

# **REPUBLIC OF RWANDA**



**MINISTRY OF LANDS, ENVIRONMENT,  
FORESTS, WATER AND MINES**

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## **NATIONAL LAND POLICY**

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## INTRODUCTION

Apart from a few scattered land regulations, most of which date back to the colonial period, Rwanda has never had a proper land policy nor has it ever had a land law, a situation that enhances the existing duality between the very restrictive written law and the widely practised customary law, giving rise to insecurity, instability and precariousness of land tenure.

The Rwandan Government, therefore, found it compelling and necessary to establish a national land policy that would guarantee a safe and stable form of land tenure, and bring about a rational and planned use of land while ensuring sound land management and an efficient land administration.

The following are the main obstacles that hinder the efficient management of land in Rwanda, necessitating the establishment of a national land policy that would guide the essential land reforms:

- Strong pressure on the already spatially limited land resources by a rapidly growing population;
- Domination of the agricultural sector which lacks any specialization in terms of human resources and equipment, and lack of alternative concrete and realistic options that would reduce the pressure on land resource;
- A land tenure system dominated by customary law which favours land fragmentation, a practice which reduces further the size of the family farms which are already below the threshold of the average surface area that is economically viable;
- A considerable number of landless persons who have to be resettled at all costs;
- Scattered farming plots that are difficult to manage due to the scattered mode of human settlement;
- Lack of a reliable land registration system that would guarantee the security of land tenure;
- Weak and inadequate existing methods of land-use planning and land improvement (outline of land potential, land use and land development; reliable methods of soil and water conservation);
- Disorderly and fraudulent land transactions, necessitating the establishment of regulations that would enable the authorities to give to the land a recognised market value which brings considerable profit to the Government Treasury;
- Unplanned use of marshlands which, in spite of their good agricultural soil, cannot be wholly recovered for agricultural purposes, in view of the following factors:

- Abundance of water which is necessary as a useful water reservoir;
- The soil make-up, which does not lend itself easily to the current cultivation methods;
- The biotic environment and biodiversity which should be protected at all costs;
- The obvious poor coordination among various institutions which use with land to support their activities;

Solutions to all the above-mentioned constraints require a coherent policy that directs and harmonizes land management and land administration and reduces land-related conflicts by resolving them as soon as they surface. This national land policy document develops policy statements and strategic options that would give solutions to the major challenges that have been identified.

The implementation of the policy statements and strategic options of this policy will be based on the major policies contained in Rwanda's National Development Strategy by 2020 commonly known as "Vision 2020", which ranks land policy among the country's vital and key policies. However, a mid-term evaluation will be carried out after ten years so as to bring in the necessary readjustments. This policy will serve also as a useful reference for the elaboration of various three-year sectoral policies, the implementation of which takes into account the Medium Term Expenditure Framework.

The implementation of this policy will not be the prerogative of the Ministry of Lands, Environment, Forests, Water and Mines only since its multisectoral character calls also for a multisectoral intervention and coordination. Similarly, for the implementation of this policy to be really effective, certain preconditions are essential, namely the establishment of:

- A Master Plan for land allocation, land use and land development;
- A National Land and Geographical Information Centre that will include land registry and land-use planning;
- The Rwanda Environment Management Authority which is useful for land use and land management planning;

In the process, close collaboration with international institutions involved in land issues will be strengthened.

## **Chapter 1: GENERAL CONTEXT**

Rwanda is a hilly, landlocked and densely populated country with serious problems related to land scarcity.

Geographically, Rwanda is situated east of Central Africa between 1<sup>04</sup>' and 2<sup>51</sup>' latitude south and between 28<sup>53</sup>' and 30<sup>53</sup>' longitude east. The shortest distance to the ocean is 1,200 km long.

### **1.1 Socio-demographic Data**

Rwanda has an area of 26,338 km<sup>2</sup>. It has a population of 8,128,553 million (MINECOFIN, Nov. 2003) with a natural growth rate of 3.1% (UNDP, Dec. 1997).

With its current physical density of 321 inhabitants per km<sup>2</sup> and a physiological density of 433 inhabitants per km<sup>2</sup>, Rwanda is the most densely populated African country, and its annual income per capita of about US\$210 (2000 estimates) makes it one of the poorest countries in Africa.

### **1.2 Physical Data**

#### **1.2.1 Relief**

Rwanda is a very hilly country, with steep slopes ravaged by massive and devastating soil erosion which is exacerbated by overstripping of land, deforestation, and inadequate use of land improvement techniques. The relief of the country can be divided into three distinct types stretching from west to east. To the west is the Congo-Nile watershed that rises over Lake Kivu. To the north is a chain of volcanoes, and to the east are the lowlands. The central part of the country has an altitude of between 1,500 m and 2,000 m, with stretched hills and more or less rounded hilltops separated by large valleys. This type of relief covers almost half of the country and has earned Rwanda the nickname of the "Land of a Thousand Hills".

#### **1.2.2 Climate**

With more or less constant temperatures throughout the year (16 – 17<sup>0</sup>C in the high altitudes, 18<sup>0</sup>C – 21<sup>0</sup>C in the central plateau and 20<sup>0</sup>C – 24<sup>0</sup>C in the eastern and western lowlands), Rwanda has an equatorial-continental temperate type of climate classified as AW3, according to the Köppen classification. The country has four seasons which are determined by the variability of rainfall. However, the rainfall is quite irregular and gives rise to prolonged drought periods, especially in the regions of Bugesera, Mayaga and Umutara, causing serious setbacks to agricultural activities that are totally dependent on rainfall.

### **1.2.3 Soils**

Rwanda's soils are naturally fragile. They are a result of the physical and chemical alteration of schistose, quartzite, gneiss, granite, and volcanic rocks which form the surface geology of the country.

The soil map of Rwanda, which was published in 1992, shows six types of soils:

- 1) Soils derived from schistose, sandstone and quartzite which cover almost 50% of the national territory
- 2) Soils derived from granite and gneiss which make up about 20% of the national territory
- 3) Soils originating from intrusive basic rocks that hardly cover 10% of the national territory
- 4) Soils originating from recent volcanic materials that cover 10% of the national territory
- 5) Soils originating from ancient volcanic materials that cover 4% of the national territory
- 6) Alluvial and colluvial soils which are typical of Rwanda's swamps occupy 6% of the national territory

The map of soil capacity, which is complementary to the soil map, shows that more than half of Rwanda's soils are unsuitable for crops that are particularly demanding. The very good soils occupy a very small space and are found mostly in densely populated areas.

### **1.3 Economic and socio-cultural data**

Rwanda's economy is based mainly on Agriculture. In fact, this sector occupies 91.1% of the active population and produces 43.5% of GDP and 80% of the country's exports, principally from coffee and tea (MINAGRI, 1998). Land resource is, therefore, the most important factor of production and survival for the nation and the entire population, and it will remain the backbone of the national economy for a long time to come.

However, due to its scarcity, land as a natural resource does not offer many alternatives in terms of increased arable land. In fact, agricultural land is estimated at around 1,380,000 ha, which is about 52% of the country's surface area. Together with the reclaimed part of the Akagera National Park, i.e. a surface area of 194,000 ha, and the entire Umutara Game Reserve, around 15,000 ha, for agriculture, livestock and forestry, the total surface area of arable land comes to 1,589,000 ha, or 60% of the national territory.

Marshland area is estimated at around 165.000 ha. Half of this area is suitable for crops, while the other half needs to be protected in order to regulate the water cycle, the eco-climatic balance, and for the conservation of biodiversity.

From the socio-cultural point of view, Rwandans are very much attached to the land which is the strong foundation of Rwandan social and cultural traditions. As a result, there is a growing competition for access to land due to the combined effects of land scarcity, population growth, the high number of landless people, the livestock crisis, and the increasing hold of the urban elite over rural land.

#### **1.4 Legal Aspects**

Currently, the land tenure system in Rwanda operates in a dual legal system:

On one hand, there is:

- ◆ the customary law, which governs almost all the rural land and promotes the excessive parcelling out of plots through the successive father-to-son inheritance system.

And on the other, there is

- ◆ the written law, which mostly governs land in urban districts and some rural lands managed by churches and other natural and legal persons. This law confers several land tenure rights to individuals such as land tenancy, long term lease and title deeds (particularly in towns).

On the whole, Rwanda's land tenure system requires comprehensive reforms, from the elaboration of a national land policy to the establishment of a land law and land code, which will guide the judicious use and management of the land resource for the economy to be able to take off in such a way that our country is freed from the grips of poverty.

## Chapter 2: HISTORICAL BACKGROUND TO THE LAND ISSUE

### 2.1 Land tenure system in pre-colonial Rwanda

The land tenure system in pre-colonial Rwanda was characterized by the collective ownership of land, where there was complementarity between agriculture and livestock. This system promoted economic production and was a factor of stabilization and harmony in production social relationships. Families were grouped in lineages, and these were in turn grouped in clans. Each clan had a chief. Clans were spread all over the national territory: in different proportions according to regions. Land ownership relationships were thus based on free land use and on the complementarity of the modes of production.

The main aspects of land tenure were as follows:

◆ **“Ubukonde”** or clan rights, held by the chief of the clan, who was the first land-clearer. The chief could own vast tracts of land on which he would resettle several families, known as **“Abagererwa”**. The latter enjoyed land rights, subject to some customary conditions.

◆ **“Igikingi”** or right to grazing land, granted by the king or one of his chiefs known as **“Umutware w’umukenke”**, to any family that reared livestock.

Right up to the advent of the colonialists, **“Igikingi”** was the most common land tenure system, especially in the central and southern parts of the country.

◆ **“Inkungu”** or custom, enabling and authorizing the local political authority, on his own or on others’ behalf, to own abandoned or escheated land. These lands were considered as a sort of land reserve which the ruler of the time could grant to anybody who needed one.

◆ **“Gukeba”** referred to the process of settling families onto the grazing land or fallow land. **Gukeba**, or **Kugaba**, as it was sometimes called, was an exercise within the province of the local authority.

As the socio-political and administrative structure became stronger and better organised, land resources likewise became more important. The need for good management of these resources was symbolised by the presence of a chief in charge of the land, **“Umutware w’ubutaka”**, and a chief in charge of livestock, **“Umutware w’umukenke”**, both considered to be at the same level as the chief of the army, **“Umutware w’ingabo”**.

Land rights were respected and passed on from generation to generation according to Rwandan tradition and custom. These rights were enjoyed under the supreme protection of the King, the guarantor of the well-being of the whole population. Land ownership was more community-based than individual. This is the system that the colonial rulers found in place, and it is over this same land tenure system, which was governed by custom and officially recognized by the King, that the new written law-based land system was going to be superimposed.

## 2.2 Land tenure system during colonization

Colonization introduced new elements in the Rwandan society, both exogenous and dominating, that were going to bring in changes and distortions in domestic social balances.

German colonization started right after the end of the 19<sup>th</sup> century and lasted till 1916. The German colonial authorities recognized the King's authority over land. The first Catholic and Protestant missions bought land and became land owners.

While political management in pre-colonial Rwanda was based on the control of the economic system which was founded on 3 pillars, namely land ownership for agricultural purposes, livestock and security in order to guarantee prosperity; Belgian colonization introduced deep changes in the management of the country which were later to destroy the traditional system. This traditional trilogy, which represented a system of national social balances, was therefore dismantled and transformed into a centralized administration. The 1926 reform divided the country into chieftainships and abolished the system by which a chief could own several land properties in different parts of the country, which characterized his importance in the country's hierarchy. And yet this form of the management of the country had been a factor of national unity and cohesion. The abolition of these traditional structures for the purpose of exercising better control of the country and get colonial orders accepted caused a lot of disturbances to the Rwandan society. Nonetheless, land management maintained aspects of traditional practices.

Belgian colonization introduced also the written law appearing in the "codes and laws of Rwanda", particularly in order to guarantee land tenure security for settlers and other foreigners wishing to invest in land in Rwanda.

The Belgian colonial administration established the 1885 decree concerning land use. The following are the two main doctrines of this decree:

- ◆ **Only the Colonial Public Officer** could guarantee the right to use the land taken from indigenous Rwandans. Settlers or other foreigners intending to settle in the country were to apply to the colonial administration, follow its rules for obtaining land, and conclude settlement agreements.
- ◆ **Land use** should be accompanied by a title deed. The natives should not be dispossessed of their land. Vacant land was considered as state-owned land. This provision introduced the duality of systems in the country's land tenure system.

All occupied land remained subject to customary law, and only settlers and other foreigners could benefit from the new written law system that was protected by the colonial administration. The written law applied also to Catholic and Protestant Missions owned land (decree of 24/01/43 concerning free transfers and concessions of land to scientific and religious associations as well as to parastatals), urban districts, as well as trading and business centres.

Owing to the high population density and the need to exploit new areas, the colonial administration introduced the system of grouped homesteads called **paysannats**, which was similar to the traditional system of “Gukeba”. This system was developed in those regions with grazing land and other land reserves, and consisted of giving each household two hectares mainly for cultivating cash crops such as cotton in Bugarama and coffee in Mayaga. This practice was introduced after the abolition of the Ubuhake system and the distribution of cattle in grazing areas (Ibikingi), and it promoted the extension of cultivated land to the detriment of livestock. A new aspect of national development was thus introduced, putting emphasis rather on agriculture and disrupting ipso facto the balance that had always existed between agriculture and livestock. This development gave rise to conflicts; both latent and real. Even though in this system where agriculture dominated over livestock, there were no open conflicts between the government and the local population, real tensions could nevertheless be felt at that time. Thus, large sections of the population among cattle breeders migrated to Umutara, Uganda and Congo.

Between 1952 and 1954, King Mutara III Rudahigwa abolished the system of “Ubukonde” and decreed that all the “Abakonde” would henceforth share their land property with their tenants, known as “Abagererwa”.

From 1959 onwards, the land tenure system became a factor of real conflict among the population. It was during this period that, with the eruption of the political crisis, the first ever wave of refugees went into exile, leaving behind both their landed and real estate properties.

### **2.3 Land tenure system after Independence**

Compared to the colonial period, the situation has not changed much after independence. As a matter of fact, 90% of the country’s arable land is still governed by customary law. The written land law still applies to a small number of persons and religious congregations. It applies more often in urban areas and business communities.

#### **a. Land situation during the first and second Republics**

After independence, the government gave an important role to the “communes” in the administration of land. Through the ‘Loi Communale’ of 23/1/63, the protection of rights relating to registered land under the customary law became the responsibility of the commune. However, the provisions of this law were virtually nullified by Decree No. 09/76 concerning the purchase and sale of customary land rights or land use rights.

While at the beginning of the 60’s the Government banked on abolishing the system of “Ibikingi” to put them under the authority of the “communes” and on recovering the land abandoned by the 1959 refugees to acquire new agricultural land, the 1970-1980 decade was characterized by intensive migration from the already densely populated regions of Gikongoro, Ruhengeri, Gisenyi and Kibuye to the semi-arid savannas of the East (Umutara, Kibungo and Bugesera) in search for vacant land. It is during this period that the Government attempted to transform the existing human settlement system into one of grouped homesteads, known as the “paysannat”. The

purpose was to make more rational the occupation and use of land which was becoming more and more scarce.

In 1976, decree No. 09/76 of 04/03/76 concerning the purchase and sale of land customary rights, or the right of soil use, authorized individuals to purchase and sell customary land after application to the competent authorities, and subject to retaining at least 2 ha of land. The buyer was also to justify that he did not have land property equal to at least 2 ha. Ever since, the Government recognized only the right of ownership based on land registration and became, therefore, the eminent land owner.

At the beginning of the 80s, there were no more new lands, and problems began to emerge bluntly; reduction of soil fertility and of the size of land for cultivation, family conflicts stemming from land ownership, food shortages, etc. From 2 ha in 1960, the average area of a family's cultivation plot was reduced to 1.2 ha in 1984, according to the agricultural survey carried out at the time.

Since the beginning of the 90s, the country found itself in a land-related deadlock. Problems included insufficient agricultural production, increasing population pressure on natural resources, growing number of landless peasants, and conflict between agriculture, livestock and natural reserves. Through agricultural projects, particularly forestry and grazing land projects, the government strengthened its role as the owner of vast stretches of land. Reforestation became an important factor in land accumulation by the State and private individuals. Forests extended even in lands fit for crops as well as marshlands. Reforestation became thus a simple form of long term land ownership.

### **2.2.1 Land situation after 1994**

The massacres and the Genocide of April - July 1994 decimated over one million lives. These sad events led also to the displacement of millions of people, both inside and outside the country, leaving behind many widows and orphans.

After the Genocide, the 1959 refugees were expected to return as stipulated the **Arusha Peace Accords**. Article 2 of the Protocol of the Arusha Peace Accords between the Government of the Republic of Rwanda and the Rwandese Patriotic Front on the Repatriation of Rwandan Refugees and the Resettlement of Displaced Persons stated that " ...every returnee is free to settle in any area of his/her choice in the country, as long as he/she does not infringe on somebody else's rights".

Article 3 of the Protocol stated that "in order to resettle the repatriated persons, the Government of Rwanda should release all unoccupied land so identified by the Repatriation Commission".

On the other hand, Article 4 of the Protocol stipulated that "the right to property is a fundamental right for all Rwandans. Consequently, the refugees have the right to repossess their properties upon their return. However, the two parties recommended that "with a view to promoting social harmony and national reconciliation, refugees who fled the country over 10 years ago should not reclaim their properties which

have been occupied by other individuals. To compensate them, the Government will give them land and assist them to resettle".

In the first place, the return of the 1959 refugees gave rise to a real land problem, mostly because it was difficult to apply the Arusha Peace Accords which had been torpedoed by the 1994 Genocide (Articles 2, 3, 4 of the Arusha Peace Accords). As a provisional measure, some of the former 1959 refugees occupied land that had been abandoned. This situation resulted in the 1996 regulations on the temporary management of abandoned land. Other former refugees were given plots on public land and vacant land on which they could resettle and produce. These lands were:

- ◆ Umutara Game Reserve, two thirds of the Akagera National Park and the Gishwati Mountain Forest, as well as land belonging to certain state-owned projects which was parcelled out and distributed to the 1959 refugees
- ◆ Communal land, woody areas found on good soil, pastures, and areas near the shallow sections of marshlands.
- ◆ In some provinces, namely in Kibungo, Cyangugu, Kigali Rural, Ruhengeri and Umutara, many family plots were parcelled out and re-distributed between the owners and the returning 1959 refugees.

Despite these actions, which at the end of the day may be considered as remedial measures, many families are still landless and land given to orphans and widows is still mismanaged. These problems add to the already existing problems such as excessive parcelling out of plots, deforestation and the gradual soil impoverishment.

This land situation has resulted in the need for a national land policy that takes into account both the current socio-political situation and economic considerations that require changes of mentalities with regard to the mode of land management and land administration.

## **Chapter 3: LAND ISSUES**

Land-related problems in Rwanda are multiple and varied. Some originate from the morphology and physiology of the land, while others are rooted in the socio-demographic and socio-economic situations, combined with inadequate land policies, laws and regulations. Being a densely populated and hilly country; Rwanda faces serious problems related to the scarcity of land, the mode of human settlement and the protection of the environment. The evolution of agriculture, long considered as the backbone of the national economy, has become unpredictable because the land resource is badly managed, and yet over 90% of the Rwandan population work on land from which they earn their livelihood. Soil erosion has worsened due to continuous cultivation of land, settlement on marginal land that is unsuitable for agriculture, and lack of reliable soil conservation methods.

This land policy document will attempt to analyze land-related problems in order to try and find solutions that are adapted to the magnitude of the existing problems.

### **3.1 Very high population density and heavy pressure on the land**

The first administrative censuses and other surveys (1930 - 1935), the registry office, the population surveys of the 1950s, the administrative censuses of 1960, the 1970 population survey, the 1978 general population census and housing survey, the 1983 national fertility survey, the 1991 second general population census and housing survey, and the annual reports of the Ministry of Local Administration enable one to follow the evolution of the population of Rwanda from 1934 till now. Estimated at 1,595,400 in 1934, the population of Rwanda had risen to 7,700,000 by 1997.

Rwanda's population growth has been exponential, except during certain periods like 1943 - 44 and 1994 - 96. The drop in the population of the years 1943 - 44 were due to famine, and that of 1994-96 can be explained by the 1994 genocide and massacres which caused over one million deaths, while several thousands fled to neighbouring countries. Thus, the population of Rwanda has experienced a very high continuous increase. It doubled during the last 25 years. This high growth is due to a very high natural growth rate of about 3.2%.

The most recent figures from the 1991 population census and housing survey show that the average population density is 272 inhabitants per km<sup>2</sup> at the national level. However, some Districts have a population density of over 600 inhabitants per km<sup>2</sup>. Currently, figures stand at 303 inhabitants per km<sup>2</sup> for physical density, and 410 inhabitants per km<sup>2</sup> for physiological density. However, there exist regional inequalities with certain rural districts like Shyamba in Butare Province can easily reach over 1,000 inhabitants per km<sup>2</sup>.

The 1996 socio-demographic survey confirmed higher population densities (recorded in 1991) in the Central Plateau, and the Northwest, i.e.: Gitarama and Butare, and Gisenyi, Ruhengeri and Byumba respectively. These provinces alone accounted for 55.8% of the country's population.

These very high population densities result in excessive population cramming in one area, and this has harmful effects on the land resource. This is why emergency measures are necessary in order to reduce the pressure of the population on land, especially arable land. Among other measures, one can recommend the re-organization of space through the construction of imidugudu villages (already started) and the creation of non-agricultural jobs in order to ease congestion in the agricultural sector.

### **3.2 Excessive parcelling out of family agricultural land**

According to the 1992 report by the National Agricultural Commission, there were 1,111,897 rural households in 1986, and an estimated 1,202,605 in 1989. It was expected that the figure would rise to 1,941,000 in 2000. Already in 1986, an estimated 25.7% of family farms were less than 0.5 ha. These households could no longer produce enough to satisfy their food needs. The arable land for the vulnerable group was in the range of between 0.5 and 1 ha.

Currently, available arable land per family farm is just 0.6 ha. There are, of course, regional inequalities concerning the available agricultural land per family, ranging from <0.25 ha to >2 ha.

The reduced size of cultivated land per family is a nationwide problem. Some provinces, namely Gisenyi, Cyangugu, Gikongoro and Butare have already reached an average that is below 0.5 ha per household. And yet, the critical threshold below which a farmer can no longer meet his family's basic nutritional requirements from agricultural activity alone is approximately 0.75 ha. According to FAO, a farming unit should have at least 0.90 ha to be economically viable.

According to these figures, it is obvious that the Rwandan family farm unit is no longer viable. This is a crisis that calls for urgent and appropriate measures, given that the scarcity of land in Rwanda hardly offers any possibilities to increase land availability for agricultural purposes.

The landless will become even more numerous and poverty more threatening since over 90% of the rural population is employed in agriculture. The re-organization of the available space and technological innovations are necessary in order to ensure food security for a steadily and rapidly increasing population.

### **3.3 Loss and degradation of soils**

The loss and degradation of Rwanda's soils are occurring at an alarming rate. There are several causes for this. There are first purely natural and/or structural causes, and then man-made causes.

#### **3.3.1 Natural Causes**

##### **a. Pedological causes**

Due to their pedogenesis, Rwanda's soils are fragile, and therefore vulnerable and very erosion sensitive.

## **b. Geomorphological causes**

Rwanda is characterized by a hilly terrain, with a physiographic pattern of steep hills, hence the significant and poetic name of the “Land of a Thousand Hills”, a term that briefly but vividly illustrates Rwanda’s high altitudes

## **c. Climatic causes**

The rainfall in Rwanda is unpredictable. It is regulated by altitude. Annual rainfall increases from East (900mm) to West (1,600). The eastern lowlands receive less rain, with an annual rainfall that is less than 1,000 mm per year, while the higher altitudes of northwest receive more, with an average of 1,800 mm per year, and a maximum of 2,500 mm. This high rainfall makes the slopes vulnerable to water erosion.

## **d. Scarcity of land**

Arable land is estimated at 1,385,000 ha, or 52% of the country’s total surface area. Add to this arable surface area, marshlands which are estimated at 165,000 ha and of which only half is available for agricultural purpose. If this half were properly developed, it would be an invaluable addition to the existing arable land.

The problem of the scarcity of arable land becomes even more acute when the same piece of land must be used for other activities such as housing, livestock, and construction of infrastructures and various community facilities.

### **3.3.2 Man-made causes**

#### **a. Population pressure**

As a result of the high population pressure, the size of cultivable land is rapidly decreasing. In addition, water induced erosion caused by the cultivation of excessively steep slopes without adequate anti-erosion, water and soil management and conservation techniques, their over-exploitation and inadequate organic mineral restoration, render Rwanda’s soils subject to continual degradation. Their fertility deteriorates so rapidly that some areas reach a critical stage that may lead to an irredeemable situation if appropriate measures are not taken.

The overpopulation of the country, apart from the exerting extreme pressure on the already fragile and unstable soils, has also brought about excessive parcelling out of land by successive father-to-son inheritance under the customary law which is still in practice in rural areas.

Soil losses are considerable: they are estimated at between 0 and 557 tonnes/ha per year. This applies to all losses. The sediment load carried into the Nyabarongo River ranges from 51 kg/s at Nyabarongo-Kigali, 44 kg/s at Nyabarongo-Kanzenze, and 26 kg/s at the Akagera-Rusumo. The loss rate ranges from 33 to 288 kg of dry matter per second.

Improper management of natural resources causes the degradation of land due to excessive rainfall and the gradient of cultivated hill slopes. This degradation of the natural environment is illustrated in a definite manner by water erosion that strips off a large section of the cultivated area. It is estimated that water induced erosion is reducing Rwanda's capacity to feed 40,000 persons per year and causes annual losses due to poor soil conservation, totaling an estimated 945,200 tons of organic matter, 41,210 tons of nitrogen, 280 tons of phosphorus and 3,055 tons of potassium for the whole country.

#### **b. The disastrous effects of the war and genocide**

The death and displacement of thousands of Rwandans resulted in the abandoning and destruction of anti-erosion structures. The massive return of refugees led to the systematic destruction of existing wooded areas, and a quasi-anarchical takeover of protected zones, namely the Akagera National Park and the Gishwati natural reserve. It is estimated that 15,000 ha of man-made forests were destroyed and 35,000 ha damaged during the 1994 war.

After 1994, reconstruction and resettlement programs, over-cutting of forests for energy purposes (since over 97% of households use wood as a source of energy) by orphanages, prisons, schools and tea factories increased the pressure on wood resources. The losses are alarming. According to the document entitled '*Energy Policy*' prepared by the Ministry of Public Works and Energy, the deficit is not yet well known, but the figures would be alarming if one considered the fact that already in 1990, the deficit amounted to 3,000,000 m<sup>3</sup> per year. In 1997, some experts put the figure to 4,500,000 m<sup>3</sup>. The crisis is obvious and the deficit will continue growing. Reforestation of deforested hills is necessary, and the use of renewable sources of energy has emerged as a possible solution. The search for other alternatives should also be encouraged and pursued.

#### **c. Inappropriate farming methods and inadequate soil conservation techniques**

Soil conservation methods and techniques used until now have mostly targeted the aspect of soil protection in an attempt to stop the loss of sediments, ignoring the aspect of "improvement or restoration of soil fertility".

Until the 1980s, soil conservation focused on applying only one method, namely that of compartmentalized or continuous isohypse ditches, reinforced by quickset hedges without taking into account the agro-bioclimatic regions. It was not until the beginning of the 90s that another method, originally conceived in 1973, was applied. This is the method of terracing. In addition, these methods were conceived without first considering the 'restoration of soil fertility' aspect. On the other hand, the public has not yet understood the anti-soil erosion campaign as one of the parameters for increased production. Add to all this the use of inappropriate farming methods and overgrazing.

#### **d. Pressure on forests and natural reserves**

Rwandan forests are subjected to strong human pressure. Due to forest clearing, between 1958 and 1978, Nyungwe mountain forest's surface area was reduced from

114,125 ha to 97,138 ha, i.e. a loss of approximately 17,000 ha in a space of 22 years. This is, in other words, a reduction of 15% of the forest's surface area. This huge forest was already being destroyed due to a steady stripping off of fuel substances for commercial purposes, as well as the poaching of big mammals such as the buffaloes and the elephants. Currently, the surface area of Nyungwe forest is estimated at 90,000 ha. In 2000, the government declared the forest a National Park in order to give it better protection.

Due to land settlement and the launching of a pyrethrum project between 1958 and 1973, the volcano forest measuring 35,000 ha was reduced by 49% of its surface area within these 15 years. Currently, this forest has only 15,000 ha.

In 1930 when Gishwati forest was classified as a natural reserve, it had a surface area of 21,000 ha. In 1981, the forest was stripped of 5,000 ha which were converted into grazing land in favour of the World Bank-sponsored Byumba, Gisenyi, Kigali project called "G.B.K". Today, 95% of Gishwati forest is occupied by the former 1959 refugees.

The surface area of Akagera National Park was reduced from 331,000 ha in 1956 to 255,000 ha in 1992. Today, the park has a surface area of 90,000 ha. The remaining part was given away in 1997 by the Government for the resettlement of old refugees returning from exile, pursuant to the Arusha Peace Accords.

Given that this region is semi-arid and is vastly occupied by large-scale pastoralists, there is no water and no pastures due to the long period of drought.

In 1997, over 30,000 cows died due to lack of water and adequate pastures, and this happens every year. In 2000, in addition to the considerable loss of cattle, 22 hippos died due to lack of water and grass as a result of the prolonged drought.

### **3.4 Lack of adequate land legislation**

As indicated earlier, most of the land in Rwanda is governed by customary law. Lack of an adequate legal framework is a real impediment to the rational use of land.

The decree-law of 4<sup>th</sup> March 1976 concerning the purchase and sale of land regulated by customary law has become anachronistic. It specifies land limits to avoid land speculation instead of specifying the standards of land use, transfer, and mortgage which would constitute a guarantee for agricultural loans, which are necessary for development in rural areas. Land has neither economic nor monetary value.

Certain existing laws have never been applied due to lack of implementation ministerial decrees and the absence of efficient punitive measures against offenders. Such is the case with the law of 30<sup>th</sup> March 1982 concerning soil conservation, and that of 5<sup>th</sup> December 1988 concerning the administration of forests in Rwanda.

The Government decree of 29/01/81 concerning town planning and land-use planning has become obsolete and ineffective. This decree should be updated in such a way as to adapt urban settlement to each town's master plan and to conform

to the regrouped settlement in villages adopted by the Government in December 1996.

In brief, the laws relating to land are scattered and obsolete. They must be updated and compiled into one law which is applicable to all land users in Rwanda.

### **3.5 Unfavourable land tenure system to women**

According to Rwandan custom, land ownership is the prerogative of men, and land rights are inherited from father to son. Girls were therefore excluded from the inheritance of family land. This system prevented a woman from land ownership, even as a widow where she was entitled only to the right of usufruct over family land while waiting for her sons to come of age.

If her husband died before she had borne him any children, a woman could not claim any of her husband's land unless she married one of his brothers. Even in such a case, it was the new husband who became the owner of that land. And if this second marriage did not take place, the widow returned to her parents.

In some parts of the country, a woman could receive a gift of land from her father, known as a souvenir or "*urwibutso*". In Ruhengeri, the young bride could receive a piece of land as a marriage gift from her family. Such a gift was called "*intekeshwa*". Similarly, when a married woman brought her newborn baby to her parents, she could be given a plot of land called "*inkuri*". All these gifts of land would remain her property which she would bequeath to her sons.

Another method through which a woman acquired land ownership was when the clan chief (umutware w'umuryango) could give a plot of land known as "*ingagari*" to his daughters who had been repudiated by their husbands (the daughters in this case were called "*indushyi*").

In principle, a widow was allowed to retain a portion of the family land in order to provide for her needs. The clan chief had land reserve (**ingalingali**) for his repudiated daughters (**indushyi**) if they were not banished from their home areas.

The new inheritance law published in the Official Gazette No. 22 of 15<sup>th</sup> November 1999 has solved this problem that had remained pending for so many years. Article 50 states that "all legitimate children under the civil law shall inherit equally without any discrimination between male children and female children". The land law should take into account this clause with regard to land inheritance.

### **3.6 Inadequate human, material and financial resources**

Bad management and poor use of land resources are also a result of inadequate human, material and financial resources. The cadastral system, which is at the core of land administration, requires trained and motivated staff as well as an enormous amount of material and financial resources, which the country lacks. Land reform requires the collaboration of several stakeholders from various sectors. Economists, sociologists, agronomists, environmentalists, land-use planning engineers and lawyers must analyze the economic, social, political and legal impact that such a

reform would have. One should also provide for eventual expropriation expenses, site servicing, measurement and demarcation of plots, production of different kinds of maps, etc. Without these resources, the situation would continue going from bad to worse.

## **Chapter 4: LAND POLICY FRAMEWORK**

### **4.1 Objectives**

#### **a. Overall Objective**

In the perspective of the harmonious and sustainable development of our country, the overall objective of the national land policy is to establish a land tenure system that guarantees tenure security for all Rwandans and give guidance to the necessary land reforms with a view to good management and rational use of national land resources.

#### **b. Specific Objectives**

- To put in place mechanisms which guarantee land tenure security to land users for the promotion of investments in land.
- To promote good allocation of land in order to enhance rational use of land resources according to their capacity.
- To avoid the splitting up of plots and promote their consolidation in order to bring about economically viable production.
- To establish mechanisms which facilitate giving land its productive value in order to promote the country's socio-economic development.
- To focus land management towards more viable and sustainable production by choosing reliable and time-tested methods of land development.
- To develop actions that protect land resources from the various effects of land degradation.
- To establish institutional land administration arrangements that enable land to have value in the market economy.
- To promote research and continuous education of the public in all aspects of duties and obligations with regard to land tenure, land management and land transactions.
- To establish order and discipline in the allocation of land and land transactions in order to control and/or curb pressure on land, inappropriate development, land speculation and land trafficking.
- To promote the involvement and sensitization of the public at all levels in order to infuse land use practices that are favourable to environmental protection and good land management.
- To promote conservation and sustainable use of wetlands.

### **4.2 General Principles**

Of all the resources, land is certainly the most precious because it is an irreplaceable support of all forms of life, particularly in Rwanda where it constitutes the most important factor of production and survival.

However, land is a very fragile asset by its very nature, its spatial limitations, and the strong man-made and climatic pressures that it endures. It is obvious that the mode of land management, land use and land development will determine the development of the national economy and the well-being of the entire population of Rwanda.

In this connection, the National Land Policy will be guided by the following general principles:

**01. Land is a common heritage for past, present and future generations.**

This implies a legal framework that integrates a series of rights on land and renewable resources. But each right should be correlated to a number of duties. The management of such a heritage should involve every citizen. The duty of the government should therefore be to prompt and support the ecological and economic dynamics by guiding the behaviour of all land users. The government becomes the guarantor of the country's land and environmental heritage and must ensure its good management while taking into account the needs of the present and future generations.

**02. According to the constitutional principle of equality of all citizens, all Rwandans enjoy the same rights of access to land without any discrimination whatsoever.**

According to this principle, women, married or not, should not be excluded from the process of land access, land acquisition and land control, and female descendants should not be excluded from the process of family land inheritance

**03. Land administration should guarantee land tenure security.**

To this end, the principle of land registration should henceforth be necessary and applicable throughout the country. It will be supported by the establishment of a well designed land registry system that is applicable both in the urban and rural areas. This will ensure that land is given its real value.

**04. The determination of the real purpose of land and information about land are a pre-requisite to good management and rational use of land, which is the basic element of development and source of life.**

The use and management of land should take into account the different land categories as represented by different master plans and classification and land-use planning maps. Account should also be taken of all the various types of land-related information, which constitute land databases which vary according to times and space.

**05. Methods of land management and land use will differ according to whether they concern urban or rural land.**

Rural land consists of hills, marshlands and natural reserves.

**06. Existing fragile zones that are of national interest should be protected**

**07. Good land management should develop land use planning, including organization of human settlement and consolidation of small plots for a more economic and productive use of land.**

**08. Land transactions and land taxation should be included in land administration as elements of land development.**

Land market gives more value to land and promotes its use in a more productive manner. It facilitates investment in land development and enables various land users to expect better times ahead.

**09. Cadastral plans and maps are the best method for obtaining, registering and analyzing comprehensive and accurate data regarding land.**

Plans and maps are absolutely necessary for the success of planned development programs of natural resources. The complexity of the relationship between man and land is such that it is essential to record this relationship in conformity with public, communal and individual rights. Large-scale plans and maps in a graphic or digitized form constitute the only likely basis for such a recording. Large-scale plans are essential for good planning and for the execution of land use programs.

**10. An appropriate cadastral system is an essential basis for really understanding the land situation of a country, and thus for planning any land reform action.**

Such a system is very important in the implementation of a reform plan that entails all types of interventions or some changes in the existing land systems. Cadastral maps and land rights registers are very vital in ensuring the security of the landowner, facilitate land transactions and monitor the use of conceded and ceded land. The registration of land rights facilitates greatly the operations of any programme aimed at granting agricultural loans, especially for small farmers.

**11. A well-defined legal and institutional framework is an indispensable tool for the establishment of a national land policy.**

In order to lay a solid foundation for the new land policy, the land law will assist in putting in place the necessary administrative structure for finalizing the land reforms.

## **Chapter 5: LAND POLICY GUIDELINES**

The conception of land is multifaceted and carries also the mark of the socio-political history of the country. One should therefore strive to avoid being trapped by cultural considerations. At the same time, one should avoid debates which focus only on the agrarian aspects of the land, i.e. aspects focusing on agricultural development only, when land aspects include other resources that land bears such as human settlement, pastoral resources, fishing, and forests. The conception of land in terms of “property” makes it impossible to give a fair description of the local land tenure systems and their dynamics.

It is necessary to stress the diversity of the modes of ownership, the historical and therefore contingent character of transformations, the role of the government and of the rural populations concerned by the land issue.

The land issue comprises different factors linked to different aspects of life. These include:

- Economic factors which highlight the value of the land and the economic stake of its control.
- Legal factors which highlight the norms of land use, the legislative systems and the legal status of land and its underlying resources
- Institutional aspects which highlight authorities responsible for arbitration, decision making, and land administration;
- Technical aspects which promote techniques of development of space that improve the land’s value and in some cases transform the status of the land; reliable methods of land allocation and rational land use. The land tenure system introduces the principle of land-use management and makes land management plan an essential and almost inevitable tool for land management.

### **5.1 Land Tenure**

#### **5.1.1 Definition**

Land tenure may be considered as a set of modes or procedures of land acquisition and ownership. It is, in other words, a combination of rules that define the modes of access, use and control of land and its renewable natural resources. It is therefore a relationship between men or social groups and land or its underlying resources.

Land tenure has a multidisciplinary dimension that includes social, technical, economical, institutional, legal and political aspects. Debates on land issues must deal with various aspects of the environment, including the vision of space and nature, forms of land ownership, the role of the government, etc.

#### **5.1.2 Modes of land acquisition and land ownership**

In Rwanda, there are currently two modes of land acquisition, namely acquisition according to customary law or conceptions, and acquisition according to the rules of the written law.

### **i. Method of acquisition through the customary law.**

#### **- Through land occupation**

According to custom, land ownership is held by whoever occupies the land first. This rule has always been respected in our society. However, in modern times, land acquisition by occupation has become obsolete since all vacant land belongs to the State. Likewise, the provisions of the decree-law No. 09/76 of 4<sup>th</sup> March 1976, article 1, stipulate that '*all land not held under the written law and affected or not by customary law or land occupation belongs to the State*'.

#### **- Through inheritance**

Customarily, land rights are passed on from father to son through inheritance. Girls are excluded from inheritance of the family land from the father. Concerning inheritance rights of widows, the custom merely gives them the right to use the land that belonged to their deceased husbands.

#### **- Through the process of transfer by sale or as a donation**

In its original customary conception, land was owned collectively. Any disposal of land was therefore inconceivable, since such land was considered as family property that belonged to the ancestors, as well as to present and future generations.

With the introduction of the subdivision of land into individual plots due to successive inheritance procedures, each family owner of a plot of land was considered as the real owner of the plot, having the right to dispose of it as it wishes. However, Article 2 of the decree-law No. 09/76 of 4<sup>th</sup> March 1976, stipulates that nobody may sell off his land rights except with the written authorization of the Minister of Lands upon the recommendation of the Municipal Council where the land is located.

#### **- By prescription**

In actual fact, ownership through prescription originates from the written law since traditionally, title deeds were unheard of. Rwandans consider that once a right has been acquired or recognized, even customarily, it is indefeasible. This is why the many existing landless people, not having received any new land, continue to feel cheated and left out because they have no right over the land which they owned customarily over 30 years ago, since the law has fixed the time limit of acquisition by prescription to 10 years.

### **ii. Method of acquisition through written law**

- Tenancy contracts of plots for building purposes for a 3-year period in urban areas.
- Long lease contracts of land for agricultural purposes for a period of 15 years or more in rural areas.
- Free assignment contracts in both rural and urban areas to natural or legal persons for social activities with real impact on the welfare of the people.

- Sale contracts and title deeds for plots that are built in urban areas. This is a system of land tenure by urban residents who first lease plots with the contractual obligation of developing them. The Ministry of Lands delivers the title deeds after confirming that the plots have been developed.
- Right of access: mode of land acquisition which is common for public institutions.

### **iii. Case of the landless**

Apart from the above-mentioned different modes of land acquisition and land ownership, there is the case of the landless people who live in rural areas and who must live from farming. These are mostly the refugees of 1959 who were forced into exile for political reasons and left their land behind. These same refugees have now returned to their country and find themselves landless. They cannot claim back their previously owned land which has been occupied by other Rwandans who remained in the country, because the Arusha Peace Accords fixed the time limit for acquisition by prescription to 10 years.

#### **5.1.3 Policy statements**

- It is envisaged to formalize Rwanda's land tenure system to boost the economy and sustainable and harmonious development of the country.
- Land tenure that is secured by land registration and cadastral survey is today a pre-requisite and indispensable in order to attract investment in the rural areas.
- Taking into account the wrongful and unjust dispossession of land by the pre-1994 regimes of a portion of the Rwandan population constituted for the most part by the 1959 refugees, the Government should provide them with land to enable them to resettle and lead a decent life. Those who practice agriculture as their profession and sole means of livelihood could be given vacant or abandoned land and non cultivated land from the private and public state land. The Government should also adopt the principle of equal sharing out of land based on community consultations as was done in Kibungo, Kigali- Rural, Cyangugu, Ruhengeri and Umutara, among others. However, those who do not depend on land for their livelihood could be given plots in grouped settlement (Imidugudu) for settlement, and plots in urban areas according to land acquisition procedures in urban areas. Vacant land belonging to genocide orphans under 18 years of age should be administered by the authorities on their behalf until they come of age. The Government should also assist vulnerable genocide orphans above 18 and widows in developing their land.
- The existence of legal provisions accepted by all and regulatory institutions which guarantee transparency of land tenure conditions and procedures for the resolution of land-related conflicts facilitates the flow of investment for national land development.
- Land tenure should be guided by the provisions of the written law
- Customary land tenure as it exists in Rwanda has become obsolete and does not offer any economic advantage to the tenants or the state
- Customary land rights and land use rights legally granted by the competent authority should give to the beneficiary full rights of ownership through a long lease which guarantees the security of land tenure and raises the land value which is essential to both the tenants and the state.

- In order to ensure an economically viable development of land, the modalities for the consolidation of small family farms should be studied and encouraged.
- Save in exceptional circumstances, the size of acquired residential plots in urban areas should range from a minimum of 4 ares to a maximum of 12 ares, while the size of commercial and industrial plots will depend on the proposed project to be submitted to the relevant authorities.
- Title deeds will be reflected by registration certificates of a long lease of up to 99 years.
- Modes of land access, acquisition and ownership should be known to all Rwandans, men and women, since they are the principal beneficiaries.
- In order to guarantee environmental conservation, state-owned lands should be governed by special measures and regulations. In this regard, the following shall be classified as the state's public lands:
  - 
  - Lakes and waterways
  - National roads and their feeder roads
  - Land with public buildings
  - Natural reserves and national parks
  - Marshlands classified as natural reserves

The following shall be classified as the state's private land:

- Economically viable marshlands
- Communal land
- Vacant land (comprising abandoned land, land recovered from religious concessions and from large-scale traditional landowners)
- Land used by state institutions (schools, hospitals, research institutions, military entities).

#### **5.1.4 Strategic options**

- Distinction between urban and rural land

The mode of land acquisition will differ depending on whether it concerns urban or rural land. It is necessary to make this distinction because the mode of management and use of these land entities differ.

On the basis of the principle that any sound management and any rational use of the national land capital must be based on a reliable cadastral system, i.e. a system of identifying land with the mapping of plots and registration of various title deeds, it is essential to clarify the status of land and the modes of land acquisition capable of promoting economic development and influence the socio-cultural nature of the communities.

The distinction of land into two categories of 'urban and rural land' should be based on the function, allocation and purpose of land. Such a distinction requires a preliminary definition of the conditions for the creation or establishment of an urban centre. Urban lands are called such because they are located within urban areas or in areas with strong urban potentialities reserved for accommodating urban activities.

The definition of urban land is done through a specific law and by the existence of a general plan for the development and allocation of land.

Urban land can be:

- Urban districts defined as such by the law
- Outskirts of urban districts whose size and distance from the borders have been defined beforehand
- Development poles identified within the framework of land-use planning and general and regional plans of land allocation
- Grouped settlements sites created within the framework of the human settlement policy

As for rural lands, they constitute the remaining natural land outside urban districts which are for the most part occupied by agriculture, forests and livestock rearing, including lakes and waterways as well as protected natural reserves.

Sequence of established procedures:

- The registration of land property should be encouraged in order to guarantee the security of land tenure. To this effect, an efficient and modern cadastral system should be installed in order to facilitate the process of land registration.
- A comprehensive inventory of land property owned according to custom and to the written law, together with a primary mapping system (plot plan or cadastral plan) will be carried out as a basis for the restructuring and intended correct registration;
- Such an inventory will equally concern all the state's private land as well as communal and vacant land. The latter will be distributed to the landless peasants and to those applicants who show definite interest in land development. However, it would be advisable to create a land reserve that could be used for various activities of general interest.
- It will not always be possible for every Rwandan to possess a plot of land of his own. Agro pastoral land will only be allocated to those who are professional farmers or pastoralists. This is to avoid wastage by under-utilization. Henceforth, a clause forbidding the parcelling of land by inheritance or transfer *inter vivos* will be reflected in the land law. The process of consolidation will be fostered and the regulation of buying back land among inheritors will be established so as to render the consolidation of plots effective.
- The establishment of accurate cadastral plans and the registration of land according to modern procedures using computerized facilities.
- The elaboration of legal texts so as to define and introduce different modes of land tenure and different land status in order to enact restrictive measures and obligations
- Cadastral and title deed registration fees will be met by the tenants and the rates will be established by a decree of the Minister of Lands. The land survey and land registration systems are a fundamental element which increases the possibilities of mortgage and acquisition of bank loans.
- To respect the limits of the sizes of land property, it will be important to draw up master plans and land-use management plans for urban land, as well as master plans for the allocation and use of land in rural areas. It is from these plans that

will be elaborated individual cadastral cards according to the use of the land. In this connection, modern cartographic methods will be used.

- In urban areas, it will be possible to have a land registration certificate before the construction of a building upon request. The value of the allocated land will depend on its location and on the total cost of its development. The formalities for acquiring such a land title will be stipulated in the land law.
- In rural areas, the registration and the granting of the registration certificate for a 99-year long lease will follow the strict rules established by the land law, stipulating the purpose of the land and the development obligations. Priority will be given to tenants with a proven intention to develop and make rational use of the land. This is in order to promote professional agriculture.
- The different land commissions established according to the law will have a big role to play in the process of land acquisition; and in the case of land acquisition by prescription, the land law, while supporting this mode, will intervene in order to clearly regulate this notion: time limits, causes of interruption or of suspension of these time limits, cases in which prescription does not count, etc.
- The registration certificate will be issued for both land ownership in urban areas and the 99-year long lease in rural areas, and it will be renewable in the latter case.

## **5.2 Land Administration**

### **5.2.1 Definition**

Land administration is the process of registration and dissemination of information in relation to land titles and all sorts of land transactions, as well as the use of land-linked natural resources. This process includes the establishment of rights and other attributes characterizing land ownership and the mode of acquisition, measuring and demarcation of plots, as well as their description.

### **5.2.2 Importance of a good land administration.**

A good land administration:

- provides land title guarantee and land tenure security.
- supports the process of land taxation, hence generating considerable revenue for the government.
- provides bank loan security in the form of mortgage.
- develops and guides land transactions.
- protects public and private state land and ensures their efficient management.
- reduces significantly land disputes, thus contributing to the stability of the society and national reconciliation.
- facilitates land reforms in rural areas.
- improves the planning and development of infrastructure.

### **5.2.3 Policy statements**

- The system of land administration in Rwanda will be based on a reformed cadastral system, including land mapping, recording of all land-related data and land titles. Land registry is, in effect, a tool of reference for an effective land administration system.

- Rwanda's land administration system should guarantee order and stability in the society by protecting the interests of land and real estate owners as well as those investing in land.
- The land administration system, through the recording of land-related data and land ownership rights, is an efficient tool for the implementation of the national land policy and the land law, which supports economic development.
- The land administration system will focus on three concepts that are land titles based on long-term leases of 99 years, the value of land and the use of land, within the general context of land management.
- In order to establish an efficient land administration system, several processes have to be taken into consideration, namely the determination of farmers' requirements, the introduction of new administrative arrangements, the establishment of land laws and different kinds of land regulations, the introduction of new land registers and new land data storing and processing procedures and the development of a national public land network.
- Active participation of the population in land management will be encouraged.
- The land administration system will be based on a reformed cadastral system.

#### **5.2.4 Strategic options**

- Establishment of a National Land Management Centre equipped with a geographical information system.
- Elaboration of a standardized land law guaranteeing fair rights to tenants.
- Promotion of the people's active participation in land management.
- Establishment of national, provincial and district land management commissions, both in rural and urban areas, within the framework of the accountability of local authorities and their responsibilities as spelt out by the law.

The National Land Commission should be responsible for the management of public and private state land on behalf of the Government and the nation at large; supervision of the management of the land acquisition and public facilities fund for urban land and the expropriation fund in the public interest; supervision of the management of programmes for the elaboration of land-use management plans, as well as national and regional land allocation and land use plans.

Due to the widespread land registration and granting of land title deeds, the National Land Commission should be the registrar of titles deeds for public and private state land. Provincial Land Commissions should supervise and coordinate the work of District Land Commissions and deal especially with the management and use of urban land.

- Appointment of title deeds registrars

Each commission will have title deed registrars. The secretary of each commission will be the registrar of land titles in urban districts or urban centres and rural areas under his/her authority.

The registration of land titles is of the utmost importance since this is the only procedure that guarantees land rights to third parties. The powers vested in land registrars, the mechanisms of property registration, of surveys of land vacancies and

of mortgage registration will be spelt out in order to guarantee the homogeneity of the registration of land titles throughout the country.

State land royalties will be stipulated in the clauses of tenancy agreements and the rate will include costs incurred for site servicing, including expropriation costs. The payment of these royalties constitutes a condition for obtaining a land registration certificate (this is different from the tile deed which is given after land development) which can be mortgaged for obtaining real estate credit.

These royalties will be determined in such a way as to maintain the standing of a given residential area. The rates and modalities of payment will be determined by decree of the Minister of Lands.

### **5.3 Land register in land administration**

#### **5.3.1 Definition**

The land register is both a list or a registry of land values (owned plots) and their owners and a representation of the territorial layout. For each administrative entity, it comprises a cadastral matrix which describes, for each apparent owner, the list of property that he/she owns; a cadastral plan (computerized or not) drawn using topographic methods that covers all numbered plots; and a section status, which is a list of plots with their numbers and owners by administrative subdivision. The land registry should at the least contain a description of the plots and land rights, and incorporate a number of other elements such as soil, topographical and other land-use management maps. The land registry serves as a tool for establishing land tax and the registration of title deeds.

Without prejudice to the objectives of equity and participation, a well designed land registry should be multipurpose in its implementation so as to play a big role in development. Land registry is one of the most efficient tools used in land administration to overcome the types of constraints that the system imposes on rural development.

#### **5.3.2 Functions of the land registry**

- **Financial:** evaluation of land property, determination of land taxation bases;
- **Legal and land-related:** identification and physical description of land properties, identification of their owners;
- **Technical:** establishment and updating of the parcelling plan, which is the direct and indispensable tool for the physical identification of these properties.

To be exhaustive, to the above-mentioned three functions could be added the economic, statistical and documentary functions which are very important because on one hand, data included in the land register concern many public and private users, especially since the computerization of these data facilitates the rapid release of masses of data on both developed and undeveloped land. On the other hand, the single, large-scale plot or cadastral plan covering the whole country, once it is well kept, is a document that is indispensable for all land development projects, all

expropriation procedures, and any survey that intends to include the location or allocation of land.

### **5.3.3 Diagnosis**

Rwanda's current land registry contains some gaps. First of all, it only exists in urban areas, while it is almost non-existent in rural areas. Furthermore, it uses manual techniques that allow many errors in terms of measurements and registration. This is a handicap in the availability of reliable land-related information, and in the field of land transactions and land taxation. It is not based on cadastral maps that have reliable bases. In most cases, these maps are non-existent. Measuring and demarcation precede land parcelling, which deprives the land of its value.

### **5.3.4 Policy statements**

- The establishment of a national land registry is a prerequisite for ensuring good land administration and good land management.
- The reformed cadastral system should ensure a comprehensive, permanent, descriptive, and evaluating inventory of land property, be it land plots or buildings. In other words, the land registry should be regarded as the registry of developed and undeveloped property.
- The land registry is an effective instrument for land use planning.

### **5.3.5 Strategic options**

- To make an inventory of all plots of land and all premises
- To identify each of these land units, i.e. give them each a registration number to facilitate their unambiguous identification, as is done for persons (social security) or for vehicles (registration plates)
- To identify the owners and record their essential particulars (name, surname, profession, date of birth, address, name of the spouse for natural persons, title, legal status, head office for legal entities.
- To provide the physical description of the land in the form of a large-scale plan, which implies that with regard to the land itself, the limits separating the property and the land that houses it must have been defined and recognized beforehand in collaboration with the owners.
- To take note of the development of open space according to the nature of the crops or the characteristics of the premises on built areas.
- To carry out a "*fiscal*" evaluation of all properties so as to determine, for each developed land unit, a cadastral rental value which will be used as a basis for calculating taxes under local direct taxation.
- Once the land registry has been established, it will be updated by recording and always taking into consideration all the changes affecting the properties and their owners. This task is fundamental.
- To train senior employees in land-use planning and rural development, as well as topographic surveyors and land surveyors
- To decentralize services responsible for land management
- To formulate decrees and laws creating rural land districts and pave the way for the appointment of land title registrars.

- To formulate laws fixing land taxation rates and regulations for the establishment of a rural land registry.

## **5.4 Land Transaction**

### **5.4.1 Definition**

Land transaction can be understood to mean all the operations involved in the evaluation of land and real property, registration and deregistration of mortgages, land and real property transfer, land and real property taxation, and the nature of land and real property markets.

Land transaction raises the land value and plays an important part in the national economy.

### **5.4.2 Policy statements**

- All national land resources should be considered as items of great value.
- The value of the land will be determined by its purpose, its location, its soil nature, its mode of development and its dimensions.
- The assessment of expropriation costs carried out in the public interest will also take into account the value of the land, which will be determined by decree of the Ministry of Lands
- The land taxation system should be under the exclusive control of the government and should be organized in such a way as to encourage the proper use of land resources
- Land property may be sold, mortgaged, given as a donation or bequeathed as a will.

### **5.4.3 Strategic options**

- The land law will determine the modalities for land sale, transfer and mortgage.
- Introduction of a land tax and state land royalties: there will be established a land tax for developed and undeveloped land for the profit of local authorities having already a decentralized administration. The land law will have to establish the minimum and maximum tax rates and leave it to the local authorities to determine the amount to pay. This option is chosen in order to leave a leeway for the promotion of investments within the towns. The selected tax base is the developed and undeveloped surface area, so selected in order to match it with the objective of ensuring land development in conformity with the master plans and land-use management plans. The land use coefficients indicated in these plans will be used as points of reference in the establishment of tax levels.

## **5.5 Use and management of urban land**

### **5.5.1 Growth of towns**

#### **a. Diagnosis**

Rwanda's towns are not old. The rate of urbanization is currently 16.89%, or approximately 1,372,913 inhabitants out of the country's total population of

8,128,553 million. According to the results of the 1978 and 1991 censuses, the urban population has been increasing at an average rate of 5.5% per year. Currently, the growth rate is approximately 9% p.a. The bulk of the urban population is concentrated in Kigali City which today accounts for about 600,000 residents, with an annual growth rate of 10.4% per year. We are currently witnessing the phenomenon of urban monocephalism.

The growth of towns in Rwanda appears to be an inevitable and desirable phenomenon to the extent that towns facilitate the integration of the surplus agricultural population. They constitute employment-creation centers that should be open to all social categories. Town growth contributes to the easing of the population pressure on arable land that can consequently offer optimum production. Even if urbanization is inevitable and desirable for economic development in Rwanda, the phenomenon should be well planned in order to prevent undesirable effects.

Most of the ordinary housing (90% in Kigali, more in other towns) has been developing in a spontaneous manner, outside any urban planning control. This unplanned or uncontrolled urbanization leads to a double densification/degradation of areas near the town center and the spreading of peri-urban housing, including the costly expansion of infrastructures and networks.

#### **b. Policy statements**

- Spatial growth should be controlled in order to generate an economic and rational urban development
- The use of land will be streamlined in order to reduce the cost of basic infrastructure and avoid unnecessary spreading of towns.

#### **c. Strategic options**

- The spatial growth of towns will be controlled through increased demand that will help to accommodate and guide housing. Urban development should be controlled through programs which will eventually assist in anticipating demand. Based on growth perspectives, land development programs will define appropriate sites for urbanization, taking into consideration the provision of primary services (roads, water, electricity) and the protection of sites with a high agricultural potential
- Formulation and updating of master plans for land-use management and town planning for a better organization of the urban fabric.
- Promotion of the construction of high-rise buildings
- Densification of parcelled out areas through census and redistribution of undeveloped plots
- Reduction of the size of the plots currently being distributed.
- Reservation of as many plots as possible for community constructions, first vertical, then horizontal, with each built area having some space for integrated facilities.
- Training and capacity building of personnel responsible for the formulation and execution of plans.
- Town planning instruments which provide guidance and control of land.

- A study of simplified methods of plot distribution and authorization to build.
- Organization of housing financing.
- Enhancing real estate development activities and promotion of land development professionals, and establishment of companies involved in the production and marketing of land plots in the municipalities.

## **5.5.2 Urban area borders**

### **a. Diagnosis**

Decree-law No. 11/79 of 20<sup>th</sup> April 1979 concerning the creation and demarcation of urban districts concerns only provincial headquarters, as well as Rwamagana and Nyabisindu. It is, therefore, important to expand this principle to cover both large and small anticipated agglomerations so that they too, can have a development plan.

The town is defined by its boundary limits. As an enforcement measure, the following actions have been banned: additional constructions, transformation and sale of land without prior authorization for occupants under customary law. This ban has never been accompanied with compensation measures for the loss of one's right to property. This situation has created the following problems:

- The proliferation of unplanned residential areas: occupants under customary law have continued to believe in their rights and to sell or transfer their land rights to new comers;
- The growth of peri-urban areas. Outlying areas are more accommodating. There, the conditions of land acquisition are simpler.
- Unplanned occupation of zones that are situated outside urban districts modifies spatial development trends. These zones have no infrastructure and urban services/facilities;

### **b. Policy statements**

- Urban districts will be demarcated and all new unauthorized constructions will be forbidden.
- Appropriate measures will be introduced to discourage the disorderly growth of squatter areas and unplanned towns.

### **c. Strategic options**

- The role of the local communities in urban management and urban planning will be strengthened. Awareness creation among the population and their participation in the formulation of urban development plans are a requirement for the enforcement of those plans.
- The law on expropriation and the relevant compensations will be modified. Expropriations in the public interest constitute a major obstacle to urbanization. Available financial resources are not adequate to cover the necessary expenses. Expenses arising from the compensation of expropriations must be recovered and a compensation fund established to this end. The recovery of these costs will facilitate the continuation of compensation operations.

### 5.5.3 Squatter areas

#### a. Diagnosis

The proliferation of squatter areas is a major obstacle to urban settlement. For several years now, the migrant population has been settling in areas which have not yet been surveyed for housing. Thus, gradually, squatter dwellings (UTUJAGARI) have developed, without any prior planning. Squatter dwellings are unhealthy and lack the minimum facilities and services.

#### b. Policy statement

- The living conditions of squatters have to be improved.

#### c. Strategic options

- Squatter areas should be restructured. This will entail the re-organization of land and the development of networks of infrastructure and facilities.
- The occupation status in squatters should be regularized. Restructuring constitutes recognition of land rights for all persons who conform to the established rules. The guarantee of permanent land occupation results in significant improved urban settlement. Restructuring implies the expropriation of land rights, the clearing of houses and other buildings located in public areas, and the possibilities for the resettlement of the communities;
- An adequate system of cost recovery should be adopted

### 5.5.4 Re-organization of space

#### a. Diagnosis

- Rwanda's towns are typically quite spread out due to scattered settlement and various buildings. The spreading out of towns is expensive in terms of infrastructure, and it reduces arable land. In addition, the evolution of towns over the years without any development plan, without any town planning or economic program... sometimes causes problems, namely the following:
  - Difficulties of movement.
  - Unhealthy neighborhoods (e.g. dwellings and sources of environmental nuisance).
  - Insufficient roads, water and sanitation networks.
  - Difficulties in linking newly built houses to the outskirts of the town.

Add to these difficulties the following worrying facts: high maintenance costs, potential urbanization sites that are saturated with too low densities, especially in town centres.

#### b. Policy statement

- Urban habitat should be densified because our towns occupy excessively large spaces.

### **c. Strategic options**

- Plans which allow for more economic use of land by housing a larger number of people in suitable conditions will be adopted: high rise buildings and horizontal semidetached houses;
- Land will be reserved for large-scale infrastructure or facilities;
- Town planning programmes, development plans, plans for soil utilization, master plans, etc, will all be applied carefully;
- Plots in the state private land will be sold to individuals in order to replace existing buildings with new ones that are bigger, taller, and more luxurious.

As densification will be carried out in the planned residential areas, the development of new sites will proceed, following the strict regulations of town planning and land laws in order to facilitate the integration of new occupants.

### **5.5.5 Protection of green areas and other spaces of public interest.**

#### **a. Diagnosis**

Urban development master plans provide for urban space zoning by determining the exact location of urban facilities and important activities. Town planners make provision for green spaces, i.e. spaces on which houses and community facilities are forbidden. Since squatter areas have prevailed over planned settlements, land-use master plans have not at all been respected to the point that our towns suffer seriously from lack of green spaces.

#### **b. Policy statement**

- Green spaces as well as valleys will be protected

#### **c. Strategic options**

- Parks for tourist attraction will be created in towns.
- Existing wooded areas in urban zones should be protected as should reserves which are to accommodate community facilities.
- Existing valleys in urban areas should be considered as green spaces
- In residential areas, green spaces will be developed and protected against uncontrolled urbanization, especially on hilly sites to avoid soil erosion.

### **5.5.6 Urban development planning**

#### **a. Diagnosis**

Urban planning which has prevailed in Rwanda, especially in the capital city, has for a long time adopted the institutional form of the technique of public allotment and urban physical planning.

The practice of public allotment consisted in the delineation of a zone to be converted into an urban area and in zoning such a directly owned area; then through

orthogonal grids, subdividing it into plots to be provisionally allocated to beneficiaries designated by the government.

#### **b. Policy statements**

- Urban settlement should be part of land-use planning in order to be able to respond, at any given moment, to the demands of town growth
- A coherent urban framework will be defined
- Development and town planning master plans for all the centres defined as urban will be elaborated or updated.

#### **c. Strategic options**

- Public awareness of urban master plans should be raised to enable them to understand the justification of space allocation for various activities. Such explanations are necessary in order to gain strict observance of the established space plan.
- Mistakes made in previous land allocations will be rectified. Town planning should restructure and rehabilitate areas with disorganized constructions by legalizing the land ownership status of the residents, and by reorganizing their lifestyle by establishing traffic routes, water supply systems, electrical networks and other basic services.
- Reception areas will be developed. In order to prepare for urban growth, it is important to increase the number and diversify the availability of developed plots. It is also important to consider new channels which will facilitate the production of plots that will accommodate the highest number of settlement units.
- Favourable conditions for access to funding and to building materials will be created and reinforced.

### **5.5.7 Development of secondary towns**

#### **a. Diagnosis**

Rwanda is characterized by urban monocephalism. Kigali alone accounts for 600,000 inhabitants out of the 770,000 inhabitants for all the towns put together; i.e. Kigali accounts for 85.7% of total urban population. Industrial activities and various other services are concentrated in the capital. Secondary towns are hardly being developed or are being developed at a very small scale, and their influence in the hinterland is practically nonexistent.

The gradual application of a voluntary policy for the provision of facilities should enable selected options to eventually succeed in terms of land development and land occupation.

#### **b. Policy statement**

- Decentralization should harmonize the spatial distribution of activities and services

### **c. Strategic options**

- A guide for the development and programming of public facilities will be established;
- Some economic and industrial activities still centralized in big towns will be transferred to other urban centres found to be more suitable for the development of industries
- Land development technicians will be trained. They are responsible for land-related procedures and the physical development of residential areas.
- A programme for providing towns with public facilities and infrastructure must be drawn up for the development of secondary towns.

## **5.5.8 Re-organization of human settlement in rural areas**

### **a. Diagnosis**

On 13/12/1996, the Government of National Unity adopted a new human settlement policy which advocates grouped settlement in the rural areas. Traditionally, rural settlement has been excessively scattered. This situation gives rise to poor management of the land, which is illustrated by the fragmentation of arable land and its degradation caused partly by erosion due to storm water. It is also an obstacle to the improvement of the living conditions of the peasants since it is difficult to provide them with the infrastructure required for their development (water, electricity, means of communication, schools, hospitals...). The Government of Rwanda has always considered grouped settlement as a solution to the problem of population pressure, poor management of land and, all in all, the impoverishment of the rural masses. Some attempts such as grouped homesteads and pilot villages were tried, but without success. After the Genocide and massacres of 1994, the resettlement of the population was carried out in the context of grouped settlement as was stipulated in the Arusha Peace Accords. From the land perspective, grouped settlement facilitates the freeing of arable land and thus increases agricultural space.

The establishment of grouped settlement sites was guided by the existence of agglomerations, public facilities centres, trading centres and other activities. The construction of houses around these centres has contributed in highlighting the urban aspect of these agglomerations; needs in rural centres are transformed into purely urban needs, mostly concerning energy, water supply, and organization of housing.

However, at the beginning, certain sites were selected in places that did not require expropriation. It is in this manner that communal woods were the first target for the establishment of villages without any consideration for environmental concerns.

### **b. Policy statements**

- The grouped settlement site should show good physical features. It should be easily accessible through communication and have other facilities such as water and electricity and some free and available land. If these facilities do not exist, the village should be established in a place where they can be easily installed.

- The choice of sites for grouped settlement should be guided by the need to free up as much agricultural land as possible.

### **c. Strategic options**

- Provincial and district land commissions are to be established to ensure effective implementation of the grouped settlement policy;
- The choice of sites is determined by the communities in their cells with the help of technicians and the general plan of land use and land development;
- The choice of sites should avoid risk areas and other zones of environmental importance such as wooded areas, marshlands, deeps and areas with steep slopes;
- The popularization of elementary techniques of physical planning of grouped settlement sites should be introduced;
- The master plan for land allocation and land use will determine the boundaries between agricultural land and appropriate settlement sites.

## **5.5.9 Demarcation of agricultural land**

### **a. Diagnosis**

Under the scattered pattern of settlement, fields are arranged on hills in scattered plots. This makes rational farming difficult and non-profitable. This land parcelling is a direct result of the existing inheritance system. When a young man reaches the age of maturity, generally considered as the age of marriage, he receives a plot of land from his father where he builds his house with a wide enclosure. This gradually causes the fragmentation of the family land.

### **b. Policy statements**

- District mayors, on the recommendation of land commissions under their authority, should agree on a new cadastre that presents viable plots.
- The minimum surface area of a homestead property should be fixed at 1 ha for it to be economically profitable. The new plot plan should raise the minimum surface area of a farm land to a single block of an acceptable surface area.
- In the case of expropriation of individuals, the system of compensation will be applied. This is because neither the government nor the district or the province can afford to pay the compensation resulting from the establishment of grouped villages in the rural areas. In fact, in cases whereby the plot is currently inhabited, the population's consent will be required for the elaboration of a new cadastre since not every one will be able to get back his farms, given the existing pattern of scattered settlement. However, those who miss out will be compensated.

### **c. Strategic options**

- The choice of resettlement sites will exclude wooded areas, whether they belong to the District or to individuals;
- Family farming of a cooperative type will be introduced in order to avoid continued land subdivision;

- A district cadastral service will be introduced in order to register all the plots and ensure that they retain their undivided character;
- All the decisions concerning the establishment of a grouped settlement site will be taken by the grassroots authorities in consultation with the target population.

## **5.6 Use and Management of Rural Land**

The use of rural land includes the right to use it and other accompanying rights.

The management of rural land is the process which enables one to use land resources in an efficient and sustainable manner.

Rural land comprises hills, marshlands and protected areas.

### **5.6.1 Use and management of hill lands**

#### **a. Diagnosis**

Hill lands are mostly governed by custom. Customary occupants make use of them as they wish since they are not guided by any regulations in this respect. This situation gives rise to the parcelling of land, the settlement of areas unsuitable for agriculture, aggressive and disorderly deforestation and capital accumulation or abandonment of fields by destitute owners and those who do not do farm work.

Even more, the scattered type of settlement does not either lend itself to a more profitable use of rural land.

#### **b. Policy statements**

- The rational use and sound management of national land resources should be based on master plans and on land allocation and land use plans which distinguish the different categories of land and their purpose.
- Grouped settlement is the only and unique method that will allow good planning of land use and rational land management in the context of land scarcity in Rwanda.
- To ensure rational land use in rural areas, it will be necessary to encourage the consolidation of plots. This is a new method of plot distribution by consolidation of parcelled and scattered land, by establishing normal and adjoining plots of land with as much independent access as possible, such that, in the public interest, a more economical use of land resources according to their purpose will be realized,.
- Should the redistribution of land become necessary as a result of the government's decision that a certain area must be divided out into plots for the benefit of a large number of landless people, the original residents will be compensated either financially or in kind.

### **c. Strategic options**

- All hill lands must be governed by the written law, and the obligation to develop that land should be imposed. It should be possible for the government to repossess the land if the owner or holder of the land rights has failed to use it in accordance with the law.
- Agriculture in Rwanda should be oriented towards specialization. This would lead to the easing of the congestion of the agricultural sector and trigger technological improvements by its development. Land development is necessary in order to improve agricultural production.
- Each agricultural specialization should take into account the purpose of the land-use as shown in the various programmes, plans and soil maps.
- Water and soil conservation should be the basic element which should be accorded the utmost importance by decision makers, technicians and farmers. It will also be necessary to formulate guides for the rational use of national land resources.
- Agro-forestry should be part of the agricultural landscape on the hills, given that it contributes to soil protection in particular and environmental protection in general, in the sense that it prevents desertification. Areas that are more or less flat and semi-arid should be developed and irrigated in order to support agricultural production. Overgrazing and pasture burning should be avoided at all costs, given the damage they cause on land resources, like the destruction of the land cover and the compressing of soil which prevent the regrowth of vegetation and water infiltration, thus leaving the soil vulnerable to erosion.
- The master plan for land allocation and land use should help professional pastoralists to choose the right grazing system so as to facilitate the integration of livestock into the agro-sylvo-pastoral system.

### **5.6.2 Use and management of marshlands**

#### **a. Diagnosis**

Currently, there are two different situations of land ownership that are diametrically opposed, neither of which can foster improved production of marshlands.

The first case, which seems to be the most prevailing to day, is the individual and permanent ownership of marshlands. Under this type of ownership, the same rules of land transfer through successive inheritance are practised. What happens then is that there is, one generation after the other, a micro-subdivision of agricultural marshland, as is the case with hill lands. This process hinders all forms of technical innovations (facilities for total water control, improvement of agricultural implements). What prevails therefore is a mediocre agriculture that has no future, characterized by tiny plots on which the prevailing crops are sweet potatoes, sorghum and beans for domestic consumption.

Obviously, the share of such agricultural produce that goes onto the market is insignificant, if non existent.

The second case of ownership of marshlands is the temporary ownership, whereby district authorities distribute plots to the peasants every year. Under such conditions,

it is difficult to invest in land, when one is not assured of being able to enjoy the right of use for a long time. In the same way, it is difficult to carry out any hydro-agricultural developments for total water control. Such a situation also results in anarchical use of marshlands, thus causing harm to the environment ( sandpits, brick-yards),

This insecurity of land tenure perpetuates a simple self-subsistence agriculture based on working the land without caring for its conservation or the improvement of its production capacity. Eventually, we remain with a completely degraded land as a result of such archaic agricultural practices, unable to meet the food demand of an ever increasing population.

#### **b. Policy statements**

- Marshlands are an unquestionably special category of public land and their use, for those earmarked for it, must be done in the form of concession.
- Their classification and allocation remain the responsibility of the Ministry of Lands and Environment.
- All marshlands must be governed by a special legislation which must be vigorously enforced.
- Marshlands meant for agriculture should not be cultivated except after adequate planning and environmental impact assessment.

#### **c. Strategic options**

- Maintenance of marshlands in the state's private land and establishment of clear regulations for their sustainable use in order to avoid any disorderly farming with negative environmental consequences.
- Comprehensive inventory of marshlands and clarification of their location and purpose.
- Specialization of marshland farmers and introduction of measures to avoid the division of land in smaller units.

In this regard, new modalities of land development which avoid too much parcelling of agricultural land will be established. In those areas that have already been developed, farm units will be given to farmers' groups members of which meet the conditions for beneficiaries. The aim of these peasants' groups is to manage collectively hydro-agricultural structures and to make rational use of water resources and inputs.

Where farmers will withdraw because of planning or organizational difficulties, agricultural developers will have the right to use those areas which they will have developed themselves.

- Creation of development poles which bring together beneficiaries who depend on and work for the development of marshlands. Priority will be given to landless peasants who are capable of adopting recommended innovations for maximizing yields from selected speculations.

- Establishment of preliminary hydro-agricultural schemes to be placed under the responsibility of the beneficiaries and/or the government to ensure total water control.
- Creation of a body in charge of land reform through which the Ministry of Lands will operate in order to guarantee the application of marshland development policies, the management of which will be under the national, provincial and district land commissions.
- For the sake of environmental protection, any form of disturbance of very fragile environmental sites should be avoided, such as highly peaty zones and marshlands found on high land which often constitute water reservoirs or water towers.
- Any hydro-agricultural development and any marshland development project should be preceded by an environmental impact study which will be analyzed and validated by the Ministry of Lands and Environment.
- Any form of marshland development should be analyzed and approved by the Ministry of Lands and Environment, with the assistance of a technical commission established by decree of the Prime Minister and whose membership will include the line Ministries responsible for lands, environment, agriculture, water and natural resources.
- Regulations for the development of marshlands will enable the government to impose the cultivation of particular crops, depending on the regions and the inherent features of the marshlands.

### **5.6.3 Use and management of land in protected areas**

Protected areas in Rwanda comprise the Volcano National Park, the Nyungwe forest, the Akagera National Park and Game Reserve, recognized as natural reserves since 1925, 1933 and 1934 respectively. The Volcano National Park and the Akagera National Park are managed by ORTPN, while the rain forests of the Congo-Nile watershed are managed by MINAGRI. These natural reserves are classified as such because of their multiple roles, namely ecological, economical, cultural, and social. The main objective of their preservation was the conservation of different species and different habitats of biodiversity for educational, touristic and research purposes.

These areas have been affected by various changes, one of which is the spatial reduction due to the resettlement of the population, as in the case for the Akagera National Park where two thirds of the park and the entire Game Reserve were given away to the population.

Almost 100% of the Gishwati forest has been destroyed by agricultural and pastoral activities.

The Nyungwe forest has often been the scene of illegal activities such as the disorderly tree cutting for timber and charcoal, mining and drug cultivation. Since 2000, the Nyungwe forest has been classified as a national park.

#### **a. Policy statements**

- Improved protection and management of protected areas is the responsibility of all Rwandans
- A special law should govern the management of protected areas
- The involvement of neighbouring communities in the conservation of protected areas should be encouraged.

#### **b. Strategic options**

- Inventory and demarcation of protected areas
- Formulation and implementation of development and management plans for each protected area
- Development of ecotourism-oriented infrastructure
- Identification and promotion of appropriate technologies for the rational use of biological resources
- Development of an integrated policy and legal framework for conservation and sustainable use of resources in protected areas
- Creation and strengthening of structures for community management of protected areas.

### **5.7 Role of cadastral plans and maps in land management**

To ensure man's survival as well as his continued and increasing prosperity, it is vital that all land resources are known as accurately as possible. The limitations of these exhaustible and non-renewable resources should be understood in order to avoid unnecessary wastage and control the losses and damage during use, for the sake of bequeathing to future generations an improved natural heritage or, at the very least, an unspoilt heritage.

#### **5.7.1 Definitions and diagnosis**

Topographical surveys are the principal means by which to ascertain the availability and the extent of land resources. It is the most convincing tool of description and registration and an essential and important method used in almost all forms of human activity. It is the process of measuring and detailed presentation of natural and artificial features of terrestrial area. Topographic observations, measuring and calculations, as well as plans/maps drawn using data from the field constitute the recording of knowledge acquired from surveys.

Plans/maps are a description of features that have been measured and drawn in an accurate and practical manner. When these measurements and presentations are recorded in the form of plans or maps, be it on paper or in a digital form (computer-based), they constitute the best basis for an accurate inventory of natural resources. They are documents in which the nature, the extent and the location of resources

can be better described; and they thus constitute a firm basis for their well-conceived and systematic conservation and development.

A map is indeed by far more reliable than a photograph for several reasons; not only because distortions are eliminated at a higher degree, but also because through the use of conventional signs, contour lines and other formulas, the plan/map is capable of illustrating all significant details with greater simplicity and clarity than a photograph. It is equally possible to illustrate on a map, information on what is above or below the earth and exclude unnecessary details.

A series of maps may be used as an adequate recording of information concerning both the soil and plant cover. This may be geological information, information on the depth and movements of water, on temperatures and pressure in the air, on the volume and distribution of rainfall, on the distribution of the flora and fauna, on the details on human populations or their activities, etc. Digital maps can be combined, manipulated, analyzed, and visualized in different ways by using Geographical Information Systems (GIS)

No engineering work, no genuine development in agriculture, forestry and mineral resources, no urban or rural development planning can be achieved without plans and maps on large and small scale.

Despite their importance, we must admit that our country is poor in terms of plans and maps. Several existing plans and maps are old due to lack of financial resources for their maintenance and updating.

Things are not better with regard to the registration of land rights because there are no large scale plans and maps, and yet they are the only reliable source of information for the identification and demarcation of plots and allocated land.

### **5.7.2 Plans and maps in land management**

Plans and maps are the tools of reference for several development stakeholders and users of land resources.

#### **- Landowners**

The fact that land is featured on a plan and is clearly registered gives comprehensive land tenure security and minimizes cases of disputes and lawsuits.

#### **- Land administration**

Plans and maps are an essential link in the process of the registration of land rights. They facilitate the control and monitoring of land-related management and land use activities. This is especially true with regard to taxation, irrigation, drainage, flood control, and preparation of all sorts of agricultural statistics.

## **- Agricultural development**

Large-scale maps are very important in the preparation of inventories of land resources, water resources and vegetation, which are essential for planned agricultural development.

Such maps are equally necessary for carrying out detailed studies on soil capability, land development, hydro-agricultural development, farm management and other activities related to agricultural development.

No large-scale agricultural project (irrigation, drainage, flood control, electrification, soil conservation, etc.) would be possible without very accurate plans/maps of the concerned area. Methodical research, conservation and rational exploitation of forest resources require an adequate mapping of forest zones. Maps are also important for reforestation programs.

The administration and development of fisheries in rivers and lakes require large-scale and professional plans/maps, as well as the registration of existing land rights and rights over water resources.

Large-scale plans/maps greatly facilitate the application of all sampling methods in statistical research for land planning and management.

## **- Other development programmes**

Plans and maps are absolutely necessary for the planning of town layouts, methodical setting up of industries, and the development of communications systems.

Even more, large-scale maps are essential for modern requirements in national defense.

And for the public at large, apart from the economic, fiscal, agrarian, scientific and administrative uses mentioned above, there is a growing demand for all sorts of plans and maps for the purpose of recreation, air transport, tourism, or in relation to historical, archeological or artistic studies/research, and commercial, industrial and educational purposes at all levels. It is true that the production of large-scale maps and cadastral plans is costly, but updated maps/plans allow for quick recovery of the money spent through the services they render.

## **5.8 Plans and master plans in land planning and land management**

### **5.8.1 Diagnosis**

All the approved and non-approved town planning master plans have expired and need to be updated so as to reflect the current situation.

New towns and new urban centres also need to have urban as well as housing development plans in order to avoid the construction of squatters.

Consequently, and having analyzed the current situation nationwide, for both the main and secondary towns, one concludes that urbanization is faced with two major obstacles:

- Insufficient planning tools and inadequacy between planning requirements and financial resources
- People's ignorance of the existence of development schemes and plans.

### **5.8.2 Policy statements**

- Urban master plans and layouts are an institutional framework for the formulation of various special development plans. All centres considered as urban centres should have land-use master plans.
- Errors from previous land occupation should be rectified through permanent and wide use of plans.
- Good management of land development in general and town planning in particular should be realized through the development and updating of master plans for land-use and town planning.

### **5.8.3 Strategic options**

- To formulate a master plan for land allocation and land use, as well as regional and national land-use plans which can serve as a precious guide for good land management at national level, and establish regulations requiring careful monitoring of this master and other plans.
- To inform the population of the existence of the master plan that shows the allotment of various spaces, as well as various land development plans. Explanations will be required to ensure strict observance of the established spatial organization.
- To computerize the existing data. Existing maps and plans should be digitalized.
- To strengthen and train the staff responsible for the elaboration and execution of programmes and plans.

## **5.9 Maps in land management**

### **5.9.1 Diagnosis**

Rwanda's geodesic network starts from what is called the 30<sup>th</sup> meridian axis and a triangulation chain starting from the Cape (South Africa) to North Africa, via western Tanzania.

To this geodesic network can be added a precise levelling network linked to Central Africa's general levelling through the Bukavu-Cyangugu-Bujumbura links and the Akanyaru levelling. Since 1978, GEOSURVEY firm installed a new levelling link that passes through the north-east of the country. There are also some geodesic and local levelling facilities in the main urban centres.

There are 44 specifically Rwandan landmarks, 12 Congolese-Rwandan landmarks, and 5 Ugandan-Rwandan landmarks. There are 325 angle measures which link the above-mentioned 61 landmarks. Concerning the levelling network, it consisted of 371 boundary markers.

These geodesic foundations and the levelling network were destroyed and replaced by a thinner network comprising 5 geodetic boundary markers installed through new methods of spatial geodesy. Using the same procedures, the network was refilled in order to create a new geodesic foundation on the national territory that is thinner than the first but equally accurate and less exposed to destruction. The 1990 – 1994 war erupted just as this foundation was being established and awaiting to be linked to satellite.

Before the destruction of the above-mentioned geodetic foundation, some measures had been taken for the establishment of a 1/100,000 scale sketch and the laying out of an aerial photograph mosaic which was used in the production of 1/50,000 maps without contour lines.

Aerial photographs were taken at different periods (1949 – 1959), covering three quarters of the national territory using scales varying between 1/20,000 and 1/50,000 on black and white infra red film. In 1974, an aerial photograph was taken at 1/50,000, covering the whole country. Between 1978 and 1982, the entire country was covered at a scale of 1/2000, and all the urban centres at 1/10,000. These aerial photographs are kept at the National Geographical Institute in Paris.

The mapping department, in collaboration with the Belgian National Geographical Institute, has produced some topographic maps. These maps, 43 sheets in all, each at a scale of 1/50,000, cover the whole country. They are still available and they have been used, and are still used today, to produce various kinds of thematic maps and land-use plans.

In 1992, the Carte Pédologique du Rwanda (CPR) project, funded by the Kingdom of Belgium, produced soil maps and soil capability maps at 1/250,000, and a capacity thematic map of level terraces at the scale of 1/250,000. Since December 2000, soil maps drawn on paper and using computer at 1/50,000 (43 sheets) as well as digitalized data are also available and constitute an essential reference basis for anything concerning land development and rational use of land resources in Rwanda.

Still in the framework of thematic mapping, one should not forget the study, carried out through photo-interpretation of satellite images of land use and land availability, which facilitated the production of the land use map at 1/100,000. This map was produced by **Technosynthesis – STR SPA**, with the funding of the European Economic Commission (EEC). It consists of 10 plates corresponding to the 10 prefectures of Rwanda then. The map shows the spatial distribution of artificial plant formations and/or reforestation, perennial, or annual and seasonal crops, grazing land, valleys, undeveloped areas, residential areas, lakes, rocky areas, etc. Following the recent changes, a new land use map is being prepared under the regional project “AFRICOVER”, which is responsible for the production of a land use map of East Africa through images taken by LANDSAT satellite of NASA.

There are also maps showing resettlement sites produced in 1998 and 1999 by the United Nations Information Management Unit (UNIMU) located at UNDP offices. These maps show sites selected for resettlement purposes as well as sites with constructed houses, the number of houses; and the sites to be developed and the intended number of houses for each site.

### **5.9.2 Policy statement**

- Maps under any form represent the essential foundation on which to base any planning of land management.

### **5.9.3 Strategic options**

- Establishment of a National Land and Geographical Information Centre. This centre would be a permanent and multidisciplinary structure with the responsibility of providing services and expertise in the field of cartography, land development and land use, hydrology, climatology, pedology and management of natural resources, as well as in the field of monitoring and evaluation of environment. It would also be the centre for the collection, storage and processing of land-related data bases and national land registry.
- Institutional support for the acquisition of technical equipment and vocational upgrading of the staff and technicians.

## **5.10 Legal and institutional framework**

### **5.10.1 Diagnosis**

Land management in Rwanda has always come up against legal and institutional considerations.

Legally, the duality of the laws brings about an element of compassion in land management. The Rwandan peasant, just as the city dweller, considers himself as the owner of his plot of land, while the government considers itself as the prominent owner of the land.

Several attempts to come up with land regulations have always failed. At the institutional level, land has always been under several managements, and this has resulted in serious managerial problems and been an obstacle in the rational use of land.

### **5.10.2 Policy statements**

- One unified land law will define accurately the rights and obligations of title deed holders.
- The law on human settlement and the environmental law will support the land law in managing land as a national resource.
- The Ministry of Lands is the prominent manager of the land at the national level. Accordingly, it should have an efficient land administration structure. The decentralization of land administration will not hamper the constitution of a central

land-related data and information bank for coherence in monitoring and supervision of land use, which is the government's prerogative and responsibility.

- Land being a basic resource on which are connected other resources, all developers of related resources should obtain prior approval from the prominent manager of land, namely the Ministry of Lands.

### **5.10.3 Strategic options**

- Elaboration and implementation of the law establishing the land regime in Rwanda in order to support the National Land Policy
- Monitoring of proper use and good management of land
- Establishment of a national land network responsible for receiving and distributing information concerning the rational use of land. Such a land network will be the core of consultations around which will converge all constructive actions concerning land management and the rational use of land, and it will be the ideal consultation point for all land stakeholders. The leadership of this network is the responsibility of the Ministry of Land, Settlement and Environmental Protection.
- The institutions which are responsible for the country's natural resources, i.e. MINITERE, MINAGRI, MININFRA, MINALOC, MINICOM and Kigali City Council, should collaborate in order to coordinate and harmonise the rights of the use of natural resources and the regulations for the good use of these resources.
- Establishment and maintenance of a National Land Information Management Centre.
- The capacity of decentralized services should be strengthened and improved.

## Chapter 6: CONCLUSION

The implementation of the land policy will be guided by clear and concerted principles that have been developed as summarized below:

- The right to land property should be correlated to a number of obligations in order to guarantee the development of the land, which is the common heritage of past, present and future generations.
- According to the constitutional principle of equality for all citizens, all Rwandans enjoy the same right of access to land, without any discrimination whatsoever.
- Land tenure and land administration should guarantee land tenure security for all holders of title deeds and should promote optimum development of land.
- Land management and land use should take into consideration different land categories as represented by the various master plans and land classification and land development maps.
- The modes of land management and land use will differ, depending on whether they apply to urban or rural land; the latter comprising hilly land, marshlands and natural reserves
- Proper land management should include the planning of land use, on the backdrop of the organization of human settlement and the enhancement of consolidation of plots for a more economical and more productive use of the land
- The process of land transactions improves the value of land and lead to a more productive land use. It attracts investment in land development and enable various land users to look forward to better times ahead
- Plans and maps are the best means of obtaining, recording, and analyzing comprehensive and accurate land-related information.
- An appropriate land registry system is essential in order to really understand the land situation of a country and thus plan for any measure of land reform.

As long as land remains the basis for the social economic development of the country, the formulation and implementation of a national land policy will help in laying the foundation for land reforms that enhance the general and sustainable development of the country.

Highlighting problems related to proper management of land and their recognition by all stakeholders is an important first step in the search for a national solution.

A concerted and well-thought out land policy will play an important part in the promotion of peace, equity, unity and reconciliation of the Rwandan people who were devastated by the Genocide and Massacres of 1994. It will definitely have a role to play in the process initiated by the Government of National Unity to reduce poverty in the country.

In clarifying and making flexible the modes of land acquisition and land access and in empowering the national land policy with a rigorous land law, Rwanda will have built a society that is ready to face the challenges of the present and the future.