

COMMUNITY WILDLIFE MANAGEMENT IN WEST AFRICA

A REGIONAL REVIEW

Coordinated by Souleymane ZEBA

With the assistance of country focal points of Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritanie, Niger, Nigeria, Senegal, Sierra Leone, Togo

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Welcome to feedback on this report. Comments may be sent to :

Souleymane ZEB

Coordinator of the West Africa survey

01 BP 6133 Ouagadougou 01 Burkina Faso

Tel : (226) 365119 / (226) 364959

Fax : (226) 365118

Email : naturama@fasonet.bf

LIST OF ABBREVIATIONS

ADEFA	Association for Promoting African Wildlife Husbandry (Canada)
AMVS	Autorité de Mise en Valeur du fleuve Sénégal
ADB	African Development Bank
ALG	Autorité du Liptako Gourma
AOF	French West Africa
BF	Burkina Faso
BN	Benin
BOAD	West African Development Bank
BSP	Biodiversity Support Program (WWF/USA)
CCD	Convention to Combat Desertification
CI	Côte d'Ivoire
CIF	Collective Interest Fund
CITES	Convention on International Trade of Endangered Species
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CILSS/RESADOC	The Sahelian Network of Documentation at CILSS
CV	Cape Verde
CWM	Community Wildlife Management
ECOWAS	Economic Community Of West African States
EU	European Union
FAO	Food and Agriculture Organization
GA	The Gambia
GACON	Ghana Association for the Conservation of Nature
GB	Guinea Bissau
GEPRENAF	Participatory Management of Natural Resources and Wildlife
GH	Ghana
GU	Guinea
IIED	International Institute for Environment and Development
IMF	International monetary Fund
IUCN	World Conservation Union
LI	Liberia
ML	Mali
MR	Mauritanie
NE	Niger
NI	Nigeria
NGO	Non Governmental Organisation
NRM	Natural Resources Management
OAU	Organisation for African Unity
PASR	Sub-Regional Action Program of CILSS
PCGAP	Survey Project for Protected Areas Management
PGRN/VGFER	Natural Resources Management Program/Wildlife

	and protected areas Management component
PRA	Participatory Rapid Appraisal
PURNKO	Kouré Natural Resources Use Project (in Niger)
SL	Sierra Leone
SN	Senegal
TO	Togo
UEMOA	Union Economique et Monétaire Ouest Africaine
UICN/BRAO	UICN regional office for West Africa
UNDP	United Nations Development Program
UNESCO	United nations Education Science and Culture Organisation
UN	United Nations
USAID	US Agency for International Development
WRI	World Ressources Institute
WWF	World Wide Fund for Nature

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1. INTRODUCTION

The IIED has entrusted us with this study on community wildlife management in our West African region. This is not only an honour but also a privilege. All along the implementation phase our team has worked in an atmosphere of challenge and pleasure in so far as West Africa is a highly contrasted region of ecosystems, biodiversity, ethnic groups, colonial and post-colonial history and political economy.

Let us look at the extremes : from the desert national park of Air Ténéré in the north-east of Niger (0-100mm of rainfall/year), to the Guinean forest of kindia in the west (4000mm of rainfall/year) ; from the few oasis of Taoudennie in the northern part of Mali, to the mangroves swamps of Port Harcourt in Nigeria ; from the sand dunes of Bir Moghrein in Mauritania to the evergreen forest of kakum national park of Cape Coast on the Ghanaian coast.

The same holds true for biodiversity : 56 species of wildlife big mammals, 1300 bird species : from the bare-headed rock fowl of Sierra Leone to the Sahelian ostrich, from the oryx and the addax antelope living in the most severe deserts, to the reserves of Hadeija Nguru valley wetland in Nigeria.

This report is intended to be a West African contribution to a global study of IIED on community wildlife management issues. Its geographic focus is the 16 member countries of the Economic Community Of West African States (ECOWAS), including 9 francophone countries (Benin, Burkina Faso, Niger, Mali, Ivory-Coast, Mauritania, Senegal, Guinea, Togo), 5 anglophone countries (Ghana, Liberia, Nigeria, Sierra Leone, The Gambia) and 2 lusophone countries (Guinea Bissau, Cape Verde). This region has more than 200 million inhabitants. Eight (8) of the 16 countries concerned are part of the Sahelian region, and are members of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS)¹. The remaining ones are generally considered as being better endowed with natural resources (e.g. flora and fauna species, forests resources, water, etc.) because of their location in a semi-forest zone. However, desertification (known as a broad process of land degradation) has been reported to be affecting most forest countries also, and this might be the reason why except Liberia, all the 15 other countries of the region have ratified the International Convention to Combat Desertification. It should be noted also that Benin have tried to join CILSS these last years. Coastal erosion and deforestation are other serious problems affecting those forest countries on the Atlantic Coast. the combined action of drought, desertification, deforestation and population pressure, have widely depleted natural resources and wildlife.

¹ CILSS member countries are : Burkina Faso, Cape Verde, The Gambia, Guinea Bissau, Mali, Mauritania, Niger, Senegal, and Chad.

In addition to the physical causes of environmental degradation (climate), anthropogenic pressures largely influence the durability of natural resources (SECA/CEE, 1988). In the region rural economies which are characterized by poverty and frequent famines, people need these natural resources to meet their basic needs : food, domestic energy, health care, housing, animals breeding. In Burkina Faso, Cote d'Ivoire Ghana, Sierra Leone and Nigeria, case studies reveal that 60 to 90% of the meat for rural people consumption come from the wildlife (BN1, BF4, CII, SLI, N15, GH1). The same reasons related to the fundamental needs explain why rural people hard hit by the consequences of natural resources degradation find themselves in this vicious circle "poverty – environmental degradation".

The impact of the natural resources degradation on the region is multiform : scarcity of wildlife even in game reserves, extinction of species from various biotopes, land as well as agricultural productivity degradation, agricultural nomadism which entails land disputes, reduction of tourist potentials, etc.

The underlying motives of policies are fairly similar across the region : wildlife which is a national property and should be preserved by the state, hence the notion of « havens ». While wildlife has always and everywhere played a major socio-cultural role and represented a source of food to African populations, it has not been perceived as such by the Europeans since their first arrival in the continent. They created wildlife reserves for the recreation (hunting) of the colonial administration, and for touristic use. Thus, African wildlife was more or less deprived of its traditional meaning which it had for local people. Once its spiritual value and socio-economic use were lost by local people, wildlife became quite a nuisance impeding the development of animal husbandry and/or agriculture.

The strategy was therefore to allow the conservation of genetic capital that free exploitation could otherwise put at risk. Further to that, and pushed by realities of tourism, West Africa deemed it necessary to market its wildlife beauty to attract foreign currency. The strategy then was to create total wildlife reserve for sightseeing and partial wildlife reserves where hunting was authorized. Policies were therefore influenced by the external market to the region. This situation covered a long period of time, from the 1960s up to early 1990s.

This study on community wildlife management is all the more relevant because the states concerned and their national and international partners, have become more aware of the rapid destruction of their wild animals populations over the last two decades, undermining related economic opportunities in West African countries. Many of these countries are now investing important efforts to reverse the trends.

Today, natural resource management is considered as a major economic development concern in West African countries. Some policy reforms in land use management, good governance, and specific legislations on sustainable use of resources (environment and development policies) have gained ground. These political changes due to structural adjustment, democracy and international conventions, are pushing towards a general evolution for more decentralized strategies better integrated at the grassroots level.

The main thrust of these new strategies is the participation of all local actors in not only planning and design, but also the implementation of programs. The concept of «Natural Resources Management», «community resources management» or «participatory Management», are commonly used by the new generation of field projects, thus originates from this new context. Natural resource management by bottom-up structures emanating from local people thus seems to be an alternative to previous top-down strategies characterized by the predominance of government actors.

This new approach is in practice in many projects funded by several donors :

World Bank : PNGT project (Burkina Faso), PGRN projects (Benin, Niger, Mali), PNAGER project (Côte d'Ivoire),

UNDP : Nazinon Forest management project in Burkina Faso,

GEF: conservation projects in Ghana (GH2), Côte d'Ivoire (CI3)

European Union: conservation projects in Guinea (GU1), Nigeria (NI1, NI3), Senegal (SN3), Niger (NI1)

Bilateral donors: conservation projects in Senegal (SN1, Netherlands), Gambia (GA1, USAID), Côte d'Ivoire (CI2, Germany).

Through this approach established in most of West African countries, local communities are actively participating in the efforts undertaken to conserve biodiversity and improve their living standards. It seems to be a donor-driven process, but historically, it should be noted that it was the traditional way of managing natural resources. Behind this approach, the idea is to enable communities to own their local lands resources, and take care efficiently of them as a precious heritage. The independence of community structures is legally recognized and gives them progressively the right to administer themselves.

The transfer of management responsibilities to grassroots communities requires a political and financial support to the democratization of institutions to ensure more effective popular adherence, through a large scale campaign of information, education, and communication. This adherence should be facilitated by a coherent approach of integrated conservation and development programs, and land use reforms that may clarify ownerships, and avoid conflicts.

The economic and financial benefits of sustainable management² of natural resources are among the main factors which will encourage peasant farmers to adopt this strategy, as well as to increase its chances of being replicated. In most cases, the profitability of wildlife management practices is not immediately perceptible by local people, as the benefits are long term rather than

² *Sustainable management of natural resources is a concept aiming at wise use of resources, in order to meet human basic needs, without compromising species and habitats for future generations. It implies strict protection of endangered species, and an optimal use of available resources.*

short term. Nevertheless, these practices should constitute the basis for the management of private concessions, as well as for community wildlife management cases.

In many countries, more autonomous and decentralized responses are sought through negotiations between state authorities, community leaders, private operators, and other stakeholders : NGOs, IUCN, WWF, etc. Some examples are : the Buabeng Fiema monkey sanctuary project in Ghana (GH2), the women of Ker Cupaam project for the conservation of the Popenguine reserve in Senegal (SN3), the community palm-groves project in Niger, and the Nazinon forest management in Burkina Faso. The aim is to work out formulas of effective partnership that stimulate local communities, NGOs, and the private sector to give their inputs alongside with the State.

Access to, and control of natural resources in a context of depletion caused by calamities (drought, desertification, coastal erosion, etc.), and by continuous increase in the demand for resources due to population pressure, represent significant socio-economic and political concerns.

This report is a West African part of a global study undertaken by IIED with the purpose of collating, analyzing and uptaking the experiences of field projects or initiatives of "Community Wildlife Management" (CWM). It is a follow-up to the WHOSE EDEN study carried out by IIED which revealed a series of interesting opportunities but also raised many questions to policy makers, project managers, grassroots communities in terms of CWM.

2. THE CONTEXT OF WILDLIFE MANAGEMENT IN WEST AFRICA

2.1 Socio-economic and political background

Before colonization

Before colonization, West African societies were hunting to meet their food, therapeutic and mythico-religious needs. Hunting was practiced individually or in group under the watchful eye of the village advisers. Hunting tools were rudimentary : bows, arrows, spears, bludgeons, pits, ropes, nets, birdlimes, etc. The game was shared with all neighbors at the honour of the hunters.

In traditional societies, forests and wildlife of a given land were considered to be part of the communal heritage. Wildlife lives in the bush and as such, it is under the control of the village chief. As for agricultural plots of land, wildlife areas are under the control of the tribe leader who plays a legal and religious role. The customary regulations of wildlife use are totally different from the nowadays modern laws.

Taboos are established between some animal species and some given tribes. The mossi people in Sabou (Burkina Faso) regard the crocodile (*crocodilus niloticus*) as a «totem animal». The respect paid to the totem animal is closely related to the workshop of ancestors and this ensures the protection of the animal. We can therefore imagine the position occupied by some animal species within the identity references of a given village or tribe.

The value of identify reference of some species coupled with the view of wildlife as a communal heritage, can partly explain the passive resistance to imported modern law which is alien to the identity of village communities.

During colonisation

In French colonies of West Africa, the French Governor LAMY oriented the forest and wildlife action on February 1, 1933, in these words: " create a listed forest area definitively settled in surface area and specifically protected". The setting up of the procedure for the constitution of a protected area was effected with the promulgation of the July 4, 1935 Decree specifying the right to property as well as the regulation of both forest use and usufruct for the indigenous people. The decree ignored the land and customary right. It stipulated that only tourists had the right to hunt within the protected areas. The regulatory order of the practice of hunting in African territories was stipulated by decree No 47-2554 of November 18, 1947. In July 1953, the Assembly of the Union Française established the pre-eminence of the principle of agricultural development of the tropical countries and proposed calling on the government to take all measures of a nature to protect forests and spontaneous vegetation, and to carry out the development of the Overseas Territories. The orientation, however, was such that protected areas were marked out and regulated on the basis of criteria and

regulations created to suit the conditions prevailing in Europe. This forest legislation applied to wildlife lasts long after independence in the 1960s.

In British colonies, early legislation pertaining to conservation and the establishment of both conservation areas and forest reserves dates to the turn of the century. While the majority of forest reserve networks were in place at an early date, the period from 1950-1970 witnessed a significant expansion in many conservation area networks. In Ghana, the majority of protected areas were established between 1962-1971. In contrast, the networks of such West African states as The Gambia, Liberia, and Sierra Leone are new, with most protected areas being established over the past decade.

In all the colonies, forest services were created as paramilitary services with more or less advanced autonomy for anglophone and lusophone colonies in the 1930s-1940s. The London Convention of November 8, 1933 came to specify the policy on the conservation of the African fauna and flora in their natural state. In the Sahelian countries, the drought years 1972 and 1973 showed the consequences of this stringent protection. Thus, in 1976, CILSS designed a development strategy based on the fragility of natural resources and the need to conserve them through a regional plan to combat desertification.

After independance

The individual and collective discipline in wildlife management that was prevailing in traditional communities is no more applicable since :

- the introduction of firearms, that increase the destruction capacity of poachers,
- the development of transport and communication means, that allow poachers to access hunting grounds at hundreds kilometers, in a short time
- the establishment of a modern wildlife legislation : hunting is no more submitted to any customary constraint. In many cases, current legislations make traditional forms of hunting illegal (e.g. collective hunting in group is prohibited in most francophone countries, because it is estimated that this form of « community-hunting » is damageable to wildlife).

Nowadays, modern legislation is the only one empowered to regulate hunting. In most cases, anarchy prevails because this modern tool is ineffective. Subsistence hunting is giving way to commercial hunting. Neighboring populations of game-rich areas, in complicity with city people, have become poachers who hunt and trade.

Commercial poachers are generally people from neighboring towns (nationals or expatriates from western countries), hunting themselves or through recruited local poachers. They hunt for trophies, ivory, skin of pythons, and bushmeat for restaurants. They also hunt for alive animals such as birds (parrots), tortoises and snakes to export abroad.

The colonial influences on wildlife management policies, legislation, institutions, and visions are still strong. The effects of economic changes in combination with other factors such as a rapid human population growth and technical innovation, have caused an increase in the exploitation of the natural resources. Aggravated by environmental uncertainties such as variability in rainfall, overexploitation of the natural resources has accelerated, initially

without detrimental effects on the level of production. With an increasing pressure on ecosystems, leading to land degradation, production levels decreased because the regenerative capacity of the natural resources has been negatively affected.

The wild fauna in the region forms such a renewable resource. Its overutilization has led to a depletion of animal populations : several species live on the brink of extermination, even in protected areas. Only in some land-locked reserves are sizeable populations found. The conservation of ecosystems with representative populations of wild animals is more and more a matter of high priority; not only because their preservation is an important part of the natural heritage, but also their potential contribution to the rural economy justifies this attention. However, the ecological knowledge required for the conservation and management of wild animal populations in West African ecosystems is at present insufficient.

Hence there is now a need to make rural populations consider the increasing values of wildlife, in the new context of market economy. A quick comparison of incomes earned between similar domestic and wild species shows clearly that the former perceptions that wildlife is only bushmeat need to be updated. In Burkina Faso for example, safari hunting of warthog, roan antelope, and African buffalo, provides at least 10 times more profits than similar domestic species like pig, horse, and ox.

SPECIES	warthog	pig	Roan antelope	horse	buffalo	ox
Value based on <u>meat</u> or bushmeat	10,000 CFA = US\$ 20	10,000 CFA = US\$ 20	80,000 CFA = US\$ 160	120,000 CFA = US\$ 240	90,000 CFA = US\$ 180	150,000 CFA = US\$ 300
Value based on <u>tourism</u> (hunting fees, meals, hotel, transportation)	175 000 CFA = US\$ 350	--	750,000 CFA = US\$ 1500	--	900000 CFA = US\$ 1800	--

Source : Nikiema, G.E., IDR, 1995.

Indeed, one important way to make local people aware of the values of wildlife is to organize the small scale subsistence hunting for meeting their primary needs. However, it will be more profitable to promote the concept of « community-based tourism » such as in Senegal and Nigeria. It would be also interesting to entrust communities for selling hunting concessions on their lands to commercial safari operators.

Through such options, enough profits will benefit directly local people, and not only the States and safari operators. So, people will recover confidence to participate actively in management efforts.

Wildlife legislation

Modern legislation provide for opening and closing time for hunting and tourism in cynegetic reserves. Forest codes generally institute two types of hunting: tourist hunting and subsistence one.

Tourist hunting also called safari hunting is done by the holders of hunting licences for recreative purpose. It is a non-profit-making activity.

Subsistence hunting or traditional hunting is done by the local communities in their own land.

It aims at meeting individual or family consumer needs.

Any person aged over is allowed to go hunting. Many hunting devices are banned: night hunting, hunting by fire, sanares or any device of massive destruction. These national provisions diverge from the spirit and philosophy of cynegetic activities in village communities.

The modern legislator has provided for subsistence or traditional hunting with a view to giving grass communities access to wildlife resources. Yet these provisions do not really take in to account the spiritual and cultural needs relating to these wildlife resources. With regard to the consumer needs of riverside villages, it can be noted that the practice of battue (collective hunting), in traditional societies, is the most interesting device for villagers in safaris the hunting products are widely distributed and cannot be commercialized. The status of the cand owner and religions leader of exploited areas, was materialized by:

- The prerogative to make ritual sacrifices for the areas,
- The right to claim the tusks of the elephants killed in the area,
- The right to get a share of the big game killed,
- The right to get a share of fishing products.

These legal and religious rules were an effective device for controlling the use of wildlife resources. With the emergence of modern law, new religions and sophisticated weapons, these customary provisions are facting in to disuse.

Nowadays, legislations on wildlife are still marked by a protectionist view. Some policy-makers still believe on the possibility of increasing the participation of local people through sensitization and extension programmes. These legislative texts apply to:

- wildlife protection by regulating the hunting practice and by assigning categories to wild species under 3 annexes, on the basis of conventional classification (IUCN, CITES):
 - Annex 1: fully protected species;

- Annex 2: Partially protected species;
 - Annex 3: Common species ranked as small game and residual wildlife made up of non game species.
-
- The organization of wildlife conservation areas listed as national parks, biosphere reserves, fauna reserves (partial, total, or integral), cynegetic areas, game ranches, wildlife haven, classified forests, etc.
 - Infractions on wildlife are regulated by the verification of the offence, and penalties (fines, imprisonment, revocation of the hunting license, confiscation of weapons, etc.).

However, this modern legislation remains ineffective in most cases. For example, in countries where hunting is totally forbidden, you may eat bushmeat in restaurants. Despite the CITES restrictions, on the trade of products from endangered species of wildlife, it is easy to find and buy elephant ivory, parrots, skins of crocodiles or pythons, etc, in most cities of the region, alongside the roads. This situation of ineffective implementation of laws, is due to poor capacity of state services (lack of personnel, equipment, financial resources, etc), but it also reveals the weaknesses of the actual conservation systems.

2.2 Role players

There are 4 main categories: communities, project managers, policy makers, and private sector:

2.2.1 Communities

“community” does not mean that people have homogenous interests, because sometimes there are conflicting views and topics, such as cases of land conflicts opposing subsistence farmers and cattle breeders. However, it should be noted that in West Africa, communities have successfully organised during centuries traditional hunting associations, aiming at sustainable use of wildlife.

In many regions of Burkina Faso and Ivory Coast (CI3, BF5), Mali (ML1), and Ghana (GH1), hunters associations were structured under the authority of hunting-chiefs, who could initiate systems of taboos to protect endangered species, systems of sacred groves to conserve fragile habitats, etc. In this past period, lands and resources were directly owned by local people, and hunters were managers.

At present, wildlife reserves are generally bordered by neighbouring communities whose hunters are practising for selling directly bushmeat, or on behalf of poachers living in the region’s cities. Even a well-trained and equipped anti-poaching team cannot overcome in most cases, unless local communities are associated in the management systems of such reserves.

2.2.2 Project managers

Projects managers should include all the agents of the management system, including community group officers, NGO extension agents and home-office managers, managers of game concessions engaged in wildlife management. Even if they belong to different types of organizations, they do have the same functions.

In CWM issues, NGO movement is still weak because the development of traditional associations of village hunters were stopped since the colonization period, followed after the independence's by a monopoly-state vision that wildlife should be managed by state authorities. However, there is actually a growing movement of national NGOs dealing with wildlife conservation. Some examples are :

- Ghana Wildlife Society (GWS) engaged in Communities involvement in the Save the Seashore Birds, Wildlife Clubs, and Wetlands management,
- Ghana Association for the Conservation Of Nature (GACON) engaged in the Sacred Groves conservation program,
- Sierra Leone Conservation Society, Society for the Conservation of Nature of Liberia (SCNL), representing BirdLife, and managing education project,
- Nigerian Conservation Foundation (NCF) involved in the Okumu Wildlife Sanctuary management,
- Center for Environmental Resources and sustainable Ecosystems (CERASE, Nigeria) engaged in environmental education including wildlife issues,
- Nature's Friends' Foundation (NATURAMA, Burkina Faso) initiator and manager of the project for the decentralized management of the Kabore Tambi National Park, national representative of Networks in Wildlife management,
- Mali Association for the Conservation of Wildlife and Environment (AMCFE) engaged in the management of the Baoule Belt national park management,
- Senegalese Association of Friends of Nature (ASAN) mainly engaged in conservation education,
- Association TINIGUENA, manager of the Cantanhez community-resources management project in Guinea Bissau,
- Niger Organization of Volunteers for Environment Protection (ONVPE) involved in the National Project of community-resource management (PGRN)
- Association "Côte d'Ivoire Nature" mainly engaged in conservation education in the central and southern regions of the country.

2.2.3 Policy-makers

Policy-makers include state authorities, regional organizations, financial partners, and international institutions. They are in charge of policy formulation issues at national and regional levels, regional coordination, and funding issues. They also play a leading role of planning strategies and programmes related to CWM in each countries.

Financial partners include national and international funding institutions. In CWM issues, the main partners in the region are : World Bank, African Development Bank, West African Development Bank, EU, GEF, UNDP, FAO, some bilateral donors (The Netherlands, Germany, UK, France, Belgium, USA, Canada, and Switzerland), and some international NGOs (WWF, IUCN, RSPB, FFI, BirdLife, Wetlands, etc.).

International donors are playing 2 important roles in this region : they are funding projects submitted by governments, NGOs, and private corporations during the process of projects planning, they do negotiate more convenient approaches, appropriate legislations for project implementation, innovative organizational arrangements, community involvement, etc. Most of the time, they have enough power to succeed. That was the case the PNGT project in Burkina (BF1), the PGRN projects in Benin (BN1), Niger, Mali, where the World Bank has push for changes in land-use legislations.

Regional organizations concerned by wildlife management in West Africa are mainly ECOWAS, UEMOA, and CILSS. Their main role is focused on the promotion of concertation between member countries for regional policies.

2.2.4 Private sector

Private corporations engaged in marketing for wildlife products (bushmeat restaurants, trophies), or wildlife services (Hotels, tour operators, travel agencies). However, it should be noted that in this region, these types of private sector are too weak, and in some cases it does not clearly exist, because the potential for wildlife product and services is considered insufficient.

The 4 categories of stakeholders listed above have different perceptions on wildlife issues. Policy-makers would like to preserve wildlife for biodiversity aspects, and to generate income for the state and local development. Usually, there is a misunderstanding in fiscal issues with private corporations, because state officials think that private corporations are earning a lot of money, without any comparison of profitability with other investment sectors (that can attract these investors). The strength of State administrations are also their weakness because this power is sometimes an obstacle against an effective partnership building with communities, NGOs and private corporations.

The following behaviours of 4 wild species, described by Carlos Lopez (Guinea Bissau) seem to correspond the 4 categories of stakeholders described above :

“The hippo is very adaptable to the water, but very territorial.

The giraffe is beautiful and elegant, breathing fresh air up in the clouds but has difficulties with grassroots situations.

The tortoise is slow but sure and guaranteed personal protection.

The monkey is intelligent, agile, but capricious.”

Despite the weaknesses of each of them, all of them are useful in their ecosystems. Each stakeholder should bring his contribution in CWM issues.

Fig.2 : Biogeographical zones of West Africa

2.3 Environmental context

West Africa can be defined as the area extending from the Atlantic Ocean in the south to the Sahara desert in the north, and from Senegal in the west to the highlands of Cameroon in the east. According to Geerling (1982) and White (1983), five phytogeographical zones can be distinguished in this area (fig. 2):

- the Sahara, a desert
- the Sahel, a semi-arid steppe vegetation
- the Sudan zone, a subhumid savanna
- the Guinea zone, a transition from the Sudan savanna to tropical rainforest
- the tropical rainforest

Two regions can be globally distinguished:

The sudano-sahelian region (Burkina Faso, The Gambia, Mali, Mauritania, Niger, Senegal, Guinea Bissau and Cape Verde).

The vegetation found in this region consists mainly of savannah with abundant grass and some trees like *Acacia* and *Commiphora*, bordered in the South by sparse *Isobertina* forests, and in the North by grassy steppes and desertic landscapes. Semi-natural woodlands in this arid and semi-arid region are overexploited for wood fuel (in particular charcoal for urban areas) and submitted to intense pressure from grazing and farming activities resulting from population growth. An aggravating factor is the erosion of collective property systems of woodland protection and management, which has been replaced by an estate system consisting of forests and wildlife, a free access resource, in the absence of state control. Degradation is intensified by poor and erratic rainfall, leading to drought, desertification, slow growth and uncertain regeneration. In this area, wildlife is strongly characterized by ungulates.

The humid and sub-humid region (Benin, Ivory-Coast, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo).

The vegetation of the northern and eastern part of this region consists mainly of sparse forests with *Isobertina*, *Brachystegia* and *Julbernardia*, whilst dense evergreen and semi-deciduous forests predominate in the South and West. Between these two areas is found a transitional area made up of a mosaic of forest and savannah resulting from human action on the original dense forest. Population growth and internal migrations, intensified by transport infrastructure established for extensive exploitation of precious species, have caused large scale encroachments on natural forests in this region. Dense forests are today reduced to less than 11 million hectares (less than 10% of woody surface areas), while forest fallow land and savannah extend over some 130 million hectares (90% of woody surface areas). Large forest surface areas have been converted into cultivated land, especially for shifting agriculture with relatively short fallow periods. Extended areas of mangroves are found along the western coasts, with five main species: *Rhizophora mangle*, *Rhizophora harrisonii*, *Rhizophora*

racemosa, *Avicennia germinans*, *Laguncularia racemosa*. Wildlife includes forest species like the pygmy hippopotamus, the chimpanzee, *Cercopithecus erythrogaster*, etc.

In the coastal region, deforestation levels are among the highest in the world. Over the past 50 years, almost three quarters of the original West African tropical rainforest have disappeared. Damages are particularly serious in Ivory-Coast where deforestation levels have reached 5.2% per year during the 1980s. It should be also noted that the tropical rain forests of neighboring countries of Benin, Nigeria and Togo are equally threatened by massive destruction.

The key causes behind deforestation in the region is timber production, and the need to clear the lands for agricultural development (coffee, cocoa, etc).

Table 1: PRODUCTION OF FOREST RESOURCES IN ECOWAS COUNTRIES

COUNTRIES	³ FIREWOOD and CHARCOAL (m3)	⁴ TIMBER (m3)	⁵ Percentage of lands covered by Protected Areas
Benin	3 673 000	3 879 000	24.2%
Burkina Faso	8 250 000	6 606 000	13.3%
Cape Verde	-	-	-
Côte d'Ivoire	6 668 000	12 032 000	11.2%
Gambia	881 000	891 000	-
Ghana	7 284 000	9 803 000	15.2%
Guinea	3 085 000	3 624 000	4.2%
Guinea Bissau	422 000	526 000	3.2%
Liberia	536 000	5 084 000	14.0%
Mali	29 973 000	30 249 000	4.6%
Mauritania	605 000	650 000	1.7%
Niger	2 817 000	3 034 000	8.2%
Nigeria	95 225 000	102 584 000	4.1%
Senegal	7 770 000	2 885 000	11.4%
Sierra Leone	690 000	7 931 000	4.9%
Togo	546 000	697 000	16.2%
TOTAL	168 425 000	154 930 000	average cover : 9.74%

³ Source : (ECOWAS, 1994)

⁴ (FAO, 1992)

⁵ (IUCN, 1994)

Figure No 3: Biological distribution of west african mammals

Figure No 4: Ecological separation of ungulates in West Africa

2.4 Types of wildlife and their habitats

West Africa is rich in wild animal species with the mammals well represented. Most species have a pan-African distribution, except for a few duiker species, for example *Cephalophus jentinki*, and only a few are really endemic to particular parts of Africa such as the giant Eland and the pygmy hippopotamus *Choeropsis liberiensis*. Most species are found within and around the the tropical rainforest. Going north into the the Sudan savanna, the richness of species generally decreases and a strong relation with annual rainfall is supposed.

Increase in cultivation and in the utilization of the savanna woodlands by cattle from the Sahel and a greater hunting pressure on wildlife are the main reasons for the fragmentation of animal populations. The numbers of wild species in the western part of Africa though found at lower densities than in eastern and southern Africa, are nonetheless characteristic of the said region , by their variability and distribution through the various ecosystems.

The bio-geographical distribution of wild mammals found in West Africa is presented in Fig. 2. These wild animals are essentially confined in a few conservation areas, located in isolated and low populated zones.

The abundant wildlife in West Africa and its picturesque landscapes have undergone strong regression, ranging from delocalization to extinction of some species such as:

- The Burchella zebra ;
- The giant eland (Tragelaphus derbianus) once present in the woody sudanian savanna;
- The giraffe (Giraffa camelopardalis) which used to be found in the sudanian areas is now found but in the sahelian areas (mainly Niger);
- The Topi Damaliscus lunatus korrigum the original population of which is present only in the reserves of Arli / Pendjari (Burkina - Benin).

The preservation of these important resources submitted to anthropogenic pressures is the major reason of Governments and community leaders for setting up national parks, protected areas, sacred groves, and wildlife sanctuaries. The following box describes the case of the Okomu wildlife sanctuary in the Lagos State in Nigeria.

Box 1 The Okomu Wildlife Sanctuary conservation project

It is a project initiated by the Nigerian Conservation Foundation with the support of WWF-UK. Its objectives are :
To protect the endangered species such as Cercopithecus erythrogaster - a rare primate which is endemic to the area.

- To protect all animal and plant life in the reserve
- To provide support activities for the rural communities
- To provide environmental education in the Park

The key decision to set up this project in 1985 was because it had endangered primates such as the white throated monkey and other animals like the forest elephant. Okomu also has several medicinal plants and palm trees which attracts loggers. One of the highlights is a 130 feet tree house which gives a breath-taking sight of this reserve of about 40,000 ha.

Achievements : The active protection of the Okomu Wildlife Sanctuary Since 1985 has saved the sanctuary's endangered species. Studies are in progress to establish exactly how much stability has been achieved. Some socio-economic activities (food processing mills, poultrys, piggeries) have augmented the meat resource, and increased the awareness for conservation. The decrease in hunting is one of the indirect results of assisting the villagers in this way.

Source : Uzoamaka Egbuche, NCF, 1997.

The mass destruction of wild species goes along with the reduction or destruction of their habitats due to anthropogenic pressure including:

- Farming practices (extensive clearing of land, cash cropping policies)
- Bushfires, tree cutting, overgrazing;
- Migratory flow followed by uncontrolled settling of outsiders;
- Absence of a standardized global policy at national and international levels;
- Inadequate material, human and financial means for the implementation of wildlife and its habitat management policies.

Table 2- Overview of wildlife specific context in West Africa

Countries	Types of Fauna and Flora per country		Specificities	Comments on CWM
Benin	2000 species of flora	187 species of mammals 630 species of birds 10 species/ primates 18 species/antelopes	an important network of protected areas in the north : Pendjari, W, Djona. Grasscutter breeding experience	wildlife management remains a state-driven issue for a long time. The main projects wre concentrated on the northern region of the W and Pendjari national park. Poor experience in CWM, except the case study BN1 (Sinsin B., 1997)
Burkina Faso	1800 species of flora.	635 species of birds more than 750 species of fauna including 34 species of large mammals	Burkina Faso is a transition zone between the arid and humid ecosystems. It is home to most of the endemic species of Sudanian and Sahelian zones	Many experiences of CWM initiatives. The new legislation is supportive for the participation of communities, private entities, NGOs. 2 national parks have been entrusted to national NGOs for management periods of 10 years (renewable). CWM projects are on-going ((CI3, BF1, BF2, BF3, BF4)
Cape Verde	800 species of flora	fauna is mainly constituted of birds : Calonetrus edwardoi, Puffinus assimilis, Pellagroma marina.	Country constituted of little islands (4030 sq km).It is poor in mammals but rich in birds, with endemic species	2 endemic bird species are reported : Apus alexandrii, Alexandra razoe. Low experiences in CWM. One case study (CV1) were considered for this survey.
Ivory Coast	4700 species of flora 90 endemic species	17 species of primate 668 species of birds	Threatened species are : elephant, chimpanzee, trichechus senegalensis, pygmea hippo.	Hunting is illegal since 1994. A new law is re-organizing the use of Wildlife (1996). Buslimeat is however easy to find in restaurants. Poor CWM experience (CI1, CI2, CI3).
Gambia	1200 species of flora	490 species of Birds 46 species / reptiles 530 species of fauna	Most of the large mammals have disappeared	The Kiang West National Park (GA1) is planned on the basis of community projects. NGOs are involved in micro-projects
Ghana	3600 flora species	200 species of mammals 16 species / primates 721 species of birds	An important number of species are located in the coastal, and forest zone.	Done interesting CWM initiatives were momtored by EPC and Wildlife Department. 3 Case studies were proposed (GH1, GH2, GH3). They involved NGOs (GWS, GACON)
Guinea	Poor datas about flora species	a great variety of mammals and birds	Threatened species : Cercophiithecus diana, Colobus badius, Picathartes gymnocephalus, Elephant, pygmea hippo.	Traditional CWM initiatives were important in Guinea. No CWM project implemented. The transboundary park (Niokolo, Badiar)) is coming up with lessons. The Ziama forest reserve project was considered during this survey.
Guinea Bissau	1000 flora species, including 12 endemic	109 species of mammals 11 species of primates	12 endemic species of flora. Limited surface area of the country (36125 km2).	Poor experience of CWM activities. The creation of the Bolama. Bijagos biosphere reserve (GB2) and the Cantanlez project (GB1) are currently based on community involvment.
Countries	Types of Fauna and Flora per country		Specificities	Comments on CWM
Liberia	unknown	590 species of birds including 13 endemie species of humid forests no datas on mammals	Threatened fauna species : Cephalophus jentinki, Cephalophus zebra, Choeropsis liberiensis, etc.	The dynamism of local people surrounding the forests of Loffa-Mano, Mount Nimba, and Wonegizi is reported. Poor CWM experience.
Mali	1500 species of flora	-625species of birds -more than 800 species of fauna, mainly adapted to savana	The Niger river crossing the country plays a central role in ecosystems. It is home to most Wetlands species.	Poor experiences in CWM. Hunting is still illegal, which is an obstacle for the interests of communities and private sector. The 2 case studies (ML1, ML2) considered were poor in lessons.

The Context of Wildlife Management in West Africa

Mauritania	1000 species of flora	600 species of birds 700 species of fauna	Important Wetlands in Banc-d'Arguin and Diawling, home to migratory birds and aquatic species.	Poor experiences in CWM. Hunting is prohibited. The new approaches and policies coming up with reforms, will be supportive fo CWM. 2 Case studies (MR1, MR2) were considered.
Niger	1200 species of flora	127 species of mammals 500 species of birds	Major mammal species are : Elephant, Giraffe, Waterbuck, Lion, Panthera pardus, Oryx, Addax.	Hunting were prohibited for a long period (15 years). The actual law (1996) allows the use of wildlife by hunters. Poor experience in CWM projects. 2 case studies (NI1, NI2) were considered.
Nigeria	2900 species of flora	274 species of mammals 839 species of birds	Nigeria is rich in forests, wetlands, and savana species. However competition between population and wildlife management.	Many CWM experiences are reported, of which 5 case studies were considered for this survey. Policies and legislations have to be adapted to the willingness of local people who are struggling for self-development.
Senegal	2200 species of flora	170 species of mammals. 625 species / birds 57 species / reptiles 26 flora species are endemic (region)	Giraffe and Topi have disappeared. A lot of threatened species : Elephant, Chimpanzee, Panthera pardus.	Poor CWM experiences. However, in the new framework of decentralization and regionalisation new types of projects are emerging in NRM including Wildlife. 4Case studies were considered (SN1, SN2, IS2, SN3).
Sierra Leone	2000 species of flora	18 species of antelopes 15 species /primates 614 species of birds 74 flora species are endemic to the region	The Gola forest is an important rainforest, home to a lot of endangered species of fauna and flora.	Poor CWM projects. However, the State officials and 2 main NGOs (SLCPN, SLCS) are working on new approaches involving communities in the coastal and central zones. The Outamba-Kilimi national park project, and the Tiwai island wildlife sanctuary project were considered (SL1, SL2).
Togo	2300 species of flora	196 species of mammals 10 species/ primates 17 species/antelopes 630 species of birds	About 1% of the species are endemic to the region.	It is estimated that Togo has a poor CWM initiatives. The national park of keran was one of the richest reserve, but its resources declined since 1991. 2 case studies (T01, T02) were considered. Hunting is still prohibited.

2.5 Institutional context of wildlife management

Wildlife management structures depend on the organisation in each country. These structures correspond to the constraints and advantages of national policies, and affects the establishment of CWM.

2.5.1 Usual categories of structures

In general, the structures can be ranked in three (3) categories:

- Central services grouped within the ministries in charge of wildlife. These services include technical directorates and services, related programmes and research institutes. Some of these structures are decentralised at provincial, district and village levels. Sometimes there are interministerial bodies for national co-ordination of policies and programmes : « *Conseil National pour la Gestion de l'Environnement* » in Burkina Faso (document MEE/PM, 1995), « *Conseil Supérieur de la Protection de la Nature* » in Senegal (document MEPN/DPN, 1998) « *Conseil National pour l'Environnement pour un Développement Durable* » in Niger, etc.), as well as scientific committees on wildlife specifically, or biodiversity in general. These interministerial bodies were recommended by the UNCED summit of Rio, 1992, to play a role of sustainable development councils. They include representatives from private corporations and civil society.
- The local level is represented by protected areas management units, field projects, private corporations, NGOs, and village associations. The local populations are sometimes organised in village hunters' associations or village hunting committees such as in Burkina Faso, Benin and Ghana (BF1, BF4, GH1, BN1). In such countries, subsistence hunting is authorised by the legislations, and local people are sharing the responsibilities of wildlife conservation. In a few cases, partnerships among local people, NGOs, and private bodies have aimed at supporting the implementation of village micro-projects or wildlife utilization by means of hunting or tourism. These partnerships mean that local people initiate their project, some NGOs provide technical guidance for the planning process, and funding for approved activities, while private operators are marketing to find clients for opportunities generated by the project.. That is the case at the Buabeng Fiema monkey sanctuary (GH2), The hippo pond of the PNGT project in Burkina (BF1), and the SNV project PURNKO in Niger (NI 1).
- The inter-states level: Sub-regional protocols on wildlife conservation have been established. This is the case of :
 - the agreement on anti-poaching, and the conservation of adjacent parks and reserves neighbouring the common frontiers of Burkina, Benin and Niger. This agreement allows park rangers of the 3 countries to go across the borders for protection activities.
 - the Mount Nimba (Ivory-Coast, Guinea, Liberia), in order to ensure the management of this area in synergy.

- the co-operation about the Fouta Djallon Massif (Senegal, Guinea Bissau, Mauritania)
- the co-operation about the Gola forest (Liberia, Sierra Leone).

In this regard, sub-regional consultation frameworks such as : CILSS, ECOWAS, Conseil de l'Entente, AMVS, Liptako Gourma, UEMOA (cf. §1.5.3), international conventions on biodiversity, and international institutions (UN, EU, IUCN, World Bank, etc) have played a facilitating role (cf. §1.5.4).

2.5.2 Wildlife Training and Research Institutions

At a high training level, there were two (2) universities in the region experienced in wildlife training and research activities: Ibadan University (Nigeria) ; Tropical Ecology Institute of Abidjan university (Ivory-Coast). Nowadays, most countries have departments of wildlife and forestry in their national universities.

At the level of technical training, three (3) specialized schools for training wildlife managers are mainly solicited by West African countries:

- The wildlife school of **Garoua** (Cameroon), for francophone students
- The school of **New Boussa** (Nigeria) and the **Mweka** college (Tanzania), for anglophone students.

The training programs of these schools and universities have been targeted to wildlife management techniques, and other related ecology and biology sciences. Local people were supposed ignorant and their possible indigenous knowledge on wildlife were fully neglected. The only social science courses taught were focussed on extension issues : How wildlife managers should address their technocratic willingness to local people.

In the same vain, the students that were trained in overseas academic institutions went out with an important gap on community-related issues in wildlife management : ENGREF/Montpellier (France), Idaho state university (USA), Wageningen Agronomic University (The Netherlands), Aberdeen University (UK), etc.

The priorities for governments were law enforcement, and income generation for national treasury. That explains why field agents got a military training for anti-poaching needs. However, even these agents were obliged to be more pragmatic by recruiting local hunters as collaborators for the interesting indigenous knowledge they can provide.

Right now, it is remarkable that in wildlife training institutions, there is no specific courses that integrate clearly community wildlife management issues. However, with the on-going policy reforms towards the devolution of management responsibilities to decentralised bodies, (CI3, SN3, GH2, BF1, BF4), it is expected that some community organizations will have to recruit wildlife experts for their game reserves.

2.5.3 Involvement of countries in interstates organizations

TABLE 3

Inter-states organizations	BN	BF	CV	C1	GA	GH	GU	GB	LI	ML	MR	NE	NI	SL	SN	TO
AMVS					+		+								+	
ADB	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ALG		+								+			+			
BOAD	+	+						+		+		+			+	+
ECOWAS	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
CILSS		+	+		+			+		+	+	+			+	
Conseil de l'Entente	+	+		+						+		+				+
OAU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
UEMOA	+	+			+			+		+		+			+	+

2.5.4 Involvement of West African countries in international agreements on the protection of Environment

International Agreements	BN	BF	CV	C1	GA	GH	GU	GB	LI	ML	MR	NE	NI	SL	SN	TO
1. Biodiversity	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2. Climate Change	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3. Desertification	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4. Endangered species (CITES)	*	*		*	*	*	*	*	*	*		*	*	*	*	*
5. Ozone layer Protection	*	*		*	*	*	*			*	*	*	*		*	*
6. Law of the Sea	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
7. Nuclear Test Ban	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8. Wetlands		*				*	*	*		*	*	*			*	
9. Interstate Treaty on the W Park	*	*										*				
10. Hazardous Wastes		*		*			*						*		*	
11. Tropical Timber				*		*			*							*
12. Inter-state Treaty on Tourism	*	*		*						*		*				*
13. OAU convention on Natural Resources cons.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

sources : (UN, 1996) ; (ECOWAS, 1996) ; (UEMOA, 1996)

It is enough clear that West African Countries are parties to the main conventions related to Wildlife conservation : Biodiversity, Climate Change, Desertification, Endangered species (CITES), The law of the Sea, and the OAU convention. That indicates their willingness to cooperate on regional and world-wide options for nature protection. However, there is a lack of national resources engaged in wildlife conservation projects.

2.5.5 International NGOs

There is a feeling that the region has been neglected for decades by number of international NGOs dealing with Wildlife conservation issues. Perhaps as a result of poor publicity from the region itself. Most of nature conservation NGOs have also restricted their operations to tree planting, combating Desertification, and reforestation. Among the reasons of that, the obstacles of wildlife legislations containing a lot of risks, and no incentive for investors.

Actually, some international NGOs have important activities in the region : WWF, BirdLife International, Wetlands International, etc. It might be remarked that no initiative was taken to create a regional NGO on Wildlife issues such as cases in East and South Africa (Africa Resources Trust, African Wildlife Foundation, African Elephant Foundation, etc).

2.5.6 National NGOs

At national levels, the number of NGO interested in Wildlife conservation is increasing, thanks to the new contexts of macro-policies. There is a hope that for this reason, more initiatives of CWM initiatives will be taken than before. However, these NGOs are still weak (lack of human resources, means, poor planning). In regard to the development of partnership with Government Wildlife Departments, it seems that Anglophone countries have got more experience than other West African countries.

In these Anglophone countries, the Wildlife Departments have entrusted and supported a main NGO as their major partner (e.g. : Ghana Wildlife Society, Conservation Society of Sierra Leone, Nigerian Conservation Foundation, Liberian Society for the Conservation of Nature). This allows the Wildlife Departments to focus on policies, strategies, and programmes, while these NGOs are stimulating other civil society organization for projects implementation in the national policy framework.

2.5.7 Influence of Donors and International Institutions

These partners in the processes of Development in Africa can play very positive or very negative role in Wildlife Conservation issues. For instance, by funding only reforestation projects in the Sahel for a long period, Environment authorities have withdrawn the human resources of Wildlife conservation for afforestation activities and commitments.

Actually, the interest of these partner in CWM projects is increasing, and some new macro-economic options (poverty alleviation, eco-development) supported by them are helpful for Wildlife conservation in the region.

2.5.8 Institutional constraints

It is a challenge to run a track equipped with an engine of motorcycle !
Actually, Wildlife conservation needs new partnerships building, specific policy reforms, education/communication with communities and different stakeholders, implementation of new types of Action plans, etc.

For meeting these expectations, most of West African countries need for meeting these expectations, most of west African countries need institutional support for Government Wildlife Departments, fields workers, NGO and private corporations, community leaders (training, equipment, etc).

At a long term, each country must try a new mechanism of achieving sustainability, given the fact that wildlife is a resource which management should generate income for running an autonomous process.

3. METHODS USED, AND PROPOSED CASE STUDIES

3.1 Methods Used For The Survey

The methodological procedure followed for the West African analysis of CWM and for preparing this report consisted of three major steps:

- Designation of a focal point in each of the 16 countries concerned;
- Information of the focal points and data collection;
- Synthesis of the information and production of the report.

3.1.1 Designation Of Focal Points

Based on the objective of the research programme which is putting together information on CWM initiatives developed in the countries so as to bring beneficial improvements to all stakeholders, the coordinator of the study found it necessary to appoint in each of these countries, a focal point to be responsible for reporting as faithfully as possible the experience of his or her country in the area, instead of the coordinator visiting all of these countries to interview wildlife management actors.

In addition to being less expensive, this procedure had the advantage of enabling Community Wildlife Managers in each country to conduct the research and begin in-depth thinking, as the lessons learnt through this study are intended to be validated and disseminated in each country.

Three major principles have guided the coordinator of the research in designating the focal points: the multidisciplinary approach, interagency approach and the gender approach.

Concerning the multi-disciplinary approach, the coordinator looked for persons with competencies that are as varied as complementary, and diversified socio-professional experiences. Thus, researchers, trainers, rural development executive staff, wildlife developers, NGO managers, field project managers, etc., are all found in the team.

Similarly, for the purpose of collaborative research, the highest possible number of key partners were involved in the process as full-fledged participants. That is the reason why the focal points designated come from various institutions including public institutions of research and training, co-operation institutes in the field of research, government services in charge of wildlife, and environment NGOs. The inclusion and integration of these service groups had the positive outcome of producing a wealth of diverse opinions in the analysis.

Finally, coordination of the study involved a gender sensitive approach by integrating women in the team. This helped to better take into account women's interests in the field of CWM which seem to be unfortunately more biased towards men.

3.1.2 Information Of The Focal Points And Data Collection

Once they were designated, the focal points received all the documentation relating to this study by surface mail, and complementary information by fax or e-mail. Suggestions of CWM projects known by IIED or by the coordinator of the survey were made. However, focal points were free to present the cases they found more interesting for analysis. The coordinator was able to meet some of the focal points during sub-regional workshops in West Africa.

A questionnaire intended to guide data collection on CWM projects of every country concerned was sent to the focal points. The poor availability of some focal points was a constraint in data collection and national reports write-up. However, this made it possible to achieve more or less the following:

- an inventory of CWM projects/initiatives (implemented or on-going)
- an inventory of key persons and/or institutions and their addresses, including CWM researchers, donors and decision makers, at both national and sub-national levels.
- a summary incorporating key data on the widest range possible of CWM projects
- CWM literature review and knowledge of sources and available reference materials;
- summary of progress achieved by these initiatives (projects aimed at achieving social, economic and ecological sustainability)
- analysis of the factors (policy, legislation, institution, etc) that affect progress
- recommendations of projects/issues which were found particularly interesting for further study and selection for phase II of this survey.

3.1.3 Synthesis Of Information And Production Of The Report

During this study, the coordinator received a briefing mission from IIED (Izabella Koziell). Elie Hakimzuamwami, coordinator of the Central Africa component participated in this mission, which made it possible to widely inquire about IIED's expectations from to the findings of the study.

The mission was able to travel to south Burkina where they met hunters, government and Naturama field workers, in the villages of Nobere, Kampala, and the game ranch of Nazinga. This was also the occasion for meeting Michel Kouda, member of the African supervisory committee of the study.

The coordinator remained in contact with IIED by different telecommunication means for the management of activities. He mainly kept in touch with the national focal points for monitoring the work. The information thus collected and sent to the coordinator of the research in Burkina, were important in the process of preparing the present report.

In addition to that, the coordinator paid visits to the regional offices of the following organizations involved in important natural resources management projects in West Africa : IUCN/BRAO (Ouagadougou), FAO (Accra), World Bank (Abidjan), WWF (Abidjan), CILSS/RESADOC (Bamako), CILSS/headquarters and UEMOA (Ouagadougou). The coordinator also requested information from the IUCN missions in West Africa (Niger, Senegal, Mali, Guinea Bissau).

A regional restitution workshop is proposed after this report, with the participation of national focal points, national wildlife departments, sub-regional stakeholders, and some representatives of the IUCN group on the sustainable use of wildlife. This workshop will give the opportunity to participants to mutually learn from the experiences of each other, to amend and validate this sub-regional report and to be supportive during the 2 future phases of the survey at their national level.

3.2 Inventory Of CWM Initiatives

The following table summarises the inventory of 39 CWM initiatives provided by the focal points. The reports from the focal points and the relevant documents they have provided are also available.

Table 5

Countries	Ref.	Projects/initiatives Titles
Benin	BN1	Natural Resources Management Project, Wildlife Management and Rural Eco-development component (PGRN/VGFER)
Burkina Faso	BF1 BF2 BF3 BF4 BF5	*Wildlife management component of the "Gestion des terroirs Project" *Biodiversity Optimization Project in Nazinga Game Ranching *Decentralized Management of Kaboré Tambi National Park (Naturama) *Involvement of populations in the conservation areas management in the East of Burkina Faso (IUCN, 1997) *Wildlife and Natural Resources Participatory Management Project (GEPRENAF/Burkina)
Cap Vert	CV1	*Nature Reserve development and conservation of Birds
Côte d'Ivoire	CI1 CI2 CI3	*The Project on bushmeat survey in Côte d'Ivoire (PCGAP, 1995) *Village participatory Management Project and self-promotion of Taï National Park (BSP, 1995) *Wildlife and Natural Resources Participatory Management Project (GEPRENAF/Cote d'Ivoire)
The Gambia	GA1	*Kiang West National Park Integrated Conservation-Development Project
Ghana	GH1 GH2 GH3 GH4	*The sacred groves conservation project (NGO Gacon; Kumasi) *The Buabeng-Fiema Monkey sanctuary community based cons. Project *The Kakum national park conservation project *Save the seashore birds (Ghana Wildlife society)
Guinea	GU1	*Upper Niger National Park Management Project
Guinea Bissau	GB1 GB2 GB3	*The Cantanhez community resource management project *Natural park conservation project of Cacheu river mangroves *The project for the creation of the Bolama Bijagos Biosphere Reserve
Liberia	LI1 LI2	*The management of the reserves of Loffa-mano, mount Nimba, and Wonegizi *The Sapo National park management project
Mali	ML1 ML2	*Improved Management of Biodiversity in Baoulé Reserve *Concerted Management of wildlife Reserve in Bafing
Mauritania	MR1 MR2	*Creation and management of Diawling National Park *The Banc d'Arguin National Park management project
Niger	NE1 NE2	*Kouré Natural Resources Utilization Project in the region of the W national park of Niger *Regional Project of protected areas development in Benin, Burkina, Niger (European Union)
Nigeria	NI1 NI2 NI3 NI4 NI5	*The Hadeija-Nguru Wetlands Conservation Programme (Kano State) *The Okomu Wildlife sanctuary (Lagos state) *The cross River National Park (Cross River State) *Bonny Island Integrated Conservation Project (Rivers State) *The Gashaka Gumti national park project (Adamawa and Taraba States)
Senegal	SN1 SN2 SN3	*Integrated Management Project of Djoudj and its surrounding * Restoration and development of Niokolo Koba National Park *Kër Cupaam community natural space development
Sierra Leone	SL1 SL2	*The Mamunta - Mayoso Wildlife Sanctuary management project *The Tiwai Island wildlife sanctuary management project
Togo	TO1 TO2	*The project of buffer zones planning and management for the conservation of protected areas *The project for the promotion of small species of wildlife rearing.

3.3 Selection Of Case Studies For Phase 2

From these 39 case studies proposed by country focal points, 7 were not suitable because they are not site-based projects and could not be considered as CWM. The 32 others have been compared on the basis of their relevance with the criteria developed on the guidelines for regional reviews, and particularly the progress they achieved for meeting social, economic

and ecological sustainability. For this comparison purposes, the case studies have been classified by appointing a number of points corresponding to the following appreciation.

The progresses made in social sustainability, economic sustainability, and ecological sustainability goals have been evaluated between 0 and 5 points :

- 0 point = the project did not address at all (social or economic or ecological) sustainability (no interest for this survey). No one of the case studies were under this status. The situation of 3 projects from Togo and Liberia (LI2, TO1, TO2) is due to the fact that they have not started yet.
- 1 point = the project is just starting with S-E-E sustainability issues, so that they lack experiences to build on for lessons to share with the region right now (limited interests for phase II of this survey). No case study under this status.
- 2 points = the project has addressed this S-E-E sustainability, however there is a doubt on the relevance of S-E-E activities planned towards the objective of “ sustainability”. This was the case of social sustainability (GH3, BF2) and ecological aspects (CI3, NI4).
- 3 points = the project has addressed S-E-E sustainability, through a technical/administrative « top-down body », so that the sustainability may be compromised at the end of the project. This is the case for economic sustainability in most cases : GH2, SL3
- 4 points = the project has addressed S-E-E sustainability, through a community-based organization, and generates significant income for its autonomous continuation, but full sustainability is not achieved. It is the case of social and economic sustainability : NI1, SL1, and BF1
- 5 points = the project has addressed S-E-E sustainability, through a community-based organization, and generates enough revenues for an exemplary autonomous continuation. No case study was so excellent..

The status of the project is estimated 0 or 1 :

- 0 point = the project has not on-going activities (suspended, abandoned, or in preparation) : projects CV1, BF3, GH3, NI5.
- 1 point = the project has current activities, which would provide the necessary input for evaluation. It would also be a good indicator if activities are not interrupted after the project expiration : projects BN1, BF1, ML1, SN2.

Project objectives are the basis for project design, activities and outcomes. So, it is interesting to analyse these objectives, and to discuss their relevance towards CWM approach. In the following table :

- 0 point = project objectives is mainly targeted on conservation issues, and do not consider local development as a priority. For instance, the Djoudj national park is designed to

protect the richness of biodiversity species, mainly birds, recognised important, and that justify its classification as a national park, and as a Ramsar site⁶

- 1 point = project objectives are clearly targeted on both conservation and local peoples priorities of development. It is the case for the Ghana project on the Buabeng Fiema monkey sanctuary, that states : the objective is to support local people for the implementation of their community-based conservation approach.

The existence of baseline studies is also appreciated, because documentation will be important in phase II of this survey, in order to deepen investigations :

0 point = the case study do not have any baseline study

1 point = the case study have baseline studies with appropriate documents.

The budget has allowed to range the projects in 3 categories with 0, 1, or 2 points :

- 0 point = no current funding;
- 1 point = small projects (budget<100,000 US\$/year);
- 2 points = large projects (budget>100000 US\$/year).

⁶ A Ramsar site is a wetland classified according to the convention on the conservation of internationally important wetlands, particularly for waterfowl. This convention adopted in 1971, is also named « Convention of Ramsar ». 9 countries of West Africa are parties to this convention : Burkina Faso, Ghana, Togo, Niger, Mali, Senegal, Guinea, Guinea Bissau, Mauritania.

Table 6 : classification of case studies

Case studies	progress in social sustainability goals	progress in economic sustainability goals	progress in ecological sustainability goals	status	objectives	Base-line studies	budget	TOTAL	Classifications
BN1	3	3	4	1	1	1	2	15	3 rd
BF1	3	3	3	1	1	1	2	14	5 th
BF2	3	4	4	1	1	1	2	16	1 st
BF3	3	2	3	0	1	1	2	12	13 th
BF5	3	3	2	1	1	1	2	13	11 th
CV1	2	2	4	0	0	1	0	9	27 th
CI2	3	3	2	1	0	1	2	12	13 th
CI3	3	3	2	1	1	1	2	13	11 th
GA1	3	3	3	1	1	0	1	12	13 th
GH1	3	3	4	0	0	1	1	12	13 th
GH2	4	3	4	1	1	1	1	15	3 rd
GH3	2	2	4	0	0	0	1	9	27 th
GU1	3	2	3	1	0	0	2	11	20 th
GB1	3	2	3	1	1	1	1	12	13 th
GB2	4	4	3	0	1	1	1	14	5 th
LI1	2	2	2	0	1	1	0	8	30 th
LI2	-	-	-	0	1	0	0	1	-
ML1	2	3	3	1	0	1	1	11	20 th
ML2	2	2	3	1	1	0	1	10	25 th
MR2	4	3	3	1	1	1	1	14	5 th
NE1	3	3	3	1	1	1	2	14	5 th
NI1	4	4	3	1	1	1	2	16	1 st
NI2	2	3	3	1	1	0	1	11	20 th
NI3	2	2	3	1	1	1	1	11	20 th
NI4	2	2	2	1	1	0	1	9	27 th
NI5	3	3	3	0	1	1	1	12	13 th
SN1	3	3	3	1	0	0	2	12	13 th
SN2	2	2	3	1	0	1	2	11	20 th
SN3	4	2	3	1	1	1	2	14	5 th
SL1	4	4	3	1	1	0	1	14	5 th
SL2	3	3	3	0	1	0	0	10	25 th
TO1	-	-	-	0	1	1	0	2	-
TO2	-	-	-	0	1	1	0	2	-
TOTAL	87	83	91	22	25	23	40	371	-

After this classification, 12 other initiatives were eliminated because, it appears that they cannot be considered at this stage as interesting projects for different reasons :

- some are just projects proposals, and the implementation phase is not seriously engaged (TO1, TO2, LI1, LI2)
- some are just starting and cannot provide enough lessons right now (BF3, ML2, SN2)
- some are not supported by enough documentation providing the basic information (GH3, NI3, NI4, CV1, SL2)

Finally, the 20 remaining case studies proposed by national focal points are analysed through the following table and distribution graphic.

TABLE 7

Case studies	social progress	economic progress	ecological progress	status	objectives	baseline studies	budget	TOTAL
BN1	3	3	4	1	1	1	2	15
BF1	3	3	3	1	1	1	2	14
BF2	3	4	4	1	1	1	2	16
CI2	3	3	2	1	0	1	2	12
CI3-BF5	3	3	2	1	1	1	2	13
GA1	3	3	3	1	1	0	1	12
GH1	3	3	3	1	0	1	1	12
GH2	4	3	4	1	1	1	1	15
GU1	3	2	3	1	0	0	2	11
GB1	3	2	3	1	1	1	1	12
GB2	4	3	3	1	1	1	1	14
ML1	2	3	3	1	0	1	1	11
MR2	4	3	3	1	1	1	1	14
NE1	3	3	3	1	1	1	2	14
NI1	4	4	3	1	1	1	2	16
NI2	2	3	3	1	1	0	1	11
NI5	3	3	3	1	1	0	1	12
SN1	3	3	3	1	0	0	2	12
SN3	4	2	3	1	1	1	2	14
SL1	4	4	3	1	1	0	1	14
TOTAL	64	60	61	20	15	14	30	254

In terms of meeting the 3 goals, these case studies are good examples of CWM projects. However, some differences should be noted in their operating modalities and durations :

Concerning the ecological outcomes, the Nazinga Game Ranch (BF2) and Wildlife component of the PGRN (BN1) have scored more because there was a long duration of wildlife management funding in these areas (>10 years). The specific case of the Buabeng-Fiema monkey sanctuary is mainly the fact of traditional beliefs that protect the monkeys and has justified the creation of the sanctuary.

Concerning the economic outcomes, 3 case studies have got more activities generating revenues for their sustainability : Nazinga Game Ranch, Hadeija Nguru Wetlands, and Mamunta Mayoso wildlife sanctuary. The main reason appears to be project planning : all of them, have planned to generate income through a touristic options. Another reason may be the publicity they benefited through their respective initiators (ADEFA, IUCN/Ramsar, and Dr Robert Lowes).

Concerning the social outcomes, this sample of CWM projects has got more progress, mainly because the model of community management has pushed towards more social benefits for local people. However, there are differences in the sources of the financial resources used for

social investments : some projects have used subsidies from external donors for social activities (GB2, SL1, SN3), while others have developed their own resources through income generation options (GH2, MR2).

Generally, in trying to meet the 3 goals (social, economic, ecological sustainability), there is a vicious circle for new projects facing lack of funding. The pursuit of the social goals slows down the ecological goals, because in most local contexts the social needs are priorities, while each new project has to improve its wildlife potential for more attractions and more income for solving social problems. However, a good balance is needed because a CWM project enjoys a lot of advantages when peoples are involved and they can see a short term benefit.

3.4 Case studies recommended for phase II

Complementary criteria used for selecting a relevant range of case studies are :

- ecosystem type : a diversity of ecosystems, with at least one forest (SL1), sudanian (BF2), sahelian (NE1), mangroves (GB2), and wetland (NI1).
- length of effort : at least one long-standing effort (BF2), and one recent initiative (SN3)
- Inter-states collaborative project : at least one that can provide lessons (CI3 / BF5)
- Type of initiation : at least 3 self-initiated community effort (SL1, GH2, SN3) and 3 started by the state (BN1) or external donor (GB2) or NGO (MR2)
- national location : not more than 1 case study per country, and at least 1 in the 2 lusophone countries (GB2), in order to compare with anglophone and francophone contexts.

Finally, each of the 20 projects has been evaluated on the basis of 20 points, and 10 of them are proposed for further investigation by IIED on phase 2 of this regional survey. The number can be decreased or increased to match specific constraints. A mixture of high scoring initiatives and the criteria listed above has led to the following case studies :

1. NI1 : the Hadeija-Nguru Wetlands Conservation Programme (Kano State, Nigeria)
2. BF2 : biodiversity optimization project in the Nazinga game ranch (Burkina Faso)
3. BN1 : Natural Resources Management Project, Wildlife Management and Rural Eco-development component (PGRN/VGFER, Benin).
4. GH2 : the Buabeng-Fiema Monkey sanctuary community based conservation Project (Ghana)
5. SL1 : the Mamunta - Mayoso Wildlife Sanctuary management project (Sierra Leone)
6. MR2 : the Banc d'Arguin National Park management project (Mauritania)
7. NE1 : the Kouré Natural Resources Utilization Project in the region of the W national park (PURNKO, Niger)
8. SN3 : the Popenquine reserve management project implemented by the women of Kër Cupaam (Senegal)
9. GB2 : Natural park conservation project of Cacheu river mangroves (Guinea Bissau)
10. CI3/BF5 : Wildlife and Natural Resources Participatory Management Project (GEPRENAF). Inter-states project between Cote d'Ivoire and Burkina Faso.

4. COUNTRY PROFILES AND LITERATURE REVIEW

4.1 Country Profiles

Benin

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Nigeria and Togo

Geographic coordinates: 9 30 N, 2 15 E

Area: total area: 112,620 sq km ; land area: 110,620 sq. km

Climate: tropical; hot, humid in south; semiarid in north

Terrain: mostly flat to undulating plain; some hills and low mountains

lowest point: Atlantic Ocean 0 m Highest point: Mount Tanekas 641 m

Environment

current issues: recent droughts have severely affected marginal agriculture in north; inadequate supplies of potable water; poaching threatens wildlife populations; deforestation; desertification. Natural hazards: hot, dry, dusty harmattan wind may affect north in winter. International agreements: party to - Biodiversity, Climate Change, Endangered Species, Environmental Modification, Nuclear Test Ban, Ozone Layer Protection; - Desertification, Law of the Sea .

Natural resources: small offshore oil deposits, limestone, marble, timber

Land use: arable land: 12%; permanent crops: 4%; meadows and pastures: 4% ;forest and woodland: 35% ; other: 45%. Irrigated land: 60 sq km (1989 est.)

People (July 1996 estimations)

Population: 5,709,529

Birth rate: 46.76 births/1,000 population

Population growth rate: 3.32%

Death rate: 13.53 deaths/1,000 population

Economy

Economic overview: The economy of Benin remains underdeveloped and dependent on subsistence agriculture, cotton production, and regional trade. Growth in real output, which had averaged a sound 4% in 1990-94, rose to 6% in 1995. Rapid population growth, now 3.3% per year, offset much of this growth in output. Inflation jumped to 55% in 1994 (compared to 3% in 1993) following the 50% currency devaluation in January 1994, but subsided gradually in 1995. Commercial and transport activities, which make up 37% of GDP, are extremely vulnerable to developments in Nigeria as evidenced by decreased reexport trade in 1994 due to a severe contraction in Nigerian demand. Support by the Paris Club and official bilateral creditors has eased the external debt situation in recent years. The government, has been gradually implementing a World Bank supported structural adjustment program since 1991.

GDP: purchasing power parity - \$7.6 billion (1995 est.)

GDP real growth rate: 6% (1995 est.). GDP per capita: \$1,380 (1995 est.)

GDP composition by sector: agriculture: 36.8% ; industry: 12.6% ; services: 50.6% (1993)

Inflation rate (consumer prices): 55% (1994 est.)

Agriculture: corn, sorghum, cassava (tapioca), yams, beans, rice, cotton, palm oil, peanuts; poultry, livestock

Burkina Faso

Geography

Location: Western Africa, north of Ghana

Geographic coordinates: 13 00 N, 2 00 W

Area: total area: 274,200 sq. km ; land area: 273,800 sq. km

Climate: tropical; warm, dry winters; hot, wet summers

Terrain: mostly flat to dissected, undulating plains; hills in west and southeast

lowest point: Black Volta River 200 m

highest point: Tena Kourou 749 m

Environment

current issues: recent droughts and desertification severely affecting agricultural activities, population distribution, and the economy; overgrazing; soil degradation; deforestation

natural hazards: recurring droughts

international agreements: party to - Biodiversity, Climate Change, Endangered Species, Marine Life Conservation, Ozone Layer Protection, Wetlands;

Desertification, Law of the Sea, Nuclear Test Ban

Geographic note: landlocked

Natural resources: manganese, limestone, marble; small deposits of gold, antimony, copper, nickel, bauxite, lead, phosphates, zinc, silver

Land use: arable land: 10% ; permanent crops: 0% ; meadows and pastures: 37%

forest and woodland: 26% ; other: 27%. Irrigated land: 160 sq km (1989 est.).

People

Population: 10,623,323 (July 1996 est.)

Population growth rate: 2.53% (1996 est.)

Birth rate: 47.02 births/1,000 population (1996 est.)

Death rate: 19.99 deaths/1,000 population (1996 est.)

Economy

Economic overview: One of the poorest countries in the world, Burkina Faso has a high population density and a middle population growth rate, a variety of natural resources, and a fragile soil. Economic development is hindered by a poor communications network within a landlocked country. Agriculture is mainly subsistence farming. Industry remains dominated by government-controlled corporations. Following the CFA currency devaluation on 12 January 1994, exports appear to have risen, but no official figures have been released yet. The upswing apparently continued in 1995, with growth perhaps at 4%. The government has updated its development program in conjunction with international agencies.

GDP: purchasing power parity - \$7.4 billion (1995 est.). GDP real growth rate: 4% (1995 est.)

GDP per capita: \$700 (1995 est.). GDP composition by sector: agriculture: 32%;

industry: 24% ; services: 44% (1990 est.)

Inflation rate (consumer prices): 5% (1995 est.)

Agriculture: peanuts, sheanuts, sesame, cotton, sorghum, millet, corn, rice; livestock

Cape Verde

Geography

Location: Western Africa, group of Islands in the North Atlantic Ocean, west of Senegal

Geographic coordinates: 16 00 N, 24 00 W

Area: total area: 4,030 sq km ; land area: 4,030 sq. km

Climate: temperate; warm, dry summer; precipitation meager and very erratic

Terrain: steep, rugged, rocky, volcanic

lowest point: Atlantic Ocean 0 m

highest point: Pico 2,829 m

Land use: arable land: 9% ; permanent crops: 0% ; meadows and pastures: 6%

forest and woodland: 0% ; other: 85%. Irrigated land: 20 sq. km (1989 est.)

Environment:

current issues: overgrazing of livestock and improper land use such as the cultivation of crops on steep slopes has led to soil erosion; demand for wood used as fuel has resulted in deforestation; desertification; environmental damage has threatened several indigenous species of birds and reptiles; overfishing

natural hazards: prolonged droughts; harmattan wind can obscure visibility; volcanically and seismically active

international agreements: party to - Biodiversity, Climate Change, Desertification, Environmental Modification, Law of the Sea, Marine Dumping, Nuclear Test Ban

Natural resources: salt, basalt rock, pozzolana, limestone, kaolin, fish

People

Population: 449,066 (July 1996 est.)

Population growth rate: 2.93% (1996 est.)

Birth rate: 44.31 births/1,000 population (1996 est.)

Death rate: 8.29 deaths/1,000 population (1996 est.)

Economy

Economic overview: Cape Verde's low per capita GDP reflects a poor natural resource base, serious water shortages exacerbated by cycles of long-term drought, and a high birth-rate.

The economy is service oriented, with commerce, transport, and public services accounting for 60% of GDP. Although nearly 70% of the population lives in rural areas, the share of agriculture in GNP is only 13%, of which fishing accounts for 4%. About 90% of food must be imported. The fishing potential, mostly lobster and tuna, is not fully exploited. Cape Verde annually runs a high trade deficit, financed by remittances from emigrants and foreign aid, which form important supplements to GDP. Economic reforms, launched by the new democratic government in 1991, are aimed at developing the private sector and attracting

foreign investment to diversify the economy. Prospects for 1996 depend heavily on the maintenance of aid flows, remittances, and the momentum of the government's development program.

GDP: purchasing power parity - \$440 million (1994 est.) ; GDP real growth rate: 4.6% (1994 est.) ; GDP per capita: \$1,040 (1994 est.)

GDP composition by sector: agriculture: 13% ; industry: 17% ; services: 70% (1992 est.)

Inflation rate (consumer prices): 5% (1994 est.)

Côte d'Ivoire

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Ghana and Liberia.

Geographic coordinates: 8 00 N, 5 00 W

Area: total area: 322,460 sq km ; land area: 318,000 sq. km

Climate: tropical along coast, semiarid in far north; three seasons - warm and dry (November to March), hot and dry (March to May), hot and wet (June to October)

Terrain: mostly flat to undulating plains; mountains in northwest

lowest point: Atlantic Ocean 0 m. Highest point: Mont Nimba 1,752 m

Environment:

current issues: deforestation (most of the country's forests - once the largest in West Africa - have been cleared by the timber industry); water pollution from sewage and industrial and agricultural effluents. Natural hazards: coast has heavy surf and no natural harbours; during the rainy season torrential flooding is possible. International agreements: party to - Biodiversity, Climate Change, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83; signed, but not ratified - Desertification

Natural resources: petroleum, diamonds, manganese, iron ore, cobalt, bauxite, copper, Land use: arable land: 9% ; permanent crops: 4% ; meadows and pastures: 9% forest and woodland: 26% ; other: 52%. Irrigated land: 620 sq. km (1989 est.)

People

Population: 14,762,445 (July 1996 est.)

Population growth rate: 2.92% (1996 est.)

Birth rate: 42.48 births/1,000 population (1996 est.)

Death rate: 15.7 deaths/1,000 population (1996 est.)

Economy

Economic overview: Cote d'Ivoire is among the world's largest producers and exporters of coffee, cocoa beans, and palm-kernel oil. Consequently, the economy is highly sensitive to fluctuations in international prices for coffee and cocoa and to weather conditions. Despite attempts by the government to diversify, the economy is still largely dependent on agriculture and related industries. After several years of lagging performance, the Ivorian economy began a comeback in 1994, due to improved prices for cocoa and coffee, growth in non-traditional primary exports such as pineapples and rubber, trade and banking liberalisation, offshore oil and gas discoveries, and generous external financing and debt rescheduling by

multilateral lenders and France. The 50% devaluation of Franc Zone currencies on 12 January 1994 caused a one-time jump in the inflation rate to 32% for 1994, but this rate fell to perhaps 10% in 1995, in part as the economy adjusted to the devaluation. Moreover, government adherence to donor-mandated reforms led to a budget surplus in 1994. Real growth of GDP in 1994 was 1.7%, a significant improvement following several years of negative growth. In 1995 growth picked up to 5%. GDP: purchasing power parity - \$21.9 billion (1995 est.) ; GDP real growth rate: 5% (1995 est.) ; GDP per capita: \$1,500 (1995 est.). GDP composition by sector: agriculture: 37% ; industry: 24% ; services: 39% (1993). Inflation rate (consumer prices): 10% (1995 est.). Agriculture: coffee, cocoa beans, bananas, palm kernels, corn, rice, manioc, sweet potatoes, sugar; cotton, rubber; timber

The Gambia

Geography

Location: Western Africa, bordering the North Atlantic Ocean and Senegal

Geographic coordinates: 13 28 N, 16 34 W

Area: total area: 11,300 sq. km ; land area: 10,000 sq. km

Climate: tropical; hot, rainy season (June to November); cooler, dry season (November to May)

Terrain: flood plain of the Gambia River flanked by some low hills

lowest point: Atlantic Ocean 0 m

highest point: unnamed location 53 m

Land use: arable land: 16% ; permanent crops: 0% ; meadows and pastures: 9% ; forest and woodland: 20% ; other: 55%. Irrigated land: 120 sq. km (1989 est.)

Environment

current issues: deforestation; desertification; water-borne diseases prevalent

natural hazards: rainfall has dropped by 30% in the last 30 years

international agreements: party to - Biodiversity, Climate Change, Endangered Species, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Whaling;

Desertification

Natural resources: fish

People

Population: 1,204,984 (July 1996 est.)

Population growth rate: 3.55% (1996 est.)

Birth rate: 44.44 births/1,000 population (1996 est.)

Death rate: 13.66 deaths/1,000 population (1996 est.)

Economy

Economic overview: The Gambia has no important mineral or other natural resources and has a limited agricultural base. About 75% of the population is engaged in crop production and livestock raising. Small-scale manufacturing activity features the processing of peanuts, fish, and hides. A sustained structural adjustment program, including a liberalized trade policy,

had fostered a respectable 4% annual rate of growth in 1990-93. Reexport trade normally constitutes one-third of economic activity; however, border closures associated with Senegal's monetary crisis in late 1993 led to a halving of reexport trade, reducing government revenues in turn.

GDP: purchasing power parity - \$1.1 billion (1995 est.) ; GDP real growth rate: 2% (1995 est.) ; GDP per capita: \$1,100 (1995 est.) ; GDP composition by sector: agriculture: 27% ; industry: 15% ; services: 58% (1993)

Inflation rate (consumer prices): 1.7% (1994)

Agriculture: peanuts, millet, sorghum, rice, corn, cassava (tapioca), palm kernels; cattle, sheep, goats; forest and fishing resources not fully exploited .

Ghana

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Cote d'Ivoire and Togo. Geographic coordinates: 8 00 N, 2 00 W

Area: total area: 238,540 sq. km ; land area: 230,020 sq. km

Climate: tropical; warm and comparatively dry along southeast coast; hot and humid in southwest; hot and dry in north

Terrain: mostly low plains with dissected plateau in south-central area

lowest point: Atlantic Ocean 0 m - highest point: Mount Afadjato 880 m

Land use: arable land: 5% ; permanent crops: 7% ; meadows and pastures: 15% ; forest and woodland: 37% ; other: 36%. Irrigated land: 80 sq. km (1989)

Environment:

current issues: recent drought in north severely affecting agricultural activities; deforestation; overgrazing; soil erosion; poaching and habitat destruction threatens wildlife populations; water pollution; inadequate supplies of potable water

natural hazards: dry, dusty, harmattan winds occur from January to March; droughts.

International agreements: party to - Biodiversity, Climate Change, Endangered Species, Environmental Modification, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling ; Desertification, Marine Life Conservation

Natural resources: gold, timber, industrial diamonds, bauxite, manganese, fish, rubber
People

Population: 17,698,271 (July 1996 est.)

Population growth rate: 2.29% (1996 est.)

Birth rate: 35 births/1,000 population (1996 est.)

Death rate: 11.15 deaths/1,000 population (1996 est.)

Economy

Economic overview: Well endowed with natural resources, Ghana has twice the per capita output of the poorer countries in West Africa. Heavily reliant on international assistance, Ghana has made steady progress in liberalizing its economy since 1983. Overall growth continued at a rate of approximately 5% in 1995, due largely to increased gold, timber, and

cocoa production - major sources of foreign exchange. The economy, however, continues to revolve around subsistence agriculture, which accounts for almost half of GDP and employs 55% of the work force, mainly small landholders. Public sector wage increases, regional peacekeeping commitments, and the containment of internal unrest in the underdeveloped north have placed substantial demands on the government's budget and have led to inflationary deficit financing, depreciation of the cedi, and rising public discontent with Ghana's austerity program.

GDP: purchasing power parity - \$25.1 billion (1995 est.) ; GDP real growth rate: 5% (1995 est.) ; GDP per capita: \$1,400 (1995 est.) ; GDP composition by sector: agriculture: 47% ; industry: 16% ; services: 37% (1994 est.). Inflation rate (consumer prices): 69% (1995 est.). Agriculture: cocoa, rice, coffee, cassava (tapioca), peanuts, corn, sheanuts, bananas; timber

Guinea

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Guinea-Bissau and Sierra Leone

Geographic coordinates: 11 00 N, 10 00 W

Area: total area: 245,860 sq. km ; land area: 245,860 sq. km

Climate: generally hot and humid; monsoon-type rainy season (June to November) with south-westerly winds; dry season (December to May) with north-easterly harmattan winds

Terrain: generally flat coastal plain, hilly to mountainous interior

lowest point: Atlantic Ocean 0 m

highest point: Mont Nimba 1,752 m

Land use: arable land: 6% ; permanent crops: 0% ; meadows and pastures: 12% forest and woodland: 42% ; other: 40%. Irrigated land: 240 sq km (1989 est.)

Environment

current issues: deforestation; inadequate supplies of potable water; desertification; soil contamination and erosion; overfishing

natural hazards: hot, dry, dusty harmattan haze may reduce visibility during dry season

international agreements: party to - Biodiversity, Climate Change, Endangered Species, Law of the Sea, Ozone Layer Protection, Wetlands; signed, but not ratified - Desertification, Hazardous Wastes

Natural resources: bauxite, iron ore, diamonds, gold, uranium, hydropower, fish

People

Population: 7,411,981 (July 1996 est.)

Population growth rate: 1.85% (1996 est.)

Birth rate: 42.59 births/1,000 population (1996 est.)

Death rate: 18.71 deaths/1,000 population (1996 est.)

Economy

Economic overview: Although possessing major mineral, hydropower, and agricultural resources, Guinea remains one of the poorest countries in the world. The agricultural sector employs 80% of the work force. Guinea possesses over 25% of the world's bauxite reserves. The mining sector accounted for 85% of exports in 1991. Long-run improvements in literacy, financial institutions, and the legal framework are needed if the country is to move out of poverty. Except in the bauxite industry, foreign investment remains minimal.

GDP: purchasing power parity - \$6.5 billion (1995 est.)

GDP real growth rate: 4% (1995 est.)

GDP per capita: \$1,020 (1995 est.)

GDP composition by sector: agriculture: 24% ; industry: 31% ; services: 45% (1995 est.)

Inflation rate (consumer prices): 4.1% (1994 est.)

Agriculture: rice, coffee, pineapples, palm kernels, cassava (tapioca), bananas, sweet potatoes; cattle, sheep, goats; timber

Guinea-Bissau

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Guinea and Senegal

Geographic coordinates: 12 00 N, 15 00 W

Area: total area: 36,120 sq km ; land area: 28,000 sq km

Climate: tropical; generally hot and humid; monsoonal-type rainy season (June to November) with south-westerly winds; dry season (December to May) with north-easterly harmattan winds

Terrain: mostly low coastal plain rising to savannah in east

lowest point: Atlantic Ocean 0 m

highest point: unnamed location in the northeast corner of the country 300 m

Land use: arable land: 11% ; permanent crops: 1% ; meadows and pastures: 43%

forest and woodland: 38% ; other: 7%. Irrigated land: NA sq. km

Environment

current issues: deforestation; soil erosion; overgrazing; overfishing

natural hazards: hot, dry, dusty harmattan haze may reduce visibility during dry season; brush fires

international agreements: party to - Biodiversity, Climate Change, Desertification, Endangered Species, Law of the Sea, Nuclear Test Ban, Wetlands

Natural resources: phosphates, bauxite, unexploited deposits of petroleum, fish, timber

People

Population: 1,151,330 (July 1996 est.)

Population growth rate: 2.35% (1996 est.)

Birth rate: 39.7 births/1,000 population (1996 est.)

Death rate: 16.23 deaths/1,000 population (1996 est.)

Economy

Economic overview: Guinea-Bissau ranks among the poorest countries in the world. Agriculture and fishing are the main economic activities. Cashew nuts, peanuts, and palm kernels are the primary exports. Exploitation of known mineral deposits is unlikely at present because of a weak infrastructure and the high cost of development. With IMF support, the country is committed to an economic reform program emphasising monetary stability and private sector growth. This process will continue at a slow pace because of a heavy foreign debt burden and internal constraints.

GDP: purchasing power parity - \$1 billion (1994 est.)

GDP real growth rate: NA%

GDP per capita: \$900 (1995 est.)

GDP composition by sector: agriculture: 44% ; industry: 8% ; services: 48% (1993 est.)

Inflation rate (consumer prices): 15% (1994 est.)

Agriculture: rice, corn, beans, cassava (tapioca), cashew nuts, peanuts, palm kernels, cotton; fishing and forest potential not fully exploited

Liberia

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Cote d'Ivoire and Sierra Leone

Geographic coordinates: 6 30 N, 9 30 W

Area: total area: 111,370 sq km ; land area: 96,320 sq km

Climate: tropical; hot, humid; dry winters with hot days and cool to cold nights; wet, cloudy summers with frequent heavy showers

Terrain: mostly flat to rolling coastal plains rising to rolling plateau and low mountains in northeast

lowest point: Atlantic Ocean 0 m ; highest point: Mount Wuteve 1,380 m

Land use: arable land: 1% ; permanent crops: 3% ; meadows and pastures: 2% ; forest and woodland: 39% ; other: 55%. Irrigated land: 20 sq km (1989 est.)

Environment

current issues: tropical rain forest subject to deforestation; soil erosion; loss of biodiversity; pollution of rivers from the dumping of iron ore tailings and of coastal waters from oil residue and raw sewage

natural hazards: dust-laden harmattan winds blow from the Sahara (December to March)

international agreements: party to - Endangered Species, Nuclear Test Ban, Ship Pollution, Tropical Timber 83, Tropical Timber 94; Biodiversity, Climate Change, Environmental Modification, Law of the Sea, Marine Dumping, Marine Life Conservation. Natural

resources: iron ore, timber, diamonds, gold

People

Population: 2,109,789 (July 1996 est.)

Population growth rate: 2.13% (1996 est.)

Birth rate: 42.72 births/1,000 population (1996 est.)

Death rate: 11.95 deaths/1,000 population (1996 est.)

Economy

Economic overview: Civil war since 1990 has destroyed much of Liberia's economy, especially the infrastructure in and around Monrovia. Businessmen have fled the country, taking capital and expertise with them. Many will not return. Richly endowed with water, mineral resources, forests, and a climate favorable to agriculture, Liberia had been a producer and exporter of basic products, while local manufacturing, mainly foreign owned, had been small in scope. Political instability threatens prospects for economic reconstruction and repatriation of some 750,000 Liberian refugees who have fled to neighbouring countries. The continued political turmoil has prevented restoration of normal economic life, including the re-establishment of a strong central government with effective economic development programs. The economy deteriorated further in 1995. GDP: purchasing power parity - \$2.3 billion (1994 est.) ; GDP real growth rate: 0% (1994 est.) ; GDP per capita: \$770 (1994 est.) ; GDP composition by sector: agriculture: NA% ; industry: NA% ; services: NA%. Inflation rate (consumer prices): 50% (1994 est.)

Agriculture: rubber, coffee, cocoa, rice, cassava (tapioca), palm oil, sugarcane, bananas; sheep, goats; timber

Mali

Geography

Location: Western Africa, southwest of Algeria

Geographic coordinates: 17 00 N, 4 00 W

Area: total area: 1.24 million sq km ; land area: 1.22 million sq km

Climate: subtropical to arid; hot and dry February to June; rainy, humid, and mild June to November; cool and dry November to February

Terrain: mostly flat to rolling northern plains covered by sand; savannah in south, rugged hills in northeast

lowest point: Senegal River 23 m

highest point: Hombori Tondo 1,155 m

Land use: arable land: 2% ; permanent crops: 0% ; meadows and pastures: 25% forest and woodland: 7% ; other: 66%. Irrigated land: 50 sq km (1989 est.)

Environment

current issues: deforestation; soil erosion; desertification; inadequate supplies of potable water; poaching

natural hazards: hot, dust-laden harmattan haze common during dry seasons; recurring droughts

international agreements: party to - Biodiversity, Climate Change, Desertification, Endangered Species, Law of the Sea, Ozone Layer Protection, Wetlands; signed, but not ratified - Nuclear Test Ban

Natural resources: gold, phosphates, kaolin, salt, limestone, uranium, bauxite, iron ore, manganese, tin, and copper deposits are known but not exploited

People

Population: 9,653,261 (July 1996 est.)

Population growth rate: 2.95% (1996 est.)

Birth rate: 51.38 births/1,000 population (1996 est.)

Death rate: 19.49 deaths/1,000 population (1996 est.)

Economy

Economic overview: Mali is among the poorest countries in the world, with 65% of its land area desert or semidesert. Economic activity is largely confined to the riverine area irrigated by the Niger. About 10% of the population is nomadic and some 80% of the labour force is engaged in agriculture and fishing. Industrial activity is concentrated on processing farm commodities. The economy is beginning to turn around after contracting through 1992-93, largely because of enhanced exports and import substitute production in the wake of the 50% devaluation of 12 January 1994. Post-devaluation inflation peaked at 35% in 1994, and the government appears to be keeping on track with its IMF structural adjustment program.

GDP: purchasing power parity - \$5.4 billion (1994 est.) ; GDP real growth rate: 2.4% (1994 est.) ; GDP per capita: \$600 (1994 est.) ; GDP composition by sector: agriculture: 42.4% ; industry: 15.4% ; services: 42.2%

Inflation rate (consumer prices): 8% (1995 est.)

Agriculture: cotton, millet, rice, corn, vegetables, peanuts; cattle, sheep, goats

Mauritania

Geography

Location: Northern Africa, bordering the North Atlantic Ocean, between Senegal and Western Sahara

Geographic coordinates: 20 00 N, 12 00 W

Area: total area: 1,030,700 sq km ; land area: 1,030,400 sq km

Climate: desert; constantly hot, dry, dusty

Terrain: mostly barren, flat plains of the Sahara; some central hills

lowest point: Sebkhah de Ndrhamcha (3 m) - highest point: Kediet Ijill (910 m)

Land use: arable land: 1% ; permanent crops: 0% ; meadows and pastures: 38% forest and woodland: 5% ; other: 56%. Irrigated land: 120 sq km (1989 est.)

Environment:

current issues: overgrazing, deforestation, and soil erosion aggravated by drought are contributing to desertification; very limited natural fresh water resources away from the Senegal which is the only perennial river. Natural hazards: hot, dry, dust/sand-laden sirocco wind blows primarily in March and April; periodic droughts. International agreements: party

to - Climate Change, Nuclear Test Ban, Ozone Layer Protection, Wetlands; Desertification, Law of the Sea

Geographic note: most of the population concentrated along the Senegal River in the southern part of the country. Natural resources: iron ore, gypsum, fish, copper, phosphate

People

Population: 2,336,048 (July 1996 est.)

Population growth rate: 3.17% (1996 est.)

Birth rate: 46.92 births/1,000 population (1996 est.)

Death rate: 15.24 deaths/1,000 population (1996 est.)

Economy

Economic overview: A majority of the population still depends on agriculture and livestock for a livelihood, even though most of the nomads and many subsistence farmers were forced into the cities by recurrent droughts in the 1970s and 1980s. Mauritania has extensive deposits of iron, which account for almost 50% of total exports. The decline in world demand for this ore, however, has led to cutbacks in production. The nation's coastal waters are among the richest fishing areas in the world, but overexploitation by foreigners threatens this key source of revenue. The country's first deepwater port opened near Nouakchott in 1986. In recent years, drought and economic mismanagement have resulted in a substantial build-up of foreign debt. The government has begun the second stage of an economic reform program in consultation with the World Bank, the IMF, and major donor countries. Short-term growth prospects are gloomy because of the heavy debt service burden, rapid population growth, and vulnerability to climatic conditions. GDP: purchasing power parity - \$2.8 billion (1995 est.) GDP real growth rate: 4% (1995 est.) ; GDP per capita: \$1,200 (1995 est.) ; GDP composition by sector: agriculture: 27.1% ; industry: 29.5% ; services: 43.4% (1993 est.) . Inflation rate (consumer prices): 3.5% (1995 est.)

Agriculture: dates, millet, sorghum, root crops; cattle, sheep; fish products

Niger

Geography

Location: Western Africa, southeast of Algeria

Geographic coordinates: 16 00 N, 8 00 E

Area: total area: 1.267 million sq km ; land area: 1,266,700 sq km

Climate: desert; mostly hot, dry, dusty; tropical in extreme south

Terrain: predominately desert plains and sand dunes; flat to rolling plains in south; hills in north

lowest point: Niger River 200 m - highest point: Mont Greboun 1,944 m

Land use: arable land: 3% ; permanent crops: 0% ; meadows and pastures: 7% forest and woodland: 2% ; other: 88%. Irrigated land: 320 sq km (1989 est.)

Environment

current issues: overgrazing; soil erosion; deforestation; desertification; wildlife populations (such as elephant, hippopotamus, and lion) threatened because of poaching and habitat destruction

natural hazards: recurring droughts

international agreements: party to - Biodiversity, Climate Change, Endangered Species, Environmental Modification, Nuclear Test Ban, Ozone Layer Protection, Wetlands; Desertification, Law of the Sea

Natural resources: uranium, coal, iron ore, tin, phosphates

People

Population: 9,113,001 (July 1996 est.) Population growth rate: 2.99% (1996 est.)

Birth rate: 54.46 births/1,000 population (1996 est.)

Death rate: 24.57 deaths/1,000 population (1996 est.)

Economy

Economic overview: Niger is one of the world's poorest countries, with recent GDP growth barely matching the rapid growth of population. The economy is centred on subsistence agriculture, animal husbandry, and reexport trade, and increasingly less on uranium, its major export throughout the 1970s and 1980s. Uranium revenues dropped by almost 50% between 1983 and 1990 with the end of the uranium boom. Terms of trade with Nigeria, Niger's largest regional trade partner, have improved dramatically since the 50% devaluation of the African franc in January 1994; this devaluation boosted exports of livestock, peas, onions, and the products of Niger's small cotton industry. The government relies on bilateral and multilateral aid for operating expenses and public investment and is strongly induced to adhere to structural adjustment programs designed by the IMF and the World Bank.

GDP: purchasing power parity - \$5.5 billion (1995 est.)

GDP real growth rate: 6.7% (1995 est.)

GDP per capita: \$600 (1995 est.)

GDP composition by sector: agriculture: 38.5% ; industry: 17.9% ; services: 43.6% (1993)

Inflation rate (consumer prices): 35.6% (1994 est.)

Agriculture: cowpeas, cotton, peanuts, millet, sorghum, cassava (tapioca), rice; cattle, sheep, goats

Nigeria

Geography

Location: Western Africa, bordering the Gulf of Guinea, between Benin and Cameroon

Geographic coordinates: 10 00 N, 8 00 E

Area: total area: 923,770 sq km ; land area: 910,770 sq km

Climate: varies; equatorial in south, tropical in center, arid in north

Terrain: southern lowlands merge into central hills and plateaus; mountains in southeast, plains in north

lowest point: Atlantic Ocean 0 m - highest point: Chappal Waddi 2,419 m

Land use: arable land: 31% ; permanent crops: 3% ; meadows and pastures: 23% ; forest and woodland: 15% ; other: 28%. Irrigated land: 8,650 sq km (1989 est.)

Environment

current issues: soil degradation; rapid deforestation; desertification; recent droughts in north severely affecting marginal agricultural activities

natural hazards: periodic droughts . International agreements: party to - Biodiversity, Climate Change, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Nuclear Test Ban, Ozone Layer Protection, Whaling; Desertification

Natural resources: petroleum, tin, columbite, iron ore, coal, limestone, lead, zinc, natural gas

Population: 103,912,489 (July 1996 est.)

Population growth rate: 3.05% (1996 est.)

Birth rate: 42.89 births/1,000 population (1996 est.)

Death rate: 12.71 deaths/1,000 population (1996 est.)

Economy

Economic overview: The oil-rich Nigerian economy continues to be hobbled by political instability, corruption, and poor macroeconomic management. Nigeria's unpopular military rulers failed to make significant progress in diversifying the economy away from overdependence on the capital intensive oil sector which provides almost all foreign exchange earnings and about 80% of budgetary revenues. Regime officials also appear divided on how to redress fundamental economic imbalances that result in troublesome inflation, the steady depreciation of the naira, and the discouragement of investors. The government's domestic and international arrears continue to limit economic growth and prevent an agreement with the IMF and bilateral creditors on debt relief. The largely subsistence agricultural sector has failed to keep up with rapid population growth, and Nigeria, once a large net exporter of food, now must import food.

GDP: purchasing power parity - \$135.9 billion (1995 est.) ; GDP real growth rate: 2.6% (1995 est.) ; GDP per capita: \$1,300 (1995 est.)

GDP composition by sector: agriculture: 38% ; industry: 22% ; services: 40% (1994 est.) .

Inflation rate (consumer prices): 57% (1994 est.)

Agriculture: cocoa, peanuts, palm oil, rubber, corn, rice, sorghum, millet, cassava (tapioca), yams; cattle, sheep, goats, pigs; fishing and forest resources extensively exploited

Senegal

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Guinea-Bissau and Mauritania . Geographic coordinates: 14 00 N, 14 00 W

Area: total area: 196,190 sq km ; land area: 192,000 sq km

Climate: tropical; hot, humid; rainy season (December to April) has strong southeast winds; dry season (May to November) dominated by hot, dry, harmattan wind

Terrain: generally low, rolling, plains rising to foothills in southeast

lowest point: Atlantic Ocean 0 m

highest point: unnamed location in the Futa Jaldon foothills 581 m

Land use: arable land: 27% ; permanent crops: 0% ; meadows and pastures: 30%
forest and woodland: 31% ; other: 12%. Irrigated land: 1,800 sq km (1989 est.)

Environment

current issues: wildlife populations threatened by poaching; deforestation; overgrazing; soil erosion; desertification; overfishing. Natural hazards: lowlands seasonally flooded; periodic droughts . International agreements: party to - Biodiversity, Climate Change, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Life Conservation, Nuclear Test Ban, Ozone Layer Protection, Wetlands; Marine Dumping
Natural resources: fish, phosphates, iron ore

People

Population: 9,092,749 (July 1996 est.) ; Population growth rate: 3.37% (1996 est.)

Birth rate: 45.46 births/1,000 population (1996 est.)

Death rate: 11.76 deaths/1,000 population (1996 est.)

Economy

Economic overview: In 1994 Senegal embarked on its most concerted structural adjustment effort yet to exploit the 50% devaluation of the currencies of the 14 Francophone African nations on 12 January of that year. After years of foot-dragging, the government has passed a liberalised labor code which should lower the cost of labor and improve the manufacturing sector's competitiveness. Inroads also have been made in closing tax loopholes, eliminating monopoly power in several sectors, and privatising state owned firms. At the same time, the government is holding the line on current fiscal expenditure under the watchful eyes of international organizations on which it depends for substantial support. The IMF, in mid-1995, announced that the government met most economic targets as called for in its Enhanced Structural Adjustment Facility agreement and released the second \$50 million tranche. The country's narrow resource base, environmental degradation, and untamed population growth will continue to hold back improvement in living standards over the medium term.

GDP: purchasing power parity - \$14.5 billion (1995 est.) ; GDP real growth rate: 4.5% (1995 est.) ; GDP per capita: \$1,600 (1995 est.) ; GDP composition by sector: agriculture: NA% ; industry: NA% ; services: NA%. Inflation rate (consumer prices): 6.1% (1995)

Agriculture: peanuts, millet, corn, sorghum, rice, cotton, tomatoes, green vegetables; cattle, poultry, pigs; fish catch of 409,000 metric tons in 1992

Sierra Leone

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Guinea and Liberia .

Geographic coordinates: 8 30 N, 11 30 W

Area: total area: 71,740 sq km ; land area: 71,620 sq km

Climate: tropical; hot, humid; summer rainy season (May to December); winter dry season (December to April)

Terrain: coastal belt of mangrove swamps, wooded hill country, upland plateau, mountains in east

lowest point: Atlantic Ocean 0 m ; highest point: Loma Mansa (Bintimani) 1,948 m

Land use: arable land: 25% ; permanent crops: 2% ; meadows and pastures: 31% forest and woodland: 29% ; other: 13%. Irrigated land: 340 sq km (1989 est.)

Environment

current issues: rapid population growth pressuring the environment; overharvesting of timber, expansion of cattle grazing, and slash-and-burn agriculture have resulted in deforestation and soil exhaustion; civil war depleting natural resources; overfishing. Natural hazards: dry, sand-laden harmattan winds blow from the Sahara (November to May); sandstorms, dust storms. International agreements: party to - Biodiversity, Climate Change, Endangered Species, Law of the Sea, Marine Life Conservation, Nuclear Test Ban, Whaling; Desertification, Environmental Modification. Natural resources: diamonds, titanium ore, bauxite, iron ore, gold, chromite

People

Population: 4,793,121 (July 1996 est.) ; Population growth rate: 4.14% (1996 est.)

Birth rate: 47.13 births/1,000 population (1996 est.)

Death rate: 18.24 deaths/1,000 population (1996 est.)

Economy

Economic overview: Sierra Leone has substantial mineral, agricultural, and fishery resources. However, the economic and social infrastructure is not well developed, and serious social disorders continue to push down production, exports, and the value of the Leone. Agriculture employs about two-thirds of the working population, with subsistence agriculture dominating the sector. Manufacturing consists mainly of the processing of raw materials and of light manufacturing for the domestic market. The mining of diamonds, bauxite, and rutile is the major source of hard currency. The government has worked hard to meet its IMF- and World Bank-mandated stabilisation targets, holding down fiscal deficits, and retiring much of its domestic debt - but at a steep cost in terms of forgone capital investments and social spending. Moreover, the economic infrastructure has nearly collapsed due to neglect and war-related disruptions in the mining and agricultural export sectors. The civil war in Liberia has led to a large influx of refugees, who place additional burdens on Sierra Leone's fragile economy. GDP: purchasing power parity - \$4.4 billion (1994 est.) ; GDP real growth rate: -4% (1994 est.). GDP per capita: \$960 (1994 est.) ; GDP composition by sector: agriculture: 40%

industry: 17% ; services: 43% (1994). Inflation rate (consumer prices): 24% (1994)

Agriculture: rice, coffee, cocoa, palm kernels, palm oil, peanuts; poultry, cattle, sheep, pigs; fish catch was 65,000 metric tons in 1994.

Togo

Geography

Location: Western Africa, bordering the North Atlantic Ocean, between Benin and Ghana .

Geographic coordinates: 8 00 N, 1 10 E

Area: total area: 56,790 sq km ; land area: 54,390 sq km

Climate: tropical; hot, humid in south; semiarid in north

Terrain: gently rolling savanna in north; central hills; southern plateau; low coastal plain with extensive lagoons and marshes

lowest point: Atlantic Ocean 0 m ; highest point: Pic Baumann 986 m

Land use: arable land: 25% ; permanent crops: 1% ; meadows and pastures: 4% ; forest and woodland: 28% ; other: 42%. Irrigated land: 70 sq km (1989 est.)

Environment:

current issues: deforestation attributable to slash-and-burn agriculture and the use of wood for fuel; recent droughts affecting agriculture. Natural hazards: hot, dry harmattan wind can reduce visibility in north during winter; periodic droughts. International agreements: party to - Endangered Species, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution, Tropical Timber 83; Biodiversity, Climate Change, Desertification, Tropical Timber 94. Natural resources: phosphates, limestone, marble

People

Population: 4,570,530 (July 1996 est.) ; Population growth rate: 3.56% (1996 est.)

Birth rate: 46.23 births/1,000 population (1996 est.)

Death rate: 10.66 deaths/1,000 population (1996 est.)

Economy

Economic overview: This small sub-Saharan economy is heavily dependent on subsistence agriculture, which provides employment for more than 60% of the labor force. Cocoa, coffee, and cotton together generate about 30% of export earnings. Togo is self-sufficient in basic foodstuffs when harvests are normal. In the industrial sector, phosphate mining is by far the most important activity, although it has suffered from the collapse of world phosphate prices and increased foreign competition. Togo serves as a regional commercial and trade centre.

The government's decade-long effort, supported by the World Bank and the IMF, to implement economic reform measures, encourage foreign investment, and bring revenues in line with expenditures has stalled. Political unrest, including private and public sector strikes throughout 1992 and 1993, has jeopardised the reform program, shrunk the tax base, and disrupted vital economic activity. Although strikes had ended in 1994, political unrest and lack of funds prevented the government from taking advantage of the 50% currency devaluation of 12 January 1994. GDP: purchasing power parity - \$4.1 billion (1995 est.) GDP real growth rate: 6% (1995 est.) ; GDP per capita: \$900 (1995 est.) ; GDP composition by sector: agriculture: 49.2% ; industry: 17.7% ; services: 33.1% (1993 est.)

Inflation rate (consumer prices): 8.8% (1995 est.)

Agriculture: coffee, cocoa, cotton, yams, cassava (tapioca), corn, beans, rice, millet, sorghum; meat; annual fish catch of 10,000-14,000 tons.

4.2 Literature Review

The literature consulted for this survey has come from the 16 national focal points, international institutions, and other documentation centres in Burkina Faso, Côte d'Ivoire, Mali, Ghana, and Senegal. This literature is not exhaustive on this issue of CWM in all the 16 countries of the region. However, if it does not respond to all the relevant questions, it allows to ask good questions and to deepen the reflections. Let's examine it country by country, and prospect the strengths and weaknesses of community wildlife management in West Africa.

4.2.1 Benin

We got an access to documentation about the « Wildlife and Rural Eco-development component » of the *Projet de Gestion des Ressources Naturelles au Bénin (PGRN/ VGFER)*, as well as the datas compiled by the regional project for protected areas management, presenting in detail the national parks of W and Pendjari, the game reserves of Pendjari, Atakora and Djona, with descriptions of neighbouring peoples realities.

We have chosen as a case study the PGRN /VGFER. This project was initiated by the Government of Benin in 1994 with the financial support of the World Bank. It covers pilot sites in the central and northern part of the country.

The purpose of the project is to ensure a sustainable management of resources through the effective participation of the populations in the design, implementation and evaluation of village projects. The wildlife management component aims at preserving biodiversity mainly in 2 pilot sites next to the national parks in the north and the cynegetic zones, through the involvement of hunters' associations and the development of functional communication with the populations.

The activities conducted are focused on: wildlife inventories; preparation of local level resources management plans; wildlife management; organization of village hunting; women's income-generating activities; supervision of the youth. The project succeeded in establishing a socio-ecological balance in its intervention areas, checking poaching and improving the peasant farmers' incomes. The project's budget amounts to US \$ 24 000 000 for 5 years.

However, we faced a lack of information about the project of Grasscutter rearing promoted by Dr Mensah, and also documentation on projects UNDP/FAO/BEN/77/011 and EDF/51002013020 who have probably generated interesting data about CWM in the central and southern part of Benin.

We got the impression that a legal and institutional framework exists and is able to promote CWM issues in the country. The major efforts developed during last decade have implemented the national Law N°87014 of 21/7/87 regulating the protection of nature and

hunting issues. However, this context did not succeed in stimulating enough decentralised initiatives of CWM in the country.

4.2.2 Burkina Faso

This country is located quite at the centre of West Africa, and is rich of both sahelian and sudano-guinean species of wildlife as recorded by Roure, Georges (1968). The FAO project N° UPV/78/008 brought (Bousquet, 1982) interesting data about wildlife economy and its use in rural zones. After a period of total closing of hunting (1978-1985), a lot of experiences have been attempted as stated by many reports : MET/DPNRFC (1984) reporting on the national seminar that recommended to re-open hunting and regulate it to satisfy local communities needs, MET/DGEF/DFE (1992) summarizing 5 years of game experiences.

Two main innovations characterise wildlife management in Burkina Faso : the creation of the first game ranch of West Africa in the forest of Nazinga in 1979, and the development of the concept of « gestion des terroirs » supported by a national program (PNGT) which has an exciting wildlife management component. A lot of lessons have been learnt through these projects towards community involvement in wildlife management (analysed in this report as CWM initiatives : IUCN, 1988 ; ZEBAN, S. 1990 ; Lungren, C. 1997, World Bank/GEF, 1995).

The lessons learnt have come up with new approaches implemented through other types of CWM initiatives : The Decentralised management of the Kabore Tambi National Park under a concession to the foundation NATURAMA, and the GEPRENAF project co-implemented by Burkina Faso and Côte d'Ivoire in the Comoé river region. These 2 projects are considered also as case studies. Specific documentation for reflections about case studies were provided.

Concerning the PNGT project, MARA/World Bank (1991), (1995) reveals that this community-based resources management) was initiated in 1992 by the Burkinabè Government with the help of a loan from the World Bank and grants received from France, Germany and Norway to a global amount of US \$ 25 millions. The purpose of the project is to check natural resource degradation by getting the local populations shoulder increased responsibilities in the 8 experimental provinces in managing their natural resources. The project has a wildlife component through the management of the biosphere reserve of the hippo pond, the Maro forest, and the wildlife reserve of Nabere.

The progress made by the project is considerable. Thus, it is being used as an example for the dissemination of local level resources management approach in the other provinces of the country and similar projects in neighbouring countries under the supervision of the World Bank. Socially, the PNGT has managed to establish village committees for local level resources management that involve all segments of the society, i.e. farmers, pastoralists, fishermen, hunters and lumberjacks. However, the recognition of village structures as legal entities remains a major constraint for the establishment of partnership and for the devolution of responsibilities to local people. Economically, the PNGT has increased the incomes of the target populations through income-generating activities (livestock rearing, exploitation of

wood and charcoal, beekeeping, market gardening, cottage industry, etc.). Village plans for local level resources management have been developed by the populations with the support of mobile multi-disciplinary teams, and a forest-wildlife technical team (ETF). On the environmental plane, the PNGT has set up a system for the ecological monitoring of local level resources under the responsibility of the Scientific Research, and the *Institut Geographique* of Burkina equipped with an appropriate GIS unit. This mechanism attests that natural resources have improved during the project.

Concerning the Nazinga game Ranch project, it was initiated in 1979 and located in the southern part of the country next to the Ghanaian border. The purpose was to conduct researches, study and develop wildlife resources management in the Nazinga area for the conservation of and increase in the same resources for the local populations.

According to IUCN (1988), the activities carried out under the project are basically focused on: development of the Ranch (94 000 ha); anti-poaching where noticeable increase in wildlife populations has been achieved (from 1000 ungulates to 20,000 in 12 years); sensitisation and education of the populations through supervision, organisation and control of the villagers' exploitation activities; fishing which has recorded spectacular results; and tourism promotion.

Concerning the Decentralised Management of the Kabore Tambi National Park (former national park of Pô), it was initiated in 1994 in Burkina Faso by a national NGO called "*Fondation des Amis de la Nature (NATURAMA)*". It is located in the southern part of the country, 100 km away from Ouagadougou the capital city. It aims at ensuring the conservation and sustainable exploitation of the Park to the benefit of local level development and national economy while being a model for the education of national managerial staff, decision-makers and the public at large on the importance of getting the civil society involved in the implementation of biodiversity conservation policies and programmes.

The project which was planned in three phases of 3 years each has carried out the following activities in its first two phases: production of monographs and development plans; organisation of village and inter-village seminars, conservation education in primary and secondary schools of the provinces bordering the park; formulation of micro-village development projects. The project has succeeded, through the execution of phases I and II, in making some progress at the environmental level via reforestation actions and villages forests; at the socio-economic level by improving the incomes of the riparian populations; at the biophysical level by reducing poaching and grazing within the park. The project is different from the other projects in as much as this national park is the only one which has been granted to a national NGO in West Africa, which enables to implement the concept of "decentralised management of a national park".

4.2.3 Cape Verde

Cape Verde is composed of small islands where wildlife management has never attracted peoples attention. This may explain why, the appointed focal point clearly stated that there is no CWM initiative in the country.

The issues of community management of natural resources in this island country basically concern sea fishing and bird conservation. The abundance of birds led the Cabo Verdian Government, through the Ministry of Rural Development and Fisheries and its technical and financial partners, to create bird reserves. It is quite fortunate that many experiences be taken into account in order to get the local populations involved in those conservation actions (see Hazevoet, C.J. and Hafkens, L.B. 1986).

This is what emerges from a field survey carried out by Birdlife Netherlands to Cape Verde which relates the ornithological potential as well as the conservation measures envisioned by the national authorities. This initiative - a nation-wide project - stretches out to the whole country, covering 10 islands and several small islands, with a surface area of 4033 km². It aims at educating the populations in general and the local fishermen (the main predators of bird colonies) in particular, not only to raise their awareness of the country's natural resources but also to inculcate conservation principles in them.

The main feature of this initiative is twofold: it focuses basically on bird wildlife (sea birds) and, it goes beyond the limited scope of legislative measures (creation of national parks and natural reserves) in order to address the problem of increased indigenous knowledge of the country's environment through a concerted strategy of education of the people.

4.2.4 Cote D'ivoire

The status of wildlife management in Côte d'Ivoire is still non-consumptive since the total closing of hunting in 1974. Ibo, J. and Leonard, E. (1996) in a publication entitled « The State, the peasants and the participatory management of forests » have pointed out the fact that a CWM approach is not possible with this legal prohibition of hunting.

During this survey, we remarked that this country has enough potential and more opportunities for successful CWM initiatives. There is a hope that consumptive use of wildlife will be possible at short term, and a national survey on bushmeat (MINAGRA/DPN-World Bank, 1995) is conducted to provide basic datas.

Ngoran, Y. (1998) and Kadja, N. (1998) have underlined the broad context of forests and wildlife conservation in Côte d'Ivoire. This context has led us to choose 2 cases studies : the GEPRENAF project, and the Taï national Park management project.

Concerning the project on "*Gestion Participative des terroirs villageois et auto-promotion autour du Parc National de Taï*" (Participatory Management of Village Natural Resources

and Self-Promotion around the Taï National Park), it was initiated in 1993 by the Ivorian Government together with the Association "*Vie et Forêts*" with the financial support of GTZ/KFW. It is located in the South-West of Côte d'Ivoire, a hundred kilometers away in the north of the Littoral, at the Liberian border. It covers a surface area of 330000 ha.

The purpose of the project is to promote a long term conservation of the Taï National Park and encourage local populations in the outskirts to assume increased responsibilities in the management of their natural resources for a sustainable development.

The activities conducted are basically focused on agriculture, animal production, agroforestry, surveillance and protection of the forest by the riparian populations, eco-tourism, infrastructures for the management of the Park, public health. The progress made by the project in terms of Community Wildlife Management concerns mainly the improvement of the people's health conditions, the organization and empowerment of the people, and the many financial advantages the populations draw from fish farming and snail breeding. The peculiarity of this project rests on the active participation of an organization from the civil society, the effective involvement of the riparian populations in the management of the Park.

Concerning the pilot project on Participatory Management of Natural Resources and Wildlife (GE.PRE.NAF), it is a sub-regional project implemented jointly in Burkina Faso and Côte d'Ivoire since 1996. It is sponsored with grants from the Global Environmental Facility (GEF), the Kingdom of Belgium, the Ivorian and Burkinabè Governments and the populations. The financing is administered by the World Bank.

The purpose of the project is to help to promote a participatory management of biological diversity in its intervention area through the adoption of a community-based strategy which combines environmental protection and local socio-economic development. The activities carried out are focused on the organization and training of village associations, the establishment of inter-village committees on 1 site in Burkina Faso and 2 sites in Côte d'Ivoire. The progress made in terms of community wildlife management mainly concerns: the carrying out of a Joint Initial Diagnosis of Village Natural Resources Management; the opening of 180 km of tracks in the biodiversity area, the execution of a pedestrian inventory of wildlife. The financing amounts to US \$ 7 millions for the Ivorian side and 4 millions for the Burkinabè side.

4.2.5 The Gambia

The national context of forests management in the Gambia (Foday, B., 1998) expresses the national situation of wildlife initiatives. The fisheries Act N°10 of 1991 and the national Environment Management Act N°13 of 1994 constitute the legal framework for wildlife issues. Although this framework is supportive for CWM projects, a bit of work needs to be addressed in order to stimulate more adequately community-based natural resource management initiatives.

Important lessons are provided by the « Integrated Conservation and Development project of the KIANG WEST National Park » (Camara, A., 1997). This project was initiated in 1992 by the Gambian Government for a first 5-year phase, with the support of USAID. It fits within the national Action Programme for biological diversity conservation and sustainable development of the rural communities.

It aims to check the deterioration of natural resources in the Kiang West area and to ensure the conservation of the various ecosystems by combining the management of protected areas with the social and economic needs of the local populations. Socially, the project has succeeded in establishing permanent local structures and changing the attitude of the local communities vis-à-vis wildlife conservation as a common heritage.

From the economic standpoint, the project has developed the incomes of the populations through fisheries, tourism, labour for the construction of fire-breaks and other management works. On the environmental plane, the project has improved the wildlife population and the vegetation cover in the Kiang West area.

4.2.6 Ghana

The literature on wildlife management issues in this country is enriched by original activities introduced during this last decade : Grasscutter rearing (John, J.M. and Roland, A.K., 1995), Snail farming (Cobbinah, J.R., 1992), and beekeeping (Nelson, A. and Angela, J., 1989).

The creation of the Environment Protection Agency (Act N°490 of December 30th 1994), the Wildlife Department provide the national institutional framework for action. Koffi, S. (1997) has recommended us 2 case studies : the Sacred Groves conservation project, and the Buabeng-Fiema monkey sanctuary management project.

Concerning the Sacred Groves conservation project (William, O. and Gyakari, J.N., 1996), it is being implemented by the Ghana Association for the Conservation of Nature (GACON) which is an NGO. The objectives of the project are :

- to mobilize communities to conserve biodiversity through education and action-oriented programmes.
- to understand fully the structure and functioning of Ghanaian ecosystems and how they are modified through land use.
- to evolve and base development in these ecosystems on the existing traditional and management systems by using inputs closely linked to these traditional systems which offer the best prospects for making substantial impacts on local standards of living without being socio-culturally and ecological disruptive.
- to give priority to actions which energise villagers and aim, under local responsibility, to restore degraded lands and manage natural resources which include water bodies, biological resources and establishment of village nurseries, woodcuts and fodder banks.

The outcomes of the project are reported to be important at the social, economic and environmental levels: the creation of additional job opportunities, the reduction of rural

poverty, and the minimisation of the pressure on remnant forests (sacred groves) through the development of fodder banks to sustain a livestock industry, the promotion of mushroom, snail farming, honey production, creation of buffer and transition zones around groves, and the development of ecotourism which will be focused on the unique forest grove and agro-forestry system. A detailed analysis of the biodiversity of the sacred groves provides the basis for understanding the structure and functioning of a potential climax vegetation ecosystem which is nested in an environmentally degraded Savannah or Forest ecosystems.

Concerning the Buabeng-Fiema monkey sanctuary community-based conservation project (Fargey, P.J. 1991 and Quartey S.Q., 1995), it has been initiated by the 2 villages of Buabeng and Fiema in the Brong Ahafo Region of Ghana near the town of Nkoranza, for the protection of 6 sacred species of monkeys : Colobus polykomos, Cercopithecus mona, Cercopithecus diana, Cercopithecus petaurista, Erythrocebus patas and Erythrocebus aethiops.

The objective of this project is to support local people for the implementation of their community-based conservation approach. The main activities undertaken are : census of fauna species, master plan for the management of the sanctuary, training of trainers, income generation activities, tree planting, environmental education, ecotourism.

The outcome of the project are important : the adoption of the bylaws establishing the sanctuary, the effective protection of the monkeys and other species of fauna and flora, the improvement of the life quality in the 2 villages : tourism, social investments such as roads, medical centre . The project is funded by Fauna and Flora International (FFI), and the Global Environment Facility (GEF).

4.2.7 Guinea

Whose forest ? Leach M. and Fairhead, J., (1995) have attempted responses to this strange question in their publication confronting modern conservation and historical land use in Guinea's Ziama reserve. This places us directly into the theme of CWM discussion in the Guinean context.

Data collected by FAO (Condé, S.B., 1998) gives a broad picture on the richness of the natural resources potentials that need to be managed properly. Complementary informations are provided by Richards, P. (1993), through his publication on « biodiversity and the dynamics of african anthropogenic linkages ».

Saternin, S. (1998) has suggested the « Project on the Management of the Upper Niger National Park » as a case study for this survey. Initiated in 1994 by the Guinean Government, this project fits within the framework of the Regional Programme for the Management of the Upper Niger and Upper Gambia River Watersheds developed to combat desertification, drought and other natural disasters.

The major objectives of this project are: the conservation of the Park's resources; sensitisation, involvement and empowerment of the population of the Park; improvement of the living conditions of the riparian population; scientific research; promotion of a legislative framework. Entirely financed by the European Union to the tune of ECU 1 673 082, the project has made some encouraging progress in the economic sector through support to business interest groups and market gardening; in the social sector through the construction of community infrastructures (schools, mosques, tracks, wells, etc.) and; in the biophysical sector through the restoration of wildlife. On the environmental plane, the progress concerns the construction of tree nurseries, the distribution of forest plants, the creation of groups and committees for bushfire management.

4.2.8 Guinea Bissau

This country has started interesting projects of demonstration through the new policy and institutional framework : the Bolama Bijagos project, the Cantanhez initiative, etc (IUCN, 1997).

On the basis of wildlife management context in the country, Diombera, K. (1998) suggested the Project on the conservation of the Cacheu River Natural Mangrove Park, as a case study. This project was initiated in 1997 by the Government of Guinea Bissau as part of the preparation of the National Forest Action Plan (MDRRNE/DGFC, 1998). It is located in the Cacheu administrative area, in the North-West of the country. It covers a surface area of 80000 ha.

The purpose of the project is basically to provide goods and services through the exploitation of natural resources and to preserve the mangrove areas because of their biological diversity and ecosystem value. Concerning the community management, the project has made some environmental progress through the implementation of a sound system of exploitation and enhancement of resources. It has had furthermore economic and social repercussions via the supply of the populations with various products (fish, seafood, etc.) and the promotion of rice-growing. The annual budget of the project amounts to Swiss Francs 100,000.

4.2.9 Liberia

Our investigations for CWM initiatives and relevant literature in Liberia were particularly difficult, as a result of seven years of civil war. Before the war, specific examples of community-based natural resources management were reported in the forests of the Loffa and Mano areas, and near the Sapo national Park (Fully, J. 1998). However, this long national conflict has destroyed all the organisations of local peoples in such a way that actually, no example similar to CWM can be examined in this country, just under re-construction after the elections that brought into power a democratic regime.

The Society for the Conservation of Nature of Liberia (SCNL) has proposed us to consider the Sapo National Park management project as a case study. Before the war, livestock production was important as food source and for income, mainly in the Sinoe County. Actually, the scarcity of poultry, small stock and cattle means it is very difficult for farmers to restart in livestock production. This results to increased reliance on bushmeat even from protected areas such as the Sapo national park. This project will pilot small stock production of Grasscutter that will serve as a source of food and income. However, after review, this project is just being planned and it could not fit our criteria for selecting case studies because no lessons can be learnt from a non-started project.

It should be noted that a project for domestication and multiplication of Cape Rat is also being planned by Mr Ben Turtur Donnie (SCNL, 1998), in order to reduce pressure on hunting of wildlife for bushmeat, and to encourage local people to engage in commercial activities.

4.2.10 Mali

After eight years of total closing of hunting in Mali, a survey was conducted (MRNE/DNEF, 1986) on the impact of this political measure by Decree N° 193/PC-RM of November 1st 1977. This survey has highlighted the negative impact of this decision on wildlife resources : more poaching, reserves abandoned to illegal hunters, no means for the state game guards for law enforcement, less touristic activities, etc. Quite a vicious circle ! So, this survey (109 pp) recommended to re-open hunting in order to regulate and organize it instead of hiding the realities of a prohibition policy.

As a kind of follow up for this recommendation, The World Conservation Union (IUCN, 1990) carried out another survey on the socio-economic importance of wildlife products in the district of Bamako, the capital city. This survey pointed out that despite the total closing decision taken by State authorities, 29 species of wildlife were usually hunted mainly for bushmeat sold in restaurants, with a volume of local trade of 209 752 250 CFA Francs (US\$ 420,000) per year in Bamako.

Two case studies have been proposed by the national focal point for this survey on CWM in Mali : the improved management of the Baoule reserve biodiversity resources, and the project on the concerted management of the Bafing wildlife reserve.

Concerning the project of the Baoule Reserve, it was initiated in 1992 by the Malian Government with the financial support of UNDP and the technical support of IUCN and ORSTOM. It relies on many research data conducted by the University of Wageningen (Netherlands). It is located in the northern part of Mali. The purpose of the project is to work out and implement a plan for the management of the reserve's resources.

The activities concern the zoning of the reserve, the management of the fauna and flora, and the determination of target villages for participatory contracts. The progress achieved in respect of wildlife management by the community is essentially: the zoning of the reserve,

the establishment of an atmosphere of dialogue between the population and the foresters, the noticeable increase in the monetary income of the populations. The financing used amounts to US \$ 1 711 000. The main feature of this project consists of the involvement of the scientific research and NGOs and associations in the execution of the programme.

Concerning the project on the concerted management of the Bafing Wildlife Reserve, it was initiated in 1996 by the Malian Government with the financial support of GTZ and the technical support of the Peace Corps, AMCFE and IUCN. It is located in the south-western part of the country. Its purpose is: wildlife data collection on the way wildlife is exploited and; to support self-promotion activities that protect the Reserve.

The activities conducted focus on the potentialities of exploitation of wildlife species, the establishment of village surveillance committees and the dissemination of forest laws in national languages. The progress made in respect of community wildlife management basically concerns: the setting up of a mechanism of functional surveillance and, a study on the way wildlife resources are exploited.

4.2.11 Mauretania

These last years the government of Mauritania has worked with the support of his partners, for policy reforms in natural resources management, mainly in the sectors of Desertification control and the conservation of biodiversity (Fall, O. 1997). This has resulted in important outcomes towards communities interests in fisheries, water catchments, forests and wildlife management.

The Diawling national park was created in this context using a new approach of partnership with neighbouring people (Thiaw, I. 1991). It's also the case at the Banc d'Arguin National Park, where Luc Hoffmann has initiated a specific foundation (*Fondation Internationale du Banc d'Arguin* -FIBA) for the conservation of the important resources of this wetland, classified as a Ramsar site. We have considered as a case study of CWM this project of FIBA for the management of the park.

It is a donor-driven project, but a great deal of community-based approaches have been used, and this provides a case of CWM initiated by a partner with a good appropriation of local people later. This project was initiated after the creation of this park by the Mauretanian Government. It is a reserve with a plentiful biodiversity, especially birds, fish and seals.

The project aims at a sustainable management of the Park's resources and a well-fare of the local populations through a holistic approach. It extends support to the Imraguen fishing community via the establishment of co-operative groupings, training in maintenance of fishing equipment, training of women in the manufacture of launcher sails. Thus, the project succeeded in banning access to the park with engines and developing eco-tourism to the benefit of the populations in order to diversify their economy. The project also extended institutional and logistic support to the personnel of the park and developed research and conservation.

The progress concerns: a management and better conservation of the biodiversity, a greater tourist attraction with increasing revenues, more responsibilities shouldered by the local populations by grouping them, the creation of a database, capacity development of national manpower through training and equipment. This project is financed by several partners of FIBA: IUCN, WWF, Wetlands, RSPB, Tour du Valat, Birdlife, FFI.

4.2.12 Niger

The Law N°93-015 dated March, 2nd 1993, has determined the legal framework for rural areas land use in the Republic of Niger, including a wildlife conservation policy. Some specific aspects pertaining to wildlife exploitation are clarified by the Law N°96-052 of 26/08/96.

Seyni, S. (1997) has proposed as a case study of CWM, the project on the Use of the Kouré National Resources (PURNKO). This project was initiated in 1995 by the Government of Niger with the financial support of the European Union (EU) and the Netherlands Organization for Development (SNV). It is located in the east of Niamey. The purpose of the project is the identification of a programme of local lever resources management and the conservation of the W national Park of Niger, under the concept of Biosphere Reserves management (MDRHE/SNV/CCE, 1996).

The activities are focused on the development and management of local level resources through a diagnostic analysis and concerted research-action with the local populations (SNV/CCE, 1996). The progress made in respect of wildlife management by the community is primarily: monitoring and identification of giraffes, dissemination of agro-ecological techniques and restoration of the giraffe habitat. The financing used is assessed at ECU 480 000.

4.2.13 Nigeria

Egbuche, U. (1997), has reviewed the literature about CWM in Nigeria for this survey, and she came to a suggestion of 5 case studies : the Haideija-Nguru wetlands conservation programme, the Okomu wildlife sanctuary, the Cross River national park-Okuwangwo Division, the Bonny island integrated conservation project, the Gashaka Gumti national park.

Nigeria is rich of experiences in different sectors, and specifically in forests and wildlife management, as described by the Federal Ministry of Agriculture and Natural Resources (1998). So, we decided to concentrate our investigations on 2 major initiatives : The Hadeija-Nguru Wetlands Conservation Programme, and the Gashaka Gumti national park management project.

Concerning the Hadeija-Nguru Wetlands Conservation Programme (William, M.A. and David, H.L.T., 1996), its ultimate aim is to ensure sustainable management of the wetlands

and the 1 million people who live within and around it. It is intended to be a part of the National Parks of Nigeria. The objectives of the project are : to conserve the flora and fauna, particularly the Eurasian migratory birds and other birds in Nigeria, as a Ramsar site ; to maintain the balance of the delicate wetlands ecosystem and to generate income for the rural people of the area ; to provide additional infrastructure such as wells for water, nurseries for tree seedlings and other infrastructure for the people.

The Hadeija Nguru project is the only wetlands project in Nigeria located in the North, where desert encroachment is a problem, the project is conserving a large expanse of water and swamps which harbours several Eurasian and national birds. It also contains a population of animals but the bird migration is the most important attraction. The wetlands supports more than 1 million people and the project tries to balance their needs with conservation. One of the crucial problems which the project had to overcome was release of water from the dams on the tributaries of Hadeija River. The project in conjunction with concerned NGOs also convinced government to cancel the Kafin Zaki Dam which would have destroyed the ecosystem. There are several studies on biological physical and economic factors against which changes can be measured.

The project has managed to protect large flocus of Eurasian and west African birds which migrate to the wetlands by protecting them from hunting and by protecting their habitat from destruction. It provides infrastructure and other benefits such as credit to the rural communities. It also provides tree seedlings which are planted by communities for protection against desertification. These activities also generate income. There is a high degree of conservation awareness amongst the people. The project has documented the programme. It has become a major tourist attraction in the country. The budget of the project is US\$800,000 for 1996-1998, mainly funded by European Union, IUCN, and the Royal Society for the Protection of Birds (UK).

4.2.14 Senegal

Among the west African francophone countries, Senegal is certainly the country who has implemented more deeply the French spirit of forests and wildlife conservation.

The Niokolo Koba national park received the most attention of the French co-operation for wildlife management in the region. However, poaching and overexploitation have gained ground and this park lost a major part of its resources, and its attraction (Diop, I. 1996).

Indeed, important lessons have been learnt and noticeable progress towards new approaches, new policies and legislative reforms have been undertaken this last decade (MEPN/DPN, 1998). Actually, innovative projects are raising up, targeted on economic options : a project of game farming of gazelles in arid lands of the northern Senegal, a centre for the multiplication and dissemination of tortoise species in the west Africa, a project of women's association for the regeneration and conservation of the Popenguine reserve, an ICDP model of project for the management of the Djoudj national park.

The publication of Diouf B. (1994), related to the responsibility of local people for the management of forest resources in the northern Senegal, gives a taste of community-based issues. This led us to the selection of 2 major case studies (Sylla, S.I., 1997) : The Popenguine reserve management by the Ker Cupaam women's association, and the Djoudj national park project.

Concerning the Project on the Integrated Management of the Djoudj national park and its outskirts, it was initiated in 1995 by the Senegalese Government with the financial support of the Kingdom of Netherlands, the German Cooperation, the North-Wesphalia Rhine-land and the région Île de France. Its purpose of the project is to get the local populations involved in the management of the site.

The activities conducted are focused on the implementation of a management plan involving the local populations, research-training-protection and improvement of the living standards of the populations. The progress made in community wildlife management mainly concerns: the participation of the 7 villages of the periphery in the programme, the development of eco-tourism and eco-development. The financing used amounts to F CFA 900 000 000.

Concerning the project on the Popenguine Reserve, it was initiated in 1994 by a Women's association called "*Regroupement des femmes de Popenguine pour la protection de la nature (RFPPN)*". It received some support from the Senegalese Government and the Foundation Nicolas Hulot. In 1997, the European Union (EU) joined the project with a ECU 393000 financial support. It is located at Popenguine, south of Dakar.

The purpose of the project is the re-generation and conservation of the Popenguine natural reserve bordering the sea, on a marine and very arid ecosystem. The project approach consists of getting the local populations, especially women, involved in the management of the reserve. The activities conducted are focused on the restoration of the biodiversity, scientific research, reforestation and eco-management of village natural resources and the creation of a training centre in community management of protected areas. The progress made in community wildlife management concerns basically: grazing forbidden on degraded natural resources and their rehabilitation, the mobilisation of women and restoration of the biodiversity outside the protected area.

4.2.15 Sierra Leone

Glyn-Davies, A. and Richards, P. (1990) have published a note on resources and sustenance strategies in rural communities around the Gola north forest reserves in Sierra Leone. It explains the necessity of involving local people in natural resources management issues for more sustainability.

Alieu, E.K., 1998 has subscribed to this conclusion in his national synthesis report on community forests and wildlife management in Sierra Leone. Alieu suggested us 2 famous projects as case studies : Mamunta-Mayoso Community Wildlife Sanctuary, and the Tiwai wildlife sanctuary.

Concerning the Mamunta-Mayoso Community Wildlife Sanctuary management, it is planned for 1998-2002. This is a Conservation Programme whose sole aim is geared towards community sustainable utilization of resources in this rural setting and therefore, would encompass wider communal involvement. Also long time conservation measures. Its objectives are : Protection of the Wetlands within the area most suitable for both local as well as migratory bird species, short-snouted crocodile and for sustainable land use practices.

The Mamunta-Mayoso started as a special project in 1978 by Dr. Robert Lowes, a British Medical Practitioner (now retired) who worked for several decades in the Kholifa Chiefdom, Tonkolili District in the Central Region of Sierra Leone on a land area of (2072 ha). This Sanctuary is the first to be established entirely through chiefdom initiatives and the Ministry in 1980 endorsed the local initiative.

Mamunta-Mayoso Wildlife Sanctuary is a swamp/grassland/ woodland habitat rich in reptiles amphibians and birds, and is this a key site supporting unique flora and fauna which have been virtually eliminated in Northern Sierra Leone. Cattle farmers have been relocated and tree planting under an agroforestry scheme practised over the past 5 years. The economic aspects here include: Tourism and touristic values, which are presently under strict preservation and conservation ; Fish harvest on the lakes within the reserve, a traditional practice usually done at a specific time of the year by the entire Mamunta-Mayoso Community. The area has a rich and very strong tradition and cultural practices which is unique to the people of the Tonkolili District. The Poro society and the Tamaraneh Cooperative Society (means 'help each other') is quite distinct among the men and women groups.

Concerning the TIWAI island wildlife sanctuary Project, it is part of the Gola Forest Conservation Programme, which objectives is to protect and conserve the flora and fauna of the 12 Km² Tiwai Island ecosystem and the immediate environs. The origin of the practice is purely traditional and based on the conservation and rational distribution of resources. It was evolved around the concept of respect for traditional leaders and authority in general.

The main result is the gradual involvement of researchers in biological sciences, anthropology, limnology etc. In the conservation and development of the Island as Sierra Leone's first Wildlife Sanctuary gazetted in 1987. physical restriction to entry on the island, traditional conservation measures such as restriction of farming and hunting activities are positive environmental management principles adhered to over the past six decades or thereabouts.

In an effort to improve people's perceptions of the forest, a handicraft centre was established to enable the local communities to sell their handicrafts to visitors. Villagers from the two adjacent chiefdoms were employed as interpreters, guides, cooks, labourers, messengers etc. The increase in the annual number of visitors to the small village of Kashana (population 120) increased economic activity in terms of selling items. Interaction with visitors, conservation education lessons and video shows are activities in which the villagers were totally involved before funding was suspended in 1994. The increase in the working

population, and the presence of visitors encouraged social activities like football matches, dances and video shows for public viewing.

4.2.16 Togo

The national report on the situation of wildlife and protected areas management (Moumouni, A .K., 1998) provides an overview of the country efforts and orientations. The policy relied for a long while on law enforcement, and hunting is still prohibited. That's the key reason for which the national focal point indicated that no CWM initiative could be found at this moment in Togo, given the non-consumptive legislation.

However, new approaches of wildlife management and responsibility devolution to local people are more and more promoted. That's the case of the « project on the management of buffer zones for the development and conservation of protected areas ». Initiated in 1996 by the Togolese Government, its purpose is to appraise the current situation in sustainable management of protected areas in Togo (Okoumassou, K. 1997). The activities conducted are focused on the identification and planning of efficient measures for an integrated sustainable management of protected areas. The implementation phase has not started yet and so, we could not consider this project as a full CWM case study in this survey.

The promotion of socio-economic development and well-fare of the riparian populations of the protected areas, captive breeding of Grasscutter, bee-keeping, etc, are actually considered in wildlife management projects planning (MET, 1996).

5. KEY ISSUES THAT AFFECT CWM IN THE REGION

Community “participation” in many case studies (BN1, BF1-4, CI3, GA1, GB1-3, NE1, NI1-5, SN1&3, SL1-2) was the key factor of the good outcomes reported. It is not a panacea, but a necessary input for success in natural resource management. However, this important aspect seems fairly controversial in terms of timing, level and degree of involvement ; and also differences in the perceptions of funding agencies, policy makers and the communities themselves, on how to manage these resources. Nevertheless, it is accepted that without the comprehension of neighbouring people, without any form of community participation, wildlife conservation in the region would be a kind of Sisyphus myth, an always-restart job. For examples, decades of special efforts at the Keran national park (Togo), and Niokolo Koba national park (Senegal), that were rich of wildlife through sophisticated systems of anti-poaching against local people, have been destroyed in a few time by angry poachers, during periods of political uncertainties.

Traditional resource management by local communities is highly developed in West Africa. However, the range of approaches and principles behind these traditional systems have not been widely documented, and are not therefore, widely recognised and understood. Prior to the introduction of modern scientific management strategies, local communities are known to have instituted effective by-laws covering : fishing in ponds and lakes (Sierra Leone, Benin, Liberia), management of water catchment areas (Guinea, Nigeria), harvesting of wild palm fruits and bush yams (Ghana, Côte d’Ivoire), pastoralism (Burkina, Mali, Niger, Mauritania), and the control of vegetation along bush paths (in woody savannahs and forests).

Some cases of community involvement in resource conservation include the management of the : Tiwai Island Wildlife Sanctuary (Sierra Leone, SL2) and Mamunta - Mayoso wildlife sanctuary (Sierra Leone, SL1); Nazinga Game Ranch (Burkina Faso, BF2), sacred groves (Ghana, GH1), Banc d’Arguin National Park (Mauritania, MR2), the Senegal River Valley (Senegal, SN1), Gashaka Gumti National Park (Nigeria, NI5), the Upper Niger national park (Guinea, GU1).

Major issues affecting CWM in most of the West African countries include :

- severe socio-economic living conditions (poverty and its consequences) ;
- resource tenure implications in wildlife management ;
- poor involvement of NGOs and private corporations ;
- management issues ;
- politics and policies ;
- legal constraints ;
- indigenous knowledge and local values.

5.1 Typology of CWM initiatives in West Africa region

The case studies considered in all the countries can be ranged in 6 categories on the basis of the degree of responsibility and participation :

(i) the development of the CWM initiative is engaged by the State institutions. In that case local communities « participate », depending on the role they are requested (by the State) to play. For example, Government can create a national park or other protected areas, with a law governing its management system, generally for conservation issues. However, as this objective can converge with local people's interests, the management body would try to build a public relation or education system to gain the support of neighbouring communities. Most of the case studies falls into this category, as they are linked to the conservation of national classified reserves: BF1, BF3, BF5, CI2, CI3, GA1, GH3, GU1, GB2, GB3, LI1, LI2, ML1, ML2, MR1, MR2, NE1, NE2, NI2, NI3, NI5, SN1, SN2, SL2, TO1.. This category can be divided into 4 types of “participation” :

- a) *Passive Participation* : People participate by being told what is going to happen or has already happened, without any listening to people's responses. This cannot fill into a CWM model.
- b) *Instrumental Participation*: People participate by providing resources, for example labour, in return for food, cash or other material incentives. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end. Peoples are consulted, and managers listen to views. These managers define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision-making and professionals are under no obligation to take on board peoples views (CI2, SN2, NI5, GA1, ML1). These 5 case studies deal directly with protected areas conservation, and local people are involved to achieve the objectives defined by the Government.
- c) *Transformative Participation* : People participate in joint analysis, which leads to action plans and the formation of new local groups or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices (CI3, BF1, BF5, BN1, GB2). For example, the GEPRENAF project in Cote d'Ivoire(CI3) and Burkina Faso (BF5), is implementing an approach of creating and empowering a community-based association named « AGEREF », to whom there will be a devolution of the wildlife management responsibility.
- d) *Self-Mobilization* :People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilization and collective action may of may not challenge existing inequitable distributions of wealth and power. For example, the popenguin reserve in Senegal (SN3) managed in the context of the Ker Cupaam women association.

(ii) the development of the CWM initiative is engaged by local people. In that case, local communities requests the authorization and the « participation » of Government and other partners (NGOs, donors). The area is not a classified protected reserve, but a site which has a traditional value respected by people. This is the category for examples like :

- the Buabeng-Fiema monkey sanctuary (GH2) that was created after an appeal to national authorities, made by the inhabitants of Boabeng and Fiema at a meeting held on the 11th October 1974 at Fiema
- the sacred groves (GH1) are created by local people of many ethnic groups in Ghana, on the basis of their traditions of nature conservation,
- the Mamunta Mayoso wildlife sanctuary (SL1) has been established entirely through the Kholifa chiefdom and the Ministry of Agriculture, Forests, and Environment endorsed this local initiative in 1980.

(iii) the CWM initiative is a donor-driven project, engaged by conservation organizations (NGO, international institutions) or private investor. In that case, both local communities « participate », depending on the philosophy of the donor and government policies. The approach can be instrumental or transformative, and project location can include a protected area or not (BF2, BF3, MR2, NE1). The project for the conservation of the Banc d'Arguin national park in Mauritania (MR2) has been initiated by Mr Luc Hoffman, a European ecologist who created the International Foundation for the Banc d'Arguin national park (FIBA). He collected sponsorship from different organizations (IUCN, WWF, FFI, RSPB, etc) for funding an exciting program of conservation that integrates development issues of the Imraguen fishermen neighbouring the park. Also, the initiative in Niger (NE1) was possible thanks to SNV, a Netherlands NGO.

5.2 Land tenure implications in wildlife management

Wildlife is a product of lands, and its management is submitted to the constraints of land tenure systems, in a context of transhumance, rural migrations, reserves occupation by people seeking best soils, etc. Land tenure systems need a greater attention for community wildlife management.

In fact, land tenure arrangements are a range of land ownership and utilization modes which aim to meet socio-economic (agriculture, animal husbandry) and cultural needs, and preserve the species and habitats. Land tenure is generally the outcome of an ideology underlying the relationships between human beings and their milieu. That is why, depending on cultural perceptions, in the customary systems of property rights, ownership is totally absent in the habits of most ethnic groups in West Africa, thus giving room to the sole right of use of some species and some lands, by local community under specific traditional rules. Within this cosmogony, the land is owned by ancestors or specific gods ; people can only benefit from utilization rights that are inherited within a family system. This consideration is in conflict with the modern legislation that have introduced « ownership » in property rights.

Today, modern law and customary law still co-exist in the whole region. Modern law is established by international conventions, national laws and national or local regulations. Customary law is expressed through a number of practices relating to the traditional organization of the society : land chief "tingsoba" in Burkina Faso (BF3), traditional chief in Ghana (GH1), traditional land management, taboo systems (sacred groves, prohibited species of

fauna and flora, periods during which fishing or hunting is banned, etc). In the Ziama forest of Guinea (GU1), it was noted that the present day forest quality and biodiversity patterns reflect the influence of past land-use practices ; of selective vegetation clearance preserving and enriching with preferred species.

Recent field research led in The Gambia, Senegal, and Guinea (Freudenberger, LTC, 1996) suggests that it is helpful to investigate tenure arrangements in the village territory (*terroir*) or the land area which is habitually used by members of an agrarian community for their livelihoods, with boundaries that are recognized by members of the spatial unit and by those residing outside the territory. Development projects in the Sahel are currently focusing interventions on these *terroirs* through small-scale integrated rural development activities, known in French as *gestion/aménagement du terroir villageois* (PNGT, 1992).

Access to land was therefore a birthright. In some societies, such as that of the Fulani of west Africa, rights of conquest took precedence over the claims of first settlement, and land allocation and use decisions were vested in the hands of the conquerors. In either case, decision-making was frequently hierarchical in nature, with most power over land resting in the hands of the older male members of the lineage or conquering group (Fox, 1967).

Primary tenure is similar to the Western concept of ownership and primary access holders enjoy a high degree of tenure security (Bruce, 1988). Indigenous tenure systems historically prohibited the alienation of land to persons outside of the lineage, since this would diminish future opportunities and equitable access for lineage members. The most common means of transferring primary rights in land is through inheritance. A deceased person's rights are distributed among heirs according to local inheritance rules.

Nevertheless, important exceptions do occur. With the introduction of cash tree crops during the colonial era in the more humid zones of West Africa, indigenous tenures evolved to allow outsiders to plant and own cocoa trees, while the local landholder maintained his or her rights to the land (Hill 1963).

Indigenous land tenure systems remain quite strong in semi-arid West Africa. Yet as the French legal anthropologist Le Roy notes in a case study on land tenure in Senegal, "local tenure law" is neither "traditional" nor "modern" but rather an amalgamation of aspects of pre-Islamic and Islamic tenure precepts as well as the pervasive influence of colonial and post-colonial land law (Le Roy, 1980). Changes in the national policy arena do affect local level resource management practices.

During the French colonial period, land viewed as unoccupied and unused “*terres vacantes et sans maître*” by government was expropriated and placed under state domain. While these lands appear to the eyes of the colonialists to be uncultivated, they were nonetheless an integral part of the agrarian system. Seemingly empty lands were often set aside by rural populations as reserves in the bush-fallow rotation cycle or used for tree crop gathering and hunting.

Colonial and post-colonial governments have long sought to encourage settlement and exploitation of these lands by non-resident populations, despite the conflicts generated. There is still a strong impression (from modern developers) that lands preserved by local people for hunting or other purposes like CWM, are unoccupied and can be distributed to non-resident populations seeking fertile soils. Resource degradation often results because new settlers are unfamiliar with the ecology of their new residences. That is the case in Voltas valleys in Burkina Faso, where riverine forests formerly hosting abundant wildlife, have been distributed to new comers for agricultural activities. It's also the cases of the Niger and Senegal rivers that were occupied without a prior discussions on the best destination of these lands at long term.

5.3 Politics and Policies

Policies are orientations selected among many others, according to the context, to guide decision-making (generally by a government), in view of achieving harmonious development at national and local levels. They serve as a basis for determining the legislation, institutions and action plans which constitute the implementation instruments. Environmental policies are supported by a certain perception of socio-economic and ecological realities, a vision of development, an ethics of conservation.

Many sectors of policies can affect CWM : hunting codes, natural resources management, land use planning, legal status of species, decentralization and governance systems, trade of agricultural products, civil society associations, etc. For example, in most of the West African countries, there is a preliminary need for clear decentralization of natural resources management, in order to empower grassroots people for the promotion of CWM initiatives.

Policies are expressed at the supranational level through international treaties and conventions such as the Convention on Biological Diversity (CBD), the Convention on International Trade of Endangered Species (CITES), the Ramsar Convention on internationally important wetlands. A table is provided on page 20, on the involvement of West African countries in international agreements on the protection of the environment.

The CBD adoption has promoted national and inter-states concertations on priority actions for biodiversity conservation, through the drafting of flora and fauna monographs, endemic species, community participation in conservation projects, etc. CBD implementation is currently developed through innovative projects funded by the Global Environment Facility, in most countries. Specific small grants (US\$ 50,000) for micro-projects are very important for small scale CWM. This convention has improved international awareness for wildlife conservation. The CITES convention has classified flora and fauna species in 3 categories corresponding to its appendix I, II, and III, and the conference of parties usually discuss about the status of species, in order to protect through international trade prohibition concerned endangered species (appendix I). So it can help combat poaching. Only two countries of the region (Cape Verde and Mauritania) did not adopt this convention right now.

Conservation projects alone cannot resolve biodiversity degradation problems, no matter how numerous and relevant they are. International, national and local policies are essential and need coherent implementation tools : action plans, strategies, projects, technologies, and methodological approaches in all sectors should be supportive for CWM policies. For example, in western and central Mali where hunters associations are well-structured, CWM initiatives can grow up if the government adopts stimulating policies on wildlife management and subsistence hunting issues. However, it would be faster if there is a national plan on CWM including clear strategies and approaches indicating how to set up a CWM project and what kind of tools are needed. It will also be useful to get the support of financial partners for funding communities projects.

On the basis of available information, the specific policies needed in specific countries are :

- hunting code that would authorize under regulations opened periods for safari and subsistence hunting : Cote d'Ivoire, Mali, Niger, Togo
- decentralization law that would deepen the devolution of wildlife management issues to local people : all the countries
- land use planning that would give the possibilities of creating communities forests for wildlife production issues: Sierra Leone, Nigeria, Benin, Guinea, Mauritania
- Innovative governance systems that would accept community organizations as partners of state administrations for development issues : all the countries.

In the past, there were a lot of traditional governance systems in West Africa : some ethnic groups in Nigeria, Niger, Benin, Burkina, Senegal (Ashanti, Yorouba, Mossi, Bambara, Wolof, Baoulé) are organized in chiefdoms, but others in Ghana, Burkina Faso, Cote d'Ivoire (Lobi, Dagara, Bobo, Birifor) did not have any system of chiefs. What seems to be common, was the collegial approach of decision-making, through discussions within the community. I should be noted also, that in their cases, the lands and forest resources belong directly to them, even when the chiefdom is submitted to a kingdom.

The colonialism introduced the revocation of local peoples rights on their natural resources. The persistence of this colonial policy of natural resource management in West Africa is reflected in authoritative legislation and institutional framework, where participation in decision making and implementation of decisions belong to the sole elites of the public administration. The administration generally argues that they don't have the necessary means to inform and involve the populations in the drafting of texts governing CWM. This argument is supported by the fact that no text makes it compulsory for the administration to consult with local people, in the development strategy design process. Everything depends therefore on the good will of the administration.

Thus, in most West African countries, the state law does not give room for provincial or regional regulations. All the prescriptions are national and are binding on all across the territory irrespective of the diversity of ecosystems and socio-cultural and economic realities. In these conditions, it is considered that the State is responsible for developing policies and implementation instruments (laws, institutions, etc.), as the representative of the interests of

the nation and citizens. Hence the policy decisions on natural resource, made by the top level and implemented by the grassroots level.

Incentives (social, economic and political) are needed that correspond to the interests of the populations and the main components of the society and which are capable of sustainably mobilizing people (BF2-3-4, GA1, GB1, NI1, SN1-2-3, TO1).

Most projects related to management of wildlife and protected areas conform to the prevailing policy and legislative framework. However, it is important to point out that, some community-based projects have been successful despite the absence of supportive policies. This indicates that some approaches can be implemented even if they do not conform to existing policy scenarios.

For instance :

- At the Ker Cupaam project (SN3) in Senegal, neighbouring women started organising themselves (1993) for sustainable use of the forest resources, when all kind of forest use where forbidden. They succeeded in the conservation of the forest more than during the state-driven period.
- At the sacred groves conservation project in Ghana, the leaders of the NGO GACON have remarked that this traditional system of nature protection is viable, often better than national reserves, but there was no official policy to deal with this issue. So, GACON started with some survey that have confirmed the richness of flora and fauna species in these areas. Actually, sacred groves are considered important in the Ghana policy for natural resources management.
- In 1976, at the starting period of the Nazinga Game Ranch, (BF2) there was no window of ranching possibility in national policies and legislation of Burkina Faso. Eight (8) years later, game ranching become legal in Burkina, and it is being promoted actually in other countries of West Africa.

5.4 Indigenous knowledge and community capacity

The opportunities and constraints of the surrounding environment, create and develop the knowledge and behavioural patterns of a community, which in turn, influence the management systems ensure that a community meets its basic needs, i.e. food production, shelter, health, spirituality and culture, etc. This local knowledge is adapted to their social and economic situation and to their cultural perceptions. This knowledge can be simple (and even rudimentary), or complex. It evolves based on creativity, innovation of spirit and is also influenced by other cultures.

"Local knowledge usually consists of dynamic insights skills and capacities which are derived from many years of experience or passed down through families for generations. Indigenous knowledge is also modified and adapted over time through informal experimentation and adjustments made in response to environmental and socio-economic circumstances" (Thrupp 1989, 1991; Warren 1991).

The local Senegalese communities in the River Senegal valley have developed forest management strategies through the use of supervisory teams. These teams essentially guarantee the protection of matured trees and young growth against cutting, fire and browsing livestock (SN1). A series of controlled management blocks drawn up in consultation with villagers by the forest service was planned for subsequent years.

In Nigeria, according to Dunn (1994), the local communities instituted the following conditions in the management of the Gashaka Gumti National Park (NI5):

- a) Restriction on the allocation of land to new comers ;
- b) Control of the movement of livestock between the uplands and the flood plains to prevent overgrazing ;
- c) Discouraged commercial hunting by outsiders ;
- d) Early burning of foliage to ensure sufficiency of forage. The annual burning also discouraged bush encroachments. On the declaration of the national park in 1991, the local communities started abandoning the enclaves for fear of eviction. During this time, exploitation was aimed at short-term gains at the expense of sustainability.

CWM can be promoted and improved by taking advantage of indigenous knowledge on species and habitats management, as well as traditional systems of conservation. In Ghana, the success of the sacred groves project (GH2) is mainly due to a good communication between project managers and local chiefs, that provided important knowledges on a lot of socio-ecological issues. The gathering and proper utilization of local knowledge help build confidence between people and project managers, reduce the risks, and avoid mistakes associated with adopting new techniques and practices.

Local and traditional knowledge (GH1, NI1, GH2, CI2) were often successful in the past and well adjusted to the biological, economic and social conditions. But, given the rapidly changing circumstances of recent decades, it is also recognized that they alone are now unlikely to provide all the necessary solutions. Some blending of local and external knowledge is needed. Training institutions need to produce problem solvers with a capacity for listening as well as communicating , rather than people filled with information. Extension workers need to understand traditional ecological concepts and to learn how to analyze problems rather than provide ready-made recipes. They also need to acquire communication skills. This is not easy in our traditions of teaching geared towards memorising and accepting what one is taught. At the same time, local people need exposure to modern, low cost, appropriate technologies which can be modified or adapted to suit prevailing social, economic and environmental context.

5.5 Religious and cultural factors affecting CWM

West African communities are among the bests of Africa in conserving their traditional cultures. In the coastal countries as well as the Sahelian part of the region, it is very usual to observe that people have kept their traditional clothes, their local ways of living, and indeed

their own perceptions of nature, despite the changes introduced by the modernism. CWM might benefit from this reality, if policy-makers and managers pay attention to local values and indigenous knowledge. Initiatives like « sacred groves project » in Ghana, the traditional hunting associations in Burkina, Mali, Guinea, Senegal and the Gambia, are still possible in the whole region because the traditional community institutions are not yet totally destroyed.

However, there is a clear impact of foreign religions (Christianity, Islam) co-existing with traditional religions. This situation as well as the market economy increasingly influence land management modes, as the sacred value of lands and threatened species status, based on traditional beliefs is no more accepted in many villages. This is the case in the village of Kalinga and Nobere (South Burkina), and the villages of Jachie and Keyyase in Ashanti region, (Ghana, GH1), where sacred groves are less respected by christian and moslems.

The cosmogony of the Senoufo people installed between Burkina Faso, cote d'Ivoire and Mali, was based only on animist beliefs, placing the community at the centre of their life. During centuries, they practised collective hunting, with traditional restrictions known and respected by all of them. They are reported to be one of the most reluctant tribe vis-à-vis the imported religions. However, at present, most of them have adopted Islam and Christian religion.

Education at the modern school is considered to be the major contribution of imported religions to development issues, and indeed to CWM. Christianity has promoted schools (for its needs) with an improvement of literacy. This education has not yet been an opportunity for any promotion of CWM. In practice, traditional indigenous knowledge held by local people and communities does not require high levels of literacy in order to apply it to natural resource management. For example, local people at the Mamunta-Mayoso wildlife sanctuary (SL1) in Sierra Leone, and at the Gashaka Gumti national park (NI5) in Nigeria, were well trained in hunting and management techniques. However, if modern scientific knowledge is to be used given that much is documented in writing, it requires higher levels of literacy.

In general, religious leaders did not consider wildlife as an interesting product to be developed for people. During this West African survey for example, no initiative of wildlife project has been reported from religious people. In other sectors like formal agriculture, animals husbandry, appropriate technologies, they have got important inputs. As imported religions are more and more adopted by people, it would be necessary that they care for wildlife, at least at the equal level than traditional beliefs.

5.6 Bushmeat in West African communities

In the whole of west Africa, there is a considerable demand for bushmeat, because people do prefer it to domestic meat. In most cases, demands for bushmeat exceed regenerative capacity; and this could probably be reduced by developing new and appropriate sources of protein. However, any innovation promoted needs to be accepted by the prevailing social and cultural environment.

Where wildlife management entails adoption of sustainable use methods, there is a need for improving existing methods, or developing new technologies. Excessive bushmeat demand could be reduced by domesticating some wild species (for instance the breeding of grasscutter, *Aulacodus swinderianus* in Benin, Ghana, Togo (TO2) and Nigeria).

People are increasingly interested in wild species breeding, game farming, and ranching in many countries (the private reserve of Banda in Senegal, the Abokouamekro view-park in Côte d'Ivoire, the ostrich farming initiatives in Burkina Faso, the tortoise breeding centre in Senegal, the game ranching initiative in the Northern Ghana, etc).

However, it should be recognized that there is currently very little domestication of wild animals, because it is culturally unusual in the whole region to breed wild species. It is quite the opposite in Eastern Africa, where Massai people don't mind mixing their cattle with antelopes. According to Lungren Clark, a Canadian wildlife manager (Nazinga game ranch), the presence of domestic animals in West African forests means the absence of wild animals.

Nowadays, wild animals breeding would be really profitable, given the considerable demand for bushmeat. For example Dilys Roe (IIED) reported that dignitaries from Abidjan who were visiting a project in Serebou (Côte d'Ivoire), asked for bushmeat - specially that of monkeys - in place of the chicken they were offered.

Legislation need to be reformed in order to stimulate private bodies interested in breeding some wildlife species. That is because in most countries, all animals species classified as wildlife are the legal property of the state. As a result, an individual who is given an authorization to develop his game ranching or game farming project, would be submitted to a lot of legal restrictions hindering the profitability of his investment (periods and ways of exploitation, number of administrative certificates for his clients, etc). It would also be difficult for a private body to get funding from banks, because through these legal restrictions banks run the risk of not being reimbursed.

In Cote d'Ivoire for example, bushmeat surveys in the region of Toumodi and Comoé have shown that the commercial value of traded bushmeat reached 50 billions CFA per annum (US\$ 100 millions/year). Through extrapolations from the whole country, the coordinator of the national planning program for the management of protected areas PCGAP concluded that the annual contribution of bushmeat to ivorian economy is around US\$ 400 millions.

There is a special bushmeat market at Toumodi, where the game guards were asked to arrest poachers or bushmeat dealers (not officially, but effectively). It is very easy to find the meat of grasscutter, monkeys, antelopes, lizards, etc. It is reported that, 5 tons of bushmeat have been recorded during a market day by the PCGAP survey. Other bushmeat surveys in Ghana (Yaa, N. B., 1995), in Mali (Gerling, C., and al, 1988), in Burkina Faso (grove, B., 1982), do confirm the special interest of West Africans in bushmeat.

5.7 Meeting basic human needs

In most of the countries, the living conditions of local people are severely affected from time to time, by a number of basic needs : lack of food, poor income generation (poverty), droughts, desertification in the sahelian part, diseases, education issues, etc. This implies resource use : subsistence hunting (bushmeat, CII), medical and customary use of some wildlife species, (GH1-2), etc.

Where wildlife management entails the relocation of people, there may be a need for compensation payments. Alternative sources of the resource to be conserved should be provided to relocated people, or a sustainable use of the resource should be allowed under some conditions to be defined with the participation of people.

According to an ECOWAS report on desertification in 1993, for more than 50% of West Africans, subsistence farming supports the families for up to 9 months in the year. In the absence of appropriate technologies, funds for mechanisation and a sustained supply of adequate quantities of inputs, good productions remain a dream as shifting cultivation prevails. The farmers are very aware of the declining yields and even blame it on the disappearing forests (low yields associated with shorter fallow).

This situation seems caused by demographic pressures on lands, and market economy that pushes people to produce more crops for trade (wool, coffee, cocoa, etc). However, the revenues of such trade is not enough for their needs (health, habitat, children's education, social obligations, etc). As a consequence, people are obliged to overutilize other land resources like wildlife, in order to bridge the gap of food.

CWM can provide sound solutions through income generation, bushmeat production, and land regeneration. CWM implementation can help combat poverty and illiteracy by creating more revenues for local people, and opening the local economy to other opportunities from tourists. The basic constraint is the openness of countries to promote CWM approaches. It is also clear that any success in combating poverty (through other profitable activities) would help implement CWM because the lack of food or income encourages local people to become involved in poaching activities.

5.8 Management constraints

Most West African countries have adopted since the colonial periods a highly centralised, state-controlled protectionist⁷ approach to wildlife management. The aim of this protectionist approach is to control and regulate resource use, enforce regulations, monitor resource

⁷ the state-controlled protectionist approach means that for the legislator, there was a need to protect environment against the action of local hostile people considered as the main cause of natural resource degradation. So, all the states have recruited game guards in military services to enforce the national laws on wildlife.

condition and use patterns and impact ; deter illegal and unsustainable use pattern practices (poaching).

All these management systems are governed by national legislations. The process for the development of a law is generally technocratic (driven by civil servants). Natural resource-related legislation in this region has been long based on the preservationist logic (Senegal, SN2). This has affected CWM initiatives that were based on customary regulations for which hunters were trained by local masters. According to Alieu, K.E. (1982), traditional restrictions to wildlife utilization were specific to local peoples realities. Present day legislation has a poor recognition of human contribution to development of landscape and biodiversity. Through all the state-designed instruments, there is a constant concern to certify state ownership of natural resources, in order to ensure total control and organization of exploitation (Guinea, GU1). As a result, the populations were excluded from taking up responsibility for natural resources. Thus, they now consider wildlife management as the responsibility of state institutions.

At the same time, government laws enforcement is not effective because there is a serious lack of resources, and a poor capacity to monitor national regulations nation-wide. For example, on the basis of national statistics, the number of field agents active in wildlife issues is usually 1 person for 50,000 to 85,000 hectares, in most of West African countries. This situation is worsened by the very poor equipment of these agents (lack of transportation means, communication, shelter, extension tools, etc), and the fact that most of them work part time on other sectors : timber or firewood monitoring, fisheries, etc.

In the 1980s, the protectionist approach in natural resources management was blamed by many partners, and other alternatives approaches have been discussed and proposed to decision-makers :

- the participatory approach, used by the GEPRENAF project (CI3, BF5) funded by GEF in Cote d'Ivoire and Burkina Faso, the Upper Niger national park project in Guinea
- the holistic approach, implemented by some integrated conservation and development projects (ICDP), such as the Kiang west national park project in Gambia (GA1), the Djoudj national park project in Senegal (SN1), the Banc d'Arguin foundation in Mauritania (MR2)
- the land-use management approach (which is both participatory and holistic), implemented by the « gestion des terroirs » project (BF1) in Burkina, the natural resources management projects in Benin, Mali and Niger (BN1, ML1 , NE1).
- the decentralized approach, which aims the devolution of the ownership of resources, and the transfer of management responsibility to local people under a protocol of duties and rights. This is the recent cases of the Kaboré Tambi national park in Burkina (BF3), and the Buabeng Fiema monkey sanctuary project in Ghana (GH2).

There are significant differences in interpretations and understanding of CWM amongst policy makers, wildlife managers and local communities. In order to ensure successful

implementation of CWM, these differing interpretations must be taken into account when designing programs of support.

Managers play an important role between policy makers and communities, and are key players in determining how policies are implemented. Their work may be enhanced by having :

- approaches and tools appropriate for CWM projects
- tools to effectively communicate with policy makers and with communities
- a greater understanding of the opportunities for community involvement : many managers under-estimate local capacity and are reluctant to delegate responsibilities to local communities
- tools to approach policy makers and advocate for policy reform.

A number of other concerns and items for consideration are found practically in all the West African case studies, and need to be addressed as important constraints for the promotion of wildlife management in general and CWM initiatives in particular :

- inadequate training for technical and field personnel (NI2-3-4-5) ;
- poor institutional capacity of the states regarding wildlife management ;
- poor recognition of indigenous knowledge, and poor consideration of the interests and aspirations of local people (SN2, LI1), by civil servants (technocrats);
- inadequate scientific knowledge ; poor development of management plans for protected areas (Ivory Coast/Burkina, CI3) ;
- a lack of financial resources for wildlife-related activities (TO1, GH2, BF3, NI2-3-4, LI2).

5.9 The role of private sector

Privatization and structural adjustment strategies are being adopted in all the West African countries. This would imply that the private sector (including NGOs) should play an important role in implementing wildlife development activities (Burkina, BF3-4).

Unfortunately, right now the state monopoly on wildlife remains a constraint to stimulating private interventions : as long as species and populations of wildlife will remain the exclusive property of the State (as declared by most of the national legislations) private bodies will keep reluctant to invest in this sector.

Wildlife species breeding is very weak in West Africa, because private individuals and corporations who would like to initiate game farming (ostrich, crocodile, ungulates) and game ranching are not encouraged by the existing laws and policies. Experiences from the Nazinga Game Ranch (BF2), the first and unique ranching experience in West Africa (Box

N°2), confirms the necessity of policy reform, wildlife civil servants re-education, and the advantages of partnership between Governments and NGOs.

Box N° 2 Institutional lessons from the Nazinga game ranch (BF2)

This project (the very first of its kind to be implemented in West Africa) was initiated in 1979 by a Canadian NGO called *Association pour le Développement de l'Élevage et de la Faune Africaine (ADEFA)*, and developed thanks to Government support, with the funding from the Rockefeller Brothers Fund, World Vision, CIDA, Food for the Hungry; it is located in the southern part of the country next to the Ghanaian border.

The purpose was to conduct researches, study and develop wildlife resources management in the Nazinga area for the conservation of and increase in the same resources for the local populations.

The activities carried out under the project are basically focused on: development of the Ranch (94 000 ha); anti-poaching where noticeable progress has been made; sensitization and education of the populations through supervision, organization and control of the villagers' exploitation activities; fishing which has recorded spectacular results; and tourism.

In the 1990s, after 11 years of work, when Nazinga game ranch succeeded in regenerating the wildlife population (from 1,000 to 20,000 ungulates), the managers asked for authorization in order to start the exploitation through cropping, safari hunting, and tourism. At this time, some civil servants start lobbying for the transformation of the ranch into a national park. For their education, a national park is the ultimate status that should be targeted in the management of any form of natural reserve. Therefore, it is remarkable (but not surprising) that despite the political willingness of authorities, the option of replacing ADEFA by a management corporation including local communities is suspended, and the game ranch is actually managed by the state.

5.10 Stability And Conflicts: Effects On CWM Projects

The sustainability of CWM initiatives also depend on political stability and social peace in the countries concerned. In West Africa, this reality is all the more relevant as we witnessed the outbreak of wars inside or between the countries for the past 10 years: strife in Liberia, Sierra Leone, rebellion in Mali, Senegal, Guinea Bissau and Niger wars between Mali # Burkina, Senegal # Mauritania; Nigeria # Cameroon.

In addition to the awful effects of these conflicts on the people themselves, the biodiversity of the target-areas has been tremendously damaged by some factors such as.

a). The proliferation of automatic rifles

In areas once occupied by the soldiers, we witness a proliferation of automatic rifles. This provides poachers living in peripheral areas with mass destruction devices. In Liberia and Sierra Leone for instance it is quite frequent to find village poachers holding submachine guns like kalachnikov, G3, Beretta as well as French and Chinese types. In Lofa Mano reserves in Liberia, it is risky for state foresters to organize themselves into hunting police because of the heavily armed poachers. This shows how difficult it is for rural communities to look after their CWM areas in places which were once battle fields.

b). Military poaching

The battle fields have often been turned into hunting places by soldiers who wanted to feed themselves or export the trophies in exchange for the currency necessary for fresh supplies. It is believed Mali and Burkina, during which the troops of both armies were stationed for long in the sahelian zone, have decimated ostriches, giraffes and gazelles which were one in great numbers. Even at the end of these conflicts, this type of poaching is carried on because of the hunting habit developed by soldiers and their knowledge of areas alounding in game.

c). Increasing insecurity

Rebellions and wars increase global insecurity and impinge on the tourist flow which is necessary to make wildlife management areas profitable. The eastern part of Senegal, where the Niokolo Koba national park is located, has witnessed a slackening of tourism on account of the rebellion in casamence.

6. IMPACTS AND ACHIEVEMENTS OF CWM

Most of the CWM projects aim to preserve biodiversity in national parks and other reserves in combination with the surrounding space, whilst at the same time sustaining or indeed improving local people's livelihoods. National parks and other categories of protected areas have played a major role in modern systems of wildlife conservation, despite the problems experienced in the field which have sometimes resulted in unsatisfactory results.

The impacts and achievements of CWM initiatives in the region can be classified through their relevance and the progress they achieved for meeting social, economic and ecological sustainability⁸.

6.1 Socio-Economic aspects of CWM in West Africa.

Information and experience from various management formats and programs in West Africa is available, but not well documented. The scenarios range from historically traditional management followed by colonial and post-colonial systems along the lines of the European school to modern cutting-edge programs involving the private sector in collaboration with the surrounding community.

Case studies have not provided enough data on economic issues. However, the existing literature and our own experience have guided us in development this section of the report⁹. When evaluating the economics of CWM or when planning management programs, several important aspects need to be borne in mind:

6.1.1 Variability of circumstances from one area to another

The economics of CWM in West Africa vary with the particular circumstances of each site, according to biogeographical region, proximity to high population centres, history, traditions and cultural trends, etc; all of which determine use systems currently followed as well tend to limit potential production systems that can be undertaken in the near future.

⁸ A table of classification is provided in Annex 5 for the 30 most relevant case studies reported by national focal points. It allows to select the Case studies for the phase 2 further investigations of IIED. Criteria for the measurements of performance are social, economic, ecological sustainability, the relevance of project objectives, status, budget, and the existence of baseline studies documentation.

⁹ More illustrated figures will be presented in the final version, through detailed exploitation of the literature.

The sahelian and sub-sahelian regions have undergone major changes in the past 30-40 years, culminating in the highest known human densities for the region accompanied by a serious disappearance of most large wild species, although some carnivores and smaller mammal species are still to be found

In some parts of the sudano-guinean savannahs significant wild species and populations are still present, including large ungulates, with relict stocks of wild ungulate varying from the equivalent of >5% of the ecological carrying capacity in most settled areas to 5-15% in classified or remote sites and along many river valleys, and about 15-40% in most-protected areas (Lungren, C. 1997). Most of the savannah region peoples have some tradition of wildlife management, although their traditional systems have been more or less eliminated, depending upon the degree of impact of modern influences (reduction of the authority of the traditional figures responsible for the oversight of the wildlife resources).

In the humid forest regions of West Africa, different dynamics again are involved, based in part upon differences in habitat, wildlife species (exploitation is less ungulate oriented - more primate and rodent based), traditions, and logistics.

6.1.2 Importance of wildlife for rural West African people

In spite of regional and site-specific variability, some significant generalities tend to distinguish the situation in West Africa from some other parts of the continent:

- preference for game meat rather than that from domestic species;
- historical de-concentration of human populations from river valleys areas due to malady vectors (present location of last remaining stocks of large wild herbivores);
- avoidance of domestic stock and/or herdsmen by wild animals;
- individual motivation and community search for cash generating activities;
- limited size of most West African countries means that the capital-cities and other large urban centres tend to drain resources from outlying areas and strongly influence the use of wildlife as well as the importance imparted to collection of wildlife products;
- awareness of resource loss and readiness of many rural populations to act towards the conservation of their dwindling resources.

6.1.3 The limited Value of wildlife in the village context

When large gulfs exist between the structured (official, urban dweller oriented) economy and rural realities, a large range of economic values becomes evident for the same animal or product, dependant upon whether the product is to be consumed in villages about wildlife sites or sent up the line to the regional centre, on to the nearest city or exported. This is true for live animals or for products such as skins and meat.

In savannah regions, illegally poached meat tends to fetch about 100 FCFA/kg at the front-line village level, although rising to about 300 FCFA/kg when a good marketing chain has been functioning for some time; although the village hunter will not necessarily benefit much from the increase, due to the large number of intermediaries who usually become linked into the sales. When a structured, legal, outlet is established in urban centres such as was done for the Nazinga Project (Burkina Faso), wild ungulate meat was sold for 10 to 15 times the price that local hunters can expect to procure. As well, urban dwellers will pay exorbitant prices for some species such as grass-cutter and porcupine, rising to well over 20 times what the rural hunter can expect to collect.

6.1.4 Modern Imperatives for Production

During the last 10 years in West Africa, while rural populations have risen by 3.3% annually and urban ones by 4.4%, overall food production has only increased at the annual rate of 2.2%. It becomes more and more evident that wildlife resources and the remaining areas of natural vegetation cover that provide wildlife habitat will survive only if they produce benefits for the local communities surrounding those remaining sites. Thus, rational wildlife production must form the main basis for effective conservation in West Africa, whereby sustainable exploitation of species will provide the economic fuel for the conservation of wildlife ecosystems.

To be successfully, it is important that wildlife use be approached from a perspective of optimisation of socio-economic benefits, as only from this framework will production attain the level of significance required to guarantee that wildlife resources are retained as a component for the socio-economic development of the rural areas harbouring remaining wildlife populations.

6.1.5 Optimisation of socio-economic benefits from wildlife resources

The optimisation of benefits from wildlife resources implies accessing the best markets, maximising the number of products that may be legitimately offered and extending the production season to year-round. To achieve these measures, appropriate management of the resource must become effective, and must intensify to a professional level. However, these measures are also needed to finance year-round management and to support the cost of professionalisation; even if the site is only one component of a broader ecosystem program involving surrounding zones directly managed and exploited by village communities.

6.1.6 Opportunity for optimising socio-economic benefits

The opportunities exist today to attain the level of production required for assuring community support for conservation programs.

Rural communities are eager today to engage activities that will conserve their dwindling resources; especially if these activities will provide cash revenues and help slow down the

forced annual exodus of young people heading off to coastal cities in search of work. Whereas the maintenance of hunting opportunity and the continued availability of wildlife products is of importance, and must be included in most community management plans, establishing gainful employment in their area is a very powerful argument for communities today towards establishing commercial wildlife production areas and including professional partners in management systems (core game ranch or hunting concession areas surrounded by village hunting zones is an ideal format for such a multi-use system).

The ecological imperative of establishing wildlife corridors and large zones for the effective management of some species (such as elephant) can benefit today from the readiness of rural populations to undertake the required institutional and spatial organisation. This is especially true when the setting aside of new blocks for wildlife management is accompanied by the establishment of village management committees and wildlife-based or forest-based exploitation that permit the organisation of economic activities (village hunting zones, apiculture, grass-cutter farming, hay production, etc) along the periphery of the wildlife areas.

Governments and tourism agencies are actively seeking for sites to develop local and international tourism attractions (game viewing). International tourism in West Africa is very hard to stimulate due to the lack of volume and valid tourism sites organisable into interesting circuits. Once wildlife populations at a new site have increased to the point where guests can spot animals at least every 5 minutes during a viewing circuit, they publicise the site by word of mouth, and the number of annual visitors can rise very quickly to commercially viable levels, even if game-viewing tourism in West Africa, by itself, will probably never attain the volume needed to pay for the cost of a site's management.

International sport hunters currently pay significantly prices for the privilege of hunting West African species, especially the «bushcow» (species of buffalo intermediary between the large cape buffalo and the red pygmy forest buffalo) and roan antelope which are not available in most other parts of the world. Once ungulate populations increase to at least 30% of the carrying capacity, safari hunting can commence, but must not take more than 2% of buffalo or 3% of antelope and warthog in order to maintain the trophy quality at a level attracting international clients.

Due to current international tourism prices and to the fact that catering to tourists and sport hunters involves the secondary production sector (services: job creation), the modernization of wildlife management on lands owned or attributed and/or managed by communities brings an important element to the economy of those areas.

Once ungulate populations reach 50% of carrying capacity, a «constant offtake» number should be cropped, which will progressively raise populations to the «Optimum Sustained Yield» level (70% of the carrying capacity), thus providing a sustainable meat production capable of tapping into commercial markets. Experience with cropping systems tested at the Nazinga Game Ranch demonstrate that cropping activity is very important for the financial viability of wildlife management areas, but that it also significantly generates local employment and valorises expertise in the modern context.

An international market for live animal sales based on conservation institutions (including the restoration of ecosystems) and on the expanding field of game ranching exists today for many species of animal that can provide a sustainable quota under effective management. This helps to maximise income per animal and to offset the cost of establishing and restoring populations at new conservation sites where the annual offtake is still quite minimal.

6.1.7 configuration of wildlife management zones

One of the surprising things to come out of the Nazinga experience is that the shape of the wildlife management zone and the location of major drainage lines, hills and different soils within the boundaries play very important roles in determining the annual production that is possible at the site.

This is because large wild herbivores in West Africa tend to avoid human activity, especially poaching, with the result that all around the perimeter of the wildlife area there will be a low-density zone that may vary from 1 to 5 km, depending upon the degree of real involvement of the surrounding villages. At Nazinga, in this low-density band, wildlife populations were only 10% of those in the central protected area. Thus, if the outer boundaries are irregular, the central high-density area can be significantly reduced, with a resulting reduction to the annual offtake possible. Enclaves create particular problems and impact very negatively upon the production at the base of economic benefits.

As well, bearing in mind the above fact, where wildlife boundaries follow along a river, the flood plain is rendered of relatively little use whereas it would otherwise provide pastures for concentrated herds in the dry season.

There is a tendency for ungulates to concentrate on «white» clay-based soils along the river in the dry season, but they move off rapidly on to the more fertile «red» lateritic soils after the first rains. This must be taken into account when organising and evaluating wildlife management potentials.

6.2 Socio-Ecological aspects

6.2.1 Improvement of the methodology for developing a protected area management plans

On the basis of experiences raising up from CWM projects in the region (Mali, ML1 ; Benin, BN1 ; Burkina, BF2-3), different new approaches are being used for planning the management of the reserves and surrounding lands, as follows :

- a) Proposals of other productions for increasing the benefits from wildlife management, outside protected areas :
 - bee-keeping is actually promoted in most of sudano-sahelian case studies. In Mali, Burkina Faso, Niger, Benin, Togo, the revenues generated for local people are around

65,000 CFA/family/year, which is more the threshold of poverty estimated at 52,000 CFA/year.

- breeding of grasscutter. It is becoming more and more frequent on the basis of the examples from Benin, Ghana, Togo, and Nigeria. According to John, J.M. and Roland A.K. (1995), the captive rearing of grasscutter is simple and easy to implement by local people. It's also an efficient tool for combating poverty, particularly in the wooded savannah zones, in most coastal countries.
- village forests management in the sudano-sahelian is providing enough firewood to be sold in neighbouring towns at interesting prices that can be partly recycled in reforestation issues, and partly for improving peoples well-being.

b) Activities relating to a participatory planning of protected areas, for an effective involvement of local people : establishment of development infrastructure (paths, salt marshes, water points, etc), drawing up of integrated development master plans, installation of surveillance mechanisms, building of exploitation infrastructure, biodiversity ecological monitoring mechanisms.

c) Activities relating to natural resource management in villagers' lands in order to avoid over-utilization of reserve resources by neighbouring people, and to provide them what they will frequently need into the reserve (NE1, SN1, MR2): building of contour bunds, pasture land development and management (access corridors, water points), creation of water reservoirs and development of marsh lands.

d) Activities relating to sustainable exploitation of soils surrounding the reserves in order to avoid a lot of clearing of lands (SN3, GH1, NI5): soil protection and preparation techniques, integration of agriculture/animal husbandry, agro-forestry actions, diversification of productions

e) Activities relating to services before and after agricultural production (BF1, NI2, BN1): Savings and Credit Fund, Cereal banks, supply.

6.2.2 Improvement of the living standards of local people

Almost all the CWM projects have set the goal of improving living standards for the local people, with the aim of generating active participation in efforts towards conservation of the park. Usually, the ((SL2, TO1, GA1) objectives set are:

- promote income generating activities,
- increase agricultural productivity
- enable villages to benefit from the utilization of resources held in the park, and its immediate vicinity.

The activities planned by Naturama (Burkina, BF2) to generate income in villages near the Kabore Tambi national park, are selected with full villager participation, using a simple analysis scale. This scale focuses on economically profitable and ecologically sustainable

actions. This analysis revealed the following activities as viable options : dry season gardening, modern beekeeping, straw gathering and sale, and poultry farming. For example, bee-keeping produces between US\$120 - 300/year to one bee-keeper, which is enough to combat poverty in most villages where annual revenues are around US \$ 60. Also, bee-keeping increases rural jobs for at least 5% each year in this zone (NATURAMA, 1996).

At the Nazinga Game Ranch, Konaté Koalo (1997) reported that in 1989, the income generated was US\$ 83,400, of which US\$ 47,000 were paid to neighbouring communities, including US\$ 36,000 for local employees salaries. Globally, the increase in the per capita income of local people due to income generating activities planned by the project was estimated around 7% per year, more than the 5.6% reported at the national level.

The second objective (increasing agricultural productivity) aims to meet the needs of the local people by improving the productivity of their occupied land, so as to relieve pressure new land that would compete with the park (Niger, NE1). Activities include organic manure promotion through composting, agro-forestry practice, dissemination of soil and water conservation techniques.

For the sharing of the benefits of the park, some management plans (Burkina, BF4 and Benin, BN1) have included the following actions (or proposals):

- authorize small game hunting in surrounding land,
- transfer 30 to 40% of income from hunting-safari, fishing, and tourism to neighbouring communities, through a Collective Interest Fund (CIF) managed by an intervillage management committee of the park,
- prioritise use of local people for carrying out development, surveillance and tourist activities.

Box N°3. The TIWAI island wildlife sanctuary Project in SIERRA LEONE

It's part of the Gola Forest Conservation Programme, funded by the New York Zoological Society. The objectives of the project is to protect and conserve the flora and fauna of the Tiwai Island ecosystem (1200 ha) and the immediate environs. It is considered that this initiative have brought a significant contribution of wildlife to local peoples well-being.

The origin of the practice is purely traditional and based on the conservation and rational distribution of resources. It was evolved around the concept of respect for traditional leaders and authority in general.

Progress to date :

Environmental aspects: physical restriction to entry on the island, traditional conservation measures such as restriction of farming and hunting activities are positive environmental management principles adhered to over the past six decades or thereabouts.

Economic aspects: In an effort to improve people's perceptions of the forest, a handicraft centre was established to enable the local communities to sell their handicrafts to visitors.

Villagers from the two adjacent chiefdoms were employed as interpreters, guides, cooks, labourers, messengers etc. Before the 1997/1998 civil war in Sierra Leone, the increase in the annual number of visitors to the small village of Kashana (population 120) increased economic activity in terms of selling items.

Social aspects: interaction with visitors, conservation education lessons and video shows are activities in which the villagers were totally involved before funding was suspended in 1994. Barrie Secondary School benefited from a few guests speakers (mostly Peace Corps Volunteers) on conservation. The increase in the working population, and the presence of visitors encouraged social activities like football matches, dances and video shows for public viewing.

Another important result is the gradual involvement of researchers in biological sciences, anthropology, limnology etc. In the conservation and development of the Island as Sierra Leone's first Wildlife Sanctuary gazetted in 1987.

Source : Aliou, K.E., 1995, in FAO bulletin Wildlife and Nature. Vol.11, N°3

6.2.3 Improvement of anti-poaching systems

The activities undertaken to control poaching of wildlife within CWM programmes are different from conventional approaches, adopted by Governments. These are:

- setting up of a Community conservation team within the structures of the project, made up of community workers and a unit leader (Ghana, GH2 ; Burkina, BF3 ; Mali, ML2). This team receives training centered on establishing good neighbourly terms with the populations.
- setting up of appropriate community institutions, especially an advisory committee on the management of the park, resource management committees at parish level and village management committees, that collaborate with the project team.
- development of environment education at local school level.

This makes it possible for the villagers to participate in decision making aiming at combating poaching, based on a participatory diagnosis and to build self-discipline for the implementation of the measures that are adopted.

These methods have improved significantly communication between the park and the communities. Instead of convening mass meetings, the projects teams deal with smaller groups that are appropriate, representative and democratically elected. They address issues on the conservation of the park, the interest of the populations, and find solutions against poaching.

It is commonly accepted that CWM initiatives have generated significant impact on poaching. However, no statistical data were provided by case studies to confirm this trend.

6.3 Improvement of the methods for projects Design

An analysis of case studies reveals some progresses this last decade in the methods used for projects design. Four categories of methods can be summarized from case studies in the region : a technocratic method, a participatory method, an ICDP method, and a decentralised project method.

6.3.1 The technocratic method

In the past, wildlife management projects were designed according to a technocratic process, which consisted in using ecological data (wildlife, flora, habitat) as well as socio-economic ones (surveys, reports), in order to draft a project meant for solving a conservation problem. Populations were not involved in this method, the administration called for them only after it benefited from a financial support. This situation prevailed until the period 1970-1990 in Niokolo koba (Sénégal), Taï (Cote-d'Ivoire), Penjari (Bénin), Baoulé Loop (Mali), etc.

6.3.2 The ICDP method

The Integrated Conservation and Development Project (ICDP) method, based on participation and increased accountability, aims to manage resources inside and outside protected areas in a more sustainable manner, and increase their value to local communities. These approaches should be closely associated with land management and agro-pastoral activities and the establishment of social and economic infrastructure. Management tools include integrated management and conservation plans of protected areas, combined with land management plans of neighbouring communities (BN1, CI3, MR1, BF2). The procedure for designing these combined plans is more complex as it involves a process with full people's participation from the beginning to the end.

6.3.3 The participatory method

The experience of community wildlife management (CWM) projects made for progress in projects design methods. The new method is based on a "participatory diagnosis" which often uses participatory rapid appraisal "PRA". "Participatory Rapid Appraisal (PRA)" serves as a tool for studying the socio-ecological realities, understanding the needs of neighbouring villages, potential sources of conflict and for involving the populations in the project identification. This method is used in PURNKO project in Niger (NE1), PNKT project in Burkina Faso (BF3), and in Ker Cupaam project in Sénégal (SN3).

The participatory diagnosis is followed by a project design period based on the initial decisions taken in co-operation with the populations.

This period is followed by the return of the project to the populations and the partners involved and by the evaluation of the project reliability. The project is revised before being financed and implemented.

6.3.4 The decentralised project method

In this case, the initiative of project design is taken by local communities with a technical or financial support from specific partners (NGOs, donors). The idea of the project should be placed in a context of a devolution of natural resources management, and the possible responsibility of local people over wildlife issues, and the hope that such project would generate interesting outcomes for the local development. Such cases are very young because the policy of decentralisation is being implemented actually in most of the countries, and a reluctance exists towards decentralised management of wildlife. This is the case for the decentralised management of the Kabore Tambi National Park in Burkina Faso (BF3) that has been given as a concession to the foundation NATURAMA, in order to prepare local people for taking more responsibility later. It is also the case of the Kër Cupaam women's project for the conservation of the Popenguine Reserve in Senegal (SN3). In these 2 cases, project design is orientated towards people's viewpoints and interests, even if they consider that conservation should be achieved at the same time in order to respect the Government willingness.

As regards national parks and other wildlife reserves, there is generally a combined management method of reserves and riverside land which takes into consideration other possible productions in villages, in order to alleviate poverty and improve the well-being of the populations. In non protected more options are available : game ranching, game farming, wildlife sanctuary (GH2, SL1, NI2), village forest management, etc.

Some of the approaches and techniques used for needs assessment and problem identification (PRA, field surveys, Geographic Information System) have positive impact on project design processes.

6.4 Experience in Monitoring and Evaluation of CWM projects

Monitoring and evaluation (Nigeria, NI1 ; Burkina, BF2 ; Benin, BN1) helps re-adjust actions with respect to initial objectives, or to move forward further if they are on the right track. Monitoring-evaluation may also highlight other problems to which solutions can be found. Actions can therefore be planned and implemented anew.

The key question is how to move from the former technocratic ways of monitoring and evaluation to a participatory system. Abbott, J. and Guijt, I. (IIED, 1997) have defined and analyze three categories of participatory monitoring of the environment: methods based on the visualisation techniques of participatory Rural Appraisal, those that use oral testimony to

uncover patterns of environmental and social change, and those based on adapting methods of ecological assessment to make them, more accessible to local people.

In West Africa, the issue of participatory Monitoring and Evaluation has been examined differently by natural resources management projects :

- German-funded projects (CI2) have adapted the method of « Planning per objective » called ZOPP, for all the project cycles : inception, implementation, monitoring and evaluation. Other projects found this method also adapted to their needs (BF1, BN1, NE1, GB2, MR2). It consists on using indicators identified during the inception, for measuring the performances of operations towards achieving the expected outcomes. These indicators are identified in such a way that can be used by local people for a self-monitoring and self-evaluation before an external M&E based on their findings.
- Many managers are used to an extension system introduced by USAID and called « Training and visit », which adapted a monitoring method (GA1, NI2, ML1, ML2) based on a mixture of oral testimony and ecological assessment. This method works also with a first internal self-monitoring, followed by an external one.
- The World Bank projects in Burkina (PNGT), Mali (PGRN) and Benin (PGRN) have initiated a new system of technical audit :
 - socio-economic progress (through a permanent contract with a survey corporation, in order to know if the well-being of local people is improving or decreasing),
 - local ecological progress through a sample of sites determined in the project locations (followed by a contractor who will respond on natural resources increase or decrease),
 - wide ecological progress using Geographic Information System, with a crosscutting on thematic data (soils, demography, forest, etc) in order to ensure the whole region of the project is ecologically improving.

Box N°4. The pilot project on Participatory Management of Natural Resources and Wildlife (GE.PRE.NAF)

The GE.PRE.NAF project is a subregional project implemented jointly in Burkina Faso and Côte d'Ivoire since 1996. It is sponsored with grants from the Global Environmental Facility (GEF), the Kingdom of Belgium, the Ivorian and Burkinabè Governments and the populations. The financing amounts to US \$ 7 millions for the Ivorian side and 4 millions for the Burkinabè side. The financing is administered by the World Bank.

The purpose of the project is to help promote a participatory management of biological diversity in its intervention area through the adoption of a community-based strategy which combines environmental protection and local socio-economic development.

The activities carried out are focused on the organization and training of village associations, the establishment of inter-village committees on 1 site in Burkina Faso and 2 sites in Côte d'Ivoire. The progress made in terms of community wildlife management mainly concerns: the carrying out of a Joint Initial Diagnosis of Village Natural Resources Management; the protection of wildlife populations, the execution of a pedestrian inventory of wildlife.

The indicators for monitoring and evaluation cover 4 major groups of factors : institutional, ecological, socio-economic and project implementation. The organization of monitoring is initially under the responsibility of the Technical Support Unit (TSU) and data collection would be done at two levels. First, simple field and village data collection techniques would be used to collect the bulk of monitoring information. Second, more complicated techniques, such as aerial surveys and analyses of satellite images would be undertaken by technical specialists contracted by the TSU.

It is intended that the evaluation process will focus on : (i) habitat management and biodiversity conservation ; (ii) natural resource utilization, (iii) socio-economic development, (iv) project management and capacity building, (v) analysis of the viability of project initial strategy.

Source : World Bank, 1995

A lot of successes seems to be achieved through these methods. However, the important constraint remains the identification of indicators that should be simple for illiterate people, and which use will have affordable costs.

For the monitoring and evaluation of management plans, ecological parameters are used to measure the improvement or degradation of biological resources: indicators used include the presence of species, their frequency, abundance, distribution, reproduction, etc.

However, relevant and effective socio-economic indicators (which data would be easy to collect and process) must also be considered. In fact, it is very important for any project to be informed on the socio-economic trends in the region, and the impact of the project's conservation activities on the living standards of the local populations. Many CWM projects have struggled to develop simple and effective socio-economic indicators.

6.5 Experience in the Management of CWM projects

With regard to the protected area development and management plans, experience in the region indicates there are two possible management methods, as follows :

- A « top-down » approach to designing a management plan based on collection and analysis of modern scientific data and information with the aim of developing a pristine park, followed by a quest for collaboration with local people on the basis of the selected management modes. This option considers that since the park is state-owned, then it certainly belongs to the state to choose the management mode and to call for the populations to "participate" (GH3, SN2, TO1, LI1).
- A « bottom-up » approach where management of the park and buffer zone areas is decentralized. Local people participate actively through elected representatives, under community structures. In these cases, the state entrusts the management of protected (and non protected) lands to local communities, based on negotiated conditions (GH2, BF3, NI5).

The first approach has not been entirely successful, and most of the concerned protected areas were seriously degraded : Baoule national park (Mali, ML1), Comoe national park (Côte d'Ivoire), Niokolo Koba national park (Senegal, SN2), etc.

In the 1990s, the national park of Keran (Togo) seemed to be a unique happy exception, being a strong state-driven park with a special richness in wildlife. Unfortunately, when the political regime were weakened during the democratization process, local communities and poachers rushed into the park and destroyed its resources in a few weeks, as a kind of revenge against the former strong park managers.

This first approach did not recognize that, the state's limited financial and human resources would restrict its ability to manage protected areas effectively. Furthermore, this approach did not recognize that local people cannot participate freely in protected area management activities because of their need to carry out basic and urgent survival needs.

The second approach is more satisfactory. This is confirmed by today's macro-political contexts in most West African countries, marked by decentralization¹⁰, democratization, structural adjustment which involve a redefinition of the role of the state and greater empowerment of communities. Thus, this option is now more appropriate.

However, given the rapid and far reaching economic changes occurring throughout Africa , as a result of market economy and globalisation policies, individualism is gaining ground in most communities. It must be acknowledge that the archetypal African community is fast disappearing. There are increasingly few areas which can practice community management based on traditional religious and social principles. The South should not adopt impetuously the approaches and policies implemented in many countries of the North. These countries could indeed learn some lessons from the South's experience.

¹⁰ The following box N° 5 deals with an example of decentralized management of a national park, through an NGO that would build the capacity of local people.

Box N° 5. Decentralized Management of the Kabore Tambi National Park

The project on "*Gestion Décentralisée du Parc National Kaboré Tambi*" was initiated in 1994 in Burkina Faso by a national environmentalist NGO called "*Fondation des Amis de la Nature (NATURAMA)*". It is located in the southern part of the country, 100 km away from Ouagadougou, the capital city.

It aims at ensuring the conservation and sustainable exploitation of the Park to the benefit of local level development and national economy while being a model for the education of national managerial staff, decision-makers and the public at large on the importance of getting communities and civil society involved in the implementation of biodiversity conservation policies and programmes.

To that extent, and within the new stimulating national policy on wildlife management, Government has entrusted NATURAMA with the park through a concession of ten years renewable. The objective planned with the 23 neighboring villages is to regenerate the park and improve local people's living standards, thus demonstrating a social, ecological and financial sustainability based on communities.

The project which was planned in three phases of 3 years each has carried out the following activities in its first two phases: production of monographs and village development plans; organization of village and inter-village associations, environmental education activities in primary and secondary schools of the provinces bordering the Park; formulation of micro village development projects. These projects include bee-keeping, grasscutter rearing, gardening, soil conservation, micro-credit for women, touristic development, etc.

The project has succeeded, through the execution of phases I and II, in making some progress at the environmental level via reforestation actions and villages forests; at the socio-economic level by improving the incomes of the riparian populations; at the biophysical level by reducing poaching and grazing within the park.

The project is different from the other projects in as much as this national park is the only one which has been granted to a national NGO in West Africa. This status enables to implement the concept of "decentralized management of a national park".

Source : NATURAMA/WWFUS, 1996.

6.6 Wildlife management legislations

Forest and wildlife code reforms are very much the topic of debate in most West African countries. Initiatives are underway to grant rural populations greater control over natural resources. These changes promise to encourage the maintenance and regeneration of farmed parklands, fallows, and community forests. For example, in Burkina Faso's new wildlife legislation, the person who breeds wildlife species will be recognized as the legal owner of the products (article 151 of the *code forestier* of Burkina Faso, Law N°006/97/ADP of March 17, 1997). This represents a radical departure from some of the earlier codes that declared the sole ownership of the State over all wildlife specimen. It should be noted that this new policies and legislation in Burkina Faso, are encouraging the creation of some community wildlife management initiatives, such as a CWM project initiated by an association named ACMVG in the Sissili province, private projects of grasscutter rearing near Ouagadougou and ostrich breeding in the sahelian zone. This context has also permitted the concession of the Kabore Tambi national park to the Foundation NATURAMA, for implementing a decentralized management projects (BF3).

While these legislative changes are important in most countries to cope with structural adjustments and other macro-economic options, they are only marginal modifications in the basic nature of the law. The state forestry service still retains in most cases of forest code reform the critical role of enforcement of legislative edicts. Much will depend on the state's ability and willingness to retrain its agents in a new ethos of participatory resource management (McLain 1991).

While recent forest code reforms are important, they have not gone far enough towards promoting a true "co-management" approach between rural civil society and the State, the central precept of the *gestion du terroir* approach. Forest code reforms have not yet meshed with the discourse that seeks to increase rule-making and enforcement capabilities around natural resources of rural communities.

Similarly, rural communities must have the powers to enforce arrangements such as the *tongo* in The Gambia that serves to reduce premature collection and even theft of forest products. While some projects in the Sahel are presently experimenting new forms of micro-territorial management, these are small islands of innovation. Local level resource management arrangements require some form of state sanctioned protection. One step in this process is the enactment of national "framework" laws that facilitate increased local-level control and responsibility over resource management. These types of laws, while establishing global guidelines, endow local institutions with the latitude to respond to resource degradation particular to their regions instead of being bound by potentially inappropriate and rigid nation-wide governmental rules and edicts.

"Framework" laws set out broad statements of principles and rights. The *Code Rural* in Niger serves much this function. Its purpose is not to spell out in detail the tenure arrangements appropriate in particular situations. Its purpose is to indicate fundamental principles which must be honoured in local level legislation. A framework law should present options, a sort of "menu" of different ways in which forest resources can be managed by individuals and households, by communities, by non-governmental organizations and business, and by the state (Tabachnick and Bruce, 1993). For example, framework legislation may spell out the variety of techniques that communities and individuals may use to meet general criteria, but give local communities the latitude to work out the precise definitions.

7. SOME WEAKNESSES IN EXISTING KNOWLEDGE

Major weaknesses in existing knowledge in CWM that should be considered as research priorities include issues related to wildlife sciences, economic data on what CWM can generate for local people, socio-anthropological surveys for understanding present day cultural realities in various contexts and ethnic groups, harmonization of wildlife legislations in ECOWAS countries to cover broad aspects such as hunting, protected areas, migrating species, etc.

The follows weaknesses were raised by case studies :

- a) The types of incentives that can ensure a sustainable mobilization of local people : income generation activities ? infrastructures ? ownership/decentralization ? bushmeat ? (CI3, IS2, GH3, TO1).
- b) The biology, ecology and dynamics of some wildlife species : *Alcephalus buselaphus*, *Damaliscus lunatus*, *Acinonyx jubatus*, etc. (BF1)
- c) Inventory of traditional uses of wildlife (medical, religious, cultural, etc). (ML2)
- d) Simple and effective tools for communities to establish local management plans (BN1).
- e) Economic profitability of wildlife exploitation with compliance to the socio-cultural uses (CI3).
- f) Models for the establishment of a profitable game production enterprise (Burkina, BF4).
- g) The legal status of non protected areas under CWM (GH2).

Other needs include the following :

1. development of public awareness programmes, which should not aim at teaching them ready-made recipes. Local people need to be informed and choose between alternative livelihood strategies, low-cost sustainable use technologies, etc. From the former concepts of education, we should move to a concept of communication with local peoples ;
2. better definition of buffer zones and migration corridors ;
3. consideration of the living conditions for protected area personnel ;
4. addressing the indifference of local authorities in the exploitation of wildlife ;
5. understanding the causal links between poaching incidents, wildlife and hunting boons ;
6. relative disadvantages and advantages of classical protection management methods against participatory, community-based management approaches ;
7. recognition of the potential economic contribution of wildlife and protected areas.

Other important considerations include :

- considering what sort of effective solutions there are to the problem of monitoring and ensuring the integrity of transboundary national parks (NE1, BF4, BN1, CI3) ;
- clarifying the type of protected areas which should be promoted ;
- debate given to protected area criteria, such as minimum size, to ensure the continued survival of particular species.

8. REGION-SPECIFIC PERSPECTIVES

We already pointed out how proud West African communities are usually towards their cultural living style, despite the strength of global market driven by the North. countries are known as the best conservationists of traditional cultures.

CWM initiatives might benefit from this reality, if policy-makers and managers pay attention to local values and indigenous knowledge. Initiatives like « sacred groves project » in Ghana, Mamunta-Mayoso sanctuary in Sierra Leone created by a traditional chief by-law, structured hunting associations in Burkina, Mali, Guinea, Senegal and the Gambia, are still viable to show the path in this region because the traditional community institutions are not yet totally destroyed.

Moreover, West Africa has a diverse colonial heritage from French, English, and Portuguese. The different colonial regimes had different attitudes to conservation which manifests itself today in the policies and legislation which since independence have not been significantly reformed.

This context provides rich lessons¹¹ to be shared regarding wildlife conservation issues in the whole region. For example, in Ghana and other anglophone countries, Grasscutter is considered as a pet, and not classified between wildlife species protected by the legislations. So it can be hunted anytime by people without any restriction. In Cote d'Ivoire and other francophone countries, Grasscutter is under wildlife legal status and submitted to hunting regulations.

8.1 The positive outcomes of the region

The perspectives that are specific to the region in terms of CWM have to be assessed at the regional (16 countries), or inter-states levels of decision making and action. These levels of assessment can be defined as action synergy levels. In this regard, action is possible only when policies and strategies are made coherent with a strong political willingness. An example of this is the management of transboundary resources.

The numerous conventions, especially those related to biodiversity and desertification control, ratified by all countries in the West African region have paved the way to the empowerment of communities in natural resource management in general, and wildlife resource management in

¹¹ Unfortunately, relevant data on such richness were not collected and centralised for our analysis under this survey.

particular. This has been effected through wide consultation processes required for the ratification of these conventions. Transboundary resource management is part of this through the International Convention For Combating Desertification. This is indeed appropriate given that the CCD employs participation and partnership as the corner stone of its strategy for genuine sustainable development.

Conventions are international provisions that lay the foundation for globally coherent actions. It should also be mentioned that the critical and multiple challenges facing the region for the past three decades and the failure of the top-down strategies have contributed positively to these conventions. The process for the development of PASR/CILSS (sub-regional Action Programme) of desertification control includes a sub-regional framework for community wildlife management under the transboundary resource management component.

Transboundary natural resource management is a valid and necessary approach, but different countries sharing the same wildlife resources across borders, often have contradictory wildlife conservation policies. This makes management difficult and can become a threat to the survival of some species.

The GEF funded project for Mount Nimba Conservation (Cote d'Ivoire, Guinea, Sierra Leone), the EU funded project for the integrated conservation and development of the Niokolo-Badiar region (Senegal, Guinea), the GEF-Belgium funded project (GEPRENAF) for the participatory management of wildlife and natural resources in the Comoé region of Burkina Faso and Cote d'Ivoire (BF5-CI3), the regional project for protected areas management on common borders of Benin, Burkina, Niger, submitted to EU (NE2) are examples of co-operation in the field of wildlife management.

A great deal of community management issues have been taken into account in all these projects. They may be interpreted as expressions of clear willingness of countries to go ahead together through important demonstrative regional projects. These projects have adopted a participatory and partnership approach as shown by the case of the GEPRENAF project (see Box N° 6). There is also a hope that they will contribute to the global effort of combating poverty in the region.

Box N°6. How the GEPRENAF project adopted participatory and partnership approaches.

GEPRENAF is an interstate project between Burkina Faso and Cote d'Ivoire aiming at participatory management of wildlife and natural resources in the common frontiers of the 2 countries (case studies BF5 and C13).

For participatory purposes, project organization and management systems have been planned to evolve in three phases, depending on the development of local skills and management capacities. In phase I, local Village Organizations (VO) would be trained by a Technical Support Unit (TSU) to be recruited under the responsibility of a national Project Coordinator (PC). In phase II, VOs at each site will group themselves into informal inter-village associations AGEREF¹². This inter-village committee would gradually take the lead in planning and decision-making in project activities. Phase III would start once the communities are ready to formalize the legal creation of AGEREF.

For partnership purposes, project has developed at local levels « Provincial Technical Consultation Group (PTCG) with all the provincial stakeholders, thus allowing them to follow project activities, and gather their inputs. At national level, there is a National Steering Committee (NSC) comprising interested ministries, NGOs, donors, and private sector operators. A Scientific Consultative Committee has been added to provide more chance of success, in considering the opinions of scientific institutions for better management.

In the context of the region, desertification control and wildlife management are transboundary issues of environment preservation that seems apparently dichotomic : combating desertification is usually synonymous of food and water security, so that it mobilizes everybody ; which is different from wildlife conservation that has a pre-requisite of tourism promotion for foreigners, so that it seems far from peoples needs. In fact, it is being realize that food security is not « cereal security ». Wildlife can provide bushmeat (and touristic profits at the same time), thus contributing to food security.

West Africa presents a wide range of ecosystems, which gives the opportunity to confront methods and approaches that are implemented in socio-cultural conditions that are typical to the region. While some wildlife species can adapt only to the conditions of the Guinea forests (pygmy hippopotamus, cercopithec), other species can live only in semi-arid and arid lands (Addax, Oryx). Each ecosystem has its specific biodiversity : some wrong perceptions tend to consider that biodiversity is concentrated in tropical humid zones, so that arid lands Biodiversity is being neglected in international interventions.

The variability of ecosystems, combined with sound community wildlife management, should enable the development of a diversity of touristic venues and products (landscapes of wetlands, forests, Atlantic beaches and sahelian sand dunes, etc). A consequent profitability would ensure an autonomous sustainability of wildlife management, for conserving the diversity among and within species as well as the preservation of associated habitats.

The Sahelian part of the West African region has initiated a process known as Sahel 21, with the purpose of building consensus among Sahelians on the vision of their common future. This should result into a common societal project in the Sahel. This exercise is prioritizing

¹² AGEREF is a french acronym and stands for « association pour la gestion des ressources naturelles et de la faune »

community natural resource management as a preferred option for nature conservation and sustainable development.

At the level of the Economic Community Of West African States (ECOWAS), there is an increasing interest in the development of supranational policies and programmes, enabling states to coordinate their efforts towards wildlife development. ECOWAS has already initiated a regional process for setting up a strategy on Wildlife management, targeted mainly on the promotion of tourism, and other economic issues.

Other inter-States regional institutions are also interested in wildlife management issues : the « *Conseil de l'Entente* », the Liptako Gourma, the « *Autorite pour la Mise en Valeur du fleuve Senegal (AMVS)* », the « *Union Economique et Monétaire Ouest Africaine (UEMOA)*¹³ ».

Without highlighting the multiple rural development experiences, the « *gestion des terroirs* » approach, also referred to as land-use management, should be mentioned as a specific « *bottom-up* » approach in rural development adopted by the new generation of projects in the region. This approach is influencing positively the acceptance of community-driven activities such as CWM.

¹³ UEMOA is a monetary union grouping Burkina Faso, Benin, Niger, Mali, Senegal, Ivory Coast, Togo and Guinea Bissau. Its headquarters is based in Ouagadougou, and it has specialized units : West Africa Development Bank (BOAD, Lomé), « *Bourse des valeurs* » (Abidjan), etc.

Box N° 7. Presentation of the *Gestion des terroirs* project (Burkina Faso, BF1)

« Gestion des terroirs » is a bottom-up approach of « community-based land management » through local people organized in village committees to whom a progressive devolution of natural resources management responsibilities is undertaken by the state. This approach was initiated in Burkina Faso in the year 1990s, and implemented nation-wide with a multi-donor program called PNGT.

The purpose of the program is to stop natural resource degradation by getting the local populations shoulder increased responsibilities in the 8 experimental provinces in managing their natural resources. The project has a wildlife component through the management of the biosphere reserve of the hippo pond, the Maro forest, and the wildlife reserve of Nabere.

The progress made by the project is considerable. Thus, it is being used as an example for the dissemination of local level resources management approach in the other provinces of the country and similar projects in neighbouring countries mainly through the World Bank.

Socially, the PNGT has managed to establish village committees for local level resources management that involve all segments of the society, i.e, farmers, pastoralists, fishermen, hunters and lumberjacks.

Economically, the PNGT has increased the incomes of the target populations through income-generating activities (livestock rearing, exploitation of wood and charcoal, beekeeping, market gardening, cottage industry, etc.). Village plans for local level resources management have been developed by the populations with the support of mobile multi-disciplinary teams, and a forest-wildlife technical team (ETF).

On the environmental plane, the PNGT has set up a system for a social and ecological monitoring of the local level realities under the responsibility of the Scientific Research, and the *Institut Geographique* of Burkina equipped with an appropriate GIS unit. This mechanism provides a social and environmental audit attesting if human well-being and natural resources are improving during the project life.

Source : MARA/PNGT, 1992.

Most countries have developed National Action Plan for Environment, which constituted frameworks for integrating land management projects. Through these NAPE promoted with the support of the World Bank in the 1990s, it was usual to include a specific program for the management of national heritages such as national parks and other protected areas. These NAPEs have come over the National Forestry Action Plans that were being formulated in most countries. It is reported that neither under NAPEs, nor under NFAPs, no funds were found for protected areas management projects. Finally, it seems that wildlife management stakeholders have come to confusion in the processes of NAPE and NFAP.

8.2 Points for which West Africa is lagging behind other regions

In West Africa, as already pointed out before, a mixture of causes: lack of political commitment, inadequate financial resources, limited potential for tourism, and conflictual situations with peripheral human populations have meant that most of the region's wildlife reserves are only « paper reserves », with little effective management. During this survey, we noted the major points for which West Africa is lagging behind as follows :

1. The lack of specific framework for regional coordination of wildlife management visions and policies, despite the existence of organizations such as ECOWAS, CILSS, and UEMOA. This situation does not provide opportunities to explore CWM issues, and integrate it into the broad discussions about the development of the region. This framework exists in the SADC region in southern Africa. In West Africa, it was attempted through the 5 Countries of the « Conseil de l'entente¹⁴ » in the 1970s, but at present day, it is abandoned for unknown reasons.
2. The poor wildlife management options : no game farming, just a starting process on game ranching, weak organization of hunting issues in many countries, no promotion of livestock rearing together with wildlife species, etc. Even the breeding of crocodiles, ostriches, etc, is just on thoughts.
3. The poor promotion of tourism due to : lack of trained people, lack of adequate promotional structures, etc. For instance, in 1990, the most visited reserve of the region was the Nazinga Game Ranch with only 7000 tourists. This is damageable to the profitability of CWM initiatives, because touristic options of wildlife exploitation are financially more interesting than only bushmeat.
4. The poor involvement of private sector in wildlife management : poor construction of hotels and other local infrastructures, lack of marketing towards foreign tour operators, very low Safari tours, etc.
5. The total closing of hunting in many countries. During this survey, we experienced legal constraints to select CWM in countries where hunting is not legally possible at all since many decades (Cote d'Ivoire, Niger, Mali, Togo). This is not a win-win situation, because safari hunting is an important economic activity since it brings in significant amounts of foreign currency in the form of taxes and earnings for hotels, restaurants, bars, travel agencies, air companies, craftsmen, car renters, etc. In other respects, subsistence hunting has an important contribution to food security (bushmeat), and other socio-cultural needs (pharmacopoeia, handicrafts, etc). Fortunately, new laws are being passed these last years in order to open and regulate hunting instead of total closing that can't encourage private sector and communities in wildlife production. However, it should be noted that there is a lack of experience in managing hunting operations in a lot of countries.

¹⁴ The « Conseil de l'entente » has been composed by 5 francophone countries (Cote d'Ivoire, Burkina Faso, Niger, Togo and Benin) in the period of their political independances in the 1960s. It has addressed wildlife issues under its policy for the promotion of tourism. A common touristic visa for the 5 countries (similar to the Schengen visa in Europe) is actually working.

9. REGION-SPECIFIC INTERPRETATIONS OF KEY TERMS

This analysis addresses the definition of the word "wildlife". It is common knowledge among West African societies, that wildlife is usually considered as "bush meat". It belongs to nobody in particular. People can therefore have free self-service. This analysis though including some truth, should be supplemented so as to have a better assessment of the situation.

For many societies, wildlife has always represented a food resource but with a cultural, religious or medicinal purpose. In this context, it belonged to the community whilst in the limits of its territory and the game brought home by a hunter was shared with the whole community. There is here an explanation of the customary law recognized by all, a law that originates from the range of values that ensure cohesion in the community. The customary authority (land chief, village chief...) thus becomes the keeper of social cohesion.

9.1 Definition of « community »

Influences that are external to the region (influences by religions, modern or market economy, the population and cultural melting pot) are so numerous that defining this term has become quite complex. However, a kind of regional consensus can be found through the definition given by the « gestion des terroirs » approach, which is community-centered, and which defines "community" as a group of people living in the same village or a group of villages, with a common past, who share the same potential of natural resources from the same limited space, and who have the feeling of sharing a common destiny.

This definition however fails to address all the issues relating to CWM because of the so heavy external influences experienced today. These influences have modified the traditional systems of values, philosophical thoughts, and many other anthropological elements that constitute the very essence of community in the past. Needs do change in time and space, and it is increasingly obvious that only the feeling of sharing a common future can still bring people together. The past remains indeed vivid in many situations, but strong migrations and slow or rapid assimilation processes of some ethnic groups undermine the foundations of the past.

As a result, individualism now prevails in rural areas. Development is driven by competition. The West African region is thus torn between the need to keep ancient but vital sources for its identity, and the realism of a pitiless market economy it can't escape. Today, the community depends on a common life, a common solution for a common future. The perception of the community in the region is therefore the synthesis of indigenous factors specific to the region (rapid population growth, increased scarcity of natural resources, desertification) and exogenous factors (religions, market economy, globalization, inputs from new technologies, etc).

In many cases the local populations situated about remaining wildlife areas do not operate as a community in the sense most used in the western context, due to historical, ethnic, religious or exploitation-mode differences. Recent demographics are such that often the populations surrounding wildlife areas have recently moved into the area or are migrants living elsewhere for a large part of the year. Recent immigrants and migrants are often at odds with the original populations who have a greater vested interest in the sustained and profitable management of wildlife resources. Urban inhabitants originating from villages about a given site and temporarily-posted government officials often have a preponderant influence upon wildlife use in rural areas although they do not live near the site. These «community» particularities, and the cohesiveness of the village and/or regional leadership structures in the area of a site can play a dominant role in the forms of exploitation and management that are possible today and in the economic scenario that results.

The "Involvement of local communities" seems to be discovered in recent years (forgetting that most rural West African villages and/or ethnic-related institutions were quite involved in resource management before colonial and post-colonial governments de-involved them). What is meant today by the implication of local communities ? This might mean that the community:

- is asked to protect or participate in the protection of wildlife, with or without directly using it;
- supplies staff for central conservation areas;
- participates in decision-making for central conservation areas;
- protects wildlife and oversees village hunting in village zones;
- manages an annual quota for hunting by participating villages or by their clients (central conservation hunting guides' clients, or urban national and/or expatriate sportsmen);
- owns or rents the central conservation area from the government and sub-contracts the central concession to a professional partner;
- manages central conservation areas and/or surrounding villages hunting zones, directly providing services for national, expatriate and international safari clients;

These last levels are still theoretical in most West African countries, but the social and economic processes underway will tend to push towards the final levels, where the community manages or engages professional management for at least part of its wildlife resources; in line with a widening search to optimise benefits from all available resources.

One aspect that must be understood before assessing economics or planning wildlife management of a given area is that **all** villages and their authority structures about a given wildlife site must be taken into consideration. Otherwise the economic assessment will probably be significantly incomplete and in the case of management planning, neglected villages will be the base for poaching as they have nothing much to lose.

9.2 Definition of « wildlife » and « conservation »

Most of the West African legislations define wildlife as « all the wild species of animals living with freedom in the nature ». Usually It is added that « this wildlife is the property of the state ». This official definition is based on imported principles and systems of governance.

In traditional cultures, the definition of wildlife is linked to values : economic, socio-cultural, spiritual, ecological, and educational. In most of the local languages, the translation of « wildlife » is etymologically « bush meat ». This is the case in languages such as Moore (Burkina), Dioula (Ivory Coast), Bambara (Mali), Mandinka (Guinea, Sierra Leone, Gambia), etc. It means that upon centuries, wildlife was mainly food for local people. However, this is not exclusive because, some important other utilizations need to be considered : wildlife products are mixed plants in pharmacopoeia (elephant skin is used against ulcer, the feathers of partridge are used against jaundice, etc), in mythico-religious ceremonies, in conflicts resolution between neighbouring villages, etc.

Whilst non-consumptive use of species by Europeans is primarily for aesthetic reasons, non-consumptive use of species by communities is often for religious reasons. However, they differ significantly in that the European approach promotes total protection of all species, whereas the West African approach promotes selective protection. Traditionally, beside religious rites and interdicts to hunt such or such species, or to use such sacred woodland, conservation under the different statutes be they colonial or current did exist. But here again, there a slight difference because the absence of legal texts in traditional Africa did not mean absence of rules of conduct based on shared values.

The modern wildlife conservation system based on different categories of protected areas (*Strict Nature Reserve/Wilderness Area, National Park, Natural Monument, Habitat/species Management Area, Protected Landscape/Seascape, Managed Resource Protected Area (IUCN/CNPPA, 1994)*) and legal prohibitions, draws from the colonial past and external schools of thoughts. Conservation become total prohibition of wildlife use in geographically limited areas.

Whilst there is still a cultural and traditional understanding of conservation amongst local communities, its foundations are increasingly undermined by the realities of the market economy and the necessity to meet vital survival needs. However, the most important fact to be noted is that there is still a pressing need for sustainable use of wildlife. In other words, to ensure that wild animals remain permanently available and contribute to meeting the diverse needs.

9.3 Definition of « Participation »

Participation entails many approaches in its field application. These approaches apply to any development operation and to CWM initiatives. The most notable trend to be identified is the one stating that participation is an approach that enables a target group to

participate in the decision making process in a project. Many of the new generation of wildlife management projects talk of participatory wildlife management. However, in-depth analysis and review of some cases show many diverging interpretations:

- Participation designed as an approach, a means to achieve a pre-established objective, that could be out of the priorities of local people. It is an instrumental approach that aims to utilize local people for externally-driven management, on behalf of international conventions or national policies and programmes : Kakum national park (Ghana, GH3), Baoule national park (Mali, ML1), W national park (Benin, Burkina, Niger, IS3), etc;
- Participation as a process aimed at ensuring effective empowerment of communities for long term local development issues. In this case, participation is a transformative approach that leads to decentralised management, usually by traditional or legal community organizations : GEPRENAF project (Burkina, Côte d'Ivoire, IS1), Boabeng-Fiema Monkey sanctuary (Ghana, GH2), Popenguine reserve project (Senegal, SN3), etc.

Concerning wildlife, it is difficult to give preference to one of the two forms of participation, though the latest seems to be the most interesting for the community. Another dimension to be taken into account in participation is partnership which brings to light known interests and the need for a synergy of action in order to achieve a common objective. CWM should be integrated with the empowerment of the community concerned.

Participation can also be analyzed through the position of each actors in the process. In other words, who participates in the project : local people? State agencies? NGOs? financial partners ? It seems obvious that when the management of resources is decentralized, it is the other actors who participate. In the absence of ownership or decentralization, local people don't manage, they can participate in the basis of determined interests. The sacred groves experience in Ghana shows that when resources belongs to local people, the psychological effect of ownership can already constitute a mobilizing factor, because people have paid attention to many things without putting ahead economic interests.

The tendency in the region is to prefer effective empowerment of the community. However, to date examples of actual empowerment of communities are fairly limited. But here again, any uncontrolled tendency to adopt this form of participation should be avoided, because the statistics are not willing to prove that this form of participation is the best one and that it necessarily ensures sustainable development and improved wildlife conservation.

10. PROVISIONAL POLICY LESSONS AND SUGGESTED AMENDMENTS

10.1 Provisional policy lessons

Policies are designed by State institutions (government, Parliament, etc). Policies are in fact the illustration of the vision authorities have of the subject dealt with. The most remarkable fact is the absence of an integrated vision of wildlife conservation and socio-economic development issues. Critical issues like land management are dealt with, separately. One important reason for that is the fact that wildlife is never a conflictual factor able to raise international lobbying, or to put socio-political pressure on national policy-makers in West Africa.

The advisory or ‘watchdog’ role of the civil society (NGOs, community federations, labour organizations, chambers of commerce, religious associations, traditionalists, etc) is no more played in West African countries. This seems to come from the long periods of non-democratic regimes in most of these countries.

This leads to poor integrated planning, which is in contradiction with traditional thoughts and management methods : Wildlife is traditionally considered as a land product that should be managed following the strategy of land ownership (cf Sacred groves project in Ghana, Haideja-Nguru wetland project in Nigeria, etc). There is innovative approaches in land legislations in Niger (Code Rural, 1993), Burkina (*Reorganisation Agraire et Foncière*, version 1995). However, the non integrated approach to wildlife and land management is one of the major weaknesses of policy making in the region.

Most policies have failed to root themselves in the social and cultural realities of the region. Their inflexibility and lack of relevance has led to many policy failures. Furthermore, the inability to progress in implementation has been aggravated by the lack of sustainable alternatives.

Many of policies and strategies for protected area management have considered local communities as ‘predators’ who need to be controlled through repression. Many management mistakes were made at the top, but in developing new approaches to management, it is important to consider whether today’s communities are culturally and psychologically prepared for full empowerment in decision-making. This need to be looked into carefully.

10.2 Suggested amendments to policies

10.2.1 Community participation in wildlife management

In fact, the increased participation of local communities, NGOs and private companies in wildlife management and forest activities in the sub-region is seriously impeded by

inappropriate official policies and deficient institutions with inadapated mandates, and by the lack of capacities and resources. For example, forest services are not used to managing the partnership that CWM entails: powers should be transferred, and communities supported without being replaced. They should be encouraged instead of being reprimanded, etc. Without an improvement of policies and institutions, new investments in the sector will give but poor results. Policy makers should carefully examine the following particular issues :

10.2.2 Consumptive wildlife exploitation possibility

In many countries, existing policies encourage poaching by completely prohibiting hunting, which makes of wildlife a resource without a legal commercial value. In order to change this situation, it is important to ensure the reopening of the consumptive use of wildlife, enabling the regulation of this type of exploitation based on stringent scientific bases. The shortcomings in the markets and policies should be corrected, through a dialogue process with the various stakeholders.

10.2.3 Capacity building

The strengthening of wildlife management institutions should be a element of a process aimed at systemically reforming the administration with special emphasis on responsibilities, the authority of the law, financial management and budgetary procedures, as well as transparency. The mandates of state forest services should be reoriented, giving forest rights and duties to local communities, NGOs for wildlife reserve management.

10.2.4 Participation of local communities in wildlife management

This should be possible, hanks to changes in the policy and legislation (e.g. land tenure system). A training in Participatory planning would enable forest services to establish partnership with local communities and NGOs for wildlife reserve management.

10.2.5 Promoting the participation of the private sector in wildlife management.

The state should transfer direct activities of protection and exploitation and now play a stimulation role, thanks to conducive policy and legislation as well as information services that promote private investments in the sector of tourism and hunting. It is sometimes argued that the community or the private sector cannot have sufficient conservation ethics to take care of hunting police. In fact, examples from the Buabeng Fiema monkey sanctuary in Ghana (GH2) and the northern Benin project (BN1) have proven the opposite. Examples of civil forest servant who practice poaching in the areas they are supposed to watch on , are also known.

10.2.6 Improvement of knowledge in wildlife management.

States should conduct national inventories that will serve as an entry point for planning, implementation monitoring and evaluation of cynegetic activities. Lessons learned from pilot field activities should be widely disseminated and research should be better oriented and more efficient, thanks to closer co-operation between researchers and the potential users of their findings.

10.2.7 Decentralization issues

The process of decentralizing natural resources management through participation, and community resource management is being interpreted differently from one country to another, and from one project to another. In many West African countries, natural resources are owned by the state, and as a result, management of these resources by people is directed by the State. Where legal ownership of natural resources is devolved to local people, they then become in charge with the responsibility for managing their natural resources (GH1, SN1).

11. THE FUTURE OF CWM IN THE REGION

11.1 Some optimism in the new generation of projects

The new generation of projects, such as the land management projects (Burkina Faso) or natural resource management projects (Benin, Mali, Niger, Senegal, Ghana, Gambia) have adopted more participatory approaches. They recognize that local people are capable of successfully managing resources that are of direct interest to them.

Many of these operations have integrated some major lessons learned from the past: addressing wildlife issues via more integrated way to natural resource development and attempting to provide more transformative community participation. A reform of the land policy and decentralized planning of land use are the main features of some of these projects supported by the World Bank, UNDP, the European Union and bilateral donors. In addition, given the increasing priority for environmental concerns, there are significant increases in available resources to develop staff and systems required for the monitoring and evaluation of both qualitative and quantitative changes occurring in forests and other natural resources.

There are many positive experiences associated with new generation of participatory natural resource management projects : The Buabeng-Fiema monkey sanctuary (Ghana, GH2), and the Mamunta Mayoso wildlife sanctuary (Sierra Leone, SL1). They have the advantage of accepting that, despite its individuality, wildlife, albeit migratory, is a product of land and should be treated as such.

11.2 The need to address remaining constraints

Many of this new generation of projects are still in their initial phases and difficulties are lying ahead, due to a number of common conceptual weaknesses:

- Many projects advocate a participatory approach to planning and implementation, but fail to define the mechanisms for it (organization of community associations, progressive transfer of management responsibility, building financial sustainability, setting up pertinent indicators for monitoring the socio-ecological progresses, etc). The participation vision is still quite a method for raising local manpower and getting people's support at low costs, instead of focusing on the transformation of the society : Niokolo-Badiar national park project (Senegal, Guinea), wildlife management sub-project of PGRN/VGFER (Benin, BN1).
- Most projects provide for institutional building, but do not work towards adequately outlining the institutional set up required for capacity building and human resource development : Bonny Island integrated conservation project (Nigeria, NI4), buffer zones management for protected areas conservation (Togo, TO1)

- Many projects fail to take account of the environmental impact and sustainability considerations in their economic analyses : PURNKO project (Niger, NE1), Bafing reserve integrated management project (Mali, ML2).
- The length of time foreseen for the implementation of projects has revealed to be too short in many cases, to reach a self-reliance stage, which is fundamental for a wildlife management project : Okumu wildlife sanctuary project (Nigeria, NI2), Community management of natural resources (Senegal, SN1).
- The weaknesses in wildlife ecology and biology expertise are underestimated, often resulting in major technical mistakes : Hunting organization support project (Burkina BF1).
- The promotion of private sector's better involvement in wildlife management. This is not contradictory with community management models, because a private investor can sign an agreement with local people for exploiting their CWM initiatives. The major constraint to the increase of private sector's participation would be the redefinition of the state services roles under new governance systems raising up from structural adjustment and democracies. Governments should play a monitoring and enforcement role, together with policy formulation, in order to stimulate stakeholders. Communities associations, NGOs, private tourism investors, are able to ensure more roles of projects implementation, marketing, and interactive communication of wildlife issues.

These projects are sometimes very complex, reflecting various objectives and intersectoral considerations that are not compatible with the existing institutional frameworks at national and local level.

11.3 The challenge of information dissemination : Networking on CWM in West Africa

Communications between decision-makers, wildlife managers, private corporations, interested communities are particularly important in West African countries, for taking advantage of experiences in policy formulation, wildlife legislations, the preparation, monitoring and evaluation of CWM projects, the dissemination of innovative tools and approaches.

Regional organizations (CILSS, ECOWAS, UEMOA, Conseil de l'Entente, Liptako Gourma, BOAD, etc), as well as regional offices of international institutions (World Bank, IUCN, FAO, UNESCO, WWF), international think tanks (IIED, WRI), NGOs and bilateral donors, can play a stimulating role in support to the Governments.

Communications can be enhanced also through national or regional networks of CWM projects, facilitating contacts between countries and institutions, sharing experiences between project managers, decision-makers, and communities, lobbying together for change at local, national, and international levels. A network can be defined as any group

of individuals or organizations who, on a voluntary basis, exchange information or undertake joint activities and who organize themselves in such a way that their individual autonomy remains intact.

Networks facilitate the exchange of information, skills, knowledge, experiences, materials and media, through meetings, workshops, publications, and cooperative programmes. Sharing of skills and experiences increases the overall competence of network members, whether individuals and organizations. Network information exchange and coordination leads to less unnecessary duplication of work and effort. With less duplication, faster progress and a wider overall impact should be possible.

Network can effectively link people of different levels, disciplines, organizations and backgrounds who would not otherwise have an opportunity to interact. Networks can bring together top policy makers and farmers, rural development engineers, NGO development workers and staff of large-scale technical cooperation projects, international researchers and extension staff, university professors and villagers. Networks can provide the critical mass needed for local, national or international advocacy, action and policy change.

12. CONCLUSION

This review of CWM in West Africa has examined a number of initiatives in the sixteen countries led by NGOs, communities, government agencies, which has in common a concern with community participation in management wildlife. Most of these initiatives are very young (not more than 10 years). They seem to correspond to the wide process of village auto-promotion and alternative governance choices under consideration in the region. They also express peoples aspirations for self-development, after the severe failures of top-down programmes.

The size and diversity of the region, added to security issues in Liberia and Sierra Leone did not allow the collection of all the relevant data in the region. However, we do hope that this report will constitute a bridge between the first and second phase of this IIED survey, and also between West African CWM issues and other regions, with the purpose of biodiversity conservation.

For these final objectives to be achieved in this region, we believe that no one better able to identify, describe and communicate the most effective strategies for CWM than the West African stakeholders. They the ones who must find practical solutions to the challenges of conserving biodiversity while addressing human needs.

By emphasizing participation and collaborative action, the ‘Evaluating Eden’ process of IIED can :

- incorporate a broad range of viewpoints into the design and implementation of CWM
- benefit from the often undervalued skills and experience of local managers,
- provide an empowering forum for co-learning, capacity-building and critical thinking.

The following recommendations are targeted on these orientations :

1. To organize a regional workshop for a restitution of the survey, and its validation through amendments including up-to-date data, when available. This workshop will group the country focal points of this IIED survey, project managers of interesting CWM projects, wildlife department authorities, NGOs, private sector representatives, community representatives, and international partners.
2. To deepen investigations through case studies in order to identify specific principles strategies, approaches, and tools that can increase the effectiveness of CWM and that address human needs, and that can document the main lessons learned. To that purpose, I have suggested themes and projects (see Annex 7).
3. To encourage each West African country to carry out a process of critical thinking about its national policies, legislations, programmes, in the context of local people’s aspirations, new macro-policies : decentralization, private sector involvement, etc.
4. To involve in this IIED survey the regional organizations (ECOWAS, CILSS, UEMOA, BOAD, etc) and the external partners of the main CWM projects in West Africa, in order to share experiences, and better disseminate the existing lessons of the region (bilateral cooperations, World Bank, EU, FAO, UNDP, WWF, IUCN, BirdLife, Wetlands, etc).