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**Legal and Institutional Component  
LTBP**

**Baseline Review**

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**Pollution Control and Other Measures to Protect Biodiversity  
in Lake Tanganyika (RAF/92/G32)**

**Lutte contre la pollution et autres mesures visant à protéger la  
biodiversité du Lac Tanganyika (RAF/92/G32)**

Le Projet sur la diversité biologique du lac Tanganyika a été formulé pour aider les quatre Etats riverains (Burundi, Congo, Tanzanie et Zambie) à élaborer un système efficace et durable pour gérer et conserver la diversité biologique du lac Tanganyika dans un avenir prévisible. Il est financé par le GEF (Fonds pour l'environnement mondial) par le biais du Programme des Nations Unies pour le développement (PNUD)"

The Lake Tanganyika Biodiversity Project has been formulated to help the four riparian states (Burundi, Congo, Tanzania and Zambia) produce an effective and sustainable system for managing and conserving the biodiversity of Lake Tanganyika into the foreseeable future. It is funded by the Global Environmental Facility through the United Nations Development Programme.



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## EXECUTIVE SUMMARY

This study:

1. introduces key legal and regulatory issues to be taken into consideration in devising an interim strategic plan for protecting biodiversity and controlling pollution in Lake Tanganyika ( "the Lake ") (Part I);
2. sets out an initial review of the legislation and regulatory framework in Burundi, Tanzania, Zaire and Zambia (the lacustrine states) which is relevant to achieving the integrated management of the Lake (Part II);
3. discusses relevant obligations of the lacustrine states under international law (Part III);
4. discusses the legal and institutional issues relevant to harmonising the laws of the lacustrine states and establishing a more appropriate framework for managing the Lake (Part IV);
5. addresses issues arising in connection with the process of implementing a new regulatory regime and proposes a work plan for the legal framework special study (Part V); and
6. sets out initial conclusions (Part VI).

The study identifies a number of key issues which require consideration by other specialists involved in the preparation of the interim strategic plan including:

1. various obligations arising out of international law which will affect the nature of any international relations or institutional structure established in connection with managing the Lake;
2. some of the information which will be required to develop a regulatory regime for the Lake;

Key conclusions and recommendations of the study are:

1. much of the legislation which presently regulates activities which impact the Lake is dated or inadequate. Certain activities are not regulated at all and much of the legislation fails to take account of environmental issues;
2. further information is required about implementation and enforcement although the evidence reviewed suggests that implementation is problematic in a number of areas;
3. the establishment of a sustainable institutional framework for cooperation between the lacustrine states in the management of the Lake will be crucial to the success of the entire project;
4. building consensus among stakeholders in the Lake Basin as to an appropriate regulatory framework at each level should be a central objective of the interim plan and all components of the project should be actively involved in doing so from the beginning;
5. mechanisms which facilitate vertical coordination between different layers of government and horizontal coordination between sectors, should be encouraged to evolve throughout the life of the project;
6. the enactment of new laws and the harmonisation of existing laws of the lacustrine states in the medium term should concentrate on those standards or measures which are essential to achieve the policy objectives;
7. full harmonisation of all the relevant laws will be a long-term process which would be best guided by a body representing the lacustrine states and the order of priority should be determined by an assessment of the threats to the Lake and the degree to which these are susceptible to legislative control;



## RESUMÉ

Cette étude:

1. présente des questions importantes, législatives et réglementaires qui doivent être prises en considération dans la conception d'un projet stratégique intérimaire pour la protection de la biodiversité et le contrôle de la pollution du Lac Tanganyika (Partie I);
2. établit une étude initiale des législations et des cadres réglementaires au Burundi, en Tanzanie, au Zaïre et en Zambie (les états riverains) pertinentes à une gestion intégrée du lac (Partie II);
3. discute les obligations des états riverains selon la loi internationale (Partie III);
4. discute les questions légales et institutionnelles qui sont importantes pour pouvoir harmoniser les lois des états riverains et pour établir une structure de gestion du lac (Partie IV);
5. répond aux questions liées à la procédure de mise en œuvre d'un nouveau régime réglementaire, et propose une stratégie de travail pour une étude spécifique du cadre législatif; et
6. propose des conclusions initiales.

Cette étude identifie un ensemble de questions importantes qui exigent l'attention d'autres spécialistes impliqués dans la préparation du projet stratégique intérimaire. Sont inclus:

1. diverses obligations impliquées par la loi internationale qui influent sur les relations internationales ou la structure institutionnelle concernant la gestion du lac,
2. certains renseignements nécessaires au développement du régime réglementaire de gestion du lac.

Les conclusions et recommandations de cette étude sont les suivantes:

1. la plupart de la législation qui contrôle les activités actuelles influentes sur le lac est soit périmée soit insuffisante. Certaines activités ne sont pas du tout contrôlées et la plupart de la législation ne prend pas en compte les questions environnementales,
2. sont que des renseignements supplémentaires sur la mise en oeuvre et le renforcement sont nécessaires. Cependant l'étude suggère certains problèmes de mise en oeuvre.
3. la mise en place d'un cadre institutionnel et une coopération entre les états riverains pour la gestion du lac seront indispensables à la réussite du projet dans son ensemble.
4. la mise en place un accord entre les concessionnaires du bassin du lac pour une structure régulatoire à tous niveaux devrait être le but principal du projet intérimaire et tous les composants du projet devraient viser à cela dès le début.
5. les mécanismes qui facilitent une coordination verticale entre les divers niveaux de gouvernement et une coordination horizontale entre les différents secteurs, devraient être encouragés à travers ce projet.
6. la mise en oeuvre des nouvelles lois et l'harmonisation des lois actuelles des états riverains dans un certain temps devraient se pencher sur les niveaux de travail et les mesures qui sont essentielles pour obtenir le but de la politique.
7. une entière harmonisation de l'ensemble des lois applicables sera un long processus qui devrait être guidé par un corps de représentation des états riverains et l'ordre de priorité devrait être décidé par une évaluation des menaces envers le lac et par le niveau auquel celles-ci sont susceptibles a un contrôle législatif.

## FOREWORD

This report was prepared as a study based on information available to the authors from sources in Europe. While every effort was made to locate relevant information, inevitably the resources available were incomplete and it was not always possible to obtain up to date copies of all relevant legislation. Wherever possible reference is made to primary sources (such as the laws of the country concerned) but in some cases secondary sources (such as unpublished FAO reports) have been relied on.

Since the social and institutional context in which laws operate have a definitive impact on the actual functioning of a regulatory system, it is to be expected that the analysis in this study will require amendment and refinement in the light of subsequent investigations conducted in the field. In particular, the reader should be conscious of the fact that in many instances it has not been possible for the authors to assess the policies of government departments, their capacity for fulfilling their relevant responsibilities and the extent to which laws are effectively implemented.

Resources relied upon for the purposes of this study were obtained or requested from a variety of sources including: the Library of the Institute for Advanced Legal Studies (London); the School of Oriental and African Studies Library (London), the British Library (London), the Bodleian Library (Oxford), the Development Law Service of the Food and Agriculture Organisation of the United Nations (Rome), the Library of the Environmental Law Centre, International Union for the Conservation of Nature (Bonn), the *Bibliothèque Nationale de France* (Paris), the *Bibliothèque Africaine* of the *Ministère des Affaires Etrangères, du Commerce Extérieur et de la Coopération au Développement* (Brussels) and Mr René Massinon former Professor at the University of Bujumbura. Embassies of the four lacustrine countries, in London (Zaire, Zambia and Tanzania) and in Brussels (Zaire and Burundi) were also contacted for assistance.

## PART I KEY LEGAL AND REGULATORY ISSUES

### 1. INTRODUCTION

If the astonishing biodiversity of Lake Tanganyika is to be conserved and its resources sustainably utilised and bequeathed to future generations, it is essential that it be properly managed. As human pressures on the Lake increase so does the need for more active management. Experience throughout the world indicates that if management policies are to be effective and sustainable they require an appropriate institutional framework established and reinforced by the authority and power of the law.

Devising an appropriate regulatory regime for the Lake poses enormous challenges, most of which arise from the physical realities of the Lake itself. Cognisance must be taken of the facts that:

- the Lake itself spans the borders of Burundi, Zaire, Tanzania and Zambia (Athe lacustrine states “);
- regulation and management of the Lake cannot be separated from management of the entire drainage basin of which it is the centre,<sup>1</sup> a vast area of some 231,000 km<sup>2</sup>;
- a range of human activities occurs within the Lake basin including fishing, agriculture, mining, water transport, forestry, urbanisation and industrial activity, all which either impact on the ecology of the Lake or are likely to do so in future;
- in each country the responsibility for regulating this wide range of human activities is dispersed among many different sectoral and intersectoral government agencies at various levels which complicates the process of formulating and implementing an integrated policy or plan;
- there are several hundred national laws which are potentially relevant in some way to the sustainable development of the lake and the adequacy and effectiveness of these laws and the extent to which they are enforced, varies widely;
- the ability of national governments to implement laws and policies for the environmentally sound management of the Lake basin is often severely hampered by a lack of funds and capacity;
- the normal difficulties of promoting international cooperation and coordinated action among states sharing an international watercourse is exacerbated by the fact that two of the countries are Anglophone countries with common law legal traditions while the other two are Francophone with civil law traditions.<sup>2</sup>

The importance of identifying institutional and legal methods of overcoming these potential obstacles should not be underestimated. The long-term success of the project will be largely dependant on its ability to establish a functioning and sustainable structure which will allow the lacustrine states to cooperate in the integrated management of the Lake and its drainage basin.

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<sup>1</sup> As the International Law Association has observed: AThe drainage basin is an indivisible hydrological unit which requires comprehensive consideration in order to effect maximum utilisation and development of any portion of its waters. “ *Helsinki Rules, Report of the 52nd Conference* (1966).

<sup>2</sup> The legal systems of all four countries are also all influenced by customary African law.

Accordingly a high priority should be given to the establishment of an appropriate legal and institutional framework within which this can occur.

## **2. ESTABLISHING AN APPROPRIATE REGULATORY SYSTEM**

This section sets out the various stages involved in moving toward an institutional and legal framework which will facilitate integrated and sustainable management of the Lake.

### **2.1 Identifying and prioritising the factors to be regulated**

So many issues and factors may in some way impact on the management of the Lake that it is essential to begin by consciously identifying and addressing the most pressing threats to the Lake's biodiversity. There are many potential threats, including: eutrophication and/or pollution caused by domestic, industrial and agricultural effluents, oil exploration, transport and recreational activities; lake level changes and siltation caused by deforestation of the watersheds; and reduction of fish-stocks for a variety of reasons, including over-fishing.<sup>3</sup> Accordingly it is essential for the legal and institutional special study to be based on findings by other studies as to which factors currently have or are likely in future to have, the most significant negative impact on biodiversity in the Lake. This information will be considered to determine the extent to which these factors are susceptible to legal or institutional control in order to *determine the factors to be regulated*.

### **2.2 Assessing existing regulatory mechanisms**

Once the factors to be regulated have been identified one must determine *to what extent the existing laws and institutional mechanisms in each country and between the lacustrine states are capable of adequately regulating these factors*. This will involve, inter alia, identifying which key factors are either not regulated or inadequately regulated, the effectiveness of existing laws and institutional arrangements. This baseline study begins this process but further information and research in the field is required to complete it.

### **2.3 Determining a methodology for implementing change**

Once the areas in which change is required have been identified it will be important to consider *what process would be most appropriate to effect the desired change*. This will involve the consideration of a range of matters including identifying the key constraints (financial, human resources, physical, political, etc) to be taken into account in devising a new management regime for the Lake and obtaining inputs from other specialist studies.

### **2.4 Implementing change**

A strategic plan which is not implemented will contribute little to the sustainable development of the Lake basin. Accordingly it is essential that a process that will result in implementation be commenced during the project. This will necessarily involve a political process in each country and

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<sup>3</sup> Cruik, R.C.M. *Monograph on the Limnology and Hydrology of Lake Tanganyika*, 1995 UNESCO (UNESCO/IHP - IV Project M-5.1), p. i.

between the four states. Some of the crucial issues to be addressed in this regard relate to the legal status of the final strategic plan for the Lake and how the institutional measures necessary to develop and implement the plan will be structured, established, and sustained (including financially).

## **PART II REVIEW OF LEGISLATION OF THE FOUR LACUSTRINE STATES**

### **3. BURUNDI**

#### **3.1 INTRODUCTION**

With a land area of 27,384km<sup>2</sup> and a population of 5,625,000 the Republic of Burundi is one of the most densely populated countries in Africa as well as one of the smallest. The capital, Bujumbura (population estimated at 215,243 in 1987), lies on the North West shore of Lake Tanganyika. Although Burundi occupies only some 8% of the surface area of the Lake, the Lake plays an important role in Burundi's economy as a significant amount of the country's external trade is conducted along the lake between Bujumbura and Tanzania and Zaire.<sup>4</sup>

Burundi's population doubled between 1962 and 1990.<sup>5</sup> Significant population pressure means that the Lake shore is heavily populated. Commercial and artisanal fishing play an important role in Burundi's economy. There are strong pressures on the Lake from land based activities such as industrial activity in Bujumbura and the use of pesticides in agriculture.

#### **3.2 CONSTITUTIONAL AND POLITICAL STRUCTURE**

Burundi, together with its northern neighbour Rwanda, existed as kingdoms for hundreds of years before both were absorbed into German East Africa in 1899. In 1916 the two territories were occupied by Belgium which then administered them as Ruanda-Urundi pursuant to a mandate of the League of Nations granted in 1923. After the Second World War Ruanda-Urundi became a United Nations Trust Territory, still under Belgian administration, until independence in 1962.

Burundi gained independence as a kingdom but in 1966 the mwami, or king, was overthrown and a Republic was declared. The present constitution was promulgated on 13 March 1992. It provides that the elected National Assembly has legislative power while the President has the power to make regulations and to issue laws by decree - which must be ratified by the National Assembly at its following session failing which they become void. The Prime Minister can take decisions to execute presidential decrees. In 1994 a Convention of Government was agreed among the main political parties for a four year period and incorporated into the Constitution on 22 September of that year. The Convention defines the terms of government for a four year transitional period and provides for the creation of a ten member National Security Council chaired by the President.<sup>6</sup>

<sup>4</sup> Africa South of the Sahara 1994, London 1993, pp201-212.

<sup>5</sup> Bouderbala, N, Appui à l'Elaboration d'un Code Rural, FAO, Rome, June 1992, p3.

<sup>6</sup> Africa South of the Sahara 1996, London, (1995) p224.

No consideration of the political structure can be undertaken without acknowledging the defacto domination of the country's political history by minority Tutsi population over the majority Hutu and the continuing ethnic tensions between the Hutu population, approximately 85% of the population, and the Tutsi, who form around 14% of the total.

### 3.3 LEGAL SYSTEM

Burundi's legal system is based on the Belgian legal system which in turn is based on the Napoleonic Code and is therefore similar to the French system.

In addition to laws passed under the Belgian administration sources of law in Burundi include legislation passed since independence, general principles of law and equity, and, although it is not specifically mentioned in either the constitution or new legislation, customary law. Furthermore, pursuant to a law passed in 1962 all laws and regulations passed in Belgium before Burundi's independence remain in force unless expressly repealed.

Even though Burundi was never a Belgian colony it was administered by Belgium as part of "Belgian Africa " and a number of laws applied throughout Ruanda-Urundi as well as the Belgian Congo.

The Supreme Court in Bujumbura is the court of final instance. Beneath the Supreme Court are the Courts of Appeal at Bujumbura, Gitega and Ngozi. There are 17 provincial tribunals of first instance and 123 smaller resident tribunals in other areas. There are administrative courts of first instance in Bujumbura and Gitega.

### 3.4 INSTITUTIONAL STRUCTURES

#### *Central Government*

As regards the regulation of activities affecting the Lake the most important ministry is the *Ministère de l'Aménagement, du Tourisme et de l'Environnement* ("M.I.N.A.T.E.") - the Ministry of Development, Tourism and the Environment - the functions of which are set out below. Other ministries which have responsibilities relevant to activities affecting the Lake include the Ministry of Agriculture and Livestock, the Ministry of Transport, Posts and Telecommunications, the Ministry of Public Health, the Ministry of Energy and Mines, and the Ministry of Development, Planning and Reconstruction.

#### *Local Government*

The territory of Burundi is divided into 15 provinces and 114 communes. The provincial authorities, each headed by a provincial governor, represent the State in the provinces and exercise all the attributions which are delegated to them by the central government. To this end they coordinate all economic and social activities and other undertakings within their provinces. They have no regulatory powers but do play a role in implementing the environmental and natural resource laws as will be seen below.<sup>7</sup>

Communes are directed by an administrator assisted by a communal council and as many councillors as are needed. The communes are charged with promoting the economic, social and

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<sup>7</sup>

Décret no. 100/77 du 18 décembre 1979 portant organisation des services provinciaux.

cultural development of the community.<sup>8</sup> Every commune is divided into zones, districts and sectors. Again, communes also have a role to play in certain legislation - but do not appear to have any overall responsibilities as regards the environment.

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<sup>8</sup>

Décret-loi no. 1/11 du 8 avril 1989 portant réorganisation de l' administration communale.



### 3.5 RELEVANT LAWS AND POLICIES

#### 3.5.1 Environment and Natural Resource Management

At present Burundi has no general or framework environmental or natural resources law or code.

Nevertheless pursuant to a 1989 decree M.I.N.A.T.E. is expressly given responsibility for defining and applying government policy on the environment (as well as development and tourism).<sup>9</sup> From the documents considered it has not been possible to ascertain what are the features of government policy at present.

The same decree also prescribes the organisational structure of M.I.N.A.T.E. There is a General Directorate of Development of the Territory, Water Resources and Forests to which four departments report. These are (1) the Department for the Development of the Territory and the Cadastre, (2) the Department of Rural Engineering and the Protection of Land Heritage, (3) the Department of Forests and (4) the Department of Water, Fisheries and Aquaculture.

In addition the 1989 decree places a number of public bodies under the supervision of M.I.N.A.T.E. These include *l'Institut Géographique de Burundi* or Geographical Institute of Burundi, *l'Office Nationale de Tourisme* or National Tourism Office and *l'Institut Nationale pour l'Environnement et la Conservation de la Nature* (I.N.E.C.N) or National Institute for the Environment and Nature Conservation.

The I.N.E.C.N. was created by Presidential decree on 3 March 1980 (and was initially placed under the direct authority of the President of the Republic).<sup>10</sup>

The task of the I.N.E.C.N., which has its headquarters at Gitega, is to ensure the protection of the environment and the conservation of nature.<sup>11</sup>

More specifically its mandate is to :-

- collect and interpret data relating to the supervision of the environment by the state supplied by both national and international bodies;
- ensure that environmental norms for the prevention of all forms of pollution are applied administratively and judicially;
- collaborate with the relevant departments to ensure the rational management of natural resources;
- create, develop and manage national parks and natural reserves to ensure sustainable use for tourism;
- undertake and encourage research and supporting measures to ensure the maintenance of biological diversity;
- supervise the application of national and international treaties relating to the trade of and exchange in specimens of wild flora and fauna;

<sup>9</sup> Décret no. 100/010 du 16 janvier 1989 portant organisation du Ministère de l'Aménagement du Tourisme et de l'Environnement \.

<sup>10</sup> Décret no. 100/47 du 3 mars 1980 portant création et organisation de l'Institut National pour la conservation de la nature (I.N.E.C.N.) .

<sup>11</sup> As amended by Décret no. 100/188 du 5 octobre 1989 portant organisation de l'Institut National pour l'Environnement et la Conservation de la Nature (I.N.E.C.N.).

- contribute to the promotion of environmental education in collaboration with interested bodies and establishments (Article 3).

The penal code does not really prescribe environmental offences as such. Setting fire to forests, woods and crops is a criminal offence as is the destruction of, or damage to, trees, crops, agricultural instruments and other goods, movable or immovable goods, whether such actions are intended or not. The penal code also forbids the killing of, or serious injury to, livestock or animals belonging to others but not of wildlife generally.<sup>12</sup>

#### *Pesticides*

The importation, manufacture, storage and use of pesticides and herbicides is not presently covered by legislation. This has potential implications for the quality of water in the Lake which has in parts become polluted by pesticide and herbicide run-off from cotton farming operations in Burundi.<sup>13</sup> A draft pesticides law has been prepared for the Government under the auspices of the Food and Agriculture Organisation of the United Nations (FAO) but this has not been implemented.<sup>14</sup>

#### *Industrial Pollution*

The law on the prevention and control of industrial pollution in Burundi is relatively under developed. A 1956 regulation ***relative aux établissements dangereux, insalubres ou incommodes*** or regulation on "establishments which are dangerous, insalubrious or liable to cause a nuisance" requires operators of such enterprises, which are listed in an annexed table and could include industrial activities, to first obtain a permit from the authorities. The regulation provides that the permit can prescribe conditions as to how the establishment is to be operated and conceivably such conditions could relate to emission levels and environmental protection measures although these are not specifically mentioned.

The 1985 Public Health Code gives the Minister for Public Health broad powers to issue regulations to set norms for the operation of industrial enterprises to protect neighbouring areas from the effects of all hazards and from nuisance caused by solid, liquid and gaseous wastes (Article 44).<sup>15</sup> Article 45 provides that industrial activities are to be classed according to the risks which they present to the environment and industrial enterprises must obtain a certificate of compliance prior to commencing operations. Breaches of any regulations issued pursuant to the Code can be punished by up to six months imprisonment as well as by fines (Article 47). Apart from restrictions on discharges to water, considered below, there appear to be no other laws on industrial pollution.

#### *Air Pollution*

There is at present no legislation dealing with the issue of air pollution apart from a reference to vehicle emissions in the 1958 Road Traffic Law<sup>16</sup> and the laws mentioned in the previous section.

<sup>12</sup> Décret loi no. 1/6 du 4 avril 1981 portant reformation du code penal .

<sup>13</sup> Sirroneau, J & Van Houtte, A, Projet de Co-opération sur la Gestion et la Protection des Lacs Partagés de la CEPGL , FAO Rome, November 1991, p16.

<sup>14</sup> Barberis, G, Législation sur la Protection des Végétaux aux Burundi , FAO, Rome, October 1992.

<sup>15</sup> Décret-loi no. 1/16 du 17 mai 1982 portant Code de la Santé Publique.

<sup>16</sup> ORU no. 660/206 du 11 septembre 1958 portant règlement de la police de roulage et de la circulation.

### 3.5.2 Land Tenure and Soil Conservation

Land Tenure in Burundi is governed by the 1986 **Code Foncier** or Land Code which was the first land law enacted since independence.<sup>17</sup> Although the Land Code, which has 433 articles, purports to be comprehensive it deals briefly with water resources (now subject to a separate code) and does not really mention forests, minerals and soil conservation all of which are subject to other laws and codes. It is really a land tenure code. Certain features are set out below.

#### Land Tenure

The Land Code provides that the national land “heritage “ comprises domanial and non-domanial land. Domanial land is that land which belongs to the State, to the communes, to public establishments and to state companies. It in turn is divided into “public “ domanial land and “private “ domanial land (Article 8).

Public domanial land is made up of the natural public domain and the artificial public domain. The natural public domain includes the beds and waters of navigable or “floatable “ rivers<sup>18</sup> (including their non-navigable sections) from their source to their mouth or the point they leave the national territory, islands on such rivers, the beds and waters of navigable lakes and reservoirs and the banks or shores of water courses up to a distance from the periodical high water level to be provided for by regulation.

The waters and bed and banks of the Lake are therefore public domanial land and as such they are inalienable, non-prescriptible, and non-distrainable (Article 220). The artificial public domain comprises land and constructions dedicated for public use and service. All other state land is private domanial land and this includes vacant and unowned land, land acquired by prescription, the beds of non navigable rivers and watercourses, forests and fallow land. The State in its management of such land is subject to common law/customary rights insofar as they are not contrary to the provisions of the Land Code itself. Such land can be subject to a transfer or a concession (Article 234). A similar regime applies to land owned by communes, state establishments and enterprises (Part III, Chapter II).

Other land is non-domanial land which is land that has been “appropriated “ (or alienated) and which belongs to private natural and legal persons. Under the 1986 Land Code this includes both land owned on a customary basis and land registered at the state land registry. In fact most land in Burundi is un-registered and held according to customary rights and so a great part of the Land Code, dealing with mortgages, common ownership, servitudes etc is actually irrelevant to most land owners and in the absence of a massive registration programme will remain so.

Added to this the registration process is expensive and complex - and the situation is worsened by the high population density of Burundi and the consequent division of the land into very small parcels.<sup>19</sup>

The Land Code expressly gives the State a pre-eminent position in the management of the land to be exercised in the public benefit so as to ensure public and economic development (Article 2). To this end Part IV of the Code provides that rights over customarily held land are only recognised if the land is exploited (although taking account of fallow periods)(Article 330). In addition, land which is not kept in production can be requisitioned or confiscated (Articles 380 to 391) while pursuant to territorial development plans the State is given the right to specify how lands are to be used without being required to pay compensation (Articles 393-394).

<sup>17</sup> Loi no. 1/008 du 1 septembre 1986 portant Code Foncier du Burundi .

<sup>18</sup> A river is “floatable “ if logs can be floated on it even if it is otherwise non-navigable.

<sup>19</sup> The average landholding is 0.73 ha . Bouderbala, *op cit*, p11.

"Foreigners" - who are defined in Article 14 as (1) natural persons not of Burundian nationality (2) legal persons which are not constituted according to Burundian law, or (3) associations which are made up entirely, or mainly, of foreigners as previously defined, are permitted to own land for industrial, commercial, social, cultural scientific or residential purposes but may only lease or obtain use rights over agricultural land. Foreigners whose own national laws do not grant reciprocal rights to Burundian nationals are, in the absence of any treaty, not entitled to rely on these rights - although the rights themselves do not preclude foreigners being granted better land rights in Burundi pursuant to any bilateral treaty or other convention on the basis of reciprocity.

#### *Soil Conservation/Land Erosion*

Intensive cultivation and a hilly terrain mean that soil erosion is a serious problem in Burundi. Responsibility for soil conservation at central government level lies with the Department of Rural Engineering and the Protection of the Land Heritage within M.I.N.A.T.E. Specifically this department is charged with protecting the nation's land heritage and promoting techniques to conserve soil and water.

The primary legislation in this field is a pre-independence decree issued in 1958 and a regulation made in 1979. The 1958 decree on "soil conservation and use"<sup>20</sup> grants powers to the Minister to issue orders and make regulations in order to ensure soil fertility and to prevent soil erosion. The decree also requires, in a general manner, occupants of land to take measures against erosion and also sets up a National Soil Commission under the direction of the Minister of Agriculture.

The 1979 regulation<sup>21</sup>, made pursuant to the decree, requires every occupant of land to:

- build and maintain anti-erosion ditches on all parts of their land which are cultivated or left fallow;
- ensure that pennisetum or setaria are planted on such anti-erosion ditches when the cultivated lands or pastures are on steep slopes; and
- participate in collective anti-erosion works on communal cultivated land and pastures according to plans set by the competent authorities (Article 1).

Furthermore, in order both to protect against erosion and to ensure a sufficient supply of firewood and building wood each family is required to establish and maintain a small wood plantation, either on their own land or on land provided for them by the commune within 2 km from their homes, according to guidelines set by Department of Water and Forests for each region (Article 2). Provincial governors, area commissioners, provincial and communal agronomists as well as communal administrators are responsible for applying the law and determining the area of wood growing land needed for each family (Article 5). Infringements are punishable with 15 days penal servitude and a maximum fine of 500 francs (Article 4).

Also the **Code Forrestier** or Forest Code gives the Minister power to issue regulations giving the provincial authorities the to right restrict or prevent the use of pastoral or agricultural land where the level of degradation is not such as to require remedial works, subject to the payment of compensation, in certain circumstances, to the occupier of the land.<sup>22</sup> The Code also notes that the prevention of soil erosion is a national duty and gives the provincial authorities power to undertake remedial works in mountainous areas (Articles 172-178). The issue of re-afforestation is looked at below in the section on Forests. There are also provisions on soil erosion in the new water law looked at below.

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<sup>20</sup> Décret portant réglementation de la conservation et utilisation des sols du 26 novembre 1958.

<sup>21</sup> Ordonnance no. 710/275 du 25 octobre 1979 fixant certaines obligations relatives a la conservation et a l'utilisation des sols

<sup>22</sup> Article 167 Loi no. 1/02 du 25 mars 1985 portant code forrestier.

### 3.5.3 Water

A 1991 report prepared for the Government of Burundi found water pollution in the Lake off Bujumbura to be a significant problem. Of the 15 or so industrial operations in the city which causing pollution only one was identified as having a waste treatment process while the rest discharged waste directly into the Lake. Domestic waste, which in 1991 was collected from only 11% of the city's population, was also disposed of, untreated, either directly into the Lake or via the Ntahangawa River.<sup>23</sup> This state of affairs could in part be attributed to the outdated water legislation then in place. Since then new water legislation has been introduced.

Within M.I.N.A.T.E the Department of Water Resources, Fish and Aquaculture is responsible for the protection of the aquatic environment and the development of fisheries and aquaculture. As regards water resources, the department is specifically required to:-

- supervise the protection of aquatic flora and fauna, particularly through the control of water quality, with the aim of containing pollution and to undertake all necessary research;
- supervise the introduction and implementation of regulations concerning the control of effluents;
- supervise the rational exploitation of lacustrine resources.<sup>24</sup>

Although, as stated above, the status of the waters of navigable and floatable rivers and watercourses is dealt with in the Land Code the principle water law is now the 1992 decree-law on the "institution and organisation of the public water domain".<sup>25</sup>

This is a modern framework law which in addition to setting a number of basic norms for water management also provides for the issuing of regulations on specific matters. The stated aims of the law include guaranteeing the conservation and free flow of water as well as the preservation of aquatic ecosystems and it is administered by the ministry having responsibility for water - presently M.I.N.A.T.E (Article 1).

Article 2 provides that water courses, lakes and reservoirs, their beds and banks up to the high water line, springs, ground water and marshes which are permanently covered with water, together with water projects undertaken by or on behalf of the State in the public interest form part of the public water domain. This domain is inalienable, imprescriptible and non-seizable and only temporary use rights can be granted over it (Article 4).

Part II contains the regime for water use. Basically no taking from, or discharge into, the public water domain can take place without the authorization of the appropriate administrative body except in the case of exceptions permitted by the law itself - such as the abstraction of water for domestic purposes - and in any event subject to the provisions in the law on the protection of water quality (Articles 8-9). The remainder of Part II sets out the framework for the grant of use rights and concessions.

Provisions on certain types of use of water are set out in Part V of the law which, inter alia, provides for the issue of regulations to require industrial users to recycle and re-use waste water where such re-use or recycling is economically and technically possible, and the use of water for irrigation.

<sup>23</sup> Sirroneau, J & Van Houtte, A, *op cit*, p15.

<sup>24</sup> Article 9, **Décret no. 100/010 du 16 janvier 1989 portant organisation du Ministère de l'Amenagement du Tourisme et de l'Environnement.**

<sup>25</sup> **Décret-loi no. 1/41 du 26 novembre 1992 portant institution et organisation du domaine public hydraulique.**

Part VI of the law deals with the harmful effects of water. As regards soil erosion, without prejudice to the provisions of the Forest Code mentioned above, Chapter 1 requires any person undertaking works on land which are likely to affect the flow of waters in springs, rivers, lakes or water courses to first obtain permission from the competent administrative body. Chapter II provides for the issuing of regulations to require the treatment of waste water from urban areas with treatment plants.

The protection of water quality is dealt with in Part VIII of the law. It provides that no one may discharge, dispose, throw or deposit either directly or indirectly any water or matter or more generally be the author of any action susceptible to altering the physical, chemical, biological or micro-biological characteristics of surface or ground water, without prior authorisation from the authorities. There is additionally a general obligation to clean such effluents. The law provides that water quality thresholds are to be fixed having regard, *inter alia*, to the protection of flora and fauna by regulation together with circumstance in which permits will be granted.

The law also provides for the creation of safety zones around water resources in respect of which water quality or quantity is threatened (Articles 83-84). Water commissions are established in each water basin and sub basin to be set out by regulation. They are to advise the administration or governors in whose territory the basin lies, wholly or in part, as requested and to make recommendations on all aspects of water basin management (Articles 98-102).

Breaches of the law are punishable only by fines - the amounts of which are to be set by regulation - and not by imprisonment. Provision is also made for the demolition of works not carried out in conformity with the law.

The framework nature of this law means that it is very much the beginning of the programme of water resource management. It does not appear that many of the implementing regulations have yet been made, however a first decree on the treatment of urban waste water was issued at the end of 1992.<sup>26</sup> Waste waters are defined as those waters the natural characteristics of which have been modified by domestic, artisanal, industrial or agricultural use or all mixed waters (Article 1).

Responsibility for enforcing the decree is given to the Ministry responsible for the environment (presently M.I.N.A.T.E), while construction of the necessary treatment infrastructure is the responsibility of the Ministry responsible for urban development. Their management is to be undertaken by specialised management services. The I.N.E.C.N. is given a police function as well as responsibility for publicising the decree (Article 2).

The decree requires property owners who discharge waste water from their land to convey such waste water to public treatment plants, provided that they are close and functioning. As regards properties built before public treatment plants are available the owner must comply within six months of being notified by the plant's management service that a near by plant is functioning. The latter will undertake the necessary works, the costs of which can be repaid by the property owner over a two to six year period. Otherwise no one may dispose of waste water over the public rights or way, along rain water channels or in surface or underground waters (Article 3). The decree also permits the management services to require pre-treatment of waste waters in certain specified situations or where a failure to pre-treat waste waters would harm the public treatment works.

Solid waste products are defined in Article 5 as all products created by humans the disposal of which causes, or which could cause, harm to the environment. Such substances must not be disposed of (to water) except with the prior permission of the responsible authority and in any event must not increase the turbidity of the receiving water, nor colour it, nor alter its taste or smell. Norms for such waste products are to be set by regulation and the authority can set higher (or lower) local conditions in connection with local water quality objectives and requirements. Although

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Décret no. 100/242 du 31 décembre 1992 portant règlement de l'évacuation des eaux usées en milieu urbain .

the decree does set out basic rules as regards fees payable it does not contain any penal provisions as regards the breach of its norms.

In connection with water, mention should be made of the REGIDESO, a government agency created by decree-law, which since 1968 has been responsible for the supply and development of drinking water and electricity generation. There is also the *Direction Generale de l'Hydraulique et des Energies Rurales* or General Directorate of Water and Rural Energy which falls under the authority of the ministry responsible for rural development, the basic mission of which is to promote rural energy and water supplies.

Finally the *Commission Nationale de l'Eau et de l'Energie* or National Water and Energy Commission, which was set up in 1989 also has a role to play in the protection of water resources although as its name suggests it is also concerned to promote the use of water resources in the generation of hydro-electricity.<sup>27</sup>

### 3.5.4 Protected Areas

The law in this area is relatively under-developed.

A 1937 Decree on Hunting and Fishing,<sup>28</sup> which is still in force, permits the Minister to declare certain regions to be (1) *reserves de chasse* or hunting reserves which may be either partial or total and where some or all animals (which are not defined) may not be hunted and (2) *domaines de chasse réservés* or reserved hunting domains where hunting is only permitted according to prescribed conditions, including the payment of the appropriate fee, as set out in regulations.

Otherwise the creation of national parks and natural reserves is covered by a 1980 decree law.<sup>29</sup> This provides for the creation of national parks and natural reserves within Burundi by decree - which must determine both the site and the specific conservation regime. The areas so designated cannot be altered or alienated except by the State which can also specify which animal and tree species are to be introduced or destroyed. Any land which is freed by such a decision of the State can then be used for other purposes.

While hunting is strictly forbidden in national parks and natural reserves (save for the taking of fauna for scientific purposes) artisanal fishing is permitted only with the express permission of the body charged with the conservation of such areas and for specified species. The fishing technique used must be such as not obstruct water courses. It is unlawful to cut trees without permission and all such felling is to be supervised by a forest agronomist. Breaches of this law can be punished by fines and/or imprisonment. There is also a prohibition on the installation of bodies of population near to, and the exploitation of land in a 1,000 metre strip around, such areas. The authors understand that there are only two such national parks/natural reserves in Burundi.

Forestry reserves are briefly considered below. Finally the role of the I.N.E.C.N. in managing and establishing national parks has already been mentioned.

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<sup>27</sup> Décret no. 100/226 du 11 décembre 1989 portant creation et Organisation de la Commission Nationale de l'Eau et de l'Energie .

<sup>28</sup> Décret du 21 avril 1937 portant réglementation de la chasse et la pêche amended by Ordonnance-loi du 31 août 1940.

<sup>29</sup> Décret-Loi no. 1/6 du 3 mars 1980 portant création de Parcs Nationaux et de Réserves Naturelles

### 3.5.5 Fisheries

The principle law on fisheries is the 1937 Decree on Hunting and Fishing. This decree applied throughout the territories administered by Belgium at that time - Ruanda-Urundi and the Belgian Congo - and as will be seen it is the law which still regulates fishing in Zaire.<sup>30</sup>

The 1937 decree is essentially a framework law providing for specific issues to be dealt with through the making of regulations. In brief, the decree gives the competent authorities powers to issue regulations on such matters as: fishing areas and permits, the protection of the rights of traditional fishermen, fishing techniques and mesh sizes, the conservation of fish stocks and the development of fisheries, the introduction of exotic species and the imposition of sanctions for infractions.

Regulations issued under the decree include a 1937 Ordonnance which bans fishing by the use of explosives, toxic substances and electricity and a 1961 ministerial regulation which regulates (1) industrial fishing, (2) artisanal fishing and (3) individual fishing on Lake Tanganyika.<sup>31</sup> Pursuant to the regulation, industrial fishing is banned within 5 kilometres of the shore as are nets with a mesh size of less than 4mm. Administrative permits are required for commercial and artisanal fishing. These are issued by the authorities on the advice of a consultative commission subject to payment of the prescribed fee. All commercial catches must be landed at Bujumbura and the procedure for the issue, including the fees payable, of permits for fishing on the Lake is also set out.

There are however a number of important omissions in the law as it stands. For example the 1937 Ordonnance banning the use of explosives etc prescribes no punishments in the case of non-compliance while the 1961 regulation fails to deal with a number of destructive fishing methods, such as beach seining, which are commonly used on the Lake. Furthermore the law is dated and has clearly not evolved over the last 30 years. In short it does not set out a framework for the sustainable management of stocks or for the collection of reliable information on stock levels. The permit system is inadequate and the prescribed levels of fines payable, where punishments are prescribed, are obsolete. Finally it would also appear that enforcement of the existing laws is problematic.<sup>32</sup>

These inadequacies with the existing law have been recognised by the Government which has requested the assistance of the FAO under whose auspices a new draft law on fisheries was prepared 1992. As far as can be ascertained this law has not been implemented.

As regards institutional arrangements, within M.I.N.A.T.E, as mentioned above, the Department of Water Resources, Fish and Aquaculture is responsible for the protection of the aquatic environment and the development of fisheries and aquaculture. The department is specifically charged with supervising the protection of aquatic flora and fauna, ensuring the rational exploitation of lacustrine resources and the development of a framework for fisheries management.

### 3.5.6 Wildlife

The 1937 Decree on Hunting and Fishing and subsidiary legislation is also the main source of law in this area.<sup>33</sup> As its name suggests this decree is more concerned with hunting than wildlife conservation.

<sup>30</sup> Décret du 21 avril 1937 portant réglementation de la chasse et la pêche .

<sup>31</sup> Arrêté ministérielle no 050/44 du 16 décembre 1961 portant réglementation de la pêche au lac Tanganika .

<sup>32</sup> Bonucci, N, Une Nouvelle Législation sur la Pêche et l'Aquaculture: Propositions et Projets de Textes , FAO, Rome, February 1992 pp4-9 and Sironneau, J & Van Houtte, A, op cit, pp18-19.

<sup>33</sup> Décret du 21 avril 1937 portant réglementation de la chasse et la pêche .



The Decree distinguishes between (1) species of fauna which enjoy “complete protection “ and which can only be hunted pursuant to a scientific permit; (2) species which enjoy partial protection and which can only be hunted with a permit and (3) other species which although they can be hunted without a permit are still considered as “trophy “ species. Species in classes (1) and (2) are listed in an appendix to the Decree which also lists the fees payable for permits. Various different category of hunting permit are specified by the Decree and the detailed provisions are further amplified in a 1937 implementing regulation.<sup>34</sup> The Decree also prohibits and restricts the use of certain hunting techniques and types of weapon.

The Minister responsible for hunting (and so it would seem the governor of each province) is given the power to ban all hunting in specified areas for specified periods and in fact in 1966 hunting was banned throughout Burundi for 2 years (with the exception of permitted scientific and health reasons).<sup>35</sup>

Although Burundi acceded to the 1973 **Convention on International Trade in Endangered Species** (CITES) on 8 August 1988 it is not clear what legislative or regulatory measures have been taken by it in order to enforce the terms of the Convention. For example it does not appear that a list of protected species has been notified to the CITES secretariat.

### 3.5.7 Forestry

The 1985 **Code Forrestier** or Forest Code, mentioned above, seeks to comprehensively regulate the administration, development, exploitation, supervision and policing of forests in Burundi (Article 5). It applies both to state and communal forests as well as to private plantations. The Code regulates the extraction and sale of timber and forest products with a permit/concession system as well as seeking to ensure the protection of forests from fire and clearance. For example as regards private plantations owners are required to agree a simple management plan with the Forest Service and to re-afforest harvested land.

The Code also provides for the classification by the Minister of forested areas as “protected forests” or “forestry reserves” where to do so is necessary in order to:

- maintain the soil on mountains and slopes, to protect against erosion and floods;
- maintain the ecological balance of certain parts of the territory;
- ensure the well-being of the population in and on the edge of settlements; and to
- conserve flora and fauna recognised by international law as being under threat (Article 160).

Specific rules are to be set out in regulations and all activities altering the soil so as to affect such forests are prohibited. Such reserves can be created on state or private land. Owners can claim compensation for any loss of revenue caused to them by such classification. Alternatively the State can acquire forest land so classified either by mutual agreement or by expropriation (Article 166).

Responsibility for applying the Forest Code lies with the Department of Forests within M.I.N.A.T.E which is responsible for managing and developing forest plantations, undertaking reforestation works and the protection of the environment.

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<sup>34</sup> Ordonnance no. 103/Agri du 4 octobre 1937 portant mesures d'exécution du décret du 21 avril 1937.

<sup>35</sup> Arrêté Ministerielle no. 050/65 du 22 mars 1966 portant fermeture de la chasse dans toute l'étendue du Burundi.

### 3.5.8 Mining and Petroleum Exploitation

The prospecting, research (defined as all scientific, technical, and economic investigation as to the quantity, quality, location etc of deposits), exploitation, conversion, keeping, transport, and trade in mineral and hydrocarbon deposits on the territory and in the territorial waters of Burundi are governed by the 1976 Mining and Petroleum Code and subsidiary legislation.<sup>36</sup>

The Code, which has 214 articles, distinguishes between quarry deposits and mining deposits both of which are the property of the State. Hydrocarbon deposits, which include liquid and gaseous hydrocarbons, are classed as mining deposits. The Code nevertheless sets out a special regime for hydrocarbons.

Prospecting, research and exploitation rights relating to hydrocarbons are only granted to companies registered in Burundi, which must demonstrate that they have sufficient levels of both financial resources and expertise. Prospecting rights are granted pursuant to permits which are valid for two years. They cover specified areas and cannot be for both hydrocarbons and minerals.

As regards research, which presumably includes test drilling, an "H" permit must be obtained. Such a permit is only granted on the basis of competition three months after an announcement has been made in the official journal - the *Bulletin Officiel du Burundi* (Article 48). Before a permit is granted an agreement is entered into with the Minister in charge of mines. The agreement must cover various prescribed matters such as the financial and technical programme to be followed. The "H" permit itself cannot last longer than three years.

Once a deposit is found the permit holder is obliged to apply for a concession but may meanwhile apply for temporary permission to exploit the deposit.

As regards environmental protection the Code contains few provisions. For reasons of public order zones can be declared by decree where mining, prospecting, research and exploitation is forbidden and in Part V of the Code provision is made for the declaration by the Minister of *perimetres de protection* or protected areas in which restrictions and bans can be placed on such activities in order to protect buildings, settlements, springs, the communications infrastructure, works of art and works of public importance and as necessary in the general interest. Otherwise the aim of the Code appears to be to maximise the benefits from the exploitation of such resources.

The Code does provide that when a mine (the definition of which includes an oil or gas drilling operation) is abandoned, for whatever reason, the Minister can require the operator to undertake such works as he deems necessary having regard to public security, the conservation of the mine and the protection of nature (Article 194).

In 1989 a decree was issued on the general regulation of mines and quarries other than mines of combustible solids and mines of hydrocarbons exploited by drilling.<sup>37</sup> This contains more specific rules about safety in such operations (for example as regards surface installations, electrical installations, transport, ventilation, lighting hygiene and safety etc) but does not deal with environmental protection. There appear to be no other regulations concerning petroleum exploitation.

<sup>36</sup> Loi no. 1/138 du 17 juillet 1976 portant code minier et petrolier.

<sup>37</sup> Décret no. 100/162 du 6 décembre 1979 portant reglement generale sur la recherche et l'exploitation des mines et des carrières au république de Burundi autres que les mines de combustibles generales solides et les mines d'hydrocarbures exploitées par sondage.

### 3.5.9 Land Use Planning and Development Control

Town planning is governed by a 1957 decree which provides for the creation of local development plans by the local administration for towns and localities designated by the Minister.<sup>38</sup> Such plans must contain details of zoning provisions, the provision of public utilities/spaces, transport and other infrastructural elements and must be subject to ministerial approval. Chapters II and III provide for the creation of regional and national plans respectively. Regional plans can set out restrictions on property rights including restrictions on construction and can provide for areas to be reserved in the regional interest such as airstrips, ports, and forests. The Minister also has power to institute a national plan setting out general rules for all or part of the country in connection with security, national defence, the protection of natural beauty. A national plan has priority over lower level plans.

Pursuant to Article 20 in towns and regions which are subject to plans the following activities may not be undertaken except with the prior, express, and written permission of the authorities:

- the building, re-building, demolition or alteration of existing constructions except for works of maintenance and conservation;
- the undertaking of works which modify the level/relief of the ground;
- the clearance of wooded areas, the felling of tall trees which are part of a forest, roadside, horticultural or decorative group except in emergency and without prejudice to (the forestry legislation);
- the partial or complete division of property into building lots; or
- until such permission is granted the offering or public announcement of the existence of building lots for sale, or the sale and purchase of such plots.

Any applications for such permission must be dealt with within 60 days of the date of the application and decisions must be in accordance with the relevant plans. Reasons must be given for any refusal and a right of appeal lies to the Minister. The procedures to be followed are set out in more detail in a 1958 regulation.

It would appear that in areas which are not subject to local or regional plans there are no restrictions on development and it is not known by the authors to what extent the Lake shore regions are subject to such plans or how rigorously the law is implemented. In any event it is clear that the present development framework is dated and makes no formal provision for environmental impact assessments to be undertaken prior to the granting of development consent.

The decree also provides for the creation of a national town planning commission the function of which is to advise the minister responsible for public amenities on any aspect of the implementation of the town planning legislation.<sup>39</sup>

### 3.5.10 Foreign Investment

Foreign investment in Burundi is regulated by the 1987 *Loi Portant Code des Investissements du Burundi* or Investment Code as modified by a 1991 decree-law.<sup>40</sup> This sets out a liberal investment code. Article 3 guarantees to any person, physical or moral, who wishes to set up a production enterprise the freedom of establishment and the freedom to invest capital.

<sup>38</sup> Décret du 20 juin 1957 sur l'urbanisme au (Ruanda) Urundi as amended.

<sup>39</sup> Amended by Décret-loi no. 1/156 du 12 novembre 1971 portant modification du Décret du 20 juin 1957 sur l'urbanisme.

<sup>40</sup> Décret-loi no 1/25 du 30 septembre 1991 portant modification de certaines dispositions du code des investissements du Burundi .

Enterprises are classified as (1) "Burundian", if their capital is raised in Burundi by a Burundian national or a foreigner, or if it is raised abroad by a Burundian national; (2) "foreign", if their capital is raised abroad by a foreign physical or moral person for a project in Burundi; and (3) "mixed" their capital comprises both Burundian and Foreign capital (Article 4).

The movable and immovable property rights of such enterprises and their freedom to undertake economic activity are guaranteed without discrimination. Furthermore there are no restrictions on the transfer of capital and profits subject to any foreign exchange restrictions applicable (Articles 5 & 7).

Otherwise the Investment Code provides that investments are categorised under four regimes depending on the size and type of the investment, and the number of jobs to be created. These are:

- the ordinary *droit commun* or "common law" regime which applies to investments below a specified level and which must simply follow the ordinary legal requirements as to registration;
- the regime for "priority enterprises" agreed with the Minister for the Plan and considered by the National Investment Commission and which must fulfil certain conditions. In view of their economic importance such enterprises can benefit from tax advantages;
- the regime for "enterprises subject to special agreement ". Enterprises from the previous category which are of particular economic importance can enter into special agreements as to the fiscal regime applicable to them;
- the regime for "decentralized enterprises ". This regime applies to enterprises in the previous two categories which are located outside the capital, Bujumbura. It provides additional fiscal and other benefits including government assistance with energy and water costs and the provision of land.

### **3.5.11 Tourism**

The National Office of Tourism was created in 1972 and operates under the supervision of M.I.N.A.T.E. It was reorganised by a 1987 decree. Its aim is to promote tourism in Burundi in all its forms and the director is assisted by a five member committee containing representatives from other ministries and the hotel industry.<sup>41</sup>

A tourism tax was created by decree law in 1978 and is payable by "tourist establishments" at the rate of 5% of gross receipts. "Tourist establishments" are those establishments which provide accommodation, food and drink to tourists and organize leisure activities for them. They include hotels and similar establishments, restaurants, travel agencies and night clubs. Revenue so raised goes to the National Office of Tourism.<sup>42</sup>

### **3.5.12 Lake Transport**

Although a draft Code on Navigation and Lake Transport has been prepared it has not apparently yet been implemented. The regulation of lake transport is still therefore primarily governed by a 1924 Ordonnance, as amended, on the surveillance and policing of navigation on the lakes and rivers.<sup>43</sup>

<sup>41</sup> Décret no. 100/41 du 25 février 1980 portant modification du texte organique de l'Office National du Tourisme and Décret no. 100/48 du 24 mars 1987 portant réorganisation de l'Office National du Tourisme.

<sup>42</sup> Décret-loi no. 1/10 du 3 mai 1978 portant institution d'une taxe touristique au Profit de l'Office National de Tourisme.

<sup>43</sup> Ordonnance no. 5/TP du 25 décembre 1924.

A certificate of navigability is compulsory for every boat or craft used for the transport of passengers and cargo, whether mechanically propelled or not, if its home port is in Burundi. Such certificates are also required for fishing boats powered by engines of 50CV or more and foreign vessels which do not have a certificate from their home port.<sup>44</sup> In addition a navigation licence is required by anyone operating a vessel of more than 50 tonnes with an exception for fishing boats of less than 15 tonnes in certain specified conditions. A 1932 Ordonnance deals with the certification of the tonnage of vessels while a 1987 Ministerial Regulation prescribes the necessary paperwork for vessels undertaking international voyages on the Lake.<sup>45</sup> A 1958 Regulation deals with the issue of wrecks and the obligations of the vessel owners as regards notification of the authorities and measures to keep navigable watercourses free from obstruction.<sup>46</sup>

Nevertheless none of the various laws and regulations deal with the issue of pollution, whether accidental or deliberate, from vessels using the Lake. With the growth of the transport of petroleum products on the Lake there is a risk of an accident causing serious pollution.<sup>47</sup>

Although the authors have not seen a copy of the draft navigation code it is understood that this contains a section on the prevention of vessel based pollution. Otherwise the only restriction is the general prohibition in the water code mentioned above.

### 3.6 CONCLUSIONS

Further information is needed as regards government policies on the environment generally and on the enforcement of the laws presently applicable. The new water law for example clearly has the potential to reduce pollution levels in the Lake around Bujumbura - but only if it is fully implemented and enforced. Similarly it has not proved possible to obtain information on cross sectoral cooperation.

Nevertheless at this preliminary stage a number of initial conclusions can be made and these are set out as follows.

1. There are a number of activities or types of activities which have actual or potential impacts on the Lake which do not appear at present to be regulated at all by the law. These include pesticides and waste disposal on land. There are no laws on wildlife conservation *per se*. Other areas, such as industrial pollution in the broadest sense, are not adequately addressed by the legislation.
2. A lot of the legislation is dated and has not evolved to meet modern conditions. Important examples including the laws on fisheries and navigation. Consequently as well as being ill adapted to present requirements these laws fail to deal with environmental issues. It does not appear that fine levels have kept pace with inflation.
3. More recently passed legislation also frequently fails to take account of environmental issues. A good example as far as potential pollution to the Lake is concerned is the Mining

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<sup>44</sup> Ordonnance ministérielle no. 730/185 du 29 août 1983 portant renouvellement du certificat de Navigabilité.

<sup>45</sup> Ordonnance no. 152 du 21 novembre 1932 portant jaugeage des bateaux and Ordonnance ministerielle no.060/269 du 22 mai 1967 approuvée par décret loi no. 1/64 du 31 mai 1967 portant navigation sur le lac Tanganika sous pavillon du Burundi .

<sup>46</sup> Ordonnance no. 64/560 du 22 décembre 1958 portant surveillance et police de la navigation.

<sup>47</sup> Sironneau, J & Van Houtte, A, *op cit*, p16.

and Petroleum Code which sets no minimum environmental standards and does not deal with the issue of liability for environmental damage.

4. The planning/development control legislation is dated and incomplete and there is no provision in Burundian law for environmental impact assessment of activities likely to have significant effects on the environment whether within the planning process or otherwise.

## 4. TANZANIA

### 4.1 INTRODUCTION

The United Republic of Tanzania was established on 26 April 1964 by the merger of Tanganyika and Zanzibar. Tanzania is the largest country in East Africa and has a land area of 945,087km<sup>2</sup>. The catchment area of Lake Tanganyika is approximately 231,000km<sup>2</sup> (exclusive of Lake Kivu), most of which lies in Tanzania. Approximately 41% of the total surface of the Lake falls within Tanzania.

The estimated population of Tanzania in the mid-1990's is 25.6 million with an estimated annual rate of growth of 2.8%. Tanzania is one of the least urbanised countries of Africa and is classified as the world's second poorest country after Mozambique.<sup>48</sup> The Lake is remote from the major population centres in Tanzania and the area in the vicinity of the Lake is generally sparsely populated except for the northern end of the Lake.

### 4.2 CONSTITUTIONAL AND POLITICAL STRUCTURE

The interim constitution of 1965 was replaced on 25 April 1977 by a permanent constitution for the United Republic. Zanzibar has had a separate constitution since October 1979.

Legislative power as regards the United Republic of Tanzania is exercised by the National Assembly but the constitution of the United Republic gives considerable autonomy to the Zanzibari authorities which are given authority to deal with "non -Union matters " in relation to Zanzibar. Union matters are listed in the first schedule to the constitution and include external affairs, defence and security. The National Assembly comprises both directly elected members (chosen by universal suffrage) and nominated members (including five members elected from the Zanzibar House of Representatives).

The President is the head of state and has no power to legislate without recourse to parliament.

In July 1965 Tanzania became a *de jure* one-party state, but in May 1992 the constitution was amended to legalise a multi-party political system. The dominant party is the *Chama Cha Mapinduzi* (CCM - Revolutionary Party of Tanzania) which has a socialist orientation.

### 4.3 LEGAL SYSTEM

As a result of its history as a British colony, Tanzania has a common law legal system.

Tanzania has an independent judiciary. The highest court is the Court of Appeal below which is the High Court, and then the District Courts which are situated in each district and presided over by either a Resident Magistrate or a District Magistrate, and finally, the Primary Courts. The latter are established in every district and presided over by a Primary Court Magistrate.

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<sup>48</sup> Africa South Of the Sahara , p886.

#### 4.4 INSTITUTIONAL STRUCTURES

##### *Central Government*

The most important ministry as far as the regulation of the Lake is concerned is the Ministry of Tourism, Natural Resources and Environment. However ministries whose responsibilities impinge on the management of the Lake include, the Ministry of Agriculture, Livestock Development and Cooperatives, the Ministry of Energy, Minerals and Water, the Ministry of Lands, Housing and Urban Development and the Ministry of Communications and Transport.

The Ministry of Tourism, Natural Resources and Environment is divided into four main departments: Forestry and Bee-Keeping, Fisheries, Wildlife and the Environment. Further details of sectoral government agencies and parastatals are given below.

##### *Local Government*

In addition to the central government authorities, local authorities are vested with important responsibilities relating to the management of natural resources and the environment. In mainland Tanzania they consist of village councils, township authorities and district urban councils.

The functions of local government are set out in the **Local Government (District Authorities) Act**, 1982 as amended.<sup>49</sup> The Act establishes a detailed procedure for the adoption of by-laws. Village council by-laws are proposed by the Village Council to the Village Assembly which passes them (with or without amendment) and then refers them back to the Council. The by-laws are then approved by the district or urban council in which the township is situated before they become effective. Township authority by-laws and district or Urban Council by-laws must all be adequately publicised and provide a period of time within which objections may be raised. Township authority by-laws require the approval of the district or Urban Council while District or Urban Council by-laws in turn require the approval of the Regional Commissioner who submits them to the minister responsible for local government.

The Minister of Local Authorities may also issue uniform by-laws for all village Councils, Townships Authorities and District or Urban Councils, many of which relate to natural resources such as soil and water.

It is significant that by-laws relating to natural resources or the environment may be approved without consultation with the relevant central government departments.<sup>50</sup>

#### 4.5 RELEVANT LAWS AND POLICIES

##### **4.5.1 Environment and Natural Resource Management**

There is no general environmental statute in force although drafts have reportedly been prepared by the National Environment Management Council.<sup>51</sup>

<sup>49</sup> By Act 8 of 1992. **Local Government (Urban Authorities) Act**, 1982 as amended by Act 8 of 1992, is also in place.

<sup>50</sup> Cirelli, M, Report on the Legal and Institutional Aspects relating to Management and Conservation of the Coastal area in the United Republic of Tanzania, FAO, Rome, October 1994, p 10.

<sup>51</sup> Cirelli, op cit, p 33.



The **National Environment Management Act**, 1983, establishes a National Environment Council responsible for, inter alia: the coordination of the activities of all bodies concerned with environmental matters, evaluation of government policies and activities which may affect the quality of the environment, fostering cooperation between central and local government, and various advisory functions including proposing legislation. Members of the Council are appointed by the Minister from ministries and organisations involved in "management and protection of the environment ". There is reportedly a lack of clarity as to the exact division of responsibilities between the National Environment Management Council and the Division of the Environment within the Ministry of Tourism, Natural Resources and Environment.

The Tropical Pesticides Research Institute was set up pursuant to the **Tropical Pesticides Research Institute Act**, No. 18 of 1979, and is responsible for research into, and the development of, pesticides as well as the regulation of their use.

The **Public Health (Sewerage and Drainage) Ordinance**, cap 336, empowers local authorities to construct and maintain public sewers in municipalities or townships which are identified by ministerial order (Section 4) and to require owners of buildings to adopt satisfactory drainage and latrines (Section 15 to 19). The discharge into sewers and drains of chemicals or other wastes which may cause nuisance or be prejudicial to health is prohibited (Section 8) as is any discharge from industries into public sewers except with the agreement of the relevant authority (Section 9).

The **Penal Code**, CAP 16, also establishes various environment-related offences including:

- "common nuisance" which is the commission of an act not authorised by law or an omission to discharge a legal duty, causing a common injury or danger or annoyance or obstruction, or causing inconvenience to the public in the exercise of common rights (Section 170);
- misdemeanours of voluntarily fouling water as to make it less fit for an ordinary purpose, or air so as to make it noxious to health (Section 184 and 185); and
- a misdemeanour of acting negligently with poisonous substances (Section 235).

#### **4.5.2 Land Tenure and Soil Conservation**

All land in Tanzania whether occupied or unoccupied, is public land pursuant to the **Land Ordinance** (cap 113 as amended by Act 28 of 1970) but the validity of rights of occupancy and other rights and lawfully acquired interests in land which existed when the 1970 amendment came into operation, are not affected (Section 3). All lands are subject to the disposition of the President and must be administered for the benefit of the Natives (Section 4) and having regard to "Native laws and customs existing in the district " in which the land is situated (Section 5). Rights may be granted by the President for up to 99 years and such grants are transferrable.

Natives are restricted from alienating land to non-Natives under the **Land (Law of Property and Conveyancing) Ordinance** (cap. 114) and the Land Ordinance restricts the transfer of rights of occupancy from Natives to non-Natives (Section 8). Rights of occupancy may be revoked by the President for "good cause " defined to include non-payment of rents and taxes, non-use, and breach of legislative provisions, or where the President considers it to be in the public interest (Sections 7(2)).

The **Land Tenure (Village Settlements) Act**, no. 27 of 1965, provides for the grant of special rights of occupancy for the purpose of developing village settlements. The Minister may exercise his powers under Section 6 of the Land Ordinance to grant rights of occupancy to the Rural Settlement Commission (which may be granted free of a premium or rent) and the Commission may assign such settlement rights to Village Settlement Cooperative Societies. The Commission or

a Society which has been assigned settlement rights, may grant “derivative rights “ including licences for use and occupation, leases and easements. However, a Society may not grant a license or lease of a homestead or agricultural plot to anyone who is not a member of the Society unless the licence or lease is for not longer than two months. The prior approval of the Commission or of the relevant Society is required before any disposition of a derivative right can validly be made.

Holders of a derivative right may nominate a person to succeed them on death subject to certain conditions including approval by the Commission or the Society.

The Commission has wide powers to make rules for the development of village settlements and the plots therein and for the conservation and protection of natural resources in village settlements including rules relating to crop cultivation, methods of fertilisation, pest control, land clearance, and relating to the forestation of land, the protection of slopes and the drainage of land (Section 18). The Commission may, by order published in the Gazette, delegate such powers to a Society in relation to a village settlement.

The **Rural Lands (Planning and Utilisation) Act**, 1973, empowers the President to clear specified areas in relation to which the Minister may issue Regulations on construction activities, farming (including forestry), mining, reservation for gardens, forests or parks, revocation of rights of occupancy etc.

#### **4.5.3 Water**

The principal legal instruments are the **Water Utilisation (Control and Regulation) Act** 42, of 1974, as amended (“the Water Act “), the **Water Utilisation (General) Regulations**, 1975 (“the Water Regulations “), and the **Urban Water Supply Act**, 7 of 1981 (“the Urban Water Act”).

The ownership of all water in Tanzania is vested in the State (Section 8 of the Water Act) and approximately 90 water sources (but excluding Lake Tanganyika) have been declared to be national water supply sources.<sup>52</sup> Water may be used for domestic purposes (Section 10) and the owner or occupier of land may use limited quantities of underground water and collect rain water. However, in general, no person is entitled to divert, dam, store, abstract or use water, or construct waterworks, except in accordance with an existing right or with a water right granted under the Water Act. Water rights are granted by water officers after giving notice of applications to allow the public to raise objections (Section 15).

The main executive functions in relation to water are performed by a Principal Water Officer and Regional Water Officers generally and in the case of specified towns, by the National Urban Water Authority (“the Authority “) established under Section 4 of the Urban Water Act. The 1981 amendment to the Water Act provides for the establishment of the Central Water Board as the principal advisory organ in matters related to the utilisation of water (Section 6(1)). The Principal Water Officer is required to consider (but not to follow) the advice of the Central Water Board in the exercise of certain powers, including deciding whether or not to grant an application for a water right or to modify it.

The Urban Water Act provides that the authority “shall be the principal instrument for the implementation, in specified towns, of the policy of the government in relation to water, water supply and water resources conservation... “ (Section 26(1)).

The 1981 amendments also provide for the Minister to declare any area of land to be a water basin in relation to a river (Section 7(1)) and to establish a Basin Board in respect of each water basin to

<sup>52</sup> See the Water Utilisation (Declaration of National Water Supply Sources) Notice, 1975 made under Section 9 of the Water Utilisation (Control and Regulation) Act, 42 of 1974.

perform essentially the same functions as the Central Water Board, in relation to the water basin concerned.

#### *Control of water pollution*

Since the 1981 amendment to the Water Act, the Central Water Board has an important function in relation to the control of, and regulation of, water pollution, including the power to carry out research, to formulate and recommend comprehensive plans for the regulation of effluent discharge, to advise and assist the government and other bodies regarding measures for the control or prevention of water pollution, to recommend legislative measures to the Minister; and to formulate effluent and receiving water standards (Section 6(3)).

The discharge of effluents from any commercial, industrial or other trade wastes system into receiving waters without a consent granted by a water officer, is prohibited (Section 15A(1)) but no criteria are established as to the conditions of such consent. The 1981 Amendments introduced a schedule of standards in respect of effluents and receiving waters which must be complied with by "users " (Section 18B). However the Central Water Board may, with the consent of the Minister, exempt any person or body of persons from complying with these provisions for a period (Section 18B(3)).

The Water Officer is required to give notice of applications for consent to discharge and the procedure provides for interested parties to object and to make representations to the Central Water Board or the relevant Basin Water Board.

Applicants for water rights are required to indicate particulars of possible pollution and measures to be taken to avoid it (Water Regulations, First Schedule, Form A). The Water Act also provides that various conditions shall be implied in every water rights consent granted for mining, forestry or industrial purposes, or for the generation of power. These include an obligation not to pollute water so as to cause injury either directly or indirectly to public health, livestock, fish, crops or to any product which is processed using the water; to take precautions to the satisfaction of the Water Officer to prevent accumulations in the water course of silt, refuse, sewage and other substances likely to affect injuriously the use of the water; and treat or otherwise modify water prior to its direct discharge into receiving waters and to ensure that it complies with prescribed effluent and receiving water standards (Section 17).

Any person who pollutes a water course commits an offence and is liable upon conviction for a first offence to a fine of up to 2,000.00 Shillings and/or imprisonment for up to 12 months, and for subsequent convictions to a fine of up to 5,000.00 Shillings and/or a imprisonment for up to two years. Where the offence is a continuing one an additional fine of up to 100.00 Shillings per day may be imposed (Section 33(4)).

In urban areas under the control of the Authority, the Authority may, with the consent of the Minister, make rules to protect surface and underground water against pollution (Urban Water Act, Section 20(1)). It is an offence under the Act to willfully or negligently misuse or waste water from a waterworks (Section 41) to deposit or allow or cause to be deposited any earth, material or liquid in a place where it may enter the water course (Section 41(1)). Offences under the Act for which no penalty is specifically provided are punishable by a fine not exceeding 500.00 Shillings (Section 47).

#### **4.5.4 Protected Areas**

The **Public Land (Preserved Areas) Ordinance**<sup>53</sup> empowers the Minister to declare preserved areas which may not be occupied or used except under rights of occupancy of leases formerly granted by the government. Rights of occupancy existing at the time of the declaration under native

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As amended by Act 28 of 1965 and Act 17 of 1966.

law or custom are preserved as long as they continue to be utilised (Section 5). Provision is made for the formal demarcation of these areas by the Commissioner for Surveys (Section 7) and for compensation for extinguishment of certain native rights in the case of a formal grant of rights of occupancy over the same areas (Section 7a).

The **Protected Places and Areas Act**, No. 38 of 1969, applies to any area declared by the Minister responsible for legal affairs to be a Protected Area. It provides for restriction of access to such area and empowers “authorised officers “ to enforce its provisions. It is not clear whether this Act has been used to protect environmentally sensitive areas.

The **National Parks Ordinance**<sup>54</sup> establishes the Serengeti Park and provides for the establishment of additional parks. Parks are declared by the Minister with the consent of parliament and compensation must be paid for any pre-existing rights which are extinguished as a result, in accordance with the Land Acquisition Ordinance (Section 628). The Tanzania National Parks (TANPA) is vested with authority to manage these parks.

Currently there are five categories of protected area devoted to wildlife conservation, differentiated according to the degree and nature of utilisation and settlement permitted in each, together with forest reserves and protected areas established under the fisheries legislation.

1. *National Park (“NP”)*

These are created by an act of parliament and controlled by TANAPA in accordance with the National Park Ordinance. Classification as an NP affords the highest level of protection and is applied to areas that have been selected for “having outstanding natural, archaeological or cultural resources representative of Tanzania’s heritage and/or critical water and soil resources necessary to maintain ecological integrity and support the subsistence needs of communities outside NP boundaries”.<sup>55</sup> Human activities essential for the proper development and management of an NP and non-consumptive recreational activities consistent with the purposes of the NP and the protection of its resources are permitted.

2. *Game Reserve (“GR”)*

These are declared by the President under the Wildlife Conservation Act 12 of 1974. This status affords a high level of protection but various forms of sustainable wildlife utilisation are permitted with the permission of the Director of Wildlife including consumptive and non-consumptive uses. No permanent human settlements, agriculture or livestock grazing is permitted in these areas. Where a GR overlaps with a forestry reserve, any cutting of vegetation is only permitted on joint authority of the Directors of Wildlife and Forestry.

3. *Ngorongoro Conservation Area (“NCA”)*

The NCA is controlled under the Ngorongoro Conservation Ordinance and is managed as a multiple land use area. Cultivation has not been permitted since 1975 but permitted uses of the land include grazing by the resident Maasai pastoralists and game viewing.

4. *Game Controlled Area (“GCA”)*

These have been declared by the Minister under the Wildlife Conservation Act and regulate hunting, live capture, fishing and the use of weapons, but not other forms of land use including human settlement and cultivation. The government does not intend to retain this category of

<sup>54</sup> Cap. 412, as amended by Acts 37 of 1962, 44 of 1963, 7 of 1967 and by the **Game Parks Laws (Miscellaneous Amendment) Act 1975**.

<sup>55</sup> Policy for Wildlife Conservation of Utilisation, Department of Wildlife, Ministry of Tourism, Natural Resources and Environment (March 1995), p15.

protected area as a result of the many problems which have arisen, due largely to the fact that these areas are neither in the full control of the wildlife authorities nor of the rural communities living within them.

#### 5. *Partial Game Reserve ("PGR" to be renamed Nature Reserve)*

The Wildlife Conservation Act makes provision for the Director of Wildlife to create and control PGRs for any animal of class of animal. According to the latest policy of the Department of Wildlife, the government intends to resurrect the use of PGRs under the new name of Nature Reserves for threatened species of wildlife and their habitats in specific, relatively small areas, to conserve important species occurring within areas settled by humans. Each Nature Reserve would be governed by a set of by-laws to be agreed at District and regional level and declared by the minister.

#### 6. *Forest Reserve ("FR")*

These are declared by the minister under the Forest Ordinance (Chapter 389 of the Laws of Tanzania). Two types of Forest Reserve are created, productive FRs for the cutting of timber and production of forest produce, and protective FRs for the protection of forests in important water catchments. Permanent human settlement, agriculture and the development of tracks is not allowed in FRs and livestock grazing is only allowed under licence. Where FRs overlap with NPs of the NCA, they are effectively managed by the Wildlife authorities as no cutting of timber or extraction of natural products is allowed. Where FRs overlap with GRs, vegetation may only be cut on the joint authority of the directors of Wildlife and Forestry. Where FRs do not overlap with any protected area devoted to wildlife conservation the forestry sector remains responsible for the management of forest produce although the wildlife sector will continue to be responsible for the management of fauna within such areas.

#### 7 *Fisheries Controlled Areas*

The **Fisheries Act**, No. 6 of 1970, makes provision for the Minister to "declare any area or waters to be a controlled area in relation to all fish, fish products or aquatic flora, or in relation to any species or kind of fish, fish product or aquatic flora"<sup>56</sup>. Fishing in any part of Tanzanian territorial waters<sup>57</sup> which has been declared to be a controlled area, is prohibited except with the written authority of the chief fisheries officer or any authorised officer. It is not known whether any such controlled areas have been declared in relation the Lake.

#### 8 *Aquatic Protected Areas*

The **Fisheries Act** also empowers the minister to make regulations "establishing marine parks, sanctuaries or reserves for any purpose whatsoever "<sup>58</sup>. The **Fisheries (Marine Reserves) Regulations**, 1975 declared under this Act establishes seven marine reserves which include areas of both land and water. As far as can be established, no sanctuaries or reserves have been declared in relation to fresh water areas. One would expect any such areas to be controlled by the fisheries department but according to a 1992 study on the establishment of the Mafia Island Marine

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<sup>56</sup> Section 5(1).

<sup>57</sup> "Territorial Waters " is defined as including "all lakes, rivers, fish ponds and dams in Tanzania " (Section 2).

<sup>58</sup> (Section 7(2)(x) )

Reserve<sup>59</sup> where a marine park involved fresh water areas both TANAPA and Fisheries Division would regard the management of the freshwater protected areas as the responsibility of TANAPA. This informal delegation of responsibility to TANAPA is apparently based on TANAPA's experience in managing parks such as the Lake Manyara National Park and especially the Rubondo Island National Park in Lake Victoria.

However it would appear that the primary motivation for declaring these national parks was to preserve terrestrial game animals (including crocodiles in Lake Victoria) and the water areas were included within the parks mainly as a buffer zone to protect the game in the park rather than to protect any aquatic fauna or flora.

#### *Policy in protected areas*

The government proposes to use joint memoranda of understanding between relevant government departments (such as Wildlife and Forestry) for the management of areas of great biological and economic importance.<sup>60</sup>

The latest policy for wildlife conservation and utilisation provides that the following information, as a minimum, must be provided for the gazetting of any new protected areas:

- An official name designation;
- A description of the national significance of the area which identifies its special cultural, scenic, or natural resources, and the constituent species and habitat the area seeks too conserve;
- A legal description of the boundary; and,
- A note of any zones of exclusion or types of special use.

The **Mining Act** gives the Commissioner of Mineral Resources the right to issue mineral rights in particular areas but the registered holder of a mineral right is not permitted to exercise any rights under the licence in any NP, GR, NCA or FR without the written consent of the authority having control over the land. It is government policy not to permit any mining in national parks or Ngorongoro, to give consideration to small scale mining for precious metals and gemstones in game reserves subject to strict criteria including prior conduct of an environmental impact assessment which must examine restorative measures after mining is completed, limited disruption to the game reserve, minimal pollution and environmental damage.

#### **4.5.5 Fisheries**

The **Fisheries Act**, No. 6 of 1970, provides for the protection, conservation, development, regulation and control of fish, fish products, aquatic flora and the products thereof. "Fish " is defined as meaning "all forms of aquatic or amphibious life (including turtles, crabs and shell fish) and includes the spat, brood, fry, spawn, ova and young of all such fish " and "fish product " means anything made, collected or obtained from fish. "Aquatic flora " means all aquatic plants and other members of the aquatic and vegetable kingdom including corals, coral sponges and weeds and "product of aquatic flora " means anything made out of, or composed wholly or partly of, any aquatic flora. The act is relatively brief and provides for the appointment of a Chief Fisheries Officer by the President (Section 3(1)) and provides that a license is required to engage in fishing, collecting, gathering, manufacturing, selling, marketing, importing or exporting of fish, fish products, aquatic flora or aquatic flora products (Section 4(1)).

<sup>59</sup> "Tanzania, Marine Parks and Reserves Act and Regulations, Legislative proposal regarding the management of marine resources in proposed Mafia Island Marine Reserve and provision for future additional reserves "; TR Young, FAO, Rome August 1992 (TCP/URT/0162) p30ff.

<sup>60</sup> Policy for wildlife conservation and utilisation (March 1995), p18.

The Minister has wide powers to make regulations including in relation to the introduction of non-indigenous live fish, preventing the obstruction and pollution of territorial waters and regulating domestic and foreign fishing vessels (Section 7). The Minister is given the power to exempt any person or organisation from all or any provision of the act or of any subsidiary legislation under the act if, in his opinion, it is in the public interest to do so (Section 14(1)).

The **Fisheries Principal Regulations**, 1989, impose license requirements for most types of commercial fishing (there are exceptions for some traditional methods), for sports fishing and for processing and trading fish. It prohibits the use of explosives, poisons and the pollution of water and directs the Director of Fisheries to establish “a system of consultation and cooperation with appropriate officials “ in order to require polluters to clean polluted waters (Regulation 27).

#### 4.5.6 *Wildlife*

The **Wildlife Conservation Act**, No. 12 of 1974, is the principal legislative instrument for the protection of fauna and the regulation of hunting and trade of animals and animal products. (This law is only applicable in mainland Tanzania).

Tanzania ratified the **Convention on International Trade in Endangered Species** (CITES) in 1979 and the Convention entered into force in respect of Tanzania on 27 February 1980. In addition to authorising the declaration of various classes of protected area (discussed above) the Act provides various mechanisms for the protection of animals<sup>61</sup> including:

- declaring partial game reserves for any animal or class of animal which thereby acquire the status of “protected animals “ and which may not be hunted, captured, killed, wounded or molested within such areas without permission;
- declaring any animal or class of animal to be national game (Section 15) thereby prohibiting their being hunted, killed, captured or wounded without the prior written permission of the Director of Wildlife (Section 16);<sup>62</sup>
- declaring closed seasons;<sup>63</sup>
- providing that a hunting licence is required for animals listed in the second and third schedules to the act (Section 23);<sup>64</sup>
- providing that no animals may be captured without a permit (Section 32);
- stipulating that no animal may be hunted, killed or wounded without the written authority of the director (Section 38);
- providing that unless expressly authorised the young of any animal, or any female animal which is apparently pregnant, or which is accompanied by its young, may not be hunted or killed;

<sup>61</sup> Section 2(1) provides that Aanimal “ means “any kind of vertebrate animal and the young and eggs thereof, other than domestic animals “ and that Afish “ means “all forms of aquatic or amphibious life (including turtles, crabs, shell fish) and the spat, brood, fry, spawn, ova or young thereof “.

<sup>62</sup> The **Wildlife Conservation (National Game) Order**, GN274 of 1974 lists the animals declared to be national game under the act. The list includes all immature animals, female animals and animals protected by international conventions of any country as well as all birds with the exception of a few game species, some common bird pests and seed eating birds.

<sup>63</sup> Government Notice No. 266 of 1974 declares the period from 1 January to 30 June annually to be a closed season during which period hunting and capture of all animals, including birds, is prohibited.

<sup>64</sup> Hunting licenses may be granted to “authorised associations “ which include any Ujamaa village in addition to individuals (Section 26) provided that the licensing officer is satisfied that the meat of the animal hunted will be made available for consumption by all the members of the association (Section 27).

- prohibiting various unlawful methods of hunting (Section 54).

However it is permissible to kill any animal in defense of human life or property or to drive out or kill by any means whatsoever any animal found causing damage to property, with certain provisos (Section 50).

The **Wildlife Conservation (Amendment) Act 1978** provides for the establishment of a Wildlife Protection Unit within the Wildlife Department which is charged with responsibility for enforcing the provisions of the 1974 act relating to the hunting, capturing and commercial photographing of wildlife and the securing of trophies. The Act also establishes a Wildlife Protection Fund and a Board of Trustees to oversee the fund.

The **Wildlife Conservation (Hunting of Animals) Regulations 1974** (GN 272 of 1974) prescribe various details relating to game licenses to hunt animals and permits designated organisations to issue permits to persons to hunt on behalf of the organisation under certain conditions. Exceptions are made under a special president's licence to hunt, capture or photograph animals for scientific research, educational or cultural activities, a complimentary gift or food in emergencies (Section 41).

The capture of animals is prohibited except under a valid permit and in accordance with the **Wildlife Conservation (Capture of Animals) Regulations, 1974** (GN 278 of 1974).

International trade in wildlife products is regulated primarily by means of the **Wildlife Conservation (Registration of Trophies) Regulations**<sup>65</sup> which provides that any trophy export certificate for an animal or animal trophy protected by CITES shall be valid only if issued and signed both by the Director and Chief Research Officer of the Game Division (Section 6). Only two exit ports are used for CITES exports: Dar es Salaam and Kilimanjaro Airport.

The recent policy on wildlife conservation and utilisation issued by the Department of Wildlife recognises a number of challenges to be addressed, including:

- mounting human pressures leading to escalating conflicts between people and wildlife, competing for land, water and grazing;
- poor land use practises leading to soil erosion, over grazing, forest depletion and destruction of wildlife habitats;
- sub-optimal efficiency in wildlife management as a result of institutional complexity (the wildlife sector is managed by a central government department and five para-statal as well as district and regional control of certain protected areas, and of staff and wildlife resources outside protected areas);
- the alienation of villages from the concept of conservation as they have benefitted little from wildlife conservation and have borne the brunt of anti-poaching activities.<sup>66</sup>

Key policy objectives include:

- establishing wildlife management areas outside the protected area network;
- requiring environmental impact assessments (EIA) for all developments which have the potential to adversely affect wildlife and protected areas;
- the review of current legislation pertaining to wildlife and natural resource management and to wildlife authorities to permit the full implementation of the policy.

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<sup>65</sup> GN 276 of 1974.

<sup>66</sup> Policy for Wildlife Conservation and Utilisation, Ministry of Tourism, Natural Resources and Environment, Dar es Salaam, March 1995.



The wildlife management areas are seen as particularly important in relation to sites which are valuable in terms of habitat or biological diversity but where patterns of human settlement would not allow the establishment of a protected area affording a high degree of protection.

Wildlife management authorities are defined as “an area of communal land in which people have use rights over the wildlife and natural resources, which they wish to manage in a responsible fashion as the primary form land use and from which they are allowed to retain a significant proportion of revenue. The size of each area will take into account its ecology, wildlife densities and other natural resources, the proposed form of land use for the area, and cohesiveness of the community. Each area will have legal administrative boundaries and can include one or more villages. The area must be leased, entrusted or owned through customary or titled systems of land tenure by villages who form an authorised association. All forms of land use will be governed by a land use plan made in consultation with rural communities. Within each area, there will be exclusive zones for the management of wildlife and natural resources, as defined in a land use plan and the use of which can be regulated by by-laws “. (Para 3.2.1)

It is envisaged that wildlife interests will have to be adequately represented on all land use commissions both at the district, regional and national levels in order to integrate wildlife conservation with other forms of land use (Para 3.4.2).

The Statement of Policy adopts a wider definition of wildlife than that envisaged by the Wildlife Conservation Act which effectively only applies to vertebrate animals and their young, other than domestic animals.<sup>67</sup>

The policy states that the wildlife sector will be responsible for the management of:

- all wildlife (as defined in the policy) including fish and aquatic flora, within wildlife protected areas;
- all freshwater species of mammals, birds, reptiles and amphibians outside of wildlife protected areas; and,
- all terrestrial species of mammals, birds, reptiles, amphibians and invertebrates where these occur outside wildlife of forestry protected areas, as well as marine species not covered by fisheries legislation (Para 1.2.4).

#### **4.5.7 Forestry**

Forestry matters are regulated by the **Forest Ordinance**, as amended,<sup>68</sup> and the **Forest Rules, 1959**, as amended.<sup>69</sup> This legislation is apparently under revision.

The Forest Ordinance provides for the declaration of territorial or local authority, forest reserves (“FRs”). The Minister may declare any area of unreserved land (ie land which is not occupied under a right of occupancy or which is not freehold or leasehold) to be a territorial FR (Section 5). Notice of intention to declare an FR must be publicised (Section 6). Objections may be raised by the public and appeals lodged with the competent court. Provision is made for the payment of compensation for rights which are extinguished and other pre-existing rights to use the land or forest products must be recorded so that permits for their exercise may be obtained (Section 8). The creation of new rights is strictly limited.

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<sup>67</sup> The *Statement of Policy* defines wildlife as “those species of wild and indigenous animals and plants, and their constituent habitats and eco-systems, to be found in Tanzania, as well as those exotic species that have been introduced to Tanzania, and that are temporarily maintained in captivity or have become established in the wild “.

<sup>68</sup> Cap 389, as amended by Act 1 of 1964.

<sup>69</sup> As amended by the **Forest (Amendment) Rules**, 1990.

The Minister may also declare local authority FRs and must specify which authority is responsible for their management, subject to the control of the Chief Conservator of Forests (Sections 10 and 11). The Chief Conservator of Forests may enter into forestry dedication covenants with landowners for the growing of trees, commercial production of forest produce or for water conservation (Section 14). Unauthorized logging and other harvesting of forest produce is prohibited in FRs (Section 15).

Licences may be issued by the Chief Conservator of Forests or persons authorised by him, and by local authorities in respect of local authority FRs. There are specific criteria given for the issue of licences. The Act also sets out extensive regulatory powers (Section 30) as well as the powers of officers (Section 20).

The Forest Ordinance provides for the protection of certain trees or classes of trees which may be “reserved “ even on unreserved land (Section 17).

#### **4.5.8 Mining and Petroleum**

Under the **Mining Act**, 1979 (as amended by Act No. 27 of 1980), a Commissioner of Mines is appointed by the President (Section 8). The Commissioner is entitled to issue mineral rights in the form of “reconnaissance licences” (for exploration with ancillary rights to enter lands, erect camps, drill etc); “prospecting licences” and “mining licences” (for extraction).

Oil and gas exploration is regulated by the **Petroleum (Exploration and Production) Act**, No. 27 of 1980. The Act vests property and control over petroleum in or under any land in the United Republic in the State (Section 4(1)) and prohibits the exploration or production of petroleum other than in accordance with the licence.

The President appoints a Commissioner for Petroleum Affairs (Section 8) with powers to grant licences to individuals who are citizens of Tanzania and to bodies corporate who are incorporated or registered in Tanzania (Section 13).

The holder of a licence is restricted in exercising his rights under the licence in respect of any land dedicated or set apart for any public purpose and land within 100m of a building, reservoir or dam owned by the Government without the written consent of the responsible Minister. In addition the consent of the controlling authority is required for the exercise of rights under a licence in respect of land in a National Park, Forest Reserve, Game Reserve, Range Development Area, or in the Ngorongoro Conservation Area. No mention is made of the exercise of such rights in respect of protected areas established under the Fisheries Act despite the fact that land is defined as including land beneath water.

#### **4.5.9 Land Use Planning and Development Control**

The highest advisory body in all matters relating to planning and management of the economy is the Planning Commission established by the **Planning Commission Act**, No. 11 of 1989. The Commission is chaired by the President who appoints all of its members, including a vice-chairman from the Cabinet and the Minister of Finance. The main functions of the Commission are “generally to be responsible for the management of the economy and for leading the planning process and supervising the implementation of the economic and social plan as approved, with a view always to secure sustained national economic growth and development within the framework of the national policy of socialism and self-reliance” (Section 5(1)). These functions include responsibility for “the formulation and implementation of plans for the most effective and balanced utilisation of the countries resources”. The Commission is required to establish and maintain “a system of

collaboration, consultation and cooperation” with other institutions and persons likely to be able to assist it in the effective implementation of its functions (Section 7).

The **National Land Use Planning Commission Act**, No. 3 of 1984, establishes a Land Use Planning Commission appointed by the Minister (with a chairman appointed by the President) as “the principal advisory organ of the Government on all matters related to land use “ (Section 4). The Commission has a variety of functions, including:

- (a) responsibility for formulating policies on land use planning;
- (b) coordinating the activities of all bodies concerned with land use planning and serving as a channel of communication between them and the Government;
- (c) evaluating existing and proposed policies and activities of Government in order to prevent inappropriate or harmful use and development of land; and
- (d) preparing regional physical plans and ensuring their implementation.

The Commission is required to work through the land advisory committees established in the districts and regions and has the power to issue binding orders to such bodies.

The **Town and Country Planning Ordinance** (cap 378) establishes a system of urban and regional planning similar to the British model. Local authorities, planning committees or preparatory authorities are subject to the direction of the Minister (Section 11). The Minister may declare “planning areas “ (Section 13) and an area planning committee is then established for such areas (which may be a local authority). A preparatory authority then prepares schemes for such areas including a general area planning scheme and one or more detailed schemes.

Copies of schemes are publicised and a procedure is established for the submission of objections, the modification of schemes and the submission of the scheme to the Minister. Any development within a planning area must receive prior planning consent (Section 35) issued in accordance with the requirements of the given scheme.

The Minister is given extensive regulatory powers to achieve the purposes of the Act.

The **Range Development and Management Act** (cap 569) includes detailed provisions for the establishment of “Range Development Areas “. In these areas a Range Development Commission is responsible for rehabilitating, conserving, developing and improving the natural resources of the area (Section 4). The Minister declares such areas (Section 3) and may make Regulations, including restrictions on entry. The Commission issues permits for various activities including forestry, gathering of natural produce and the construction of roads (Section 9).

The **Rufiji Basin Development Authority Act**, No. 5 of 1975, is an example of legislation to provide for the development of a specific area. The Act applies to the area of land through or along which the Rufiji river (including each and every tributary of the river) flows, as defined by Presidential proclamation. The Act established the Rufiji Basin Development Authority (Section 4) which is responsible for a variety of development functions in the Rufiji Basin Development Area. These include generation of hydro-electric power, flood control, the promotion and regulation of industrial activities, agricultural activities, forestry, fishing, public inland water and road transport systems, the prevention or minimisation of soil erosion and the promotion of tourism (Section 6).

#### **4.5.10 Foreign Investment**

The **National Investment (Promotion and Protection) Act**, 1990 as amended by Act No. 10 of 1992, establishes an Investment Promotion Centre as a focal point for local and foreign investments, to collect and distribute information, identify potential investors and partners, organise promotional activities and other related functions (Section 5). The Centre issues certificates of

approval of investments to nationals and foreigners - a necessary precondition to investment. In considering applications, the Centre must look at a number of criteria in order to establish that the investment will provide a significant contribution to economic development of Tanzania. Various incentives are available including tax holidays and exemption from import duties (Sections 20-27). The 1992 amendment provides for the creation of a committee with representatives of various ministries and a council with 22 members from the business community (Section 6a and 6b).

#### **4.5.11 Tourism**

The **Tanzania National Tourist Board Act** 1962 as amended by Act No. 18 of 1992 establishes a National Tourism Board appointed by the Ministry to advise on tourism matters, and to promote and develop the tourism industry, with all necessary powers. The 1992 amendment provides for the establishment of a Tourism Fund.

## **4.6 CONCLUSIONS**

The authors have been unable to locate details of legislation regulating transport on the Lake. Apart from that, it is clear the relevant legislation is fragmented. There are over one hundred items of legislation and subsidiary legislation in Tanzania which effect environmental management and are therefore relevant to the Lake. As with the other states considered it is has been hard to gather information on enforcement by the Tanzanian authorities of the laws considered. One report considered, however, suggests that enforcement of environmental laws is weak due in part to delays in the court system and a lack of specialisation on the part of the judiciary.<sup>70</sup> The same report also notes that fine levels are too low to have a deterrent effect.<sup>71</sup> Other conclusions are set out as follows.

- 1 Much of the current legislation is outmoded or inefficient. Certain Acts date back to colonial times while many are based on old fashioned concepts of resource utilization rather than sustainable development.
- 2 Some important issues are not covered, or are inadequately covered, by the law. These include air pollution and hazardous waste management, species protection through designation as endangered species and quality and emission standards.
3. There is at present no provision in Tanzanian law for the use of environmental impact assessment in the development process.

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<sup>70</sup> Report on Existing Legislation Pertaining to the Environment, Division of Environment, Ministry of Tourism, Natural Resources and Environment, Dar es Salaam, May 1994, p74.

<sup>71</sup> Report on Existing Legislation Pertaining to the Environment, op cit, p76.

## 5. ZAIRE

### 5.1 INTRODUCTION

The Republic of Zaire, with an area of 2,344,885 km<sup>2</sup> is the second largest country in sub-Saharan Africa and is particularly rich in natural resources. Lake Tanganyika and the other great lakes of the Rift Valley (Lakes Kivu, Edward and Mobutu) lie along its Eastern border. To the West there is small strip of coastline 40km long. Otherwise the country's geography is dominated by the Zaire River, which carries the second largest volume of water in the world, and the network of tributaries which make up its basin.

The estimated population of Zaire in 1991 was 36,672,000. Mining plays a significant role in Zaire's economy and is a major source of export earnings. The most important mineral resources are copper, diamonds, cobalt and zinc. Zaire is also a petroleum producer, with oil fields on the Atlantic Coast and at the mouth of the River Zaire, and in 1989 became a member of the African Petroleum Producer's Association.<sup>72</sup>

### 5.2 CONSTITUTIONAL AND POLITICAL STRUCTURE

A former Belgian colony, Zaire gained independence on 30 June 1960 as the Republic of the Congo. It was renamed the Republic of Zaire in October 1971. There have been several constitutions since 1960 which have all been subject to amendments. At present the constitution is effectively suspended and under the present transitional government a new constitution is being prepared pursuant to Transitional Constitutional Acts adopted in September 1993 and April 1994.<sup>73</sup>

From 1970 until November 1990, when legislation was adopted to permit the existence of political parties, Zaire had a one party political system.

### 5.3 LEGAL SYSTEM

Like Burundi, Zaire's legal system is based on the Belgian legal system and is therefore within the civil law tradition. Laws passed under colonial rule remain in force unless specifically repealed and as will be seen, a number of laws considered in this study date back to colonial times. The Supreme Court sits at Kinshasa, the capital. Below it are nine Courts of Appeal and 36 County Courts. The Department of Justice, under the direction of the Minister of Justice is responsible, *inter alia*, for the organisation of the judiciary and for defining its competence.

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<sup>72</sup> See Africa South of the Sahara ,1996, (1995 ), op cit, pp1013-1037.

<sup>73</sup> Africa South of the Sahara ,1996, (1995 ), op cit, p1029.

## 5.4 INSTITUTIONAL STRUCTURES

### *Central Government*

At central government level, ministries with responsibilities relevant to the Lake include the Department of the Environment, Nature Conservation and Tourism, the Department of Agriculture and Rural Development, the Department of Transport and Communications and the Department of Industry and Mines. Other relevant central government bodies are considered below. Central government has exclusive competence over all matters relating to the general policies of the country and national sovereignty.<sup>74</sup>

### *Local Government*

Apart from the capital, Kinshasa, the country is divided into 10 regions which are each administered by a regional commissioner and six councillors. The administrative arrangements and distribution of powers and competencies (1) between central government and the regional governments and the various levels of local government (sub-regions, cities, urban areas, zones, towns, villages and districts) and (2) among the hierarchy of local government bodies are set out in a 1982 decree-law. It appears that this complex law is at present not uniformly applied. Its attempts to relatively centralize power and decision making are apparently hampered by the distances between Kinshasa and the regional centres and consequent communications difficulties.<sup>75</sup> The Department of the Environment, Nature Conservation and Tourism also has offices in each region, headed by a Regional Coordinator, as well as at sub regional and zonal levels.

## 5.5 RELEVANT LAWS AND POLICIES

### **5.5.1 Environment and Natural Resource Management**

There are no general environmental or natural resource management laws in force in Zaire. Nevertheless, since its creation in 1975, the Department of the Environment, Nature Conservation and Tourism has had a central role in this area. According to **Ordonnance no. 75-231 du 22 juillet 1975 fixant les attributions du département de l'environnement, la conservation de la nature et le tourisme et complétant l'ordonnance no. 69-146 du 1er août 1969** the Department is responsible for the promotion and coordination of all activities relating to the environment, nature conservation, tourism and the hotel industry.

As well promoting and organising tourism and the hotel industry the specific duties of the Department include:

- creating and managing both complete and partial nature reserves (which include national parks, hunting reserves and fish and aquatic resource reserves);
- ensuring the protection and conservation of flora and fauna in such reserves;
- creating and managing research stations whether in such reserves or elsewhere;
- creating and managing water and forest ecosystems (Article 1.2).

<sup>74</sup> Ordonnance-Loi No. 82-006 du 25 février 1982 portant organisation territoriale, politique et administrative de la République

<sup>75</sup> Sironneau, J & Van Houtte, A, op cit, p21.

In 1977 a number of other services were transferred to the Department of the Environment, Nature Conservation and Tourism giving it a wide set of environmental responsibilities. Services transferred from the Ministry of Agriculture included the Directorate of Water and Forests, the Hunting and Fishing Service and the Office of Forest and Aquatic Resources Exploitation. The Directorate of Town Planning and Housing was among the services transferred over from the Ministry of Public Works and Territorial Development while the Directorate of Industrial Pollution was transferred from the Department of the National Economy. The Environmental Health Service was transferred from the Department of Public Health and the Office for the Protection of Monuments and Sites was transferred from the Ministry of Culture and Arts.<sup>76</sup> Another important department within the Ministry as far as the conservation of biodiversity is concerned is the *Institut Zaïrois pour la Conservation de la Nature (IZCN)* or Zairian Institute for Nature Conservation.

At the time of the creation of the Department of the Environment, Nature Conservation and Tourism in 1975 an interdepartmental environment, nature conservation and tourism committee was established with the aim of:

- formulating outline policies for the Republic of Zaire in the fields of the environment, nature conservation and tourism;
- considering any proposed amendments to international treaties relating to the environment, nature conservation and tourism;
- considering any proposals to undertake industrial, commercial, touristic or other activities which might have effects on the environment, nature conservation and tourism;
- studying methods for assisting the protection of the environment and nature and the promotion of tourism in Zaire;
- advising the Executive Council<sup>77</sup> on any issue relating to the environment, nature conservation and tourism;
- generally giving such advice to and making any proposals to the Executive Council on the environment, nature conservation and tourism as necessary.<sup>78</sup>

According to the Presidential Order by which it was created, the committee, which is chaired by the Director General of the Department of the Environment, Nature Conservation and Tourism, must meet at least once a quarter. Other members include representatives from the Departments of Agriculture, the National Economy, Public Works and the Development of the Territory, Land Affairs, Transport and Communications, Energy, National Education, Public Health as well as from the Office of the President. It has not been possible to ascertain whether this committee is still functioning or details of any policies which it has formulated.

In 1982 a committee was set up with responsibility for developing Zaire's national nature conservation strategy, however the authors have not been able to discover any details of this strategy.<sup>79</sup>

#### *Pesticides*

There is no pesticides legislation in force in Zaire. It is understood that run-off from pesticides on cotton plantations near the Ruzizi River is a source of pollution to the Lake.

#### *Industrial Pollution*

<sup>76</sup> Ordonnance no. 77-022 du 22 février 1977 portant transfert de directions et de services au Département de l'Environnement, Conservation de la Nature et Tourisme

<sup>77</sup> The Executive Council was the name of the council of ministers under previous constitutions.

<sup>78</sup> ***Ordonnance no. 75-232 du 22 juillet 1975 portant création d'un comité interdépartemental pour l'environnement, la conservation de la nature et le tourisme.***

<sup>79</sup> Arrêté Départemental du 15 décembre 1982 portant création d'une commission restreinte chargée de la stratégie nationale de la Conservation de la Nature au Zaïre.

The only laws apparently in force relating to industrial pollution are a 1953 regulation on establishments which are dangerous, insalubrious or liable to cause nuisance, which the authors have not seen, and a 1986 ministerial regulation which sets out the procedure for obtaining a permit to operate such an establishment.<sup>80</sup> It appears that such a permit can contain conditions as to how such establishments are to be operated although environmental factors are not mentioned.

#### *Air Pollution*

No references to air pollution legislation have been found.

### **5.5.2 Land Tenure and Soil Conservation**

Land tenure is governed by a 1973 law on the regulation of the ownership of goods, land, buildings and securities<sup>81</sup> as amended and completed by a 1980 law.<sup>82</sup>

Pursuant to Article 53 of the 1980 law all land is the exclusive, inalienable and imprescriptible property of the State. This "state land heritage" is made up of the public and private land domains (Article 54). The public land domain comprises all land which is used for public purposes and services and is not capable of being subject to a concession (Article 55). All other land comprises the private land domain (Article 56) and is capable of being subject to a perpetual concession, an ordinary concession or a land easement pursuant to the 1980 law (Article 57). The law sets out the procedure whereby concessions are granted and also provides for more detailed provisions to be made by Presidential Order (Article 71). Only Zairian individuals can be granted perpetual concessions over land.

The beds of every lake and of all navigable water courses, whether floatable or not (Article 16 of the 1980 law), are part of the public land domain and the water of such lakes and water courses as well as ground water also belongs to the State. Subject, however, to any legal and administrative measures which regulate use or the granting of concessions, the right to use such water is open to everyone. In addition a ten metre wide strip of land from the high water mark of navigable and floatable waters remains in the public land domain.

As regards soil conservation, in 1981 a National Re-forestation Service was created as a specialised unit within the Department of the Environment, Nature Conservation and Tourism. One of the aims of this department is to ensure the conservation and protection of land where the natural vegetation cover has been destroyed by implementing re-forestation policies and undertaking measures against erosion.<sup>83</sup> Otherwise apart from an article in the Forest Law, considered below, it has not proved possible to locate any other provisions relating to soil erosion, although it is understood that soil erosion from the steep hills above the Zairian banks of the Lake is a significant problem.

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<sup>80</sup> Arrêté no. 001/CCE/DECNT/86 du 4 mars 1986 portant mesures d'exécution de l'ordonnance no. 41/48 du 12 février 1953 relative aux Etablissements dangereux, insalubres, ou incommodes.

<sup>81</sup> Loi no. 73-021 du 20 juillet 1973 portant régime générale des biens, régime foncier et immobilier et régime des sûretés.

<sup>82</sup> Loi no. 80-008 du 18 juillet 1980 modifiant et complétant la loi no. 73-021 du 20 juillet 1973 portant régime générale des biens, régime foncier et immobilier et régime des sûretés.

<sup>83</sup> Arrêté no. 012/DECNT/CCE/81 du 18 février 1981 portant création et organisation du Service National de reboisement.



### 5.5.3 Water

At the “First Symposium on the Definition of National Water Quality Norms in Zaire “ held in Kinshasa in 1988 the inadequacies of Zairian water law were recognised. Problems identified include the piecemeal nature of water legislation, its lack of adaptation to different uses, its failure to deal adequately with pollution and an insufficient framework as regards the infrastructure for water treatment.<sup>84</sup> A draft water law has been prepared by the FAO for the government but has not been implemented.

As mentioned above, Article 18 of the 1980 land law provides that ground water and the water of all lakes and navigable water courses, whether floatable or not, belongs to the State and its use is subject to legal and regulatory provisions. Article 19 provides simply that no one may contaminate such waters or change their course.

Apart from the provisions of an Order of 1914 which refers to the pollution of springs, lakes, water courses and parts of watercourses which has not been seen by the authors this would appear to be the only legislative provision on water pollution.

As regards institutional arrangements a pre-independence decree of 6 May 1952 sets out the administrative regime for the management of water in lakes and watercourses.<sup>85</sup> It provided for the creation of provincial water commissions in each province whose function it is to advise the provincial governor as requested. It is understood that such water commissions, if they are still in existence, operate in each region (as opposed to each province) and report to the regional commissioners.

The decree also gives the Minister broad powers to take measures necessary to:

- protect springs, ground waters, lakes and water courses;
- prevent the pollution and wastage of water;
- control the exercise of use rights as well as rights of occupation which have been conceded.

In addition the Minister is given powers to undertake inspections, to require work to be carried out by individuals, to order public works to be undertaken, to raise any necessary funds, to set up an account to receive money from taxes and charges raised and to acquire and dispose of water installations.

Concessions to use water or to occupy the beds of lakes or water courses are granted by regional or central government depending on the amount of water to be abstracted or the use to which it is to be put.<sup>86</sup> No concession can be granted without the advice of the regional water commission.

Concessions, which vary in length according to which level of government has granted them, contain such conditions as are deemed necessary by the authorities and must contain compulsory conditions as to rules and time limits for water abstraction, the measures the concessionary is to take to protect sites etc. There are no specific environmental protection provisions.

Otherwise the State owned company, the REGIDESO, has a monopoly over the supply of water distribution in the urban areas which it serves.<sup>87</sup> In urban areas which it does not serve the use of

<sup>84</sup> Sanogo T, Avant-projet de Loi Portant Code de l'Eau et Textes d'Application FAO, Rome, July 1994, p1.

<sup>85</sup> **Décret du 6 mai 1952 sur les concessions et l'administration des eaux des lacs et des cours d'eaux.**

<sup>86</sup> As the decree itself was issued before independence, post-independence it is unclear precisely which levels of government have authority to grant concessions.

<sup>87</sup> **Ordonnance no. 77-019 du 22 février 1977 portant creation des cahiers des charges de la REGIDESO, Article 4.**

ground and surface water for industrial purposes is subject to the prior permission of the Minister responsible for mines and energy subject to the advice of the REGIDESO. As well as obtaining such permission the user must also enter into a special user agreement with the REGIDESO.<sup>88</sup>

Finally mention should be made of the National Action Committee on Water and Water Treatment which operates under the chairmanship of the Minister responsible for the national economic plan and is charged with elaborating and supervising the development of the drinking water and water treatment infrastructure in Zaire.<sup>89</sup>

#### **5.5.4 Protected Areas**

A number of instruments govern the creation and attributes of protected areas in Zaire.

A 1969 law on nature conservation authorises the creation of “Integral Nature Reserves “ on any part of the territory of the Republic where the flora, fauna, soil, water and the natural surroundings in general are of special interest such as to justify their conservation and the protection of their surroundings from any activity which might alter their appearance, composition or evolution.<sup>90</sup> However activities on the basis of customary rights which have been expressly preserved can still be undertaken in such reserves.

In 1975 a law was passed on the creation of “Protected Areas”. These can be proclaimed by Presidential decree in any area which is not subject to an urban plan and where such a proclamation is justified by the needs of conservation or restoration. Within such areas, regulations can be issued to prevent hunting and fishing, and to regulate and restrict industrial, commercial, agricultural, pastoral, forestry activities, the execution of public or private works, the extraction of accessible materials, the use of water, public access and any activities likely to harm flora and fauna or more generally to alter the character of the area. The decree creating such an area also specifies the body which is to be responsible for its management. Provision is made in the law for the payment of compensation, calculated on an analogous basis to compensation for expropriation, to people who have suffered a diminution of the value of their land rights as a result of the creation of such Protected Areas.<sup>91</sup>

A 1982 law on hunting provides that the Minister responsible for hunting may declare parts of the national territory to be “Wildlife Reserves” or “Hunting Areas”.<sup>92</sup> Wildlife Reserves can be either full or partial. In full Wildlife Reserves the hunting, killing or capture of all species of fauna is forbidden except by, or under the supervision of, the authorities responsible for the reserve and all other human activities are forbidden. In partial Wildlife Reserves the hunting of wild fauna is regulated and controlled in a prescribed manner. Limits can be placed on hunting seasons and methods as well as on the species which can be hunted. In any event hunting in such areas is undertaken pursuant to a management regime, as regards permits and taxes, to be defined by the department responsible for hunting.

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<sup>88</sup> ***Arrêté Départemental no. 00144/DPT.MINER/86 du 2 septembre 1986, portant interdiction d'utiliser des eaux naturelles autres que l'eau fournie par la REGIDESO.***

<sup>89</sup> ***Ordonnance no. 81-023 du 14 février 1981 portant création d'un Comité National d'Action de l'Eau et de l'Assainissement.***

<sup>90</sup> Ordonnance Loi No. 69-041 of 22 August 1969 Relative a la conservation de la nature.

<sup>91</sup> Loi no. 75/024 du 22 juillet 1975 relative à la création de secteurs sauvegardés.

<sup>92</sup> Loi no. 82-002 du 28 mai 1982 portant réglementation de la chasse.

Section 1 of the law on hunting provides that within Wildlife Reserves it is forbidden, without the authorisation of the authorities responsible for the reserve, to:

- introduce domestic or exotic animals, firearms, traps or any hunting equipment, to detain or transport living wild animals, their skins or trophies, their meat or any other byproducts;
- pursue, hunt, capture, destroy, frighten, or disturb in any manner whatsoever any species of wild animal, including dangerous wild animals, except in the case of legitimate defence or *force majeure* in which case the person involved must within 48 hours report the incident to the Minister responsible for hunting and must provide proof that his actions were in self defence and that he did not either directly or indirectly provoke the aggression of which he claims to be the victim;
- damage in an unauthorised manner the habitat of wild fauna; and to
- fly an aircraft at a height of less than 500 metres.

Furthermore human activity in designated Wildlife Reserves is strictly limited. While existing villages are permitted to remain in place the re-location of villages, immigration, the creation of new villages and the clearance of any wooded areas are prohibited as are all activities which risk having an effect on the tranquility, the development of, or the hunting of, wildlife. The Minister can however lift these restrictions for the benefit of designated villages in order to improve wildlife habitat and to facilitate its exploitation (Article 15). Furthermore certain partial Wildlife Reserves can be leased to tourist enterprises or hunting associations on the basis of conditions set out by contract.

The 1982 law also provides for the designation of (1) Hunting Areas, where hunting may be authorised and (2) Hunting Estates which are set up by the appropriate minister and which are managed by the State.

### 5.5.5 Fisheries

The principle law on fisheries is the 1937 decree on fishing and hunting (as amended by a Decree of 17 January 1957, a legislative ordonnance No. 52/273 of 24 June 1958 and by a decree of 1960) which is also the principle item of fisheries legislation in Burundi, considered above. It will be recalled that the 1937 decree is essentially a framework text which allows the Minister or regional commissioner to issue regulations dealing with such issues as fishing seasons, the issue of fishing permits, the establishment of areas where fishing is totally or partly prohibited, fishing techniques, equipment and mesh sizes, the issue of fishing permits and fee arrangements and the introduction of new species.

The 1937 Ordonnance implementing the 1937 decree, which is still in force in Burundi, has been replaced by more recent regulations. A departmental regulation of 21 April 1981 prohibits the use of explosives, toxic substances and electric shocks as fishing techniques throughout the lakes and watercourses of Zaire and provides for the seizure of any such equipment and catch by the authorities.<sup>93</sup> The issue of fishing permits is presently dealt with pursuant to a 1979 regulation.<sup>94</sup>

In addition regional regulations, issued pursuant to the 1937 decree, which apply to fishing on the Lake were issued in 1958 by the then Shaba and Kivu regions. These are the same as the 1961 Burundian regulation on fishing on the Lake.<sup>95</sup>

Similar criticisms can be made about the Zairian fisheries legislation as were made about that of Burundi. Equally the government has accepted the need for reform by asking the assistance of

<sup>93</sup> Arrêté départemental no. 002 du 9 janvier 1981 portant interdiction de la pêche par empoisonnement des eaux.

<sup>94</sup> Ordonnance no.79-244 du 16 octobre 1979.

<sup>95</sup> Tavares de Pinho, A, Legislation des Pêches au Zaire , FAO, Rome, December 1985 pp 25-34.

FAO in the preparation of a new law on fisheries. Again, although a draft law has been prepared it has not been implemented.

Enforcement of fisheries legislation is the responsibility of the *gardes-pêche* or fisheries protection service who report to the Directorate of Water and Forests in the Department of the Environment, Nature Conservation and Tourism and to the regional administrative authorities. It appears however that they have no effective means of surveillance over Zaire's 650 km long coastline on the Lake.<sup>96</sup>

Of the four lacustrine states Zaire would appear to be the only one to have issued specific regulations dealing with the commercial exploitation and export of ornamental fish. The instrument is a 1987 ministerial regulation which provides that the exploitation of *poisson d'aquarium* or ornamental fish, defined as fish species which do not form part of the human diet, may only be undertaken by persons holding permits issued by the minister. Such permits are renewable annually and can set a maximum quota of 75,000 specimens. A fee is payable for the permit and on the export of each specimen and the Minister is given power to suspend both the exploitation and export of such fish.<sup>97</sup>

Finally mention should also be made of **Ordonnance no. 274/Agri** of 26 September 1945 whereby regional governors were given the power to establish local fisheries committees. Although this instrument is not presently applied it has not been expressly repealed and it might have some future relevance as far as management of Lake fish stocks is concerned.

### 5.5.6 Wildlife

The principal law on wildlife protection is the 1982 **Loi portant réglementation de la chasse** or law on hunting, mentioned above. The law is expressed to be applicable to all wild species of mammals, birds, reptiles and all wild vertebrates and invertebrates in Zaire. Such fauna are the property of the State and no one may exploit them by hunting them or in any other manner except subject to a permit. According to Article 1 "hunting animals" are all wild vertebrates except fish and batrachia and these are divided into three categories, as set out in tables annexed to the law:

- totally protected species which are listed in Table 1;
- partially protected species which are listed in Table 2; and
- unprotected species which are those species listed in neither Tables 1 or 2.

Without a scientific permit, no one may kill, capture, hunt, track, or deliberately disturb any animal listed in Table 1 or cause such an animal to flee, by whatever means, with the aim of causing them distress. Scientific permits can be issued to scientists or scientific bodies (Article 61) - and must specify the species, number, and sex of animals which can be caught or killed as well as the area for which the permit is valid and duration of validity (Article 62).

Partially protected species, listed in Table 2 can be hunted only with a specific type of hunting permit (eg a "*permis de grand chasse*") and according to the conditions and limits set by the Minister. The law makes provision for moving species from table to table and adding species as appropriate.

Species in category three - unprotected species - can still only be hunted by a person holding a hunting permit and apart from the two types of permit already mentioned the law provides for another 7 different types of permit which are issued according to such issues as residence, and the

<sup>96</sup> Van Houtte and Sirroneau, op cit, p2

<sup>97</sup> **Arrêté no. 0055/CCE/AFECN/87 du 18 août 1987 portant organisation de l'exploitation et de l'exportation de poisson d'aquarium.**

type of hunting to be undertaken.<sup>98</sup> Other provisions of the law regulate the duration of hunting seasons over all, or part, of the territory, for different species and forbid the use of certain types of weapons and hunting practices. Finally no one may introduce foreign wild animal species except with the permission of the minister responsible for hunting.

### 5.5.7 Forestry

It appears that the principle item of forestry legislation is a decree of 14 April 1949 which sets out the basic forest law.<sup>99</sup> This decree provides for the categorisation of forests as either “classified “ or “protected “. Classified forests include designated State forests as well as bare or insufficiently wooded areas of land which it is necessary to so classify in order to ensure their re-forestation or restoration, to protect hillsides against erosion, to protect springs and water courses or so that works of public benefit can be undertaken (Article 5). All other forests which are not the subject of concessions or classification are protected forests apart from private forests which with one exception are not otherwise subject to the provisions of the decree.

The decree, which is somewhat dated,<sup>100</sup> permits the unregulated felling and gathering of wood in protected forests for domestic use. Otherwise all such activities can only be undertaken by persons holding a permit and the decree sets out the rules and procedures for the issue of permits by the authorities.<sup>101</sup> These are now issued by the regional governments.<sup>102</sup> While the decree does provide for the collection of a re-forestation tax, there are no references to soil erosion apart from those mentioned above in connection with the categorisation of forest types. The owners of private forests may not under take deforestation works on slopes of more than 20 degrees without permission from the authorities (Article 37).

The national re-forestation service within the Department of the Environment, Nature Conservation and Tourism has already been mentioned in the context of soil erosion. Its other tasks include:

- the development of plantations near urban and rural centres to ensure a regular supply of wood and secondary materials;
- inspecting re-forestation activities undertaken by third parties in natural forests;
- assisting third parties charged with re-forestation to obtain good quality seeds so as to improve natural forests.

A re-forestation tax which is 20% of the total amount payable in fees for forestry exploitation permits was introduced in 1981.<sup>103</sup>

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<sup>98</sup> Apart from scientific permits there are also commercial and administrative permits as well as various permits for residents, tourists, rural inhabitants and collective-groups.

<sup>99</sup> Décret du 11 avril 1949 sur le régime forrestier.

<sup>100</sup> For example it regulates the rights of “indigenous people “ and has an article on permits for the wood supplies needed for steam boats.

<sup>101</sup> As amended by arrêté ministériel no. 8/CAB/MA/68 du 15 janvier 1968, portant nouvelles dispositions en matière de l’octroi de permis de cope de bois.

<sup>102</sup> Ordonnance-Loi no. 86-020 du 27 mars 1986 modifiant l’article 192 de l’Ordonnance-Loi no. 82-006 du 25 février 1982 portant organisation territoriale, politique et administrative de la République.

<sup>103</sup> Ordonnance no.77-023 du 22 février 1977 portant actualisation des taxes et redevances sur l’exploitation forestière en République du Zaïre.

### 5.5.8 Mining and Petroleum

Mining plays a major role in the Zairian economy and petroleum production is already underway in the coastal region. The principle law on mining and petroleum is the 1981 **Ordonnance-Loi portant Législation Générale sur les Mines et les Hydrocarbures** or general law on mining and petroleum as subsequently amended.<sup>104</sup>

The 1981 law provides that Zairian subsoil remains the property of the State and includes mines, quarries, mineral waters and hydrocarbons. Rights to these are separate to property rights. The law differentiates between the stages of prospecting for, and research and exploitation of such resources and provides for a system of permits and concessions in connection with mining and quarrying rights.

Hydrocarbon rights, which are the responsibility of the Department of Energy and not the Department of Mines, are dealt with under a different regime. This is set out in Part VIII of the law which provides that petroleum rights, relating to both prospecting and exploitation, are granted by convention or contract - and only to companies or legal persons. Under such contracts exclusive prospecting rights are granted for five year periods within one or more zones together with the right to a concession to exploit any deposits located.

Exclusive reconnaissance and exploration zones have an area of 50,000km<sup>2</sup> and include the beds of all water courses within such zones as well as the 10 metre wide strip of land from the high water mark of navigable and floatable waters of land which belongs to the public domain. Article 84 sets out specific matters to be governed by the contracts, such as the sizes of the zones in question, the minimum workplan and corresponding expenses etc. There are no requirements about environmental protection although there is provision for the inclusion of any other specific condition which the parties deem appropriate and so conceivably provisions relating to environmental protection could be included.

Again, as regards exploitation of petroleum resources, the law provides that the State can include in the agreement any clauses requiring the concessionary to take measures in the public interest - but gives as examples provisions relating to the increase and regulation of production levels, centralising sales rather than environmental protection.

Finally Zaire's energy policies are formulated by the National Energy Commission which reports to the Minister responsible for energy matters. Other functions of the Committee include the coordination of the activities of the various departments and organisations involved in the solution of energy problems, the promotion of activities relating to the energy sector and the planning of energy production, transport and distribution.<sup>105</sup>

### 5.5.9 Land Use Planning and Development Control

Town planning is regulated by a 1957 decree on Town Planning which is in fact the same pre-independence decree which is also still in force in Burundi. This provides for the preparation and thereafter the periodical revision of local, regional and national development plans. Equally no one may undertake specified construction activities in a town or region which is subject to a plan unless they have the prior, express, written permission of the district commissioner in towns or the regional

<sup>104</sup> By Ordonnance-Loi no. 82-039 du 5 novembre 1982 modifiant et completant l'Ordonnance-Loi no. 83-013 du 2 avril 1981 portant législation générale sur les mines et les hydrocarbures and Loi no. 86-008 du 27 décembre 1986 modifiant et completent l'Ordonnance-Loi du 2 avril 1981, portant législation générale sur les mines et les hydrocarbures, telle que modifiée et complétée par l'Ordonnance-Loi no. 82-039 du 5 novembre 1982.

<sup>105</sup> Ordonnance no. 81-022 du 14 février 1982 portant création d'une Commission Nationale de l'Energie.

commissioner or his representative. The extent to which plans have been prepared is not known by the authors and nor is it known whether any such plans apply to the regions adjacent to the Lake. As in Burundi, however, it appears that there may be no restriction on development activities in areas which are not subject to a plan.

A departmental regulation of 22 October 1988 provides that any person who wishes to build a construction in durable or semi-durable materials within a town, an urban zone, or a settlement of more than 3,000 inhabitants must first obtain building permission.<sup>106</sup> Application is made to the Minister responsible for town planning and human settlement for buildings to be constructed on behalf of the State and parastatals, buildings more than three storeys high and large investment projects such as industrial complexes and luxury hotels. Application is made to the regional commissioner in all other circumstances. In considering the application the decision maker must *inter alia* have regard to the environmental legislation in force.

### **5.5.10 Foreign Investment**

Foreign investment is governed by the 1979 **Code des Investissements** or Investment Code which seeks to encourage both foreign and national investment in the country through privileged investment regimes: the *régime général* or general regime, the *régime d'exonération partielle* or partial exoneration regime and the *régime conventionnel particulier* or specific agreement regime. Classification of an investment within such a regime depends on such matters as the size of the investment as well as the economic and other benefits to Zaire. Beyond general guarantees relating to property rights specific guarantees are given to foreign investors. These include the right to transfer abroad capital gains of amounts proportionally equivalent to their initial capital investment, the right to transfer abroad a proportion of any profits in proportion to the value of their initial capital investment and the right to repatriate the capital investment.

### **5.5.11 Tourism**

The promotion of tourism and the hotel industry is of course one of the responsibilities of the Department of the Environment, Nature Conservation and Tourism as mentioned above.

### **5.5.12 Lake Transport**

Lake Transport is regulated by the **Code de la Navigation Fluviale et Lacustrine** or River and Lake Navigation Code of 1966. The authors have not seen a copy of this text although in view of its age it would be reasonable to suppose that it does not deal with the issues of accidental and deliberate pollution caused by vessels.

## **5.6 CONCLUSIONS**

As with the case of Burundi it has not been possible to obtain details of government policies in the areas considered. Equally, it has not been possible to obtain concrete information on implementation and in view of the present economic and political situation in Zaire there must be some doubt as to the extent to which the present laws are actually enforced in regions far from Kinshasa. As regards the laws presently in force the conclusions are similar to those reached in

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<sup>106</sup> Arrêté départemental no. CAB/CE/URB.HAB./012/88 du 22 octobre 1988 portant réglementation sur la délivrance de l'autorisation de bâtir.

respect of the laws of the other lacustrine states. A number of important issues such as air pollution, waste disposal and pesticides are apparently unregulated.

In certain areas, such as fisheries and water, the Government has recognised that the laws are inadequate although new draft laws have not been implemented. In other areas the law is incomplete. Soil erosion in particular is poorly regulated while new laws which may otherwise be adequate, such as the mining and petroleum code, once again, do not take environmental factors into account. Finally the development and planning laws are dated and again no provision is made for environmental impact assessment.



## **6. ZAMBIA**

### **6.1 INTRODUCTION**

The Republic of Zambia is a landlocked state with an area of 752,614 km<sup>2</sup>. The continental divide, separating Atlantic from Indian Ocean drainage, forms the frontier with Zaire then traverses the North East of Zambia to the Tanzanian border. Approximately 77% of country is drained to the Indian Ocean by the Zambezi and its two main tributaries, the Kafue and Luangwa, with the remainder being drained principally by the Chambeshi and Luapula via the Zaire River to the Atlantic.

Zambia's population in 1981 was estimated to be just over 8 million. The population density of 10.7 inhabitants per km<sup>2</sup> is low for non-arid areas of Africa but even this figure is misleading since Zambia is the third most urbanised country in mainland Africa.

### **6.2 CONSTITUTIONAL AND POLITICAL STRUCTURE**

Zambia was colonised in 1890 under the aegis of the British South Africa Company of Cecil Rhodes. It was a British Protectorate from 1924 until 1953 when it entered the Federation of Rhodesia and Nyasaland. The territory became independent as the Republic of Zambia on 24 October 1964 and a new constitution was promulgated.

A new constitution was approved by the National Assembly on 2 August 1991 and provides for a multi-party form of government. The Head of State is the President of the Republic elected by popular vote at the same time as elections to the National Assembly. The President's tenure of office is limited to two five-year terms. The legislature comprises the National Assembly of 150 members elected by universal adult suffrage.

The constitution also provides for a House of Chiefs numbering 27. It is an advisory body which may submit resolutions to be debated by the assembly and to consider matters referred to it by the President.

### **6.3 LEGAL SYSTEM**

Zambia's legal system is based on traditional customary law, English common law, statutes originating in the colonial and federation periods and acts of the Zambian legislature. Zambia's legal system is classified as belonging to the Common Law family of laws although customary law remains important in some areas of the law.

The Supreme Court of Zambia is the final Court of Appeal. The Chief Justice and other Judges are appointed by the President. Beneath the Supreme Court is the High Court which has unlimited jurisdiction to decide any civil or criminal proceedings. Senior Resident and Resident Magistrate's Courts sit at various centres and in addition there are local courts which deal mainly with customary law although they have certain limited statutory powers.

## 6.4 INSTITUTIONAL STRUCTURES

### *Central Government*

Central government ministries with responsibilities relevant to the Lake include: Energy and Water Development; Agriculture, Food and Fisheries; Lands; Environment and Natural Resources; Tourism; as well as a Minister at the Office of the President with responsibility for planning and development coordination.

### *Local Government*

The **Local Government Act**, No. 22 of 1991, provides for the establishment of councils in districts and sets out the functions and administrative structure of local authorities. Local authorities have a variety of functions in relation to the management of local natural resources including responsibility for conserving natural resources, preventing soil erosion, controlling weeds, protecting and controlling local forests, operating sanitation services for refuse and effluent disposal, regulating the storage of hazardous substances and establishing and maintaining drains and sewerage systems.

## 6.5 RELEVANT LAWS AND POLICIES

### **6.5.1 Environment and Natural Resource Management**

The **Environment Protection and Pollution Control Act** 1990 is a framework act for the protection of the environment and control of pollution. It establishes an Environmental Council (Section 3) headed by a Chairman and Vice-chairman appointed by the Minister. A wide range of parties are represented on the Council including ten ministries, the National Commission for Development Planning, the Chamber of Commerce and eight other institutions, and a designated non-governmental organisation concerned with the conservation of nature (Section 4). The Council is also required to establish an Environmental Inspectorate with the necessary technical staff and facilities to administer, monitor and enforce measures for the protection of the environment and the prevention of pollution (Section 81).

The overall function of the Council is to “do all such things as are necessary to protect the environment and control pollution, so as to provide for the health and welfare of persons, animals, plants and the environment “ (Section 6(1)). Particular functions of the Council are enumerated including:

- (a) advisory functions in relation to: formulation of policies relating to good management of natural resources and the environment; conservation generally, and cooperation between national and international organisations on environmental matters;
- (b) research functions relating to the improvement of the environment and pollution control;
- (c) development control functions including considering and advising on all major development projects as an initial stage and identifying projects or types of projects, plans and policies for which environmental impact assessments are necessary;
- (d) coordinating the activities of all Ministries and other bodies concerned with the protection of the environment and control of pollution;
- (e) promoting projects which are likely to further conservation for sustainable development and protection and improvement of the environment; and
- (f) regulatory functions including conducting or procuring environmental impact assessments, embarking on educational programmes, providing support for environmental conservation by way of loans etc.

The Act also deals with a number of specific sectors of the environment including water (Part IV), air (Part V), waste (Part VI), pesticides and toxic substances (Part VII), noise (Part VIII), radiation (part IX) and natural resources conservation (Part X).

#### *Air Pollution*

The Environmental Council is given wide responsibilities in relation to the control of air pollution. It is charged with establishing air ambient quality and emission standards and guidelines, investigating incidents, monitoring and controlling air pollution, and initiating and encouraging international cooperation in this area, especially with neighbouring countries (Section 36). In addition the Council may, with the approval of the Minister, establish controlled areas within which special emissions standards apply. Applications for licences for industrial plants or premises likely to cause air pollution must be made at least six months in advance (Section 43). Furthermore no owner or operator or individual may operate a motor vehicle, ship, train, aircraft or other conveyance in a manner which will cause air pollution in contravention of established emission standards.

The **Penal Code** (CAP 146) provides that fouling air is a misdemeanour (Section 189) and causing loud noises or offensive or unwholesome smells which annoy considerable number of persons in the exercise of their common rights constitutes the offence of common nuisance (Section 190).

#### *Waste*

In respect of waste the Council is required to give directions to District Councils regarding their functions relating to the collection and disposal of waste under the **Local Administration Act**, 1980 (Section 48). The Council is also responsible for formulating various standards in relation to wastes, regulating all aspects of hazardous waste including transportation, export and generation, and monitoring and regulating waste disposal sites (Section 49).

It is an offence to discharge waste so as to cause pollution in the environment, to transport waste without a licence or to operate a waste disposal site or plant or generate hazardous waste without a licence (Section 50). The importation of hazardous waste into Zambia is banned as is the export to any country without a permit from the Council and the consent of the receiving country. The transportation of hazardous waste within Zambia requires a permit from the Council (Section 56).

#### *Pesticides and Toxic Substances*

The Council is also charged with regulating pesticides and toxic substances which are defined as poisonous substances which cause any adverse physiological effects to man, animals, plants or the environment (Section 57). The Council's obligations include controlling the importation, exportation, manufacture, distribution, sale, use, packaging, transportation, disposal and advertisement of pesticides and toxic substances. It is also required to provide for the monitoring of pesticides, toxic substances and their residues in the environment (Section 58). Manufacturers, importers and processors must apply for registration of pesticides and toxic substances (Section 59 and 60). It is an offence to use or dispose of a pesticide or toxic substance into the environment in contravention of the Act (Section 64).

The **Penal Code** (CAP 146) also provides that it is a misdemeanour to handle any poisonous substance in such a manner as to endanger human life or to risk hurting or injuring any person (Section 239).

The **Inland Waters Shipping (Dangerous Goods) Regulations** made under the **Inland Waters Shipping Act** establishes certain precautions and safety standards to be observed in the carriage aboard a vessel on inland waters of dangerous goods (identified in the schedule to the regulations).

### *Noise and Radiation*

The Council is also required to control noise including establishing noise levels and noise emissions standards for various activities and is also required to regulate ionising radiation including establishing standards for the proper regulation of radioactive contamination and the monitoring and control of pollution from radiation (Section 72).

### *Enforcement*

Enforcement under the Environmental Protection and Pollution Control Act is to be achieved primarily by an Environmental Inspectorate established by the Council. The Inspectorate may order polluters to take appropriate abatement and control measures and where these are not taken the Council may take the measures and recover the costs from the polluter (Section 90). It is an offence to pollute the environment or to contravene any of the provisions of the Act. A person who inadvertently or accidentally causes or witnesses an act causing pollution is required to report it without delay to the Inspectorate, the police or a local authority (Section 86). Wilful failure to do so is an offence and the Inspectorate is obliged to treat the source of any such complaint as confidential (Section 87).

The Inspectorate is required to publish its intention to issue a license or permit at least 28 days in advance and to invite representation from interested persons effected by the grant of the license or permit (Section 93).

### *Natural Resource Management*

The Environmental Protection and Pollution Control Act repealed a considerable part of the **Natural Resources Conservation Act**, No. 53 of 1970, which had established a natural Resources Advisory Board to advise the Minister. The Council has now effectively assumed the Board's most important functions. The Environmental Protection and Pollution Control Act requires the Council to, *inter-alia*, conduct research into land use practices and their impact on natural resources,<sup>107</sup> establish and review land use guidelines, make regulations for the conservation and protection of natural resources (with the approval of the Minister) and to take stock of the nation's natural resources and their utilisation (Section 76).

Although much of the Natural Resources Conservation Act No. 53 of 1970 has been repealed, some parts of it remain in force. In particular, the Minister may by order require occupiers of land to undertake or adopt measures necessary for the conservation of natural resources on such land and the prevention of injury to natural resources on other land (Section 13). Such an order may relate to a variety of activities including preserving and protecting water catchments, the source, course and bank of any stream, controlling water, preventing the pollution or fouling of public water, works for conserving water or soil and the preservation of trees and other vegetation. It is an offence not to comply with such an order and in some cases the Minister may cause appropriate works to be constructed or measures to be taken.

The Act also provides for the establishment of Provincial Natural Resources Committees responsible for exercising general supervision over the natural resources of the province and to coordinate and review plans for their conservation, wise use and improvement (Section 16) as well as District Natural Resources Committees responsible, *inter alia*, for keeping the conservation status of natural resources within the district under continual review (Section 17).

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"Natural resources " are defined as including, soil, water, plant life and vegetation, animal life and fauna including natural products derived from them and anything else which the Minister may declare to be a natural resource by means of a statutory order (**Natural Resources Conservation Act** Section 2).

The Minister, with the approval of the President, may order any owner or occupier of land within a particular area to reduce the number of stock and to comply with stock limitations. Part V of the Act gives the Minister extensive powers to control bush fires.

The Minister is given wide regulatory powers in relation to natural resources and is specifically empowered to make regulations relating to reducing and limiting stocks, prohibiting and controlling cultivation along stream banks,<sup>108</sup> controlling the taking of forest produce, controlling fauna and fish life, providing for the prevention, mitigation or control of soil erosion.

The **National Heritage Conservation Commission Act**, No. 23 of 1989, establishes a National Heritage Conservation Commission (Section 3) "to conserve the historical, natural and cultural heritage of Zambia by preservation, restoration, rehabilitation, reconstruction, adapted use, good management and any other means" (Section 8(1)). "Natural heritage" is defined to include areas of land and natural objects with aesthetic or scientific value or interest including areas of land containing rare, distinctive or beautiful flora or fauna (Section 2). The Minister may declare heritage (including natural heritage) to be a national monument upon the recommendation of the Commission if the Minister considers it to be in the national interest (Section 27). Land on which heritage is situated is subject to various restrictions on alienation, mortgaging, subdivision and the like and details will be registered against the title deeds (Sections 30 and 31).

### **6.5.2 Land Tenure and Soil Conservation**

#### *Land Tenure*

Further information is required regarding the system of land tenure in Zambia, particularly in respect of areas along the Lake shores. Although ultimately all land is owned by the state, it would appear that there are three distinct land tenure regimes: land in Reserves and Trust Lands which is allocated by Chiefs, agricultural land which may be allocated under the **Agricultural Lands Act**, and all other land which is allocated by way of state leases under the **Land (Conversion of Titles) Act**.

At independence all Crown Lands were vested in the President by the **Zambia (State Land and Reserves) Order**, 1964. The Order preserved the "Native Reserves" of the colonial period as reserves set aside for the exclusive use of the indigenous people of Zambia and under the control of Chiefs. Chiefs are empowered to allocate land in Reserves and this is done in accordance with local customary law.

The **Zambia (Trust Land) Order**, 1964, vested ownership of Trust Lands in the President and reaffirms the validity of interests granted in Trust Lands under the former colonial legislation, in particular the 1947 Northern Rhodesia (Native Trust Land) Order in Council.

The **Agricultural Lands Act** was passed in 1960 and is designed to ensure that agricultural land is used for agricultural purposes. It establishes an Agricultural Land Board which is responsible for advising the government on the agricultural use of state lands situated outside urban and peri-urban areas. The Act provides that state land may be allocated for agricultural purposes for a period of up to 30 years and the holder must remain in "beneficial occupation" of the allotment which involves farming it in accordance with "sound methods of husbandry".

The **Land (Conversion of Titles) Act**, No. 20 of 1975, was designed to give the State the necessary powers to make far-reaching land reforms. It provides that all land in Zambia vests in the President who shall hold it in perpetuity for and on behalf of the people of Zambia (Section 4).

<sup>108</sup>

The **Natural Resources (Control of Stream Banks) Regulations** prohibit cultivation and the destruction of natural vegetation within 100ft of either bank of any stream (Regulation 2) without the prior consent of the authorities.

All previous freeholds are converted into statutory leaseholds of not more than 100 years but these leaseholds are renewable for a similar period provided that the leaseholder has not failed to comply with the terms of the lease. Where a statutory lease is not renewed the leaseholder is entitled to compensation for improvements (Section 7). The consent in writing of the President is required for land to be subdivided, alienated or encumbered in any way (and in granting such a consent the President may fix the maximum amount that may be received, recovered or secured).

The Minister is also empowered to prescribe the maximum area of agricultural land which may be held by any person at any one time for a specified purpose (Section 17).

### *Soil Conservation*

It would appear that the primary mechanism for soil conservation in Zambia is the Conservation Plan established under the **Natural Resources Conservation Act**. As discussed above, the Conservation Plan may govern land use, land consolidation, soil erosion, prevention works, stock limitation, control of burning and "the organisation, systemization and control of indigenous shifting cultivation " (Section 42 and the Schedule to the Act). Furthermore, the Minister may undertake construction of works or measures to be paid for by the state and may require persons having an interest in the land to contribute towards such costs to the extent that he considers just (Section 15). Where the Minister has ordered a person to construct any works the Minister may carry them out on behalf of the occupier at the occupier's expense and recover the costs (Section 13(5)(6)) and the occupier may apply to the Minister to apportion such costs between all persons having an interest in the land.

Responsibilities for taking measures to prevent soil erosion are also placed on the Chief Conservator of Forests under the **Forest Act** and on local authorities and village organisations (see 6.4 above).

### **6.5.3 Water**

Zambia covers three international water course basins: the Zambezi, the Zaire and the Lake Tanganyika basins.

In the pre-colonial period ownership of land was theoretically vested in the tribe with the paramount chief as custodian. In many villages the community was centred around a rain shrine and even today a number of such shrines may be integrated into one rain making cult controlled by the matrilineal kin of the governing chief who uses the shrines to support his authority. In traditional societies chiefs were originally appointed from among the ranks of rainmakers and villages were organised for communal activities around rain shrines<sup>109</sup>. At the time of independence in 1964 all land, including water, became State land.

The **Water Act**, No. 34 of 1948, as amended, vests the ownership of all water in Zambia in the President (Section 5) and regulates the control and use of water. Water is classified as either public or private. *Private water* includes: swamps and springs entirely situated within the boundaries of private land and which do not feed water courses flowing beyond that land, ground water artificially brought to the surface of the land and artificially impounded flood water (Section 2). *Public water* includes all water in a public stream as well as lakes, swamps and marshes which either form the source of the public stream or occur along its course. "Public stream " is defined as any water course, drainage depression or "dambo " of natural origin, forming part of the natural drainage system in which water flows in ordinary seasons. This classification does not appear to imply different ownership status but merely to differentiate between the rights which apply to the use of each class of water.

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<sup>109</sup> See study by S. Burchi, in Caponera, D A, (ed) *Water Law in Selected African Countries*, FAO, Rome, 1979, p244.

The Water Act also identifies three categories of water use: *primary use* refers to the use of water for domestic purposes and the support of animal life; *secondary use* relates to irrigation and fish farming; while *tertiary use* relates to industrial and mechanical use of water, including for power generation (Section 2). However this classification does not appear to establish an order of priorities for water use.

Land owners<sup>110</sup> are entitled to freely use private water occurring on the land for primary, secondary or tertiary use (Section 5). Any person is entitled to use public water for domestic consumption or the watering of animals (primary use) wherever access may be had to the water in its natural channel (Section 8) but administrative authority is required for permission to impound, store or divert water from a public stream for primary, secondary or tertiary use (Section 9).

The Water Board may grant special rights in respect of public water to applicants wishing to establish irrigation works (Section 11) or for tertiary use (Section 12) where the Water Board believes such schemes to be of public importance or general utility and where the advantages outweigh the disadvantages to the public. Special procedures are established in Part 3 of Act in respect of the use of waters for mining, railway and urban purposes. Administrative authority is required for each of these uses.

Applicants for water rights or water use rights are required to submit applications to the secretary of the Water Board who will advertise the applications and call for objections as well as notifying registered owners of water rights which are likely to be affected by the application. Public enquiries may also be held before any rights are granted. The names of persons who have been granted water rights are published twice a year in the Gazette (Section 35) and water rights and easements are registered by the Water Registrar.

#### *Control of Water Pollution*

The Environmental Council established by the **Environment Protection and Pollution Control Act**, 1990, has wide responsibilities in relation to the control of water pollution including establishing water quality and pollution control standards; determining conditions for the discharge of effluents into the aquatic environment; formulating rules for areas where waters may need special protection, investigating incidents of water pollution and taking steps or authorising works to prevent or abate water pollution (Section 23). The Council is also specifically required to “initiate and encourage international cooperation in the control of water pollution, in particular with those neighbouring countries with which Zambia shares river basins “ (Section 23(h)).

Discharging pollutants into the aquatic environment in contravention of a water pollution control standard is an offence (Section 24) and owners or operators of trade or industrial undertakings wishing to discharge effluent into existing sewerage systems require written permission from the local authority and may be required to pre-treat the effluent (Section 26 and 27). A licence is required for a local authority operating a sewerage system or the owner or operator of industry or trade to discharge effluent into the aquatic environment and in respect of new plants applications for such licences must be made at least six months prior to the discharge of the effluent.

The **Public Health Act**, No. 12 of 1930, imposes a duty on Local Authorities to take all necessary measures for:

- “(a) preventing any pollution dangerous to health of any supply of water which the public within its district has a right to use and does use for drinking or domestic purposes ...;
- (b) or purifying any such supply which has become so polluted;

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<sup>110</sup> This expression should presumably relate to statutory leaseholders pursuant to the 1975 **Land (Conversion of Titles) Act**.

and to take measures (including, if necessary, proceedings at law) against any person so polluting any such supply or polluting any stream so as to be a nuisance or danger to health" (Section 78),

The **Local Administration (Trade Effluent) Regulations** 1985 regulate the discharge of trade effluent into any watercourse or onto any land controlled by a local authority. Although the Act under which these regulations were made (the Local Administration Act 1980) has been repealed, the regulations are apparently still in force and overlap with the **Pollution Control (Effluent and Waste Water) Regulations** 1993 made under the Environmental Protection and Pollution Control Act.<sup>111</sup>

The **Water Act** also creates various offences in relation to water including interfering with or altering the flow of water of any works or of a public stream, and wasting public water (Section 53). It is also an offence to wilfully or negligently pollute or foul public waters so as to render them harmful to man, animals, fish or vegetation (Section 55) and the Water Officer is empowered to call upon the person responsible for such pollution to take measures to prevent it within a specified period (Section 56).

In addition the **Penal Code** (CAP 146) provides that voluntarily corrupting or fouling public waters so as to render them less fit for the purpose for which they are ordinarily used is a misdemeanour (Section 188).

#### *Central Government Administration*

The Ministries most centrally involved with water affairs are : the Ministry of Energy and Water Development, the Ministry of Environment and Natural Resources, and the Ministry of Agriculture, Food and Fisheries. The Ministry of Health also has certain responsibilities in relation to the sanitary aspects of water resources.

The most important central government executive agencies are: the Water Board established by the Water Act, which is responsible for control and exploitation of public water resources and for the granting of use rights; and the Environmental Council responsible for establishing water quality and pollution control standards, effluent standards, protecting aquatic areas, investigating water pollution and taking steps to prevent or abate it, promoting international cooperation in the control of water pollution. In addition the Environmental Inspectorate has an important enforcement role under the Environmental Council and the Chief Conservator of Forests has responsibility *inter alia* for the conservation of existing water supplies.

#### *Regional and Local Administration*

At the intermediate level, Provincial and District *Natural Resources Committees* have advisory, and to some extent supervisory or executive functions in relation to the conservation and improvement of natural resources including water (see discussion above).

At the local level, Local Authorities (municipal or township councils), Village Productivity Committees and Ward Development Committees also have responsibilities relating to water administration particularly in relation to water drainage systems and the use of water for irrigation. Village Productivity Committees are elected and financially supported by members of the villages which they represent and have responsibility, *inter alia*, for providing and improving water supplies in the villages.

#### *International watercourses*

<sup>111</sup>

State of Environment in Zambia, Environment Council of Zambia, June 1994, 75



At the international level the governments of Zambia and Zimbabwe entered into an agreement on 28 July 1987 concerning the utilisation of the Zambezi River which was incorporated into domestic Zambian law by the **Zambezi River Authority Act**, No. 17 of 1987. The Act provides for the establishment of a Zambezi River Authority run by a board and responsible to a council of ministers which is responsible for a variety of matters, primarily concerned with the operation of the Kariba Dam complex and generally for efficient and equitable use of the waters of the Zambezi River, including sharing available energy from the Kariba Dam.

Zambia is also a party to the 1987 *Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System* ("the Zambezi Agreement") which adopted the Zambezi Action Plan (ZACPLAN) for the environmentally sound management of the entire Zambezi river basin. The agreement sets out a comprehensive environmental management programme based on the recommendations of the Stockholm Conference, the Mar Del Plata Action Plan and the Cairo Programme for African Cooperation on the Environment. It has been described as "the most ambitious approach to environmental protection of a river basin in the developing world " and as exemplifying the potential of common management in addressing environmental problems.<sup>112</sup>

#### **6.5.4 Protected Areas**

The **National Parks and Wildlife Act**, No. 10 of 1991, is the principal act relating wildlife taking and trading in Zambia. It authorises the establishment of *National Parks* in which hunting is generally prohibited and of *Game Management Areas* where hunting is allowed under a permit on a quota basis.

The **Natural Resources Conservation Act**, No. 53 of 1970, empowers the Minister to designate areas as *Conservation Planning Areas* (Section 41) and to cause a conservation plan to be prepared for the preservation, protection or control of natural resources within such areas (Section 42). The Minister is required to consult owners and tenants of land and holders of mining licences in relevant areas and to take their views into account in preparing a plan. Conservation plans are registered and the statutory notice of registration is published whereafter the provisions of the plan are binding and failure to comply with them is an offence (Sections 47 and 48).

Conservation plans may make provision for a variety of issues including preservation and protection of water catchment areas, stream banks, marshes, the demarcation and preservation of nature reserves, wildlife reserves, scenic reserves and sites for public amenity, measures for preventing soil erosion or for draining land, measures to regulate bee-keeping, fishing or game cropping and measures to prevent the pollution of public waters (Section 42 as read with the Schedule to the Act).

#### **6.5.5**

#### **6.5.6 Fisheries**

The **Fisheries Act**, No. 21 of 1974, is primarily directed at developing and controlling commercial fishing. The Minister is empowered to declare any area of water to be a commercial fishing area, to make regulations in respect of such area (Section 8) and to appoint a Fishing Development Committee to coordinate and improve commercial fishing in such an area (Section 12). The **Commercial Fishing Areas (Declaration) Order** (Statutory instrument 107 of 1976) declares a

<sup>112</sup>

Birnie P. W. and Boyle A. E., *International Law and the Environment*, Oxford (1994), p248.

commercial fishing area in Lake Tanganika.<sup>113</sup> Within such areas, fishing by means of driving fish into a stationary net (“kutumpula”) is prohibited and throughout the Lake Tanganika Commercial Fishing Area the use of monofilament net of a mesh size less than 120mm, is prohibited (Regulations 3 and 4 as read with the Second Schedule to the **Commercial Fishing Areas (Declaration) Order**).

The Act also prohibits certain methods of fishing including the use of poison, poisonous plants, explosives and electric fishing devices (Section 3) and prohibits the importation of live fish or the introduction of any non-native species without the written permission of the Director of Fisheries (Section 5).

The Minister is empowered to issue a statutory order declaring any area of water to be a prescribed area for recreational, subsistence, or research fishing (Section 6) and to grant special fishing licences (primarily for scientific purposes) in such areas.

It should be noted that the Act applies to fish rather than to aquatic fauna generally. The Act defines “fish “ as “any vertebrate fish alive or dead, any part thereof, whether or not preserved in any form, and includes the young and eggs “ (Section 2).

### **6.5.7 Wildlife**

The **National Parks and Wildlife Act**, No. 10 of 1991, provides for the establishment, management and control of National Parks and Game Management Areas, the conservation and protection of wildlife, the licensing of hunting, the control of possession of trophies and the control of bush fires. Unfortunately it has not proved possible to locate a copy. The 1991 Act replaced the **International Game Park and Wildlife Act**, No. 27 of 1971 as amended by the **National Parks and Wildlife Act**, No. 32 of 1982. The former Act provided for the Minister to establish an Integrated Resource Development Committee to manage Game Parks or Game Management Areas. It established a Director of National Parks and Wildlife Service to carry out its provisions.

The ownership of every wild animal existing in its natural habitat within Zambia vested within the President (Section 3) except where possession had been lawfully transferred to another person. The Minister could declare a certain wild animal to be a protected animals under the Act (Section 35) and the hunting of such animals was generally prohibited or restricted. Certain wild animals could also be declared to be game animals which could be hunted only in accordance with conditions of a valid game license and certain methods were prohibited (Sections 77 to 88).

The taking of wildlife in National Parks was generally prohibited although the Minister could authorise the hunting of certain wild animals in a National Park or Game Management Area for the purposes of wildlife management (Sections 22 and 59) and could by permit authorise hunting of specified wild animals in a game management area on a quota basis (Section 33). However the taking of wildlife which was not defined as game or as a protected animal and which was outside a national Park or Game Management Area was not regulated. Wildlife was defined in the Act to mean wild animals or birds of species which were found in Zambia in a wild state and vegetation indigenous to Zambia and growing naturally without cultivation. The Act did not identify any wild flora for protection. Where game, a protected animal, other animal or trophy was unlawfully in the possession of a person, ownership remained vested in the President on behalf of the Republic. Persons who wished to buy or sell any live animal required permission from the Director (Section 112) and a certificate of ownership was required for any person to sell game or protected animals or their meat (Section 116)

<sup>113</sup>

Section 2 defines the Lake Tanganika commercial fishing area as “the open waters of Lake Tanganika; the main stream of the Lufubu River upstream to the Mwepwe Falls; together with the verges of the Lake and river respectively to a depth of 150m beyond water mark at a given date and such other water lying within 30km of the aforesaid Lake and river as the director may, in special cases, specify. “

The **Plumage Birds Protection Act** 1915, as amended, prohibits the sale or possession for sale of any plumage of any species of wild bird (Section 3).

### 6.5.8 Forestry

The **Forest Act**, No. 39 of 1973, provides for the establishment and management of national and local forests, the conservation and protection of trees and for the licensing and sale of forest produce.

The ownership of all trees standing on state lands, reserves, trust land, national forest and local forests, and all forest produce derived therefrom, is vested in the President on behalf of the Republic until such stage as it is lawfully transferred or assigned (Section 3). A Chief Conservator of Forests is appointed to administer forestry (Section 4). The President may, by statutory instrument, declare any area of land to be a national forest (Section 8) or a local forest (Section 17) subject to consultation with the relevant local authorities and the payment of compensation to the holders of rights and easements affected as a result.

National forests are intended to secure supplies of timber and other forest produce, to provide protection against floods, erosion and desiccation and to maintain the flow of rivers (Section 12) and within a national forest a variety of activities are prohibited without a licence including: cutting or removing forest produce, lighting fires, constructing roads or camps and grazing domestic animals (Section 16). Land in a local forest must be used exclusively for the conservation and development of forests with a view to securing supplies of timber and affording protection to land and water supplies in the local area (Section 21).

The Minister is also empowered by statutory instrument to declare any kind or category of tree to be a protected tree throughout Zambia or any part of Zambia (Section 25) and no person is entitled to cut, burn, injure, take or remove any protected tree without a licence unless it is from land over which they have the freehold (Section 20).<sup>114</sup>

As regards state lands, reserves and trust lands, the Chief Conservator is responsible for controlling and managing the licensed taking and removal of trees and timber (“major forest produce”) although responsibility may be delegated to a local authority (Section 30). Generally trees on such lands are required to be conserved for the use and benefit of the inhabitants of such lands (Section 27) although they may be felled for agricultural and development purposes.

A licence is required to convert wood from such areas into charcoal, to sell such charcoal (Section 28) and to fell, work or remove any trees or timber from such land.

A licence granted under the Forest Act does not confer any rights in respect of any national parks or land within 30m of the bank or edge of any river, dam, or lake, unless the licence expressly indicates to the contrary (Section 44).

It is notable that where a person is convicted of a forest offence, in addition to penalties provided for in the Act, the court may require the person convicted to pay an amount by way of compensation for any loss or damage caused in the course of the offence. The Minister has wide power to regulate in connection with forestry including in relation to the transport of forest produce by waterway and to prohibit acts which might cause obstruction of waterways (Section 68(2)(O)). Detailed provisions regarding the exploitation of forest produce are set out in the **Forest Regulations** (Statutory Instruments 98 of 1976 and 31 of 1978).

<sup>114</sup> Presumably pursuant to the 1975 **Land (Conversion of Titles) Act** the reference to freehold should be read as a reference to land subject to a statutory lease.

### 6.5.9 Mining and Petroleum

The **Mines and Minerals Act**, No. 32 of 1976, regulates all aspects of mining and minerals and deals with the granting, renewal and termination of mining rights. The ownership of all minerals and the rights to exploit them are vested in the President on behalf of the Republic (Section 3(1)). "Mineral" is defined widely but excludes public and private water, certain minerals prescribed in the **Prescribed Minerals and Materials Commission Act**, No. 28 of 1976, and petroleum as defined in the **Petroleum (Exploration and Production) Act** No. 13 of 1985 (Section 2). Mining rights are only granted to individuals who are Zambian citizens or companies incorporated under the Zambian Companies Act (Section 5).

The Chief Mining Engineer is responsible for supervising and regulating mining generally and for the proper and effectual carrying out of the provisions of the Act (Section 6).

A holder of a prospecting license is entitled to take forest produce for domestic use or prospecting purposes and to take, free of charge, public water for such uses (Section 25(e) and (f)). The holder of a mining licence has similar rights and may in addition stack or dump any mineral or waste products and construct various waterworks, and drains, and maintain sewerage disposal plants, subject to the provisions of the **Water Act** (Section 53).

Certain restrictions are placed on the exercise of mining rights including: the requirement that the written consent of the President be obtained to exercise rights in respect of land containing a national monument; that the written consent of the owner or legal occupier be obtained in respect of activities within 90m of any tank, dam or private water and that the provisions of the Forest Act be complied with in respect of national or local forest and that the provisions of the National Parks and Wildlife Act be complied with in respect of national parks (Section 76). In addition, rights conferred by licences under the Act must be exercised reasonably (Section 77).

Owners and occupiers of land whose rights are disturbed or whose crops, trees, buildings, stock or works are damaged by mining operations are entitled to receive compensation (Section 80).

Areas subject to mining rights may be abandoned by notice to the Chief Mining Engineer who will issue a certificate of abandonment (Sections 87 and 88) but no provision is made for rehabilitation of the land.

The **Petroleum (Exploration and Production) Act**, No. 13 of 1985, is similar to the **Mines and Minerals Act** but relates specifically to petroleum which is defined to include all natural organic substances composed of carbon and hydrogen. The Act makes provision for the establishment of a Petroleum Committee, chaired by the minister responsible for mines, to regulate the development of the petroleum industry (Section 4).

The right to carry out petroleum operations (which include all operations relating to the exploration, development, extraction, production, transportation, storage, sale or disposal of petroleum, subject to limited exceptions) is vested in the State (Section 17) although the State is entitled to enter into contracts with "contractors" in respect of such operations.

The restrictions which apply to mining in certain protected areas (described above) also apply to petroleum operations by virtue of Section 34. In addition the Act imposes an obligation on contractors to observe practices which are generally accepted in the international petroleum industry, in the conduct of their petroleum operations. Contractors are specifically required: to adopt measures necessary for the protection of flora, fauna and natural resources; to avoid the pollution or contamination of water, atmosphere or land; to carry out clean-up operations and render the contract area safe on termination of the contract; and to completely remove any structure or facility which has ceased to be used (Section 32(1)(d), (e), (i) and (j)).

### **6.5.10 Land Use Planning and Development Control**

The principal legislative instrument regulating land use planning is the **Town and Country Planning Act**, No. 32 of 1961, (as amended) which, like the Tanzanian act, is modelled on the English system. The Act establishes a Town and Country Planning Tribunal (Section 6) and establishes a system for controlling land use and development in areas identified by the Minister by statutory notice. The definition of "land" in the Act includes land covered by water. However the Act has limited application to trust land and land in reserves, and rights granted under the Mines and Minerals Act take precedence and nothing in the **Town and Country Planning Act** may derogate from such rights or powers (Section 3(4)).

The Minister may order development plans to be prepared for an area other than trust land or land in a reserve (Section 15). Once the development plan has been prepared it is submitted to the Minister who approves it, with or without modification (Section 17), and thereafter it must be updated at least once every five years. A procedure is established for public participation and the Minister is required to take into consideration representations or objections received by him in respect of proposed development plans or modifications to them (Section 20). The Minister also has a general power to hold public enquiries for the purpose of executing functions under the Act (Section 49).

Planning permission is required for the development or subdivision of land in areas in which a development plan exists or in other areas specified by the Minister (Section 22). The power to grant planning permission is usually delegated to various local authorities. Compliance with development plans and the terms of planning permission is achieved by the service of enforcement notices (Section 31) and if these are not complied with, the Minister or planning authority may enter on the land and take the necessary steps and recover the costs (Section 32).

The Minister may also order the preparation of regional plans (which may apply to trust land and reserves) and once a regional plan is approved no development plan which is not in accordance with the regional plan may be approved without the consent of the Minister (Section 46). The second schedule to the Act sets out the matters for which provision may be made in a development plan. These include: providing for the control of the use and change in the use, of land zones; reserving areas for various purposes including agriculture, horticulture and forestry; preserving single trees, groups of trees and natural vegetation; and prohibiting, restricting or otherwise controlling the deposit or disposal of disused vehicles or waste materials and the pollution of rivers, lakes, lake shores and ponds.

### **6.5.11 Foreign Investment**

Foreign Investment is regulated by the **Investment Act** 1993 which is designed to provide a comprehensive legal framework for investment in Zambia.

The Act does not explicitly make provision for natural resource management or pollution control although some of the provisions could be considered as providing incentives for good natural resource management, including a provision that an investor is entitled to a farm works allowance of 100% in respect of certain expenditure on farmland including works for the prevention of soil erosion and for water conservation (Section 22(3)).

The Act provides a variety of incentives to encourage investors and establishes an Investment Centre to assist investors in various ways, including to acquire land.

### 6.5.12 Tourism

The **Tourism Act**, No. 29 of 1979, provides for the establishment of the Zambia National Tourist Board (Section 3) to develop and promote tourism. The Board is specifically required to prepare national or regional plans for the development and promotion of tourism in areas declared to be tourism priority areas (Section 8(2)).

The Act also requires tour operators, travel agents and other persons operating tourist enterprises to obtain licences from the Board (Section 13). Licence holders may be entitled to any incentives which the Minister may prescribe (Section 23).

### 6.5.13 Lake Transport

The **Inland Waters Shipping Act**, No. 34 of 1960, (as amended) requires vessels used on inland waters of Zambia to be surveyed and registered and to comply with certain standards to ensure the safety of passengers and cargo. The Act applies to vessels used for hire or reward on inland waters excluding: vessels operated by the government which are not ordinarily used for the carriage of members of the public, vessels of less than 25ft in length which are not propelled by machinery or sails, and fishing vessels of less than 5 tons (Section 3).

By virtue of the **Inland Water Shipping (Inland Waters Declaration) Order**, those parts of Lake Tanganyika which lie within the boundaries of Zambia are declared to be inland waters for the purposes of the Act. The **Inland Waters Shipping (Declared Date) Notice** provides that the use of a vessel on that portion of Lake Tanganyika which lies within the boundaries of Zambia is prohibited unless it has been surveyed and registered in accordance with the Act and the vessel has a valid certificate of registration.

The Act specifically makes provision for the President to conclude agreements with other countries bordering on Zambia's inland waters relating to the mutual recognition of various documents (such as certificates of registration and certificates of competency of masters and crews) and generally matters relating to the safety of passengers and crew and the navigation of vessels on inland waters (Section 11).

## 6.6 CONCLUSIONS

A 1994 report by the Environment Council of Zambia<sup>115</sup> found that there were approximately 28 pieces of legislation which have, or could have, a bearing on environmental protection and pollution control in Zambia. Clearly a meaningful analysis of the shortcomings of all potentially relevant legislation is beyond the scope of this study. However even with the incomplete information available to the authors the following general shortcomings were readily apparent.

1. Much of the legislation is old and outdated and many of the stipulated penalties are too low to serve as effective deterrents today.
2. As is common in many countries, legislation has been developed on sectoral lines and in many cases there appear to be overlaps and concurrent jurisdiction. Examples included overlaps between the Water Effluent Regulations under the Environmental Protection and Pollution Control Act of 1990 and the Local Administration (Trade Effluent) Regulations 1985.

<sup>115</sup> State of Environment in Zambia, Lusaka 1994.

3. There is a general absence of provisions requiring environmental impact assessments to be conducted. These would be relevant to many activities including: mining and petroleum exploration activities, projects affecting watercourses, and major projects and policies currently regulated by the Town and Country Planning Act.
4. The regulatory structure could be improved by facilitating participation by local communities in the regulation of their local environments and allowing a greater role for public participation in the enforcement of environmental obligations.



## PART III INTERNATIONAL AND COMPARATIVE LAW ISSUES

### 7. INTRODUCTION

Lake Tanganyika extends over the territories of four nation states. The median line of the Lake forms the frontiers between Zaire and Tanzania and between Zaire and Burundi.<sup>116</sup> While the frontier between Tanzania and Burundi is also clearly established<sup>117</sup> the frontiers at the Southern end of the Lake between Zaire, Zambia and Tanzania are less well defined although it does not appear that this uncertainty has led to any practical difficulties.<sup>118</sup>

Accordingly a consideration of the relevant rules of international law is essential for a full understanding of any existing or proposed legal regime relating to the Lake.

International law regulates the relations between nation states and one of its fundamental principles is that of state sovereignty. The sovereignty of states includes sovereignty over the natural resources within their territories.<sup>119</sup> States therefore have the sovereign right to exploit such resources according to their own environment and development policies. Yet as states become more conscious of their inter-dependence, and their common reliance on the global ecosystem, international law has developed rapidly in the environmental area - and continues to do so. The sovereign right of states to exploit their own natural resources has become balanced by a general responsibility to ensure that activities within their own jurisdiction do not harm the environments of other states or of areas beyond any national jurisdiction.<sup>120</sup> International law also governs the competing rights and obligations of states over shared natural resources such as lakes and rivers.

Since no formal constitutional mechanisms exists for enacting international law in the way a national parliament can legislate, international rules of general applicability are created by general consent among states. This may be evidenced in various ways but the most important mechanisms for the purposes of this study are multilateral international treaties and international custom. "Custom " in this sense does not mean ancient custom but rather the general recognition among states that a particular practice is obligatory.

<sup>116</sup> This frontier which was first mentioned in 1885 in a circular of the Administrator General of the Ministry of Foreign Affairs of the Independent Congo State and has subsequently been confirmed in a number of treaties and declarations.

<sup>117</sup> Pursuant to a protocol dated 5 August 1924 between the United Kingdom and Belgium the respective mandate holders for the former German territories of Tanganika and Ruanda-Urundi.

<sup>118</sup> The treaty dated 12 May 1894 between the United Kingdom and the Independent Congo State and the Congolese declaration of neutrality of the same year which defined the frontier between the Congo and then British territories define the frontier by reference to a Cape Akulunga on the Lake. The precise location of this cape is unclear. See Zacklin R, & Caflich L (eds), *The Legal Regime of International Rivers and Lakes* The Hague (1981).

<sup>119</sup> United Nations General Assembly Resolutions no.s 523 (VI)(1950); 626 (VII)(1952); 1803(XVII)(1962); Principle 21 of the Stockholm Declaration (1972); Principle 2 of the Rio Declaration (1992); Preamble to the 1992 Climate Change Convention cited in Sands, P, *Principles of International Environmental Law*, Manchester University Press, London, 1995.

<sup>120</sup> Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. See further Sands, *op cit*, pp186-194.

## 8. RELEVANT OBLIGATIONS UNDER INTERNATIONAL LAW

### 8.1 TREATIES

The most important international treaties and treaty organisations for the purposes of this study are listed below.

***The African Convention on the Conservation of Nature and Natural Resources.***<sup>121</sup> (“the African Nature Convention “)

This treaty was concluded at Algiers in 1968 and entered into force on 16 June 1969. All four lacustrine states are parties to the Convention. The fundamental principle of the Convention is that the parties “shall undertake to adopt the measures necessary to ensure conservation, utilisation and development of soil, water, flora and fauna resources in accordance with scientific principles and with due regard to the best interests of the people “ (Article 2)

The International Union for the Conservation of Nature (IUCN) prepared a revision of the Convention in 1990 but it has not yet been adopted by the Organisation of African Unity (OAU).

***Convention for the Protection of the World Cultural and Natural Heritage*** (“the World Heritage Convention”)

This treaty was concluded at Paris on 16 November 1972 and entered into force on 17 December 1975. All four lacustrine states are parties to the Convention.

The Convention aims to protect cultural and natural heritage of outstanding universal value. It places a primary duty on each State Party to “do all it can “ to identify, protect, present and transmit natural and cultural heritage to future generations (Article 4) and places on the international community as a whole the duty to cooperate in the protection of such heritage. The Convention establishes a World Heritage Committee within UNESCO which allocates disbursement from the World Heritage Fund to Parties requesting assistance in protecting their heritage.

***Agreement for the Establishment of the Organisation for the Management and Development of the Kagera River Basin*** (Athe Kagera Basin “greement “)

This regional treaty was concluded in 1977 by Rwanda, Burundi and Tanzania. It establishes an organisation to manage and develop “the area drained by the Kagera River and its tributaries and sub-tributaries “ and contains no norms. Although it does not deal with the Lake, the practise of states is an important indicator of whether or not they concur with a particular rule of international law. Consequently the primary significance of this treaty in relation to the Lake is as an example of the state practice of Burundi and Tanzania in respect of international watercourse issues.

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<sup>121</sup> 1001 United Nations Treaty Series 4.

***Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System*** (“the Zambezi Agreement”)

Zambia and Tanzania are parties to this 1987 regional treaty which adopted the Zambezi Action Plan (ZACPLAN) for the environmentally sound management of “the territories within or related to the Zambezi river basin within the following countries: Angola, Botswana, Malawi, Mozambique, United Republic of Tanzania, Zambia, Zimbabwe and the illegally occupied territory of Namibia. “

***Convention on International Trade in Endangered Species of Wild Flora and Fauna*** (“CITES “)

The Convention was concluded in 1973 in Washington and entered into force on 3 May 1980. All four lacustrine countries are parties to CITES.

As its name suggests, CITES is aimed at protecting the tens of thousands of endangered species of flora and fauna which are listed in its appendices by prohibiting or regulating trade these species. The appendices are periodically reviewed. Trade in species listed in Appendix I is effectively prohibited while that of species in Appendix II is strictly regulated. Of the four lacustrine states only Zaire has identified an aquatic species for inclusion in Appendix III and which consequently require an export permit.<sup>122</sup>

***Convention on Biological Diversity*** (“the Biodiversity Convention “)

The Convention was opened for signature on 5 June 1992 at Rio de Janeiro and entered into force on 29 December 1993. All four lacustrine states are signatories to the Convention.

The Convention is intended to protect the earth’s biodiversity by promoting its sustainable use and by ensuring that its benefits are shared equally between the developed and developing world. It imposes a wide range of obligations on the Parties including in relation to *in situ* conservation, promoting the sustainable use of biological resources and provides for the transfer of technology and funding to developing countries.

***Communauté Economique des Pays des Grands Lacs*** (“CEPGL “)

The treaty establishing the CEPGL, or Economic Community of the Countries of the Great Lakes, was signed at Gisenyi on 20 September 1976 by Burundi, Zaire and Rwanda.

The CEPGL’s aims are broadly to promote the development of social, economic, commercial, scientific, cultural, political, military and technical cooperation between the three countries. To achieve these aims a number of institutions have been created by the treaty, and subsequent protocols, including a Conference of the Heads of State (the decisions of which are binding on the member states), a Council of Ministers, a Permanent Executive Secretariat (at Gisenyi in Rwanda) and Specialised Technical Commissions. In addition there is provision for the establishment of ad-hoc or permanent sub-commissions, committees or working groups to deal with specific issues.

As a result of difficulties caused by the recent civil war in Rwanda it is understood that the CEPGL is not really functioning at present. Interestingly as far as the present project is concerned, the CEPGL requested FAO assistance in the preparation of a convention on the management and

<sup>122</sup> The species is *Caecobarbus Geertsii* or the Congo Blind Barb. Source *African Wildlife Laws*, IUCN Environmental Policy and Law Occasional Paper, no. 3, Bonn, 1987.

protection of the shared lakes of the CEPGL states. Two draft treaties were prepared in 1991 - one version more complex than the other - but neither has been adopted to date.<sup>123</sup>

***Convention on Wetlands of International Importance Especially as Wildfowl Habitat*** (“the Ramsar Convention “)

This Convention was concluded at Ramsar, Iran, in 1971 and entered into force on 21 December 1975. It was amended by the Paris protocol in 1982 which came into effect in 1986 and was again amended in 1987 but this amendment is not yet in force.

Of the four lacustrine states only Zambia is currently a party (since 28 August 1991) but apparently Tanzania is considering acceding to the Convention.

***The Committee for Inland Fisheries in Africa*** (“CIFA”)

CIFA, which is an FAO statutory body, was established in 1971. It is made up of 33 African countries including the four lacustrine states.<sup>124</sup> Its aims are broadly to promote fisheries development and a number of subsidiary bodies have been created under its auspices including a Sub-Committee for Lake Tanganyika which is made up of the four lacustrine states.

This Sub-Committee was established in 1977 and its mandate is as follows:-

- a) to act on behalf of CIFA between sessions as regards questions linked to fisheries in Lake Tanganyika;
- b) to develop a regional fisheries project and to render it operational;
- c) to supply technical advice to the various governments for the realisation of the regional project and to ensure the coordination of national projects according to regional objectives;
- d) to work towards the seeking of sources of finance for new projects which could emerge from the regional project;
- e) to participate in the long term integrated development of fisheries in the region; and
- f) to account to each session of CIFA of its activities since the previous session.

Although CIFA itself has not met since October 1990, the Sub-Committee for Lake Tanganyika last met in October 1993 in Lusaka, Zambia. At that meeting, in recognition of the need to set up a more powerful coordinating body, a recommendation was made that the four states make concerted efforts to establish a Lake Tanganyika Fishery Commission with sufficient mandate to undertake research programmes, and harmonize and implement fisheries management measures. It is not known what steps have been taken towards realising this aim.

***Agenda 21***

Finally mention should also be made of Agenda 21 which was concluded at the United Nations Conference on the Environment and Development at Rio de Janeiro in June 1992 and sets out a global action plan for sustainable development. Although categorically not a formal treaty, Agenda 21, which was negotiated over a two-year period, can be said to represent the priorities of the international community as regards the future development of international law regarding development and the environment and as such is a guide to the development of policies and law at both national and international levels. Freshwater resources are dealt with in Chapter 18.

<sup>123</sup> Sironneau, J & Van Houtte, A, *op cit*.

<sup>124</sup> Created pursuant to Article VI-2 of the FAO Charter by the 56 session of the FAO Council in Rome on 7-18 June 1971.

## 8.2 THE INTERNATIONAL LAW REGIME FOR THE REGULATION OF FRESHWATER RESOURCES

In addition to formal treaties the development of international law in this area has been heavily influenced by non-binding resolutions, recommendations and declarations of various international conferences and organisations,<sup>125</sup> and the work of various international legal organisations such as the Institute of International Law and the International Law Association which have attempted to identify and codify emerging principles of international law. Such non-binding documents have frequently had the effect of crystallizing the opinions and practice of states regarding general international law rules.

### 8.2.1 Development of International Watercourse Law

The fundamental importance of freshwater supplies to humankind together with the fact that about half of the world's river basins are shared between two or more countries, has led to the development of a fairly comprehensive body of rules governing international watercourses.<sup>126</sup> Many of these are set out in binding bi-lateral or regional treaties and useful guidance is to be found in many non-binding instruments prepared by international organisations such as the United Nations Environment Programme (UNEP), the International Law Commission (ILC)<sup>127</sup> of the United Nations, the Organisation for Economic Cooperation and Development (OECD), as well as non governmental organisations such as the International Law Association (ILA).<sup>128</sup> These texts also provide useful guidance as to the emergence and development of customary international law rules in addition to the decisions of the Permanent Court of International Justice (PCIJ) and of international arbitration panels.<sup>129</sup>

A meaningful discussion of the development of international law in this area is beyond the scope of this study but some of the more important milestones are referred to in the discussion below of the specific obligations of the lacustrine states.

### 8.2.2 International Drainage Basins

Although some international treaties adopt a narrow view of how much of a watercourse system is regulated by international law, for the purposes of this study it will be regarded as the entire drainage basin. The ILA defines an international drainage basin as "covering a geographical area extending over two or more states determined by the watershed limits of the system of waters,

<sup>125</sup> Notable examples include the 1972 Declaration of the United Nations Conference on the Human Environment held at Stockholm and the 1977 Declaration and Resolutions of the United Nations Water Conference held at Mar del Plata.

<sup>126</sup> An international watercourse " includes any river, lake or ground water resources which is shared by two or more states.

<sup>127</sup> Notably the ILC's 1991 *Draft Articles on the Non-navigational Uses of International Watercourses*, 2 Yearbook of International Environmental Law (1991) 764

<sup>128</sup> Notably the *Helsinki Rules on the Uses of Waters of International Rivers* which the ILA adopted in 1966 in an attempt to set out a comprehensive statement of the rights and obligations of states in relation to international drainage basins.

<sup>129</sup> Such as the *Lac Lanoux* Arbitration between France and Spain which concerned the diversion of the Carol River to generate hydro-electric power (24 ILR 101 (1957)).

including surface and underground waters, flowing into a common terminus “ (Helsinki Rules, Article II).

The drainage basin approach is increasingly favoured internationally, is widespread in Africa<sup>130</sup> and has been specifically endorsed in treaties ratified by each of the lacustrine states. The 1977 Kagera Basin Agreement between Rwanda, Burundi and Tanzania, defined the territorial jurisdiction of the Organisation for the Management and Development of the Kagera River Basin as “the area drained by the Kagera River and its tributaries and sub-tributaries, as shown in the attached map. “

In addition, as mentioned above, Zambia and Tanzania are parties to the 1987 Zambezi Agreement which also adopts a drainage basin approach. This approach to integrated water resource management is also endorsed by Agenda 21.<sup>131</sup>

### **8.2.3 Allocation of International Water Resources**

The mostly widely accepted theory of allocation treats international watercourses as shared resources which must be utilised equitably by the lacustrine states. Equitable utilization should not be confused with equal division and refers rather to equal rights or shared sovereignty. In general states are entitled to “a reasonable and equitable share in the beneficial uses of the waters “ as determined by a balancing of all relevant factors in the particular circumstances of each case.

In determining what constitutes equitable and reasonable utilisation consideration must be given to all interests liable to be affected by a proposed use of a watercourse even if these do not amount to a legal right.<sup>132</sup> However the ILC has identified a number of relevant factors including:

- (a) geographic, hydrographic, hydrological, climatic, ecological, and other factors of a natural character;
- (b) the social and economic needs of the watercourse states concerned;
- (c) the effects of the use or uses of the watercourse in one watercourse state on other watercourse states;
- (d) existing and potential uses of the international watercourse;
- (e) conservation, protection, development, and economy of use of the water resources of the watercourse and the cost of measures taken to that effect;
- (f) the availability of alternatives, of corresponding value, to a particular planned or existing use.<sup>133</sup>

## **8.3 OBLIGATIONS OF THE FOUR LACUSTRINE STATES**

This section sets out the main obligations and rights under international law between Lake Tanganyika’s lacustrine states themselves, and between the lacustrine states and other states. A full discussion of these rights and duties and the precise extent and legal authority of each of them is beyond the scope of this study. The following discussion is merely intended to identify the most important principles of international law to be taken into consideration in developing a strategic plan

<sup>130</sup> Examples include the international agreements relating to the Senegal, Zambezi, Niger and Chad river basins (see Birnie and Boyle, p 216, n. 5).

<sup>131</sup> Chapter 18.9.

<sup>132</sup> See *Lac Lanoux* arbitration, p138 f.

<sup>133</sup> Birnie and Boyle, *op cit*, pp221-222.

and institutional and regulatory mechanisms for the sustainable, integrated management of the Lake.

Each of the four lacustrine countries are required by international law to fulfil the obligations set out below:

**1. *Establishment of policies for the conservation, utilisation and development of underground and surface water***

The obligation to establish such policies is contained in Article V (1) of the 1968 African Nature Convention.

**2. *Reasonable and equitable use, development and protection***

The obligation of a watercourse state only to use and develop the international water resource in a manner which is reasonable and equitable to the other lacustrine states and is consistent with adequate protection of the resource, is a widely accepted general principle of international law. It is included under Article 5 of the ILC *Draft Articles on the Non-navigational Uses of International Watercourses* ("the 1991 ILC Articles").

**3. *Protection and preservation of the ecosystems of the Lake and its drainage basin***

It seems clear that an obligation on watercourse states to protect and preserve the ecosystems of international watercourses is emerging or has emerged as a general rule of customary international law. (This obligation is owed not merely to other states which share the same watercourse and is frequently linked with a duty to protect and preserve the marine environment from pollution from rivers). In the case of the four lacustrine states this general duty is specifically referred to and extended by the African Nature Convention which imposes on the parties an obligation: "to manage aquatic environments with a view to minimising deleterious effects of any water and land use practice which might adversely affect aquatic habitats " (Article VII(1)(b))

**4. *Consultation and information exchange***

It would appear that a customary international law obligation to exchange information on the state of the watercourse and the impact of current and proposed uses has emerged. Even where there is no specific obligation of consultation under a treaty the practice of consulting via international river commissions on pollution emission standards, toxic discharges and the like suggests that there is an implied obligation to consult on such matters.<sup>134</sup> This obligation is clearly also central to fulfilling the obligations of equitable utilisation and the prevention of harm to other states and the environment discussed elsewhere in this section.

The 1968 Africa Nature Convention specifically provides that:

"Where surface or underground water resources are shared by two or more of the Contracting States, the latter shall act in consultation, and if the need arises, set up inter-State Commissions to study and resolve problems arising from the joint use of these resources, and for the joint development and conservation thereof;" (Article V (2)) and

"Where any development plan is likely to affect the natural resources of another State, the latter shall be consulted " (Article XIV (3)).

<sup>134</sup>

Birnie and Boyle, *op cit*, p235.

## **5 Incorporation of natural resource conservation issues into development strategies, plans and programmes**

If measures to protect natural resources are to be successful, it is essential that they be integrated into development policies which will determine how such resources are utilised. This general principle underlies two specific treaty obligations assumed by the lacustrine states, namely:

- “to ensure that conservation and management of natural resources are treated as an integral part of national and/or regional development plans ... “ (African Nature Convention, Article XIV) and,
- “to integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies - as far as possible, as appropriate and in accordance with particular conditions and capabilities “ (Biodiversity Convention, Article 6);

## **6 Avoidance and prevention of harm**

There is a general obligation on states to ensure that activities within their jurisdiction or control do not cause harm in another state, including harm to the environment. This obligation applies specifically in relation to the use of an international watercourse.

The 1991 ILC’s draft articles express the obligation as follows:

"Watercourse states shall, individually or jointly, prevent, reduce and control pollution of an international watercourse that may cause appreciable harm<sup>135</sup> to other watercourse states or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse ..." (Article 21(2)).

In addition the Biodiversity Convention specifically provides that states are under an obligation to ensure that activities within its jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of national jurisdiction.<sup>136</sup>

### *Pollution*

Pollution of an international watercourse is wrongful under international law if the rights of other states are infringed. A state’s rights will be infringed if such pollution causes serious or significant harm (which would amount to an inequitable use of the resource) while pollution which causes harm below this threshold will be wrongful only if it does not fulfil the test of reasonable and equitable use discussed above.

A possible exception is the discharge of certain persistent, highly toxic or highly radioactive substances from land based sources. It would appear that such discharges may in themselves constitute breaches of international law regardless of whether or not they are proved to have resulted in damage.

The exact extent of a watercourse state’s obligation to prevent pollution is not settled but it seems likely that this is not an absolute obligation and that the state from which the pollution emanates would not be liable if it had exercised due diligence in the regulation and control of pollution of the international waterway.

<sup>135</sup> According to ILC rapporteur Schwebel, the term “appreciable harm “ is intended to denote that while the harm need not be momentous or grave it must at least be harm of some consequence, for example to health, industry, agriculture or the environment. (See the discussion in Birnie and Boyle, *op cit*, at p 232).

<sup>136</sup> Convention on Biological Diversity (1992), Principle 3.



## **7 Notification, consultation and negotiation in the case of environmental risk**

As a general principle where the proposed use of a shared resource may cause serious injury to the rights or interest of another state, the potentially affected state is entitled to prior notice, consultation and negotiation. These important procedural principles apply to international watercourses and are generally regarded as also applying to situations of potential adverse affects. Clearly they are also important to implement the principle of equitable utilisation and to avoid disputes over the development of international watercourses.

There may be a dispute as to whether or not particular circumstances give rise to an obligation to consult. The position would appear to be that a state must notify and consult whenever a possible conflict of interest arises. As the *Lake Lanoux* arbitration tribunal stated:

“A state wishing to do that which will affect an international watercourse cannot decide whether another state’s interests will be affected; the other state is sole judge of that and has the right to information on the proposals.”<sup>137</sup>

Such notification should be timely, allow a reasonable period for reply and contain sufficient information for the impact of the proposal to be evaluated.<sup>138</sup>

## **8. Emergency notification and cooperation**

It is a general principle of international law that states should notify one another and cooperate in cases of emergency to avert harm to other states. The ILC’s draft articles now extend the obligations of lacustrine states to take action to prevent, mitigate or neutralise the danger to other watercourse states in case of pollution or environmental emergency.<sup>139</sup>

## **9. PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW**

In addition to the obligations discussed above which are directly relevant to management of an international watercourse, there are various other specific obligations which arise both from treaties signed by the parties and from emerging principles of international environmental law which must be taken into consideration in developing and implementing a strategic management plan involving the four countries.

### **9.1 Treaty Obligations**

These include the following obligations:

#### *Biodiversity*

1. to cooperate with one another as far as possible and as appropriate for the conservation and sustainable use of biological diversity (Biodiversity Convention, Article 5);

<sup>137</sup> *Lac Lanoux* arbitration, 24 ILR (1957), p119.

<sup>138</sup> See the 1991 ILC draft articles.

<sup>139</sup> 1991 Draft Articles, Art 25.

2. to develop or adapt national strategies, plans or programmes for the conservation and sustainable use of biodiversity in accordance with its particular conditions and capabilities (Biodiversity Convention, Article 6 (a));
3. to accord special protection to animal and plant species which are or may become, threatened with extinction, and to the habitat necessary for their survival (African Nature Convention, Article VIII (1));

#### *Protected areas*

4. to establish a system of protected areas where special measures need to be taken to conserve biological diversity - as far as possible and appropriate (Biodiversity Convention, Article 8(a));
5. to establish, where necessary, zones around conservation areas within which activities detrimental to the protected natural resources are controlled (African Nature Convention, Article X(2)) and promote environmentally sound and sustainable development in areas adjacent to protected areas to further the protection of these areas (Biodiversity Convention, Article 8 (e));

#### *Customary rights*

6. to take all necessary legislative measures to reconcile customary rights with the provisions of the Convention (African Nature Convention, Article XI).

## **9.2 Emerging Principles of International Law**

A number of emerging principles of international environmental law are also particularly relevant. Their precise status in international law is not entirely established: they are less than rules, yet their inclusion in a wide range of treaties and the importance which has been attached to them suggests that they are more than mere statements of policy. They have a potentially valuable role in the formulation of an integrated management scheme for the Lake at international as well as national level. Of the emerging principles not already considered, the following two principles are particularly relevant.

#### *The Principle of Sustainable Development*

The Principle of Sustainable Development first defined by the Brundtland Report in 1987 as “development which meets the needs of the present without compromising the ability of future generations to meet their own needs “ is fundamental to the long term success of the present project as well as to the long term prospects of the Lake and its environment. The components of this principle are found in numerous international treaties to which the four lacustrine states are party.<sup>140</sup>

#### *The Precautionary Principle*

The precautionary principle provides guidance for regulators in the face of scientific uncertainty. There are numerous formulations of the principle which is still evolving. One example is Principle 15 of the Rio Declaration which provides that, “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a justification for postponing cost-effective measures to prevent environmental degradation. “ The principle was also recited in the preamble to the Biodiversity Convention. Agenda 21 calls for the use of a precautionary approach

<sup>140</sup>

For example the African Nature Convention; CITES; 1992 Biodiversity Convention.

in water quality management<sup>141</sup> and particularly in view of the unique features of the Lake's ecosystem it is important that this principles has a key role in its management.

## 10. HARMONISING LEGISLATION IN THE LACUSTRINE STATES

One issue that should not be overlooked as regards the proposed harmonisation of legislation among the four lacustrine states is the fact that they have legal systems which fall within different traditions. As identified above, the legal systems of Burundi and Zaire fall within the civil law tradition while Tanzania and Zambia have common law legal systems.

This has a number of consequences. While the legal systems of the states within the same traditions are not identical they are broadly similar. The differences between the two traditions are much more marked. For example the role of the courts in the judicial process, the sources of law, and the procedures involved in the two traditions are quite different as are the institutional arrangements.<sup>142</sup>

Another issue which has implications for the harmonisation of legislation is the matter of statutory interpretation by the courts and hence the style in which laws are drafted. Broadly speaking the traditional approach of common law courts to statutory interpretation is to examine and apply the literal meaning of the words of a statute and only to look at the broader intentions of the legislator if that initial meaning is ambiguous or otherwise unclear. In contrast the courts in civil law systems take a purposive approach to statutory interpretation and are primarily concerned with the legislator's intention as they seek to find a legal solution. This difference in approach has clear effects on the drafting styles adopted by lawyers in the two traditions.<sup>143</sup>

The effect of these differences will not be to preclude harmonisation of legislation although it does mean that particular care will be required to ensure that this is achieved. Model legislation on specific areas for all four lacustrine states is not a realistic option.

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<sup>141</sup> See further Sands, *op cit*, pp 208-213.

<sup>142</sup> See further de Cruz, P, *A Modern Approach to Comparative Law*, Deventer, 1993.

<sup>143</sup> By way of example the Tanzanian Urban Water Supply Act, 1981 begins with nearly three pages of definitions. By contrast, the 1992 Burundian law on the public water domain contains no definitions at all.

## **PART IV IMPROVING THE REGULATORY FRAMEWORK FOR THE LAKE**

### **11. INTRODUCTION**

On the assumption that the interim strategic plan for the Lake will recommend the development of an integrated lake basin management system, it is possible to identify a number of key legal and institutional issues which will need to be addressed. The sectoral special studies will undoubtedly reveal more such issues and any attempt to recommend how these can best be addressed would be premature at this stage.

In order to establish a system of integrated management for the Lake it is essential:

- to have a mechanism for establishing and developing an integrated strategy and policy for the Lake;
- to create a legal and institutional framework which will promote consistent implementation of the strategy and policy at each level within each lacustrine state; and
- to establish mechanisms for resolving conflicts between competing users of the resource of the Lake basin.

Clearly this will require close attention to existing and proposed institutional structures to ensure that they provide an appropriate framework which will facilitate and support the dynamic process of managing the Lake basin in an integrated and sustainable manner. In this regard valuable lessons may be drawn from experiences in various countries in seeking to implement integrated coastal area management (ICAM) which poses many similar legal and institutional challenges.

### **12. INSTITUTIONAL ASPECTS OF ESTABLISHING INTEGRATED MANAGEMENT SYSTEMS**

#### **12.1 Integration and Coordination**

The importance of distinguishing between the terms 'integration' and 'coordination' has been emphasized in the context of establishing integrated management systems for coastal areas. Strictly speaking "an integrated system is complete or unified although it will generally have subordinate components. A coordinated system involves independent, generally equivalent components working to a common purpose".<sup>144</sup> Since management necessarily involves implementing policy, it follows that integrated management must be preceded by integrated policy.<sup>145</sup> This will require the involvement of all relevant institutions and organisations in the formulation and articulation of a common, long term vision for the management of the Lake basin which addresses issues such as long term community interests and ecological sustainability.

<sup>144</sup> Kenchington, R. and Crawford, D., "On the meaning of integration in coastal zone management" *Ocean and Coastal Management* 21 (1993) pp109-127.

<sup>145</sup> See the discussion at p 23 ff in Cicin-Sain, B. "Sustainable development and integrated coastal management" *Ocean and Coastal Management* 21(1993) pp11-43.

However implementation of integrated policies may be achieved either by integrating the institutional structure (eg. by creating clear rules as to which policies and agencies must be given precedence in any particular situation) or by coordinating the various agencies responsible for managing the Lake basin on the basis of the common policy.

Because many of the issues which arise in the context of integrated coastal area management (ICAM) are so similar to those arising in connection with integrated lake basin management it is useful to consider an institutional model which has been developed for ICAM. The model is based on the *integration* of the planning phase of coastal zone management and the *coordination* of implementing agencies and other interested organisations.<sup>146</sup>

## 12.2 Integrated Planning

According to the model, integration of the planning phase requires:

- (a) *systems integration*, which pertains to the physical, social and economic linkages of land and water use patterns, and is necessary to ensure that all relevant interactions and issues are considered;
- (b) *functional integration* which refers to the principle that the programmes and projects formulated must be internally consistent with management goals and objectives; and
- (c) *policy integration* which concerns the integration of management with development and policies initiatives.<sup>147</sup>

## 12.3 Coordinated Implementation

Coordination is aimed at bringing together various concerned government agencies, community groups, research institutions and NGOs to work toward common goals by following mutually agreed upon strategies. There is a need for coordination at various levels:

- (a) *vertical coordination*, pertaining to the various hierarchical levels of government: central, provincial, state, regional and local;
- (b) *horizontal coordination*, meaning that within a specific level of government, all relevant sectors should be taken into consideration; and
- (c) *temporal coordination*, which requires that at any one time the same policy objectives and priorities are being pursued by all parties.

The management of Lake Tanganyika present complex issues in achieving both “horizontal “ coordination between different sectoral agencies (e.g. those with responsibility for land use, fisheries, water, forestry, agriculture etc.) and “vertical coordination “ between the different layers of government.

A number of levels must be considered in promoting vertical integration. These include:

<sup>146</sup> The model has been proposed by the International Centre for Aquatic Living Resources Management (ICLARM), an international organisation based in Manila, the Philippines, drawing from experience in South East Asia with integrated coastal management programmes.

<sup>147</sup> Policy integration was a major aim of the Baltimore Harbour Environmental Enhancement Plan where a Memorandum of Understanding was signed by the concerned government agencies, and public and private interest groups, in an attempt to reconcile conflicting conservation-oriented and development-oriented views on how to deal with applications for works in the harbour region.

1. the local community level at which one would expect to find an intimate relationship between the social structures and the use of natural resources which is likely to be fundamental to creating a sustainable system of natural resource management;
2. the local government level at which one would expect to find a variety of important powers to control access to local resources and to regulate certain human activities;
3. the central government level where key policy making, implementation and enforcement powers will be vested in sectoral government agencies;
4. the regional inter-State level at which the lacustrine states will need to negotiate the establishment of a mechanism and procedures for reconciling their mutual interests in the Lake which may include horizontal linkages between the States at other levels (e.g. inter-State technical committees);
5. the international level at which relations between the lacustrine states on the one hand and international organisations or other members of the international community on the other hand, will occur (for example relating to the conservation of the biodiversity in the Lake).

### **13. ESTABLISHING A FRAMEWORK FOR COOPERATION BETWEEN LACUSTRINE STATES**

#### **13.1 Institutional Structure**

Once the conclusion is reached that watercourse basins are most effectively managed as an integrated whole the most logical institutional mechanism to ensure equitable utilisation and development is common management.<sup>148</sup> Examples in which lacustrine states have established international institutions for the purpose of formulating and implementing policies for the development and use of watercourses include the Lake Chad Basin Commission, the River Niger Commission, the Permanent Joint Technical Commission for Nile Waters, the Zambezi Intergovernmental Monitoring and Coordinating Committee, the Intergovernmental Coordinating Committee of the River Plate Basin, the Amazonian Cooperation Council, the Danube Commission and the US-Canadian International Joint Commission.

The establishment of common management institutions has been endorsed by international organisations and codification bodies. The 1972 Stockholm Declaration on the Human Environment<sup>149</sup> and the 1977 U.N. Conference Mar Del Plata Action Plan<sup>150</sup> call for the establishment of intergovernmental commissions where appropriate to achieve coordinated development and environmental protection.

It is instructive to consider some of the functions of such international commissions as set out in the ILC 1984 draft articles. These functions include:

- (a) to collect, verify, and disseminate information and data concerning utilisation, protection, and conservation of the international watercourse;

<sup>148</sup> See further Birnie and Boyle, *op cit*, p222 n. 50.

<sup>149</sup> Stockholm Action Plan for the Human Environment, UN Doc. A/Conf. 48/14/Rev. 1, Rec. 51.

<sup>150</sup> Report of the UN Water Conference, Mar del Plata, 14-25 Mar. 1977.

- (b) to propose and institute investigations and research concerning utilisation, protection and control;
- (c) to monitor the international watercourse on a continuous basis;
- (d) to recommend to watercourse states measures and procedures necessary for the optimal utilisation and the effective protection and control of the watercourse;
- (e) to serve as a forum for consultations, negotiations, and other procedures for peaceful settlement entrusted to such commissions by watercourse states;
- (f) to propose and operate control and warning systems with regard to pollution, other environmental effects of water uses, natural hazards, or other hazards which may cause damage or harm to the rights or interests of watercourse states.<sup>151</sup>

Another important function of international watercourse commissions is that they facilitate the adoption, implementation and review of common environmental standards.

### 13.2 International Legal Issues

It is essential to establish an intergovernmental institutional structure to facilitate cooperative or joint management in order to manage the Lake in a manner which is sustainable, effective and in accordance with the international law obligations of the lacustrine states. The establishment of such an institutional structure will require the conclusion of a formal agreement or treaty between the lacustrine states and the allocation of resources. This in turn will require an appreciation at national government level of the reasons for and advantages of pursuing this course of action and the simultaneous exercise of political will in each of the four countries. Clearly this may be difficult to achieve and accordingly it is important that this be identified as an objective of the interim strategic plan for the Lake and that political support for the development of a draft legal instrument be sought at an early stage.

Negotiating an agreement between the lacustrine states will require discussion of a range of important issues including:

- the nature of the Lake basin management institutions;
- the responsibilities and powers of such institutions;
- the legal status of the strategic management plan for the Lake within each country;
- enforcement both within states and between them; and
- financing mechanisms.

### 13.3 National Legal Issues

The analysis of the current regulatory regimes in each of the four lacustrine states suggests that the following areas will require further attention:

#### 1. *Legislation*

In an number of areas it is clear that existing legislation is outdated, inadequate, incomplete or simply fails to deal with environmental issues relevant to the Lake basin. Certain important issues, such as for example pesticides, are not presently dealt with in the legislation of one or more of the four states. It will be important to ensure that new legislation and amendments to existing legislation in the four states is harmonised in the sense of implementing the strategies and policies designed for the integrated management of the Lake. In particular it will be important to ensure the harmonisation of standards and procedures.

<sup>151</sup> II Yearbook ILC (1984), Article. 15, quoted by Birnie and Boyle, *op cit*, at p224.

## 2. *Implementation and enforcement*

The adequacy any legislation, whether existing or proposed, cannot be assessed except by reference to the extent to which it is capable of implementation within its given social context. Further information on implementation is required as regards the capacities of the respective enforcement agencies, the attitudes of the courts and the levels of fines and other sanctions for breaches of the law. This information will in turn inform policy objectives in the preparation of new legislation and the harmonisation of national standards. Adequate implementation and enforcement of relevant laws across the four lacustrine states is clearly also a policy objective in itself. It will also be important to develop cross border cooperation as regards enforcement and this may in turn require legislation at national level in the four states.

## 3. *Environmental impact assessment, prior consultation and the development process*

National level development consent procedures, including those relating to petroleum exploitation in the Lake basin, should be reviewed and strengthened as necessary. In any event such procedures should be amended to require that environmental impact assessments are carried out and that cross border issues are considered. To this end such procedures at national level should require prior consultation with the appropriate authorities in the lacustrine state, or states, which may be affected if the development proceeds.

## 4. *Inter sectoral coordinating mechanisms*

A number of inter sectoral coordinating and policy bodies have been identified in the four states. Further information is required as to their effectiveness and to the extent to which they are capable of both vertical and horizontal extension. Most of the bodies identified address a limited range of issues, such as "the environment ", and not cover the range of human activities from industrial pollution and oil exploitation to fisheries and transport which impact on the Lake. It will be important to ensure inter sectoral coordination at the national level if international intersectoral coordination is to be achieved.

## 5. *Public participation in the legal process*

The extent to which individuals and NGOs are able to obtain information and to challenge the actions or inactions of the authorities concerning the formulation and implementation of strategies and policies designed to ensure integrated management of the Lake may have a significant bearing on the chances of such strategies and policies being achieved. Further information is however required on this issue.



## **PART V ESTABLISHING A FRAMEWORK FOR INTEGRATED LAKE BASIN MANAGEMENT**

### **14. INTRODUCTION**

The successful implementation of an appropriate management system for the Lake is likely to involve a significant degree of change, particularly in the institutional arrangements and practices of officials in the four countries. The process by which this change is implemented will play an important role in shaping the content and form of the final strategic management system as well as having a significant effect on whether or not cooperation continues. This section does not purport to deal with this issue at length but rather seeks to draw attention to a few key issues relating to the establishment of an appropriate regulatory regime which should be considered from an early stage, and to propose further steps to be taken.

### **15. KEY ISSUES**

#### *Involving all stakeholders*

If a new regulatory system is to be appropriate to the needs of the people dependant on it and to be accepted by them it is essential that all those with an interest in the management of the Lake and its basin ("the stakeholders") be given an opportunity of participating in shaping the strategic plan and regulatory regime. These stakeholders include: local people, regional and local authorities, relevant central government departments and ministries, national governments, and non-governmental organisations of various kinds.

#### *Integrating traditional resource management practices*

Wherever possible opportunities for integrating traditional methods of managing resources into the overall management structure should be explored. From a regulatory perspective this can offer a number of important advantages including:

- enhanced prospects of success where long established social practices can be adapted rather than suppressed;
- more effective and cost-effective enforcement - the support of local communities is important for the effective enforcement of any management regime and is essential where the resources and capacity of the central government are strictly limited; and
- improved prospects for long term sustainability - conservation in developing countries is inextricably linked with improving the living standards of local people which is most likely to occur where they are involved in managing and benefiting from local resources;

#### *Identifying constraints*

If the proposed regulatory system is to be practical and effective rather than a Utopian model it will be important to identify constraints at an early stage and to take them into account in any recommendations. These may include: political instability; language and cultural differences; shortages of skilled personnel, enforcement officers, funding and equipment, and difficulties in enforcing the law through the judicial system.

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### *Identifying priorities*

In view of the breadth of the range of activities which impact on the Lake it will be necessary to ensure that a consensus is reached as to priorities to be addressed ensuring that the needs of future generations are accounted for. The work of the other projects will be important in setting priorities.

### *Experience gained from other regional cooperation treaties*

As set out above, the four lacustrine states are parties to a number of regional cooperation treaties and organisations including the Zambezi Agreement, the CEPGL and CIFA. The experience gained by the four states as to how these function should be fully taken into account in the formulation of the management system.

## **16. LEGAL FRAMEWORK SPECIAL STUDY**

The proposals for the legal framework special study are set out in appendix 2.

## PART VI CONCLUSIONS AND RECOMMENDATIONS

### 17. CONCLUSIONS AND RECOMMENDATIONS

It is clear that the establishment of a sustainable institutional framework for cooperation between the lacustrine states in the management of the Lake will be crucial to the success of the project. Accordingly it is recommended that a central objective of the interim plan should be to promote the development of consensus among stakeholders in the Lake as to what kind of regulatory framework would be appropriate. All components of the project should be actively involved in this activity throughout the life of the project and at each level (e.g. village, local, regional, national and international).

The project should aim to act as a catalyst for the establishment or strengthening of mechanisms which facilitate vertical coordination between different layers of government and horizontal coordination between sectors.

In some of the lacustrine states, policy initiatives in various fields relevant to the management of the Lake (such as wildlife conservation and the environment) are already taking place. Although these initiatives concentrate on a particular sector, they are concerned with a wider range of issues than the management of the Lake. Where such initiatives exist, and particularly where they will involve the redrafting of legislation, it will be important to find ways of having an input to ensure that issues relevant to the protection of biodiversity in the Lake are given proper weight.

As identified in this report the existing laws in a number of areas relevant to the sustainable management of the Lake are obsolete or incomplete, either on their own terms or because they fail to take account of wider environmental considerations. In certain other areas relevant laws simply do not exist. The wide range of human activities which may impact on the Lake and the many institutions and laws concerned with regulating these means that it is essential to identify priorities. The order of priority should be guided by an assessment of the threats to the lacustrine environment and the degree to which these are capable of being controlled by legislative measures. It is recommended that further legal analysis and recommendations for legal reform and harmonisation should be focussed on those areas and issues which have been identified as crucial to the success of the project.

Full harmonisation of all relevant laws will be a long term process which would be best guided by a body representing all the lacustrine states. However, developing a draft agenda or plan of action for the future, during the course of the project, would be important to support long term progress in this regard.

While the main institutional structures have been identified in this report and institutional capability identified where possible further information is required in this regard. The issue of institutional capability is closely related to that of implementation and enforcement and here again further information is needed.

The prospect of making a real contribution to the protection of biodiversity in the Lake may be increased by providing legal technical assistance for the implementation of one or more crucial aspects of the strategic plan (such as constituting an inter-governmental lake management body) rather than restricting the outputs to analysis and recommendations. It would be appropriate to give further consideration to this issue in the light of responses from national governments.

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### **Forestry**

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## APPENDIX 1      TERMS OF REFERENCE

- Review existing major legislation, policies and institutional structures in each country for the protection of the lake environment and other existing laws and regulations which impact the lake. This is to provide an understanding of the current level of knowledge, drawing attention to gaps and to aspects to be investigated further.
- Identify where possible shortcomings in the implementation and enforcement of existing legislation.
- Identify international law and comparative law issues relevant to harmonising legislation and establishing a legal framework for cooperation between the four riparian countries. As far as possible implications for multidisciplinary activities within other special studies and cross sectoral components should be identified.
- Advise on the legal implications of establishing such a framework, and set out options and issues to be taken into consideration in preparing the strategic plan.
- Identify the legal and international issues which would need to be addressed to achieve integrated lake basin management.
- Identify where possible the current institutional capability and manpower availability and how the project can work with relevant local and national bodies to mutual advantage in the development of the legal framework.
- Produce a detailed work plan for the legal framework special study.