three large macro-zones: Maiko NP, Kahuzi-Biega NP, and the UGADEC CBNRM zone (Figure 3, including the Tayna Reserve). For the latter zone, the first focus was on identifying and developing the core protection zones that were being developed into PA community reserves, and CARPE mapping reflected this emphasis on developing the PA network for the landscape (Figure 3).¹³

2006: CBNRM macro-zones are expanded and better defined as two new protected areas are created

Early in 2005, the USFS macro-zone methodology was introduced into the CARPE toolkit. By this time as well, significant capacity had been developed for the ICCN staff of the two National Parks and the staff of the UGADEC federation. The international and local partners of the CI-led partnership were regularly meeting to discuss landscape-level activities and assessing how

their activities in each of the macro-zones should work together over the broader region encompassed by the Landscape.

Also by April of 2006, UGADEC reached an important crossroads. A second nature reserve project, the Kisimba-Ikobo Reserve (970 km², Figures 4–6) completed the necessary steps to seek Nature Reserve status, and in discussions between UGADEC and the Ministry of Environment, it was also decided that the Tayna Reserve Declaration from 2002 needed to be re-configured. Both of these “Nature Reserve” declarations were issued (re-issued in the case of Tayna), but significantly, each was accompanied by a management contract between ICCN and the local NGO project representing the Collectivité and customary powers. In this legal agreement, ICCN subcontracted management to the local NGO to manage the reserve, with several co-manage-

LESSON LEARNED 3

In a dynamic, large Landscape, macro-zones are not static entities, and as planning is refined, many of these zones will evolve. In applying the USFS macro-zone methodology for Protected Areas (PAs) and Community Based Natural Resource Management (CBNRM) zones, the macro-zoning approach for this Landscape had to take into account that one type of zone was evolving into another: some CBNRM units were (and still are at present) in the process of creating PAs, which would then be integrated into the national network of PAs managed by local communities and the state wildlife authority, the ICCN. Thus, a portion of a CBNRM unit would eventually become a PA, while the remainder would continue as a CBNRM. Both the new PA and the CBNRM would need to be considered as separate macro-zones, expected to develop their own management plans specifically adapted to their contexts.

ment conditions that needed to be met by the local community. Effectively, two protected area zones had evolved from a CBNRM zone (the UGADEC federation) and the Landscape partnership realized that macro-zoning should reflect this

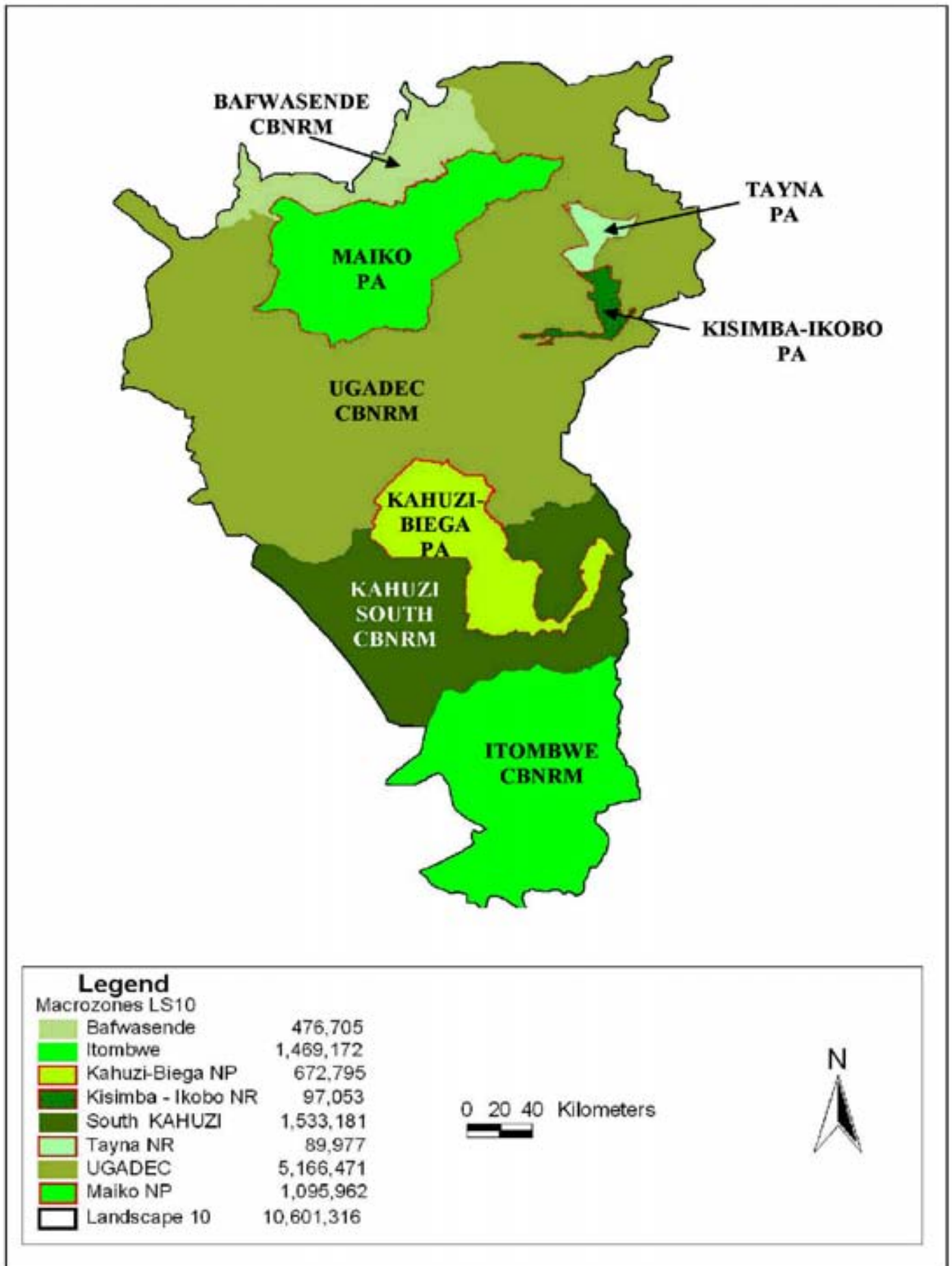


Figure 5: The current (2007) configuration of eight macro-zones for the Landscape. Figures below show sizes in hectares of each zone.

evolution in zoning (compare Figures 3 and 4, for example).

To address this evolution of a CBNRM zone into a PA zone, the Landscape partnership made several recommendations for macro-zoning that were approved by the local partners, and subsequently sent to the CARPE/USAID management team, approved, and integrated into the landscape-level land-use planning. First, to reflect the actual status of the Tayna and Kisimba-Ikobo Reserves as two autonomous Protected Areas, each with their own management regimes (despite being members of the UGADEC federation), the Landscape partnership assigned to each a separate PA status, no different from the PA status of Maiko and Kahuzi-Biega National Parks. This was reflected in the 2006 macro-zone map (Figure 4). The planning team reasoned that this would facilitate the development of individual management plans for Tayna and Kisimba-Ikobo, which would ultimately include micro-zones, such as station locations, ecotourism routes, patrol roads, etc.

Outside of the two core protection zones of these two new reserves, however, were the actual communities of each collectivité, governed by the customary powers sponsoring and managing the reserves (see Figure 6, areas A and C for these two reserves).

The Landscape partnership understood that these communities needed resource management plans to sustainably manage natural re-

sources outside of the core protection zones of their reserves, and decided that the UGADEC federation was the best community governance structure to provide this CBNRM planning at that time. Thus, following the boundary limits of the collectivités composing UGADEC, that is, those communities still in the process of developing and gazetting nature reserves following the Tayna model as well as the collectivités managing the Tayna and Kisimba-Ikobo Nature Reserves, the Landscape Planning Team identified one large CBNRM area as the UGADEC CBNRM (Figures 4 and 5). It was understood that as each of the Collectivités of UGADEC eventually developed and created their own reserves, each of these reserves would need to be assigned a new PA macro-zone status. In addition, each collectivité would eventually develop its capacity within UGADEC and would also develop separate CBNRM macro-zones following the boundaries of their customary governance units. Thus, in a sense, for this landscape in 2006, the UGADEC macro-zone could be deemed a “supra-macro-zone”, in that it was an area where communities needed natural resource management planning (in addition to their PA planning for the nature reserves) and the first step would be to do this together in their UGADEC federation, followed by an expected evolution into separate PA and CBNRM zones based on the traditional boundaries of the collectivités (reflected in the 2006 macro-zone map, Figure 4, and refined in the latest 2008 versions, Figures 5 and 6).

Thus, from 2003–2005 to 2006, the Landscape partnership enlarged its focus from PAs and the UGADEC core protection zones (Figure 3) to a more comprehensive vision for the CBNRM zones of UGADEC (Figure 4, yellow zone). The partnership assessed its work with areas surrounding the National Parks outside of the UGADEC zone and concluded that we had perhaps employed a somewhat too “protected-area-centric” focus. That is, in the first two years, livelihoods and development assistance for communities surrounding National Parks were seen through the lens of working in “buffer zones” and were developed and directed by National Park ICCN staff and their international partners, as for example, the road and bridge building outside the northeast sector of Maiko NP (Figure 4,

LESSON LEARNED 4

CBNRM macro-zones are not simply buffer zones for National Parks or other protected areas. Technical and financial support to develop capacity for community-based natural resource management should, when and if available, not be perceived as projects conceived by and delivered through National Park staff working in “buffer zones” of protected areas, but rather should be directly focused on surrounding communities to build their capacity to manage their natural resources.

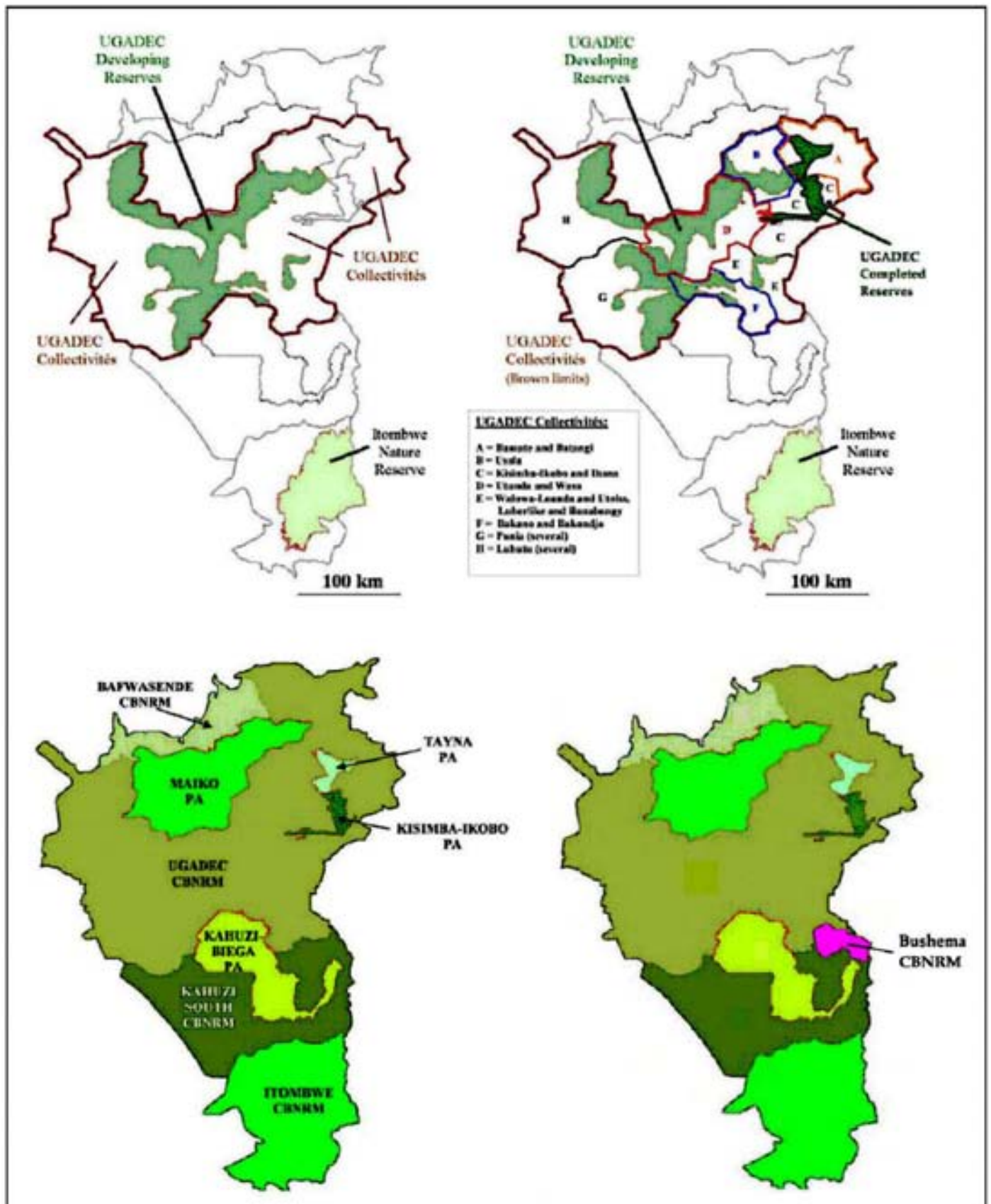


Figure 6: How some CBNRM macro-zones for the Landscape are in reality, “supra-macro-zones” (see text) in that they are zones in which it is expected that individual communities will develop as separate macro-zones with their own management plans. The figures above display the actual eight Collectivities (two are Territories, H and G) composing the UGADEC zone and the Itombwe Nature Reserve (see text). Figures below show the development of the Bushema forest CBNRM macro-zone from the Kahuzi-South CBNRM “supra-macro-zone”.

olive zone, Bafwasende) or livelihoods projects adjacent to the highland sector of Kahuzi-Biega NP (Figure 4, green zone, South Kahuzi). Although this did have the advantage of creating local goodwill towards state-controlled national parks, it was not conducive to developing a more focused capacity for local communities to manage their own natural resources nearby the two national parks. Following this logic, the Landscape Planning Team concluded that these zones should be identified as CBNRM zones, and two more macro-zones were added to the Landscape, Bafwasende and South Kahuzi (compare Figures 3 and 4). The Landscape partnership believed that the creation of these CBNRM zones would better focus 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. It was also understood that these new CBNRM zones were “supra-macro-zones”, in the sense that it was expected that individual communities or collectivities within each zone would eventually organize themselves and create smaller, discrete macro-zones for which management plans would eventually be developed (see below).

2006: The Itombwe Massif is added to the Landscape and the Itombwe Nature Reserve is created

The region of the Itombwe mountains to the south of Kahuzi-Biega NP (Figure 2) is a globally important biodiversity region for birds, mammals and reptiles, and was originally given a high priority for conservation intervention at the Libreville Conference in 2000 (Figure 1). Because these mountains also included a good portion of the Albertine Rift Ecoregion (AR) to the east (areas above about 1,500 m, Figure 2), the first MTKB Landscape boundary excluded Itombwe, assuming that conservation interventions there might be sponsored by other initiatives more focused on the AR. After the inception of CARPE in this Landscape however, it soon became apparent that the Itombwe Massif’s location in DRC and its proximity to the Landscape argued for conserva-

tion interventions being delivered there in tandem with the rest of the landscape interventions, specifically with the WWF programme for Kahuzi-Biega. WWF began a programme of participatory conservation for Itombwe (aided by biodiversity inventories conducted by WCS)⁹ and in 2006 requested that the Itombwe region be officially recognized as part of the MTKB Landscape. The Itombwe extension was officially recognized by CARPE in October 2006 and was added as a CBNRM zone in the 2006 macro-zone map (Figure 4). This increased the size of the Landscape to just over 10 million hectares (10,601,316 ha).

By late 2006, the ICCN and local communities, assisted by WWF, succeeded in obtaining a Ministry of Environment Declaration creating the Itombwe Nature Reserve (Figure 6). Unlike the Tayna and Kisimba-Ikobo nature reserve model, in which the core protection zone delineation was completed by local communities before seeking a Ministerial Declaration, the Itombwe Reserve Declaration provided for the development of a core protection zone in the future: it made clear that the process of determining the final boundaries of the reserve and the zones it would contain, such as completely protected core zones, mixed-usage zones, and other zones devoted to development, would be determined by future consultations with local communities. Because no core protection zone was defined in the Itombwe Reserve Declaration, the Landscape partnership chose to keep it as a CBNRM macro-zone for the purposes of landscape planning, but like the case for the UGADEC CBNRM, expected that a PA macro-zone and one or more CBNRMs would likely evolve there in the future (Figures 4–6).

2007: Adjusting Landscape and macro-zone boundaries to reflect politico-administrative units and expanding macro-zoning to the entire landscape

In 2007, with the inception of CARPE IIb, the Landscape partnership (Consortium in this phase) began vetting the concept of landscape-

LESSON LEARNED 5

If macro-zone and landscape boundaries follow government administrative unit boundaries as closely as possible, the landscape land-use plan will more likely be accepted by government authorities at all levels. A macro-zone boundary based simply on ecological features that cuts across a collectivity or groupement (local governance units) is not only not well understood by government authorities, it runs counter to the concept of community-based natural resource management, in which it is expected that all members of a community will participate in developing plans to manage their natural resources.

level land-use planning with local and provincial authorities. It became apparent that our Landscape boundary, having been originally conceived as a biological entity, cut across a number of politico-administrative units (including four provinces). The Consortium therefore re-evaluated the boundaries for Landscape 10, as well as its eight macro-zones, based on a new criterion that was intended to improve zoning for this Landscape, while at the same time facilitating acceptance of the landscape-level approach by local, regional, and national government policy makers: *Landscape limits and macro-zone boundaries would be adjusted to follow government administrative units wherever possible (i.e., provincial, territorial, collectivity and groupement boundaries).*

The Consortium reasoned that this would be the best way to facilitate acceptance of both a Landscape and macro-zone approach by government entities at all levels (national, provincial and local) by ensuring that boundaries would be understandable to the government based on the administrative units with which they were most familiar. Because these changes effectively expanded the existing boundaries based largely on biological criteria, the expansion did not interfere in any way with the biological or conservation objectives. The Consortium reasoned that this approach 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. Importantly, this approach also minimizes competing claims between and within local governance units. For example, if a CBNRM macro-zone is designed around an ecological characteristic, such as a forest block, but that zone overlaps two groupements, they are likely to make competing claims over the incoming resources unless both are included. Similarly, if the forest block only covers 50% of a groupement, ensuring that the CBNRM macro-zone includes the entire *groupement* will avoid internal claims that resources targeted on natural resource management are only going to those members near the forest, rather than all members within the *groupement*.

These adjustments resulted in making the Landscape boundary slightly larger (Figure 2, compare yellow and red boundaries), and as a

LESSON LEARNED 6

An effective landscape land-use plan is a guide for the future sustainable management and use of resources throughout the entire Landscape, and as such, with stakeholder participation, it should identify macro-zones for the entire area of the Landscape. Bearing in mind that macro-zones will likely change and evolve, and irrespective of whether immediate financial and technical resources are available, a landscape land use plan, through macro-zone designation, should target all areas in a landscape for future interventions. In the case of CBNRM zones, this provides a series of important community targets for government and international partners such that these communities eventually receive capacity building to enable them to develop resource management plans.

consequence, also enlarged some of the CBNRM macro-zones to follow more clearly the boundaries of *groupements and collectivities* (compare the western boundary of the UGADEC CBNRM macro-zone, Figures 4 and 5).

Simultaneously with the Landscape boundary revision, the Consortium evaluated all interventions in the Landscape and believed it essential for the process of landscape land-use planning to provide a macro-zone designation for all areas throughout the Landscape (compare Figures 4 and 5). For example, following this approach and respecting administrative unit boundaries, we also expanded the Kahuzi South CBNRM macro-zone (compare the 2006 macro-zone map with that for 2007, Figures 4 and 5).

It is important to note that these macro-zone designations do not imply that financial resources are at present available for all zones or that they represent a shift in areas of intervention and responsibility under CARPE funding (and the matching funding provided by partners). Rather, they represent target areas for future interventions and, *for the purposes of the landscape land-use plan*, indicate that CBNRM planning will be necessary for all non-protected area zones in the Landscape. To provide an example, under CARPE-sponsored funding, one Landscape partner, WWF, is currently undertaking interventions in the CBNRM macro-zone Kahuzi-South. With the inception of the CARPE programme, this was originally conceived as the buffer zone for Kahuzi-Biega National Park (Figure 4) and the earliest interventions were seen through the lens of this globally important protected area. With a change in perspective by 2006, that an entire set of *collectivités* surrounding the National Park would at some time in the future need capacity building in community-based natural resource management (Figure 5), WWF, with limited resources available, began work in one area, the Bushema Forest (Figure 6), which in accordance with local *collectivité* boundaries, could organize itself as a CBNRM macro-zone. Under the current five-year agreement with CARPE, it would not be expected that WWF (and the Consortium) could widen its intervention to an area of 1,533,181 ha, the new configuration for Kahuzi South CBNRM zone (Figure 5). Despite this, the Consortium maintains that the new configuration for this zone, following administrative boundaries, is the most appropriate way to go forward in partnership with government officials. Thus, this new (ideal) zone provides a target for resource governance for the future, not a revision of our consor-

tium responsibilities under CARPE funding. This example also demonstrates the utility of using the name “supra-macro-zone” for the Kahuzi South CBNRM zone (also see discussion above for the UGADEC CBNRM zone, and Figure 6), which is an area where formal, smaller CBNRM zones could eventually develop under the vision of a comprehensive landscape land-use plan.

Summary

As the above “historical” narrative to the evolution of macro-zoning in this Landscape has hopefully underscored, the development of a series of macro-zones for a comprehensive landscape land-use plan has clearly been an iterative and adaptive process. First, the process needed to absorb and include the important community initiatives already underway when the CARPE-supported CI-led partnership began its work in the Landscape. Second, when the CI-led partnership began, with no local state or community institutions having the capacity to even begin operations (exceptions: the highland sector of Kahuzi-Biega supported by GTZ; and Tayna, supported by DFGFI), nearly two years of support went into local capacity building and convening the partners and stakeholders to familiarize them with landscape-level activities. Third, as the USFS land-use planning methodology became integrated into the CARPE programme and as CBNRM groups in this Landscape began to create officially recognized protected areas, the macro-zones being used, which at the time focused largely on protected areas, were re-defined with a much broader emphasis on CBNRM zones. Fourth, as the landscape planning process emerged from a smaller project planning team and was vetted by government policy makers, macro-zones needed to be adjusted to reflect the boundaries of local governance units, while continuing to reflect important ecological zones. And finally, to provide for a comprehensive land-use plan, all areas of the Landscape were given a macro-zone designation (or at best, a “supra-macro-zone” designation).

One of the most important lessons learned for this Landscape was that the planning process had to introduce the concept that one type of

macro-zone, the CBNRM zone, had (and continues to have) portions of its area morphing into protected areas under initiatives led by local communities. The Consortium believes that zoning should reflect this and therefore assigned these new areas the status of PA macro-zones. This has the advantage of putting a focus on the development of an individual management plan for each of these PAs which, in keeping with their government status as a nature reserve managed by both communities and the state wildlife authority, would allow them to develop a management plan not dissimilar to that of a national park. Meanwhile, for the CBNRM area, the community can marshal its efforts to develop a management plan that provides for the sustainable use of their natural resources outside the protected area.

During the time the Consortium has been working in this Landscape, we can now see, with the clarity of hindsight, that we evolved from an approach focused on protected areas to a more comprehensive approach that considers both the present and future needs of all communities living in the entire Landscape. This evolution was catalyzed by inputs from the CARPE/USAID management team, as the expected results (IRs and Sub-IRs) were adapted and refined and as new methodologies became available for our toolkits, as for example, when the USFS land-use planning methodology helped to refine our thinking. Importantly, though, the evolution of our approach was most often catalyzed by our local Congolese partners who, with their vision for land use and management and a desire to protect their important biological heritage, catalyzed many revisions. 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. Security issues, complex and costly logistics, a new national government and even new regional conservation initiatives, as well as limitations with financial and technical resources, all conspired to slow down the process. But in retrospect, what may have seemed to be delays along the way

may have in fact provided valuable time for the Consortium and its local partners to assess, reflect, and adaptively respond to the challenges of the enormously complex task of developing an enduring plan for both the conservation of biodiversity and the sustainable use of natural resources in an area larger than Belgium and the Netherlands combined.