

LANDNET RWANDA CHAPTER
Seminar on Land in Rwanda
Hotel Novotel Umubano 22-23rd November 2001

**LAND AND POVERTY IN
RWANDA**

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November 2001

1. INTRODUCTION

This paper is a diagnostic and descriptive analysis of land and poverty in Rwanda. It is designed as a harbinger to prescriptive attempts to resolve the land problem and could serve to inform the ongoing dialogue on land policy and land law in the context of poverty reduction initiatives

Section 2 provides a conceptual framework, with a deliberate emphasis on definitions. Section 3 focuses on the attributes of land and how they bear on the emergency of poverty in past decades and in recent years. It contains also a short review of the types of land and related problems as were observed in some districts of Rwanda.

Section 4 identifies a few critical challenges to policymakers and all stakeholders in the land question while section 5 concludes the paper.

2. A CONCEPTUAL FRAMEWORK

2.1 Land

A classical definition of land, is the indestructible part of the soil. It is a factor of production which is unique because it is readily given by nature. As such it is not man made and is fixed. However, the immobility of land can be substituted by changing its use. For instance, an apparently barren hectare of land, can be put to productive use if it is used for building a hotel complex. The problem of immobility can be lessened by reclaiming land from the sea for agricultural use or by engineering a desert into arable land.

Payment to land is traditionally, rent. The concept used to refer to payments a landlord receives from serfs in monetary terms or in kind during or where are feudal production relations. A modern meaning of rent is that of a theoretical surplus a plot of land has in excess to the employment of the less fertile or marginal land.

A comprehensive definition of land serves better our purpose. Today, land is a concept that includes arable land, vegetation, chemicals, water, atmospheric and sub-terranean products and where relevant deserts. In a word, land is taken to be synonymous to natural resources. It includes forests, rivers, national parks but primarily, in these parts of the world, space for agriculture and animal husbandry.

Thus in Rwanda, land includes farmland to which people have user rights, plots in urban areas with title deeds valid for several decades, common property such as rivers and lakes and protected land such as

national parks. In Rwanda, the exchange-value of land is in reality payment for user-rights since land belongs to the state.

In Rwanda, like in many Third World countries land is important, because there is relative scarcity of capital and skilled labour-the other productive factors of production. Moreover, 91 of Rwandans live in rural sector and about 90% of these depend on agriculture for a livelihood. Land is the primary productive asset a Rwandan has.

2.2 Poverty

Recent decades have seen emergence of a class of definitions of poverty (Gordon and Spicker 1999). This diversity is not so much an ambiguity, as much as a reflection of the complex nature of poverty.

It is also a reminder that causes and effects of poverty are various. Three levels of conceptions have been identified (Townsend 1993)

First, is a set of definitions based on 'subsistence' (Rowntree 1901) The poor were those whose incomes were not 'sufficient to obtain the minimum necessities for the maintenance of merely physical efficiency'. It is a biological definition, which today is interpreted in terms of minimum calorie intake required for physical efficiency. The set of definitions has been succeeded by others because it is argued that human needs are physical, food, clothing and shelter. There are social needs as well. Moreover, even the most dominant biological need food, is not easy to measure because minimum needs always vary from society to society.

The second set of definitions emerged after 1970s evolving around 'basic needs'. Basic needs are two fold. First are minimum requirements of a family, of adequate food, shelter and clothing as well as household furniture and equipment.

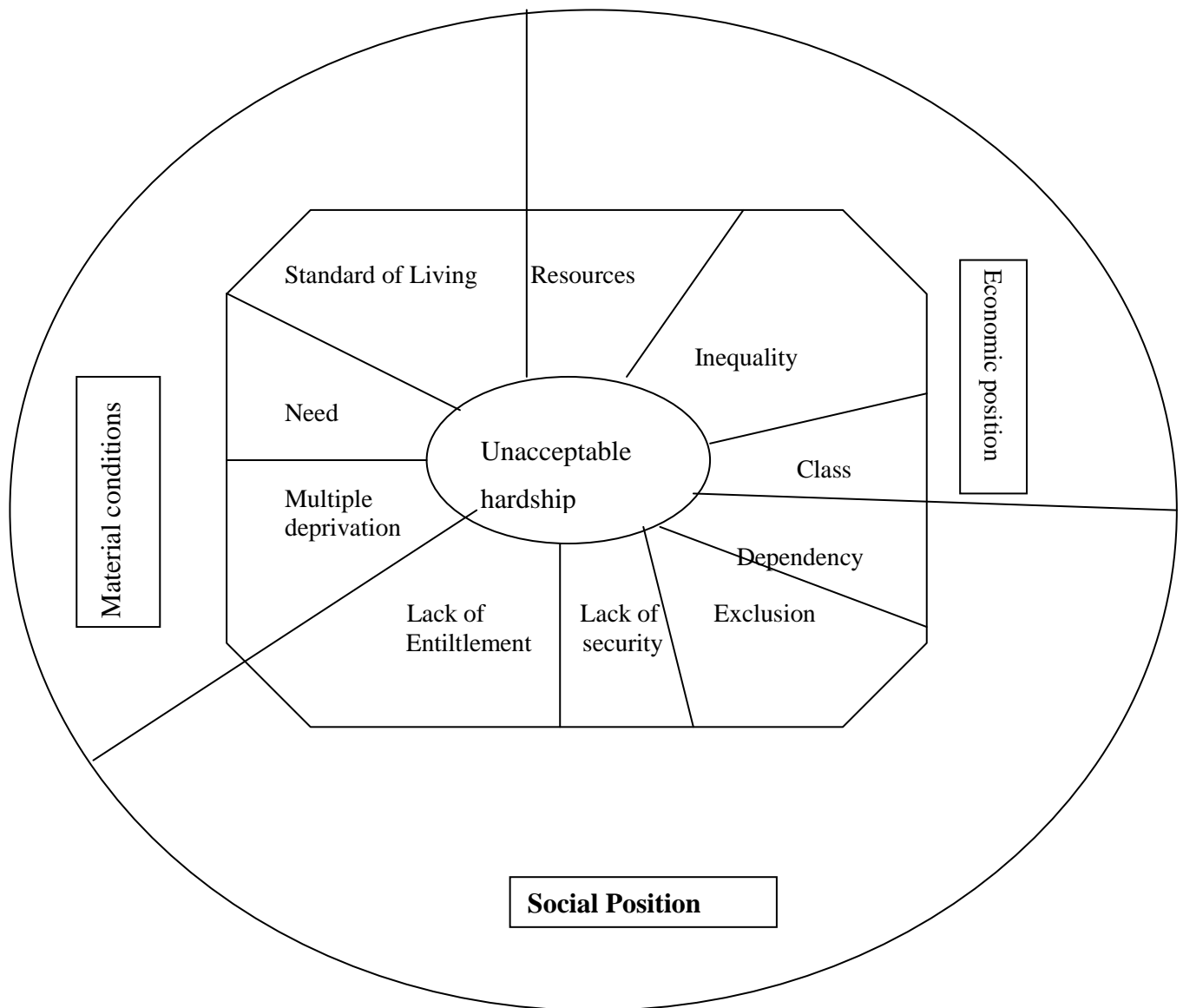
Second, they include essential services provided by and for the community at large, such as safe drinking water, sanitation, public transport and health education and cultural facilities. This set of definitions became popular with international organizations such as UNDP and ILO, but were criticized on the ground that there is no consensus on which needs have to be included. Some forms of poverty such as those found in marginalised groups and women and children could not be well captured by these.

Lastly, is the concept of 'deprivation'. People are relatively deprived if they cannot obtain, at all or sufficiently the conditions of life i.e. diets, amenities, standards and services which allow them to play the roles, participate in the relationships and follow the customary behaviour which

is expected of them by virtue of their membership of society (Townsend, 1993).

Another categorization which is friendly to non-economic analysts is that of grouping concepts of poverty in terms of material conditions, economic and social position. It is shown clearly in the figure below (c 1997)

Figure 1: Family resemblance between different concepts of poverty



What is remarkable is that the boundaries are fuzzy and permeable. There are also links across the circle. For instance lack of entitlements and exclusion can be linked to low resources while multiple deprivation can be related to class.

The links allow overlaps and underscores the fact that poverty is a composite concept. When the problems of land is elaborated below, it will be easy to see how landlessness or restricted access to land can take any of the forms of poverty shown in the circle, even without elaborately defining each of the concept.

Meanwhile empirical studies have continued to provide quantitative indices of poverty. By any standards Rwanda is among the poorest countries of the world. Up to 69% Rwandans live on less than one dollar a day. Life expectancy is less than 50 years and the literacy rate is 49%. Maternal death rate is 81 per 1000 women and infant mortality rate is 131 per 1000 children under 5. The GNP per capita is slightly more than US\$ 250. Recently UNDP ranked Rwanda 164th in 174 countries on the Human Development Index (HDI) (HDR 2000).

Of interest to us is that over 90% of the poor are estimated to be in the rural sector. Since the mainstay of these people is agriculture, it is clear to link poverty and land in Rwanda, the focus of this paper.

3. LAND ATTRIBUTES AND SEEDS OF POVERTY IN RWANDA

3.1 General characteristics

The surface area of Rwanda is 26, 388 square kilometres or 2,634 mill ha. Out of these 32.2% is arable and 10.1% holds permanent cropland. Forest cover 3.000 square kilometres or 12.4% of total land area. Other uses constitute about 45%.

Protected areas constitute 3,600 square kilometres or 14.6% of total land area. Freshwater resources are estimated at 6 billion cubic metres whereby 94% is for agriculture, 1% for industry and 5% for domestic use. (RDI 2001).

Rwanda's relief is typically hilly. Most of Rwanda is above 900 metres (3.000 feet) and the central plains have an average elevation of 1,932 metres (4.400 feet) above sea level.

From west to east the topography is divided into six regions.

- Narrow Great Rift Valley slopes sharply to Lake Kivu

- Volcanic Virunga Mountains which have the highest point in Rwanda Mt Karisimbi (14,870 feet) and towers over the north western lava plains
- North- south steep rise of Zaire - Nile Divide which has width of 40 kilometres
- Ridge of the Zaire-Nile Divide which has an average elevation of 2,750 metres
- Central plateau east characterised by rolling hills and
- Savannah and swamps of the eastern and southern border areas, covering one tenth of the area.

Except for the desert-like terrain of southeastern Rwanda, this topography has an impact on agriculture and soil erosion, which will be mentioned below. Recent estimates (1986) showed that 27% of cultivated land is undertaken on slopes of more than 20%, 23% on slopes between 10-20 degrees, 16% on slopes between 5-10 degrees and between 0-5 degrees 34%. Total cultivated land was 1.025.000 ha.

3.2 Structural dimensions

Land and poverty are linked to structural factors that have evolved over several decades. They include interlinkage between demography, land use and environmental degradation. When early last century (eg German Duke in 1907) called Rwanda, a country of a thousand hills, flowing 'milk and honey' it can be believed that demography had not yet exerted much pressure to result into a crisis. Presumably, population was a million. In the last 50 years population has almost quadrupled as can be seen in Table 1.

Year	Estimated Population
1948	1,890,000
1952	2,143,875
1955	2,309,499
1956	2,374,336
1957	2,452,737
1960	2,750,000
1964	3,069,000
1978	4,819,317
1980	5,046,000
1983	5,700,000
1985	6,026,000
1990	7,027,000
1994	5,200,000
1996	6,200,000
1998	6,600,000
2001	8,600,000

Source: Various

The result of dramatic demographic change, is rise in density of population. Some 35 to 40 years ago density on agricultural land was 121 persons per square kilometre, rose to 166 per square kilometre 25 to 30 years ago, is thought to have been approximately 262 people per square kilometre in 1990 and is today well above 350. In some parts of Rwanda, density is exceptionally high. In parts of Save District, it is estimated at 700 per square kilometre and Ruhondo in Ruhengeri is thought to have the highest density of population on arable land in Africa south of the Sahara, with 820 inhabitants per square kilometre. The lowest density in Rwanda is thought to be 62 inhabitants of Rusumo district. Where as the Total Fertility Rate has gone down from 8.3% in 1980s (the highest in the world then) to about 6 today, the pressure is likely to continue if the birth rate remains at 3% per annum and if policy does not bring some alternatives. Clay et al (1998) have summarised the effects of rapid population change.

- farm holdings have become smaller due to constraints on land availability
- holdings are more fragmented
- cultivation has pushed into bottom lands and fragile margins on steep slopes previously held in pasture and wood lot
- many households now rent land, particularly households owning little land or those with large families
- fallow periods have become shorter and cultivation periods have grown longer.

The effect is not only emergence of small farm holdings but also skewed landholding distribution.

While in the 1950s more than 50% of the people worked on more than 2 ha today almost 60% have less than 0.5 ha as can be seen in Table 2 and Table 3.

Table 2: Farm holdings in 1984

classification	Percent of households	Percent of cultivated land
Less than 0.5 ha	26.4	6.9
0.5 – 1.0 ha	30.3	18.4
1.0 – 1.5 ha	15.6	15.7
1.5-2.0 ha	11.1	16.1
> 2.0 ha	16.4	42.9
Total	99.8	100

Source: Guichaoua 1989 cited in Guther 1999

Table 3: Farm holding in 2001

Classification	Percent of agricultural holdings
<0.5 ha	58.6
0.5-1 ha	19
1.0-1.5 ha	10.6
1.5-2.0 ha	5.8
2.0-3.0 ha	3.5
3.0-4.0 ha	1.2
4.0-5.0 ha	0.5
>5 ha	0.8
Total	10.0

Source: EICV 2001 Preliminary results.

That the majority of the poor are the ones with small holdings is corroborated by Table 4.

Table 4: Average agricultural farms by quintiles

1 st quintile	0.55 ha
2 nd quintile	0.58 ha
3 rd quintile	0.66 ha
4 th quintile	0.82 ha
5 th quintile	0.85 ha

Source: EICV preliminary results

Yet farm sizes, cannot adequately answer the question of poverty. Land use and productivity have also been incapable of producing enough food for the rural population. For example if annual food production was 100 units between 1979-81, it was only 70 units in 1993 (HDR 1994). One structural problem has been identified as environmental degradation.

Clay (1998) has pointed out that farmers observe a decline in the productivity in nearly half their holdings due to soil degradation. He cites other studies related to Rwanda. Byiringiro and Reardon show that erosion severely reduces farm yields in Rwanda. Ford citing erosion in Ruhengeri notes that 4/5th of the sampled farmers observed decline in the productivity of the soil.

John F. May finds that demographic pressure is driving soil degradation in Rwanda. That environmental degradation has become a serious problem cannot be underestimated (Guther 1999)

The description of the topography of Rwanda above, becomes relevant here. Indeed Rwanda can be divided into favourable and unfavourable ecogeographical arenas (Gunther 1999). The central highlands are an underdeveloped mountainous region with steep slopes and deeply

weathered acid soil of limited fertility. The fertile volcanic soil in the North West and previously almost unusable swamps and savanna region in the south and east are being used to the limits of their capacity. On the Western boundary up to the Rift Valley, even the most extreme slopes are cultivated. "Today the once fertile soil is degraded, while geographical alternatives are rapidly diminishing (Gunther 1999:132)".

Gunther (1999) further registers some figures. Loss of humus is to the tune of 10.1 MT per ha and can go up to 36 MT/ha on 5% of the soils and more than 68 MT/ha on 1% of the soil. Clay (1998) states that soil erosion is moderate to severe on 50% of the land surface of Rwanda. Rwanda may be losing up to 12,251 tons of soil per year due to land erosion (RDI 2001).

Environmental degradation is not limited to soil erosion (fluvial and dry) alone. Of primary forests which covered 80% of the country only 5-8% is left. In 1980s the deforestation rate was 2.3% or 2000 ha per year. Between 1970-1986, 56% of exploited acreage pushed cultivators into poor soils in marginal land. (Gunther 1999).

Previous lower limit of cultivated land was 1800 m, but today the land limit is 3000 m. The Virunga chains was reduced from 34,000 ha to 15,000 ha between 1958-79. (Gunther 1999).

Between 1958 and 1996 natural reserved were depleted by 34,8% , Nyungwe by 17.2% Gishwati 86,4% Mukura 46,7% , Birunga 62,5% and Akagera 17,6% .

The easiest link is that land degradation causes poverty. The other half of the truth is that poverty also encroaches on the environment and land use in particular. Suffice to mention here, that there is an apparent historical and structural link of poverty to land size, exploitation and degradation that has been exacerbated by human action. (Lewis and Nyamulinda 1996) and especially demographic pressure.

Thus even by 1985 poverty was estimated as 40% of population (below the poverty line) and 53% in 1993. GNP per capita was US \$ 110 in 1976 and about US \$ 300 in 1987, small rates even by African standards.

Perhaps, it worth the haste to point out that while land may not account for all forms of poverty, no poverty reduction initiative can be meaningful, if it does not take into account the role of land in Rwanda.

3.3 Conjunctural factors

Another set of causes of poverty in Rwanda has been in relation to the transient and volatile nature of Rwandan poverty, which may or may not be directly related to land. In this category are vagaries of weather, natural calamities and economic political turmoil. While the former causes may be traced even in the past, the latter economic and political reasons account for the so called 'new poor'.

Unpredictable periods of starvation have been recorded recurrently in the history of Rwanda. 1890, 1895, 1887-98, 1900-1903, 1904-08, 1909, 1910, 1911, 1912, 1916-18, 1921-22, 1924-26, 1927, 1928-29, 1943 (Gunther 1999 citing Nahimana 1993). In some years it was epidemics, drought, locusts or military expeditions.

The most notorious famines have names. These were for example Ruyaga 1902, Rumanura a few year later, Kazuba and then Gakwege 1924-1924 and Ruzagayura 1943-43 which is believed to have claimed half of the population. Although the direct link to land is discernible, recent food shortages in Rwanda, show that it has not been possible to use land in times of bumper harvest to mitigate starvation in seasons of drought.

Famines hit many Rwandans after every political upheaval in 1959, 1963, 1982 and in early in 1990s. But perhaps the most conjunctural causes of poverty have been recent economic and political events in Rwanda.

The concept of the 'new poor' was coined in relation to people falling in poverty because of 'structural adjustment'. Rwanda accepted to adjust in 1990. Among elements of reform, that were accepted which could involve land was commercialisation of agriculture. Chossudovsky (1999) argues that the political collapse that followed the 1990-1993 period can be attributed to adjustment.

It has been observed that with or without adjustment Rwanda would have been in crisis any way. For example between 1985 and 1982 the real world price of coffee fell by 72% , and of tea by 66% .

Uvin (1997) evenly shows the link between the crisis-ridden by a chronic shortage of land and rapid population growth. In addition, drought in the 1980s and civil war from 1990 onwards, contributed to the declining production levels. Kilocalories production per farmer fell from 2,055 per day in 1984 to 1,509 in 1991. Because of the centrality of agriculture to the economy, the agricultural crisis had huge repercussions. It is estimated that average GDP per capita declined from \$355 in 1983 to \$260 in 1990".

Whichever, is the argument the hostilities plunged Rwanda into a genocide in 1994, which created a new class of 'new very poor'. While GDP is thought to have gone down by a half, 1 in every 7 people was killed and 1 in every 3 displaced.

After the war it is estimated 34% of all households are headed by women and there are about 85,000 child heads of households. Poverty reached the highest level in the period, to about 70% in 1996 and 69% by year 2000.

It is naive to think genocide was brought by environmental scarcity in the Malthusian fashion. But as Leif (1999) argues ignoring Malthusian concerns is a gross oversight. Prunier (1995) has attempted to define the link.

"the decision to kill was of course made by politicians, for political reasons. But at least part of the reason why it was carried out so thoroughly by the ordinary rank-and-file peasants was [a]... feeling that there were too many people on too little land, and that a reduction in their numbers there would be more for survivors"

A few years later Johan Pottier (1997) also pointed to this link.

"in the build up to genocide, land scarcity and despair of landless, jobless youth were factors much larger than ethnicity itself".

Elaborate link between environment and genocide in Rwanda, has been attempted by Gunther (1988) and Leif (1999). The whole point being made is not a diminution or misrepresentation of genocide in Rwanda. Contrary to that, their argument confirm the link between land and poverty, whose magnitude in contributing to hostilities and genocide is being debated.

Thus, if the nexus between land, environment and the 'new very poor' is carefully but correctly appreciated, Rwanda presents a case in Africa, where land is not only a precious productive asset but for which some people can kill others.

3.4 Land Tenure issue

The issue of land tenure in Rwanda is rather complex, detailed and historical. We shall here in passing identify a few cases the shed more light on the relationship between land and poverty in Rwanda.

Larks-Erik Brigeard (1993) defines tenure in very clear terms. Tenure refers to the terms and conditions on which land is held and used. Tenure is not a matter of man's relationship to land. Tenure is a matter of relationships between individuals and groups of individuals in which rights and obligations with respect to control and use land are defined.

In Rwanda land tenure, in colonial rule has been governed by customary law and written law. The customary law recognised land rights obtained in one of three ways:

- (i) by inheritance through the male line
- (ii) from a chief, in return for tribute
- (iii) by clearing new land to which no chief had laid claim.

The most dominant system was clientship, by which landless persons were obliged to seek patronage and usufructory land rights from local political chiefs.

The written law was mainly on abolishing forced labour in 1949 and cattle clientship in 1954. Special provisional council in 1960 suspended private rights to pastureland, although opposed by the King, it was signed by the Belgian Resident. Its Commission of Enquiry drew up two decrees related to cultivated land in the north-west, which later in October 1960 formed a single act on land issue in Ruhengeri and Gisenyi, whereby generally customary law was upheld and land redistributed between patrons and clients.

Belgian land tenure regulations were recognised as binding after independence by the Rwandan Constitution of 1962 (Article 108). They were summarised as follows:

- (i) lands occupied by the original inhabitants were to remain in their possession
- (ii) all unoccupied lands belonged to the state
- (iii) all sales or gifts of land to be approved by Minister of Agriculture
- (iv) lands belonging to persons who were not original inhabitants had to be registered

The overall situation was not changed generally by a 1976 law, which provided for the following:

- (i) all lands not appropriated according to written law belong to the state
- (ii) lands subject to customary law, or rights of occupation granted legally, cannot be sold without prior permission from the Minister responsible for lands and after the communal council has expressed an opinion on the transaction
- (iii) the Minister can only grant such authorisation when (a) the sell has at least 2 ha remaining (b) the buyer does not possess more than 2 ha.
- (iv) contravention of the above provisions are punishable by a fine of 500-2000 francs and the loss of customary rights or rights occupation of the land.

Contentions and controversies apart Reintsma (1981) noted three issues related to land tenure which are of interest even today.

First, is the shortage of land and fragmented holdings, mentioned above. He noted that the shortage of land gave rise to increase in the number of land transactions notably in densely populated areas like Ruhengeri and Butare. Renting land for a number of years was also on the increase. Moreover the problem of land scarcity led to land fragmentation. Inheritance law provided that land would be subdivided among male heirs. When subdivision becomes too small, another plot must be cleared or bought. With increasing land scarcity, farmers have to go further afield to acquire new lands and holdings become more dispersed.

Second, feature of post independence land tenure was migration. Land scarcity has given rise to considerable internal migration.

- (i) People moved from overpopulated areas to areas previously underpopulated due to poor soils, lack of water supply, or tsetse infection. A good example is Bugesera region, whose population density was 20 persons per square kilometre in 1960 and rose to 120 persons per square kilometre in 1978. In 1958 Bugesera had 1 million ha and in 1978 2/3 of the forests had been cleared because of migration of people from other prefectures.
- (ii) Rural-urban migration may be in terms of people particularly the youth looking for a living in towns or probably due to shortage of land.
- (iii) Some migrants went to Zaire, Uganda and Tanzania in search. Third, feature of the land tenure system in Rwanda is also a form of migration "paysannats"

Paysannats were started in Rwanda in 1952 by Belgians as a scheme to alleviate the situation of land clients who had or who had no security of tenure over the land they cultivated. Plots of about 2 ha were given to monogamous families. Boys over 18 could get their own plots.

It with this background that Rwanda plunged into a genocide in 1994. The war and genocide brought in questions related to land which have necessitated urgent action for land policy and land law. The point to be stressed is that, the latter crisis only worsened an already a delicate situation. Andre and Platteau (1993) had noticed conflict every three days in the commune they studied and half of them were over land.

When in July 1994, RPF liberated Rwanda almost 1 million people had been massacred. This meant many household heads or entire families were deceased. A couple of million refugees fled the country to Congo, Tanzania and elsewhere. Meanwhile, about 1.3 millions Rwandans, 'the old case load' returned to Rwanda after 30 or so years in diaspora. In

1996 and 1997 several other millions of the 1994 refugees also returned home. All these dramatic changes had ramifications to land.

Van Hoyweghen (1998) introduces the problem as follows:

‘the challenges which lie ahead for post-genocide Rwanda’s economic, social and political development are closely related through the issue of land. The pressure from a high rate of population growth, added to the paucity of economic opportunities outside the agricultural sector, is forcing people off the land and into poverty. Society is under extreme stress’...

It is not possible to get to the bottom of the problem. It is however, worth noting that by Arusha Peace Accord no refugee who had spent more than 10 years outside Rwanda could have claim on land. The ‘old case load’ were allowed to cultivate land on temporary basis. Grouped settlements ‘imidugudu’ were started by the government in 1996. They served as a temporary solution to shelter but their long term capacity to release arable land and form a basis of new production and tenure relations leave a lot to be desired. Ownership and tenure of land to these and the rest of the population are crucial for reintegration, reconciliation, peace and economic development.

No wonder therefore that the land issue appears in the poverty reduction agenda (PRSP 2001). It constitutes also continuation of the land policy and law dialogue which has been going on for a number of years. The issue of land is a significant factor in the poverty reduction debate which the government cannot put aside to ‘wait and see’.

3.5 Types of land and land related problems in Rwanda

This section is just a descriptive summary of a recent survey carried out by a team of researchers from the National University of Rwanda.

It was a qualitative test of the relevance of poverty reduction policies and therefore is of limited utility to empirical-oriented inquiry.

It can show how widespread and varied the problem is in Rwanda today.

The survey was carried out in 38 districts of Rwanda, covering all 12 provinces and agro-climatic zones between May and June 2001. Some problems recorded are summarised in table 5 below.

Table 5: cited land and land related problems in PRT survey

DISTRICT		PROBLEM(S)
1	RUSUMO	<ul style="list-style-type: none"> • people solely dependent on agriculture • grazing land is a problem migrate • imidugudu ‘ are far from farms

2	MIRENGE	<ul style="list-style-type: none"> • returnees have tiny plots • weak link between agriculture and the market
3	RWAMAGANA	<ul style="list-style-type: none"> • plots are tiny • agricultural techniques archaic
4	RUHANGO	<ul style="list-style-type: none"> • low yield livestock • returnees have tiny plots • chemical fertiliser expensive • improperly used wetlands
5	KANOMBE	<ul style="list-style-type: none"> • some returnees are in towns because of shelter • land law not out • in the new land law returnees needs land also • some imidugudu have no services • famine refugees from Bugesera not gone home
6	GASHORA	<ul style="list-style-type: none"> • famine is due to drought • lack of fertilisers • lack of property rights work against perennial crops • marches not prepared • water in lakes and Akagera abundant but lack of its management in dry season
7	NGENDA	<ul style="list-style-type: none"> • with 105.000 ha only land is a scarcity • grazing land is diminishing • fertilizer is lacking in supply and is costly
8	NYAMATA	<ul style="list-style-type: none"> • long dry seasons and drought • Nyabarongo wetlands not well utilized
9	KAHI	<ul style="list-style-type: none"> • Lack of forests • Trees planted are prone to white ants
10	RUKARA	<ul style="list-style-type: none"> • Long dry seasons • Few coffee growers are supported
11	RWAMIKO	<ul style="list-style-type: none"> • Land plots small and over used • People do not like artificial inseminations to their livestock
12	RUTSIRO	<ul style="list-style-type: none"> • Remote and isolated

13	GISUNZU	<ul style="list-style-type: none"> • Acute shortage of chemical fertilizers
14	KARABA	<ul style="list-style-type: none"> • Few granaries and storage facilities
15	NSHILI	<ul style="list-style-type: none"> • Remote but has abundant grazing land
16	NYARUGURU	<ul style="list-style-type: none"> • Fertilizers costly, but has ample grazing land
17	KADUHA	<ul style="list-style-type: none"> • Remoteness is the problem but grazing land plenty • Lack of credit facilities
18	MUHANGA	<ul style="list-style-type: none"> • Tiny, underproductive plots but have coltan minerals • Lack of fertilizers • Low harvests (yields)
19	NTONGWE	<ul style="list-style-type: none"> • Land generally fertile problem is some type of poor quality food
20	NGOMA	<ul style="list-style-type: none"> • Lack of natural resources
21	SAVE	<ul style="list-style-type: none"> • Small plots of land • Large prison population
22	NYAKIZU	<ul style="list-style-type: none"> • Plots are small • Bad soils
23	GIKONKO	<ul style="list-style-type: none"> • Laziness
24	KIGOMBE	<ul style="list-style-type: none"> • Land scarce and fragmented
25	BUKONYA, NDUSU and GATONDE	<ul style="list-style-type: none"> • Tiny plots • No fertilizer application • No selected seeds use
26	BUGARAGARA and RUHONDO	<ul style="list-style-type: none"> • Small plots of land • Large scale erosion
27	KAYOVE	<ul style="list-style-type: none"> • Soil erosion
28	KAGEYO	<ul style="list-style-type: none"> • Land over used • Lack of select seeds • Low yield cows • Imidugudu far from farms • Land sharing resented
29	ITABIRE	<ul style="list-style-type: none"> • Old soil, much erosion • 'umudugudu' resented

30	BUKUNZI	<ul style="list-style-type: none"> • conflict between families of prisons and survivors' families • 'umudugudu' is said to have been imposed
31	IMPALA	<ul style="list-style-type: none"> • steep slope erosion • overpopulation • some people against land redistribution • resent imidugudu
32	KADUHA	<ul style="list-style-type: none"> • backward agriculture • immense soil erosion • land conflicts relation to inheritance • dissatisfaction with 'imidugudu' scheme

These are insights into some of the problems narrated. Of course they do not provide generalized pictures of districts, but at least they show how widespread land and agriculture problems are widespread. Most significant is also that there are similarities across regions.

A general inference is that land policy and land bill will be pitted against a widespread problem, which is also linked to agriculture and subsequently poverty. Land policy including land reform is not about political or social processes, it is also about economics of fighting poverty.

4. SOME CRITICAL CHALLENGES

From discussions in the previous sections, the principal challenge in Rwanda is poverty reduction: In June 2000 a National Poverty Reduction Programme was launched. This November 2001, a Poverty Reduction Strategy Paper has been released, approved by the government and accepted by the donors. What is critical, is how land can be used in the fight against poverty.

(a) Land productivity

As was noted, plots of land are not only tiny, but productivity was declining even before genocide. One major cause, was cited as soil erosion. The problem then is how to use agriculture -say land – for poverty reduction and at the same time provide exit strategies for employment outside the sector.

It has been estimated that for Rwanda to move out of the list of poor countries, the rate of growth of GDP should be at least 8% per annum for at least the next 20 years. With a growth rate of say 3%, the real growth rate should be expected to be about 5%. Rwanda being dominantly

agricultural, this growth rate should come from land at least during the first 15 years.

One suggested approach has been agricultural intensification and commercialisation (Mellor 2001). Mellor argues that fertiliser alone can account for 75% of the 5% growth rate, while swamp reclamation can provide, another 10% and the rest from using intensive crops. For instance potatoes can account for 20 percent growth rate, because it is responsive to fertiliser and coffee and tea can account for 15 percent growth.

For agriculture to be so productive and later release labour to other forms of employment require that population is kept low and environment conservation and protection are given priority. The draft population policy is comprehensive and ambitious, aiming at improving the quality of human resources instead of focussing on quantity alone (ONAPO 2001). But it is clear from our discussion above that Rwanda, can no longer afford to have the highest total fertility rate in the world (8.3 in 1980s) The annual growth rate of population should for the next twenty years be kept below 3%. Soil erosion affects 50% of the loss of fertility of soil in our country. Environmental protection is a challenge we cannot over look.

(b) Land Policy and law

In the previous section we showed the critical challenge of land tenure, which should address the question of access. From the argument a land policy in Rwanda is urgent for:

- (i) poverty reduction in that landlessness and land shortage characterise poverty
- (ii) economic growth in that land is the principal productive asset which people can use as an investment
- (iii) peace-since there is a link between land and conflict in Rwanda

The poverty reduction strategy paper (PRSP) has reserved some space on the issue of land policy. For a start this is a good sign. However, the danger is that land policies are very fragile when they are mechanistically determined by planning technocrats and administered from the 'top'. Land policy should involve a process that involves the people, to decide on ownership and security of tenure and also to participate in arbitration of land related disputes.

Landnet could continue to provide a platform from which informed dialogue can take place. Otherwise like in other countries, government may take a 'wait and see' attitude when land is being grabbed.

5. CONCLUSION

Land is a precious asset in Rwanda. It supports the majority of the people Rwanda by all indicators in poor.

The poverty which is rampant is related to land. The link between land and poverty was seen to have a historical context that includes dynamics of demography and environment.

Land is closely related also to the conflict that led to genocide that generated a new form of poverty. Even today land and land related problems can be seen all over Rwanda. Thus for poverty reduction in Rwanda, land cannot be overlooked. This is particularly, the issue of raising agricultural productivity and evolving an elaborate land policy.

Land cannot surely provide every answer to poverty in Rwanda, but there can be no answer on poverty in Rwanda that will not take into consideration the role of land.

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