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# Zimbabwe Land Subsector Study

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Southern Agriculture Division  
Eastern and Southern Africa Projects Department

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## CURRENCY EQUIVALENTS

(November 1985)

US\$ 1.00 = Z\$ 1.54

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## ABBREVIATIONS

AGRITEX	-	Agricultural Technical and Extension Services
ARDA	-	Agricultural and Rural Development Authority
BSAC	-	British South Africa Company
CSC	-	Cold Storage Commission
DDC	-	District Development Committee
MFEPD	-	Ministry of Finance, Economic Planning and Development
MLARR	-	Ministry of Lands, Agriculture and Rural Resettlement (merger of MOA and MLRRD in July 1985)
MLGRUD	-	Ministry of Local Government, Rural and Urban Development (formally named Ministry of Local Government and Town Planning)
MLGTP	-	Ministry of Local Government and Town Planning (in September 1985, renamed Ministry of Local Government, Rural and Urban Development)
MLRRD	-	Ministry of Lands, Resettlement and Rural Development - (merged with MOA in July 1985)
MNRT	-	Ministry of Natural Resources and Tourism
MOA	-	Ministry of Agriculture (merged with MLRRD in July 1985)
NLHA	-	Native Land Husbandry Act
NRB	-	Natural Resources Board
TILCOR	-	Tribal Land Development Corporation
VCW	-	Village Community Worker
VIDCO	-	Village Development Committee
WADCO	-	Ward Development Committee
WADEC	-	Ward Development Center
WCC	-	Ward Community Coordinator

## GOVERNMENT OF ZIMBABWE FISCAL YEAR

July 1 - June 30

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## ZIMBABWE

### LAND SUBSECTOR STUDY

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PREFACE

The field work for this study was carried out in May of 1985 by a joint World Bank/Government team. Subsequent draft reports were discussed with members of the joint study team. This final report takes into account the comments received on the several draft reports and the Government's consolidated written comments on the previous draft.

The Government team comprised officials from the Department of Natural Resources (Ministry of Natural Resources and Tourism, MNRT), the Ministry of Local Government and Town Planning (MLGTP) - subsequently renamed Ministry of Local Government, Rural and Urban Development (MLGRUD), the Ministry of Agriculture (MOA), and the Ministry of Lands, Resettlement and Rural Development. The latter two ministries have since been merged into one - the Ministry of Lands, Agriculture, and Rural Resettlement (MLARR). The Bank team wishes to express its appreciation and gratitude for the support and assistance received from the Government and from those officials who joined the study team, without whose contribution it would not have been possible to complete this work.

At the macroeconomic level, the basic challenge facing the country is how to sustain a rate of overall economic growth which will enable the country to achieve its long-term development objectives of transforming traditional agriculture and raising the standard of living for the vast majority of people living in the Communal Areas. In this context, the importance of protecting and improving the use of the land resource, from which most wealth in the Communal Areas is, and will continue for the foreseeable future to be derived, cannot be overemphasized. However, already there are signs that the deteriorated state of the land resource is constraining agricultural development in many of the communal lands. Unless this trend is arrested, the country's development goals will not be attainable. It is with this economic imperative and sense of urgency that the present study has been undertaken.

Because present land policy and thinking on land issues generally has been so heavily influenced by past developments, the first chapter of this report traces the historical evolution of land policy up to the present. This is followed by a chapter on current land use patterns. The state of the land resource is presented in Chapter III, followed by an analysis of the main issues in Chapter IV. In Chapter V, the areas in which Zimbabwe could benefit from assistance are identified. Finally, the report's main conclusions and recommendations are summarized in the last chapter.

## I. THE EVOLUTION OF LAND POLICY

### A. Pre-Colonial Tenures

1.01 Before the advent of the Europeans in the 1890s, the nation was in a state of flux. Boundaries between tribal groups were not permanently fixed and fluctuated with the rise and fall of political power.

1.02 The tenure systems of the two main tribes (Shona and Matabele) had numerous similarities. The Shona were primarily settled agriculturists. In theory, land was claimed by the ruler, although his control was fairly tenuous in remote areas. Land control was, also in theory, vested in the leading living members of patrilineages into which the Shona were divided. The ruler had, again in theory, the right to withdraw grants of, and reallocate, lands. In practice, however, the household or a group of households (a sub-group comprising kin-related members) could only be dispossessed by very strong pressures, and land grants were virtually permanent. Territories were sub-divided among lesser chiefs into wards, and then further sub-divided into villages. The ward was the crucial level for land allocation. Above the ward there was a tenuous sense of identification with the wider tribe. But since membership of a tribe fluctuated and members could easily join or leave the tribe, tribal identification was far weaker than it would later become under colonial rule.

1.03 Upon marriage, a male Shona was entitled to receive fields for cultivation. He also acquired the right of access to common grazing lands and to cultivated lands in the off-season. A village did not encompass a demarcated area, although the boundaries were known. It was a loose collection of dispersed households, or sub-groups, that shared a common identity.

1.04 For the Matabele, the position of the king was similar to that of the Shona, with theoretical control over the land and the delegation of powers to lesser chiefs. Among the Matabele too, a male received land on marriage and the right of access to the commons for grazing. In a land-abundant situation, shifting cultivation was practiced and every married man could exercise his right of access. Where the Matabele and the Shona differed was in the Matabele creation of amabutho regiments. In theory, amabutho were military units comprising young men who lived in separate residential areas; in practice, most of their time was spent herding the cattle of the monarch. As among the Shona, members from other ethnic groups were easily incorporated into the Matabele.

### B. The Winds of Change

1.05 The changes that occurred in the 1890s and thereafter, although cataclysmic, were not entirely unforeseeable. The advent of guns in the 19th century and the rapid increase in the ivory trade brought increased contact with Europeans. In the 1860s, the Matabele began to trade cattle south. The development of mines in Kimberly (1860s), Transvaal (1880s) and Mashonaland (1890s) made for a profitable cattle trade. Most of the trade

was controlled by the Matabele monarchy, with a few independent Shona communities in the south which also exported their animals. In return, there was an influx of consumer goods. Migration of labor for work in the mines soon grew. It was economic opportunity that drove this stream south, the laborers being drawn from the poorest segments of the tribal populations.

1.06 The rediscovery of gold in the Zimbabwean plateau in the 1860s led the South African whites to demand mineral concessions. These concessions, however, put Chief Lobengula of the Matabele on notice of the potential danger of conquest. Both the Shona and Matabele, jostling with each other for territorial control, negotiated for their security with rival European powers -- the Portuguese and British, respectively. Each tribe had the maintenance of political integrity as its goal but by 1895 both tribes had been conquered by white settlers. Zimbabwe was to remain under white minority rule for a little over eight decades before re-emerging as an independent nation.

### C. Protection, Persuasion and Compulsion 1890 - 1923

1.07 In 1890, the British South Africa Company (BSAC) led by Rhodes marched into Zimbabwe armed with a Royal Charter and concessions to mineral rights. Rhodes swept by Bulawayo and into Mashonaland where he set up capital at Salisbury. The prospect of gold proved to be illusory, however. The soldiers and other soldiers of fortune had to be compensated and land, not gold or money, was the only form of compensation available.

1.08 By 1894, most of the lands with heavy red and black loamy soils of Matabeleland had been granted in concessions both to individuals and companies. European settlement also began to encroach on African lands. In 1894, a Lands Commission was appointed to assign land to the Africans of Matabeleland. The Commission created two reserves for the Matabele, the Shangani and the Gwai (amounting to about 0.8 million ha) and, in addition, granted about 4,800 ha as a reserve for the use of the wives and sons of Chief Lobengula. The Matabele refused to move into these reserves on the grounds that the Shangani was unhealthy and the Gwai, waterless. Despite this refusal, an important precedent had been created: the establishment of Reserves on a tribal basis. The alleged justification for the creation of the reserves was the protection of the African from the superior economic power of the European.

1.09 In 1896, the Shona uprising failed and in 1898, an Order-in-Council merged the Shona with the Matabele to form Southern Rhodesia. The Order extended to the Shona the "Cape Clause" which had hitherto been applied only to the Matabele. The "Cape Clause" recognized the right of an African to hold and dispose of land on the same conditions as a non-African. The Order also expressly provided that further lands should be made available to the African as needs arose.

1.10 By 1902, one-sixth of the country (and a majority of the lands with prime agricultural potential) had been made available to the settlers and companies, usually at considerably lower prices than those lands would have fetched in an open market. The native commissioners who were entrusted with the task of demarcating land for the African were given no guidelines; consequently, subjective criteria predominated. The result was a patchwork quilt of reserves intermingled with non-reserves. The healthy and relatively fertile highlands were largely left to European settlement.

1.11 In 1902, the total population was estimated at around 514,000, of whom 11,000 were Europeans. The reserves measured about 8.4 million ha. 1/ The remaining territory (a little under 32 million ha) was open to purchase by Europeans although, in theory, the African could also purchase lands. The African, however, was generally priced out of the land market. Over the next decade, the main focus of BSAC shifted from mineral exploitation to land transactions. This gradual change resulted from the realization that little could be gained from mineral exploitation and that the profit to its shareholders lay in land dealings. The company was spurred by the growing demands of settlers with their increasing political clout. In 1908, the Colonial Secretary approved suggestions for reserve boundaries and BSAC opened an Estates Department to promote European settlement. The Department soon found that it needed more land and requested a readjustment of the original reserve boundaries. By 1911, the African population was estimated at over 700,000. An estimated 8.0 million ha was available to them for cultivation with an average population density of 8.0 per square km. With inferior lands at their disposal, the Africans spilled over into unalienated areas and also onto unoccupied European lands. This overflow, together with the company agitation for more land for the European settler, led to the appointment of the Southern Rhodesia Native Reserve Commission by the British Government in 1914.

1.12 The Commission did not prove immune to the influence of BSAC's Estate Department. The final report recommended the reduction of the reserves by about 0.5 million ha (from 8.3 to 7.8 million ha). The Commission also recommended that tribal reserves be widely distributed throughout the country so that, by a process of imitation of the European farmer, the standards of African agriculture would be raised and tribalism would be broken down.

1.13 The movement towards separation from the Crown grew with the increase in settler numbers and power. In 1914, when BSAC's charter was up for renewal, further concessions were wrung out of the company. Settlers now had six representatives in the Council. It became impossible to find land for tribal reserves and the Commission's recommendations were embodied in an Order-in-Council in 1920. This order made a "final disposition", allocating about 8.7 million ha for tribal reserves. In 1921, the African population was estimated at 778,000; the area available for cultivation was 8.7 million ha, and African population density was 8.9 per square km.

1.14 At this point, on the eve of self-government, it would be useful to recapitulate the trends with regard to land. BSAC came in as a merchant company promising profits from the extraction of minerals. When this source of income dwindled, it turned to land as a source of profit. To do so, however, the company had to attract settlers and make concessions to keep them in the country. It had to provide these without rousing the suspicions of the British Government that these concessions were being made to the detriment of the African. The justifications were numerous: the

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1/ Estimates of the African population and of the area of the reserves during this early period are not very reliable. The former appear to have been consistently underestimated; the latter could not be known with any certainty since there were no land surveys when the native commissioners carried out their demarcation.

African was accustomed, with his level of technology, to farm the thin sandveld. Further, since the African was at a lower level of development, it was not considered wise to allow indiscriminate contact with the European -- this could lead to the destruction of the native culture. The "pass" system was introduced in 1902, making it impossible for an African to leave the reserve without a special permit from a native commissioner. The minor irritant to the settlers, however, continued to be the "Cape Clause" under which Africans were, theoretically at least, permitted to purchase land. With the increase in the numbers of settlers, the company was compelled to make further concessions, gradually handing over power to the settlers who, though not necessarily unified among themselves, were unified against the African. It was their interests alone that were paramount and, in pursuit of those interests, logic would be strained.

#### D. Self-Government: Separate and Unequal (1923-1951)

1.15 Rhodesia attained self-government in 1923. The original Constitution provided that all unalienated land belonged to the State. Curiously enough, however, while enshrining native reserves and providing in a schedule that these amounted to 8.7 million ha, the constitution vested authority over the reserves in the British High Commissioner. The "Cape Clause" continued to be in effect, which served to agitate the settlers, many of whom argued that even though the Clause had been in effect since 1894, by 1925 only nineteen farms (comprising 19,000 ha in total) had been sold to Africans. This was offered as proof that the African was not accustomed to individual tenure and preferred to live in reserves.

1.16 This argument was repeated when, in 1925, the Morris Carter Land Commission was created to look into the desirability of defining separate areas for use and occupation by Africans and Europeans, respectively. The Commission recommended repeal of the "Cape Clause", and proposed that if Africans wanted to purchase land, they should be permitted to do so only in an area set apart for that purpose. The total area suggested was 3.0 million ha, which was later classed as the African Purchase Areas and which, after Independence, became known as the Small Scale Commercial Areas. The Chief Native Commissioner recommended that these purchase areas adjoin reserves so that the progressiveness of the Purchase Area farmers could infiltrate into the reserves (a variation of the earlier argument which suggested that the African would imitate European methods of farming).

1.17 The Commission concluded that over 6.8 million ha be reserved for European purchase; about 35,600 ha were classed as semi-neutral areas where members of both races could purchase land; and a little over 7.0 million ha in remote and tsetse-infested areas remained unassigned.

1.18 The method by which the Commission arrived at the land needs of the African and European deserves comment. For the European, a "needs test" was used -- land of sufficient fertility and location to provide an income which would attract settlers and also suffice to maintain European standards of living. For the African, however, the basis was average acreage per household -- that is, enough land to provide subsistence for a family. This remained the basic test thereafter. Even under this static criterion, however, the maximum "carrying capacity" had been almost

reached. In 1926 when the estimated African population was 936,000, the Administration estimated that the land available to them could support a population of 940,000 under the traditional system of land use. This ceiling would be reached in a year. Soil erosion and land degradation were already evident.

1.19 The establishment of Purchase Areas was equally difficult. Most lands suitable for farming had already been alienated. Finally, 1.6 million ha were designated as African Purchase Areas. These comprised five large, remote areas in the northern- and southern-most parts of the country, "hardly suited to agricultural development because of poor ecological conditions and distances from markets." 2/ Further, when these lands were later surveyed, it was found that many were already occupied by Africans living under chiefs in adjacent reserves.

1.20 Despite apparent overcrowding on African lands and the difficulties of finding suitable Purchase Lands, the Land Apportionment Act of 1930 embodied all the recommendations of the Morris Carter Commission. The Act was "the white man's charter" and the cornerstone of land policy in S. Rhodesia until independence. Thereafter, additions would be made (classed as "Special Areas") mainly from the unassigned land and African Purchase Areas. The Act specified (in schedules) which lands were African areas, undetermined areas, forest area and unassigned area. The European area was, however, by a process of exclusion, to be "all land not included in the reserves or in the areas set aside under Government Notices... or in the first four schedules". The categories referred to in the Act and the constitution were as follows:

Table 1.1: Land Categories and Area in S. Rhodesia, 1931

	(million ha)
European Area	19.67
Native Reserves	8.64
Native Purchase Area	2.98
Unassigned Land	7.12
Forest Area	0.24
Undetermined Land	0.03
Total	<u>38.68</u>

1.21 Meanwhile, other developments were taking place which would also affect land tenure systems. In 1926, it was apparent that the maximum carrying capacity of the land in the reserves (as estimated by the authorities) would soon be reached. The authorities realized that if natural resources were not to be destroyed, the traditional system of land use would have to be changed. This realization gave rise to the concept of "centralized" villages.

1.22 The concept of rationalizing agriculture in the reserves by demarcating separate grazing and crop cultivation areas was first thought of by Alvord who was appointed "Agriculturist for Instruction of Natives" when the Department of Native Agriculture was established in 1926 under the

2/ WEINRICH, A.K.H. (Sister Mary Aquina O.P.) 1975, African Farmers in Rhodesia. London: Oxford University Press, 20-1.

Department of Native Affairs. Alvord trained the first agricultural demonstrators and sent them out to the reserves. These initial efforts were not met with enthusiasm either by the African or the European, the latter fearing African competition in the market place. When Alvord encouraged Africans to grow maize, the European farmers complained and the training of demonstrators was temporarily suspended in 1934. While centralization did make cattle herding easier, the separation of arable from grazing areas resulted in long distances to be traversed between the two areas, which meant that the fields generally received no manure since few cultivators took the trouble to cart manure from the cattle byres. Although some 97,000 ha had been centralized by 1938, and centralization was made part of the duties of agricultural demonstrators, the authorities were dissatisfied with the rate of progress.

1.23 Even more dissatisfaction was expressed with regard to the lack of progress of the agricultural demonstrators. In 1936, irrigation demonstrators were added, followed by soil-erosion control demonstrators in 1937 and livestock demonstrators in 1944. The efforts of these officers did not meet with much success, nor was erosion stemmed. A Commission appointed in 1939 to examine the question of preserving the natural resources of the country came to the conclusion that "it would take at least 250 years to repair the damage done to the soil in the tribal areas". 3/ There was an air of despair among the authorities. One solution was the passage of the Natural Resources Act (implemented first by the Ministry of Internal Affairs and subsequently by the Ministry of Lands and Natural Resources), which permitted the authorities to carry out soil protection control, improved farming practices and destocking throughout the country, although these measures were principally applied in the European areas. By 1941, an era of persuasion had given way to an era of compulsion.

1.24 The justification for compulsion was the simplistic view that the African was uncivilized. However, the real reasons for the spread of erosion and land degradation need to be mentioned. First, both human and livestock populations continued to grow. Between 1931 and 1941, the estimated African population had grown from 986,000 to nearly 1.4 million. The land available to the African for cultivation had not kept pace with population growth: although it increased from 11.8 million ha to 12.4 million ha, the average population density per square km rose from 8.3 to 11.1. Second, the livestock population grew from an estimated 1.6 million cattle in 1931 to 1.9 million in 1945, on the same land resource. It is also true that, although the total amount of grain produced continued to increase during this period, the per capita production of grain declined from 3.31 bags (of 90 kg) in 1926 to 2.44 bags in 1940 4/ -- an indication of declining fertility and/or the extension of cultivation to increasingly marginal lands.

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3/ PASSMORE, Gloria. C. 1972, The National Policy of Community Development in Rhodesia. Salisbury: University of Rhodesia, 26.

4/ MOSLEY, Paul 1983, The Settler Economies. Cambridge: Cambridge University Press, 120, 72. Mosley also points out that it is not entirely accurate to estimate production per head on the total African population but that there is no alternative, given scant data on the rural population.

1.25 A consolidated Land Appropriation Act replaced the former Act in 1941. The new Act retained most of the provisions of the previous Act. In reality, the new Act made it even easier than it was before for whites to own land in the reserve areas, and it tightened the conditions under which Africans could reside in the European areas.

1.26 No restrictions or legislation, however, could prevent the growing African population from spilling over into European areas and other unalienated lands. During the war years, little was done to remove the African. But after the war, returning soldiers and increased settler immigration brought a sense of urgency to the need for implementing the division of land. Much of the 6.8 million ha reserved for European purchase had not been alienated by 1948 and African squatters resided on a significant percentage of these lands. The government decided to resettle these squatters -- some on the reserves. The resettlement of nearly 85,000 families, however, brought only unrest and violence.

1.27 In 1948, the African population was estimated at 1.71 million and the area available to the African for cultivation was estimated at 12.4 million ha (an average population density of 13.8 per square km). A committee was appointed to reexamine the African need for additional land. This committee and subsequent committees gradually added to the reserves by reallocating land mainly from the Unassigned Area (which was largely disease-ridden and infertile) and the Purchase Areas. The new reserve areas, called "Special Native Areas", were, however, in no way different from the earlier reserves with regard to land rights and methods of production. The division of lands in 1953 was as follows:

Table 1.2: Land Categories and Area in S. Rhodesia, 1953 a/

	(million ha)
European Area	18.96
African Reserves	8.34
African Purchase Areas	2.26
Special Native Areas	1.65
Unassigned	5.68
Wankie Game Reserve	1.19
Forest Area	0.39
Undetermined	0.02
Total	<u>38.51</u>

a/ Discrepancies in the total areas between 1931 (Table 1.1) and 1953 are due to more accurate surveys having been carried out.

1.28 Neither the compulsory destocking (under the Natural Resources Act) nor the restoration of the powers of land allocation to the chiefs in 1945 sufficed to stem the tide of accelerating land degradation in the reserves. Further, the official view had also changed. Persuasive methods (agricultural demonstrations, etc.) were deemed insufficient. The prevailing sentiment was that an authoritarian approach was needed together with a change in the system of land tenure.

### E. The Native Land Husbandry Act, 1951

1.29 The Native Land Husbandry Act, 1951 (NLHA), later called the African Land Husbandry Act, was seen by many as the panacea for all the ills that afflicted the reserves. With some variations, it was a more sophisticated legislative enactment of the concept of centralized villages (para 1.22). The Act was described by the Secretary for Native Affairs as "the most important Bill affecting Native communal life ever passed in Southern Rhodesia and possibly even in Africa".<sup>5/</sup> The Act prescribed the standard land area for crop production and grazing to be granted to an individual, the farming practices that could be ordered, and the number of animal units that could be grazed on a given area. It also stated that residents could be called upon to provide labor for conservation works and that land in the reserves could be acquired for the establishment of towns, villages, and business centers.

1.30 Although NLHA was based on fundamentally sound technical considerations, implementation met with more problems than anticipated. It appears that the authorities assumed "that the African population would welcome the new measure once it had been imposed upon them, merely because of its undoubted merits from an economic and land husbandry point of view".<sup>6/</sup> This was not, in fact, the case. First, the NLHA once more transferred the authority of the chiefs to allocate lands to the Department of Native Affairs -- this power was not restored officially until 1967. Not surprisingly, therefore, most chiefs opposed the Act. Second, under the Act only those who had farmed the land in the season immediately before the date when the Act came into effect were granted a farming right. It was later estimated that more than two-fifths of the adult males in the reserves had thereby lost their farming rights, and been rendered landless, because they were in towns on the prescribed date. Further, some 20 percent of farmers and their families had been removed from their villages to other areas in order to comply with the standard size of holdings that the Act prescribed. The disenfranchised individuals joined in opposition to the Act. Third, the estimate of 1.25 million ha of arable land was found to be erroneous; there were only 1.13 million ha which could provide only 70 percent of the families with standard size holdings. Fourth, population and land were not evenly distributed in the reserves. For example, in southern Mashonaland there were 79,000 cultivators but land enough for only 32,000 full-sized holdings; in Mashonaland East there was more than enough land to provide standard size holdings. And finally, when the Act was passed, the economy was growing (the result of a post-war boom). By 1955, when the Act was actually implemented, the boom had ceased and employment remained static thereafter. Therefore, an assumption that those barred from the land would be able to find alternative employment proved to be erroneous. By 1960, some 113,000 Africans had been evicted.

1.31 There were additional features of the Act that are worth noting. The Act was assumed to give individuals greater security than they had had under the indigenous system. This was a fallacy stemming from a misapprehension of the nature of security of tenure under indigenous systems. Further, it is doubtful whether the framers of the legislation had accurately worked out the returns that would accrue to farmers. What

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<sup>5/</sup> PASSMORE, op. cit., 28.

<sup>6/</sup> Report of the Mangwende Commission of Inquiry, 1961, quoted in PASSMORE, op. cit., 32.

the Act did, however, was to irrevocably introduce the concept of the right to transfer lands. It created a land market. By the end of 1960, 1,155 farming rights had changed hands at an average price of £5.9s.7d. per acre. In addition, 13,511 grazing rights had been transferred at an average price of £4.17s.5d. per animal unit. This land market is still functioning today. An equally important feature of the Act was that it made for greater equality of holdings than under the indigenous system. But the NLHA was too mechanistic in its approach -- it assumed that every individual farmer had both arable land and livestock. Most importantly, it neglected the human factor. As the Mangwende Commission stated, the framers of the Act had a

...supreme confidence in the power of intellectual planning largely based on slide rule and (sometimes incomplete) statistics which...has resulted in an underestimation of the sociological and psychological factors involved...7/

1.32 With staff shortages and mounting pressure from the landless and the chiefs, it was already obvious in 1957 that the objectives of the NLHA would have to be sacrificed. This was admitted in 1962 when NLHA was amended to allow for the cultivation of lands previously designated as grazing lands. In that same year, further implementation of the NLHA in new areas was stopped.

1.33 After the collapse of the NLHA in 1962, chiefs regained the power, in practice at least, of land allocation. They allocated some 37,000 ha to their tribal members; in 1963, a further 34,000 ha were allocated to 16,000 members. These allocations raised concerns among government officials since they were largely allocations of grazing lands.

1.34 Rather than deal with the land question and the problems of continuing land deterioration in the reserves, the ruling government preferred to transfer responsibility to the tribal authorities. This view found expression in the Tribal Trust Land Act of 1967 which returned significant control of land to the chiefs. It provided for the establishment of tribal land authorities comprising the chief and his advisers.

1.35 In 1969, the Land Tenure Act replaced and incorporated the Tribal Trust Land Act. The legislation merely strengthened previous acts. The division of lands on racial lines was made even more absolute. The 1969 constitution of Rhodesia fixed African land at 18 million ha, all European land (urban and rural) at 18 million ha, and left 2.6 million ha as national land. The Land Tenure Act did, however, make provision for the grant of individual tenure if the African farmer wanted it.

#### F. The Decade Before Independence (1970-1980)

1.36 The decade before Independence was marked by increasing political conflict and the passage of numerous laws. By 1970, NLHA had been completely abandoned and the Tribal Trust Land Authority was replaced by the Tribal Land Development Corporation (TILCOR). Under this corporation,

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7/ Quoted in PASSMORE, op. cit., 48-9.

residents in tribal areas were no longer tenants-at-will at the mercy of chiefs but obtained secure tenancies. In 1977, the 1941 Land Apportionment Act (which had been amended, or consolidated 60 times between 1930 and 1977) was amended once more to allow Africans to purchase land in the European areas for the first time. In 1979, the Tribal Trust Land Act was amended and all reserves were vested in the President. The Act increased the powers of the Minister of Internal Affairs to intervene in matters of land management over which the chiefs and local councils had power. In the same year, the Rural Land Act provided the legal basis for settlement schemes, leaving virtually "all control over the settlement of land in the hands of the government".<sup>8/</sup> The Act applies to all lands other than tribal trust lands (now communal lands).

### G. Independence and After

1.37 The nation attained independence in 1980 and inherited all the problems, as well as the legislation, of the previous eight decades. The bequests included a dualism in both the economy and the organizational structure (i.e., the traditional chiefs and the local government administration), a dichotomy in the land tenure system, and, most importantly, a rapidly growing population. Since Independence, an additional category of land has been created - Resettlement Areas. These areas comprise former commercial farm land that has been sold to the Government and which in turn has been made available to new settlers. As of the end of April, 1985, less than 2 million ha, involving some 30,000 families, have been settled.<sup>9/</sup> Therefore, the main classes of land, excluding national lands, include: lands under private title, comprising both large and small-scale Commercial Areas; Communal Areas (the former Tribal Trust Lands); and Resettlement Areas.

1.38 Lands Under Private Title. The nature of title in the areas covered by private title is quite clear. They are governed by the Roman-Dutch law of the Cape Colony in 1891, as amended. The owner has full title to the land. Registration amounts to registration of title. There is, further, no obligation under the law, as it presently stands, to use the land. Recent legislation, however, has placed restrictions on an owner's ability to deal with property. First, under section 8 of the Rural Land Act, the land may only be leased to a single individual or a body corporate. If the owner intends to lease the land to two or more individuals jointly, the written consent of the Minister of Local Government and Town Planning (now Local Government, Rural and Urban

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8/ HARBESON, John W. 1981, Land and Rural Development in Independent Zimbabwe: A Preliminary Assessment. Washington, D.C.: Office of Rural Development and Development Administration, USAID.

9/ This type of resettlement is referred to as Model A (individual family holdings). A small amount of former commercial land (about 95,000 ha) has also been used to establish a few communal farms, known as Model B. In addition, two former commercial farms have been converted into Government estates, designated as Model C and the Government is experimenting in a pilot scheme with the use of one former commercial ranch as a holding area for cattle to relieve pressure in the Communal Areas. This latter scheme is known as Model D.

Development) must be obtained. Further, under section 10 of the same Act, no share-cropping agreements can be entered into, unless they are in writing and with the consent of the Minister.

1.39 Communal Areas. The relevant legal position is contained in the Communal Lands Act, 1982 (which repealed the Tribal Trust Land Act, 1979). First, the "owner" of all communal lands is the President. The Act vests the power to control the occupation and use of communal lands in the District Council which has powers to control the type of crop grown, prescribe conservation measures, and demarcate lands for grazing and crop cultivation. Despite the fact that Government policy and the law clearly vest authority to allocate lands in the District Councils, in practice however, some chiefs continue to allocate land in the few areas where land is still available. Furthermore, while the Act only confers on the persons resident on communal lands, at the date when the Act came into force, the right to continue to use and occupy those lands, and not the right to transfer such lands, in practice, sales of land are taking place - disguised, as in other African nations, as transfers of buildings or orchards.<sup>10/</sup>

1.40 Resettlement Areas. In the third category of lands (Resettlement Areas), title is unclear. At present, no decision has been made as to the ultimate title settlers will receive. Settlers currently receive a user's permit. Resettlement areas are first identified by the Ministry of Lands, Agriculture and Rural Resettlement (MLARR). The land use plans prepared by MLARR are then implemented by the Department of Rural Development in the Ministry of Local Government, Rural and Urban Development (MLGRUD).

1.41 Initially, the Government gave priority to settling the landless who had very little, if any, farm or farm management experience. A large number of the original settlers were ex-combatants returning from the war and former farm laborers from the same recently sold commercial farms. More recently, the Government announced its desire to have experienced farmers also settle on the newly-acquired farm land.

1.42 Most of the settlers (about 30,000 families) have been located on individual family plots while a relatively small number (about 2,400 members as of April 1985) have organized themselves into communal or cooperative farms. The original goal of settling 162,000 families in three years, beginning in 1982, is now recognized as unattainable. The levelling-off of the program is due in large part to changed circumstances. First, pressure from the non-agricultural population for farm land appears to have subsided significantly; and, second, the commercial farming population has, for the most part, stabilized with the result that little new commercial farm land is now available for sale. Recent statements by the Prime Minister, reconfirming that such sales would be completely voluntary without coercion from the Government, have served to strengthen confidence.<sup>11/</sup>

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<sup>10/</sup> Harbeson, op. cit.

<sup>11/</sup> However, the Land Acquisition Bill (1984), if passed in its present form, could undermine that confidence. Among other provisions, the Bill provides that no sales can take place without the consent of the Minister for Lands, Agriculture and Rural Resettlement (MLARR). If the Minister objects to a sale, he may offer a purchase price. If this is refused, the matter is referred to arbitration.

1.43 However, the Government now recognizes that even if the resettlement program were to achieve its original goals, this would not by itself solve the problem of population pressure and land degradation in the Communal Areas. While resettlement could provide some relief, the problem in the Communal Areas needs to be tackled head-on. In 1984, in a Directive and Statement of Policy from the Prime Minister (Annex 1), a concept of grass roots, local government land use planning was enunciated. In broad terms, it outlines the role and functions of the local governments, in particular, the Village Development Committees (VIDCOs) and the Ward Development Committees (WADCOs) in defining the limits of, and managing their natural resources. Of course, the real challenge lies in the implementation. If the problems are approached pragmatically and the mistakes of past governments in Zimbabwe and other neighboring countries are avoided, this program could lead to a significant improvement in the land use and conservation situation in the country.

## II. LAND USE PATTERNS

2.01 Out of a total surface area in Zimbabwe of approximately 39 million ha, about 33.2 million ha (85%) is designated as agricultural land, about 4.7 million ha (12.1%) as National Parks, about 0.9 million ha (2.4%) as State Forest, and the remaining 0.2 million ha (0.5%) as urban and State Land. Hence, the importance of the country's agricultural land. Of the 33.2 million ha of designated agricultural land, the Commercial Areas (comprising about 4,800 large-scale farmers of European origin plus African laborers and their families totalling about 1.7 million people) account for about 12.8 million ha or approximately 39% of the available agricultural land in the country. The Communal Areas (comprising over 800,000 small-scale farmers and the bulk of the rural African population of over 4 million) account for about 16.4 million ha or just about half the available agricultural land. The Small-Scale Commercial Areas (comprising about 8,500 small-scale African farmers) and the relatively new Resettlement Areas (comprising some 30,000 settlers) account for the remaining relatively small shares of 1.4 million ha (4.3%) and 2.6 million ha (7.9%) respectively. Present agricultural and non-agricultural land use shares are summarized below:

Table 2.1: Present Land Use

	<u>Total Area (million ha)</u>	<u>Percent of total (%)</u>	<u>Percent of Agricultural Land (%)</u>
National Parks	4.70	12.1	-
State Forest	0.92	2.4	-
Urban and State Land	0.22	0.5	-
Sub-total	5.84	15.0	-
<b>Agricultural Land</b>			
Commercial	12.82	32.8	38.6
Small-Scale Commerc.	1.42	3.6	4.3
Communal	16.35	41.8	49.2
Resettlement	2.64 a/	6.8	7.9
Sub-total	33.23	85.0	100.0
<b>TOTAL</b>	39.07	100.0	100.0

a/ Includes land which has been purchased but not yet settled.

Source: AGRITEX

2.02 In addition to having much higher population densities than the Commercial Areas (on average more than twice the population on almost the same total land area), the Communal Areas are also much less favorably naturally endowed. Nearly 75% of the Communal Areas fall within the relatively low rainfall regions (Natural Regions IV and V), and only 9% in the relatively high rainfall zones of Natural Regions I and II. The distribution of agricultural land by Natural Region is summarized below:

Table 2.2: Distribution of Agricultural Land by Natural Region (%)

<u>Natural Region</u>	<u>I a/</u>	<u>II b/</u>	<u>III c/</u>	<u>IV d/</u>	<u>V e/</u>	<u>Total</u>
<u>Agricultural Land</u>						
Commercial Areas	3.0	29.7	15.8	23.6	27.9	100.0
Smallscale Comm.Areas	0.4	17.7	38.1	36.7	7.1	100.0
Communal Areas	0.9	7.8	17.3	44.7	29.3	100.0
Resettlement Areas	1.6	20.3	37.0	37.7	3.4	100.0

a/ more than 1,000 mm of rain; b/ 750-1,000 mm; c/ 650-800 mm; d/ 450-650 mm; e/ 450 mm.

2.03 When a broader measure of agricultural potential is used (including soil properties, slope, and secondary terrain characteristics in addition to climate), the outcome is much the same.<sup>12/</sup> Using this broader classification scheme, approximately 60% of the Communal Areas fall either in the poor or very poor agricultural potential ranges, although it should be noted that the quality of the soils in the Communal Areas is due in part to erosion occurring over many decades (paras. 3.03-3.04). These areas were not always as degraded as they are today. It is not surprising, therefore, that Communal Area farmers maintain a high percentage of fallow land (equal in size to about three-fourths of the land presently under crops), mainly to give this marginal land sufficient time to recuperate.<sup>13/</sup> The distribution of the Communal Areas by Natural Region and land use are summarized below:

Table 2.3: Distribution of Communal Areas by Natural Region and Land Use  
( '000 ha)

Natural Region	I	II	III	IV	V	Total
<u>Land Use</u>						
Grazing	81	705	1,564	4,042	2,649	9,042
Cropped	21	178	394	1,018	667	2,278
Fallow	16	137	304	787	516	1,760
Other <u>a/</u>	29	255	566	1,462	958	3,270
<b>Total</b>	<b>147</b>	<b>1,275</b>	<b>2,828</b>	<b>7,309</b>	<b>4,790</b>	<b>16,350</b>

a/ Unsuitable for agricultural purposes (rock outcrop, etc.)

Source: Adopted from AGRITEX estimates.

<sup>12/</sup> WHITLOW, J.R, "1980. Agricultural Potential in Zimbabwe: A Factorized Survey," Zimbabwe Agricultural Journal 77 (3).

<sup>13/</sup> Of course, some of the presently estimated fallow land in the Communal Areas is not being used for reasons other than just recuperation, including a shortage of draft power and, in some cases, lack of interest on the part of absentee owners. The estimates of fallow land are derived from the difference between the estimates of presently cropped and once cropped land. For the Communal Areas, this would appear to be a reasonably reliable method for estimating fallow land.

2.04 Since 1980, the area under large scale commercial farming has declined by about 17% (from 15.4 million ha to 12.8 million ha), reflecting in part the departure from the country of some of the European farmers, while the resettlement areas have correspondingly increased, as new settlers have moved on to vacated commercial farms, a large proportion of which were formerly ranches. In fact, about 75% of all resettlement has taken place in Natural Regions III and IV (see Table 2.2 and IBRD Map No. 19097). During this same period, the total areas occupied by Communal and Small Scale Commercial farmers have remained virtually unchanged.

2.05 Within the Communal Areas, however, land use patterns have continued to change in response to population pressure. Between 1975 and 1984, when the Communal Area population (growing at a rate of 2.7% per annum) increased from 3.53 million to 4.51 million, the cropped areas increased from 1.7 million ha to 2.3 million ha and the grazing areas correspondingly shrunk (from 11.6 million ha to 10.9 million ha) as more land was brought under cultivation at the expense of grazing land. The proportion of cropped land to total land rose to 14% in the Communal Areas, compared to only 4.0% in the Commercial Areas. Furthermore, the new land being brought under cultivation was better suited for grazing cattle than for growing crops, meaning that more land was now needed to produce the same quantity of grain as was previously produced on a smaller area. The changes in agricultural land use since 1975 are summarized below:

**Table 2.4: Agricultural Land Use Changes (1975-1984)**  
( '000 ha)

	<u>Total Area</u>	<u>Arable Land</u>			<u>Grazing</u>	
		<u>Cropped</u>	<u>Under Irrig.-b/</u>	<u>Fallow or Grazed</u>	<u>Area</u>	<u>Other c/</u>
<u>Commercial Areas a/</u>						
1975	15,430	593	(129)	1,444	10,307	3,086
1980	14,798	575	(155)	1,378	9,885	2,960
1984	12,688	545	(144)	1,130	8,476	2,537
<u>Small Scale Commercial Areas</u>						
1975	1,416	74	(negl.)	113	946	283
1980	1,416	65	(negl.)	122	946	283
1984	1,416	76	(negl.)	111	946	283
<u>Communal Areas</u>						
1975	16,350	1,678	(4)	2,360	9,042	3,270
1980	16,350	2,032	(4)	2,006	9,042	3,270
1984	16,350	2,278	(4)	1,760	9,042	3,270
<u>Resettlement Areas</u>						
1975	-	-	-	-	-	-
1980	632	n.a.	(negl.)	156	350	126
1984 d/	2,644	115	(negl.)	538	1,463	528
<u>Total</u>						
1975	33,196	2,345	(133)	3,917	20,295	6,639
1980	33,196	2,672	(159)	3,662	20,223	6,639
1984	33,098	3,014	(148)	3,539	19,927	6,618

a/ Excludes the planted forest area of 82,000 ha in 1975, 94,000 ha in 1980 and 132,000 ha in 1984.

b/ The reduction in total area under irrigation in 1984 is partly explained by the fact that 1984 was the third consecutive year of drought. Also, some of the irrigation schemes in the communal areas have fallen into disrepair and are not currently operational.

c/ Non-agricultural land (rock outcrop, etc.) estimated at 20% of total.

d/ Includes some land already purchased but not yet settled.

Source: Adopted from AGRITEX estimates.

2.06 It has been estimated that population pressure is critical in nearly 40% of the Communal Areas.<sup>14/</sup> These areas correspond largely to an arc of communal lands extending from the southwest of Masvingo, northeastwards through the Sabi North Communal Area into Mtoko district,

<sup>14/</sup> WHITLOW, J.R, 1980 "Environmental Constraints and Population Pressures in the Tribal Areas of Zimbabwe", Zimbabwe Agricultural Journal, 77 (4).

east of Harare, and including the communal areas immediately surrounding Harare and to the south of Bulawayo. In the most populous communal areas in the provinces of Mashonaland East, Manicaland and Masvingo, population densities well over 100 persons/km<sup>2</sup> are not uncommon, as compared to an average of about 14 persons/km<sup>2</sup> in the Commercial Areas and about 32 persons/km<sup>2</sup> in the Small-Scale Commercial Farming Areas, in those same provinces. Population densities and growth rates are summarized below:

Table 2.5: Population Densities and Growth Rates

	Density (persons/km <sup>2</sup> )		Average Annual Growth Rate (%) (1969 - 1982)
<u>Zimbabwe</u>	19.3		3.1
Communal Areas	25.2		2.7
Commercial Areas	9.4		1.9
Urban Areas	870.9		5.4
<u>Selected Provinces</u>		(Range)	
<u>Manicaland</u>	31.5		2.8
Communal Areas	38.9	19.5 - 205.7	2.6
Commercial Areas	16.4	4.8 - 33.0	3.0
<u>Mashonaland East</u>	60.0		4.2
Communal Areas	35.2	8.0 - 112.2	2.2
Commercial Areas	15.2	6.0 - 29.2	2.2
<u>Matabeleland South</u>	7.8		1.9
Communal Areas	16.3	5.1 - 49.9	2.7
Commercial Areas	2.6	0.8 - 10.0	-0.5
<u>Masvingo</u>	23.3		2.8
Communal Areas	36.1	5.8 - 69.1	2.6
Commercial Areas	10.1	1.5 - 10.4	2.9

Source: Zimbabwe 1982 Population Census;  
A Preliminary Assessment (February 1984)

2.07 With the population in the Communal Areas growing at an estimated rate of 2.7% per annum during the last decade, the cattle herd has also increased, compounding the problem created by a shrinking grazing resource. Serious overstocking is now considered characteristic in most of the Communal Areas where cattle can be found, while stocking rates in the Commercial Areas generally conform to recommended levels. Stocking rates in many of the communal areas are frequently more than three times above the recommended rates. The size and distribution of the herd between the Communal and Commercial Areas is summarized below:

**Table 2.6: The Size and Distribution of the Cattle Herd**  
( '000 head)

Natural Region	I	II	III	IV	V	Total
<b>Tenure System</b>						
Commercial	37.5	878.7	476.3	477.8	163.1	2,033.4
Small Scale Comm.	2.9	52.0	65.3	42.9	34.6	197.7
Communal	<u>12.0</u>	<u>648.3</u>	<u>685.6</u>	<u>1,237.6</u>	<u>479.4</u>	<u>3,062.9</u>
	52.4	1,579.0	1,227.2	1,758.3	677.1	5,294.0

Source: Cattle Census in Commercial Areas, 1983-84  
Stock Census in Communal Areas, 1983-84

2.08 The land area under irrigation is relatively small (about 148,000 ha) and all but about 4,000 ha in the Communal Areas and some negligible amounts in the Small-Scale Commercial and Resettlement areas, are located in the Commercial Areas.

### III. STATE OF THE LAND RESOURCE

3.01 As described in the previous chapter, population pressures (both human and livestock), occurring mainly in the Communal Areas, have combined to alter land use patterns very significantly. Furthermore, as discussed below, these changes are having a very serious negative impact on the quality of the land resource, to the point where land degradation from soil erosion is limiting the prospects for agricultural development in many of the Communal Areas.

3.02 The relationships between these land use changes and the quality of land in the Communal Areas are both complex and varied. First, as more marginal land, often on steep slopes, has been brought under cultivation in the Communal Areas, most farmers have not adopted appropriate (but very labor intensive) conservation measures such as ridging along the contours. The result has been high rates of runoff and soil erosion. Some observers have also noted the lack of maintenance of existing conservation (called mechanical) works on formerly cropped land. Second, and perhaps more importantly, as new land has been brought under cultivation and the grazing land correspondingly has been reduced, livestock owners, operating under a communal grazing system, have had no economic incentive to limit the sizes of their herds. The result has been serious overstocking and the destruction of the veld's vegetative cover, leading finally to extensive sheet and gully erosion. Another important factor at work has been the increased demand for fuelwood and fencing poles that has accompanied the

large increases in population, with the result that trees and bush in the Communal Areas have been rapidly disappearing, further accelerating the soil erosion and desertification process.

3.03 In 1982, Meikle estimated soil losses in the Communal Areas to be 82.3 tons per ha per year in Natural Region III and 53.5 tons/ha/yr in Natural Region IV, compared to average soil loss figures for the Commercial Areas of only 8.7 tons/ha/yr for Natural Region II and 6.8 tons/ha/yr for Natural Region III.<sup>15/</sup> The Government's most recent estimates of the extent and severity of the soil erosion problem nationwide are depicted in IBRD Map No. 19096, which was prepared by the Department of Natural Resources. About 40% of the Communal Areas can be regarded as having serious erosion problems, with another 35% having moderate problems. Although these estimates are based on the subjective evaluations of field staff, they do serve to indicate the relative seriousness and broad magnitude of the problem. Two surveys, which are presently underway, are expected to provide more scientifically-based and up-to-date information on the extent of soil erosion throughout the country.<sup>16/</sup>

3.04 Another indirect but by no means perfect measure of the extent of soil erosion, and a problem in its own right, is the degree of siltation in the country's rivers and dams.<sup>17/</sup> One study of the country's major water catchment areas indicates that the problem of siltation is most acute in the eastern and southeastern middleveld, which contains most of the Sabi River Catchment area.<sup>18/</sup> This is also the area with the heaviest population pressure (para 2.06). The communal lands which cover about 58% of the Sabi Catchment area are estimated to be responsible for about 96% of the estimated 100 million tons of siltload which the river carries. Many of the dams in this area (most of which are small storage dams for drinking water for humans and cattle) are already silted up to 50% or more.

3.05 With regard to woodland resources, the extent of deforestation in the Communal Areas, and its impact on the supply of wood products and protection of the land resource, has now reached serious proportions in

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<sup>15/</sup> Meikle, G. 1982 "Soil Erosion of Sabi Catchment and Suggested Remedies" Address to Manicaland Regional Meeting on 22nd January, 1982.

<sup>16/</sup> The first of these, a national survey based on sampling techniques and scheduled for completion in 1986, is being carried out by the Geography Department of the University of Zimbabwe under the auspices of the Natural Resources Board. The second survey, which focuses on the Communal Areas and would inter alia assess erosion hazards in these areas, is being carried out by the Department of Research and Specialist Services (R&SS) with the assistance of Consultants financed under the Bank/IFAD financed National Agricultural Extension and Research Project.

<sup>17/</sup> Siltation is not a perfect measure of the extent of soil erosion because not all of the eroded soil materials are deposited in the dams and rivers.

<sup>18/</sup> Ministry of Energy and Water Resources and Development, 1985. (Interconsult, Consulting Engineers) Soil and Water Conservation.

many of the Communal Areas. It was estimated that in 1980, 40% of the Communal Areas already had significant wood deficits and that another 30% would soon face this problem. Since then, if anything, the problem has worsened.

3.06 Guardianship for the nation's natural resources rests with the Natural Resources Board (NRB) of the Ministry of Natural Resources and Tourism (MNR&T). Its powers and functions derive from the Natural Resources Act which has remained in effect essentially unaltered since 1941. NRB's functions in the conservation field are very broad and wide-ranging and include: monitoring, public information, advising Government, as well as enforcement. The Board is also empowered to recommend to the Minister the construction of conservation works.

3.07 In practice, however, very few of these functions are actually performed, owing mainly to a limited budget and a shortage of technical personnel within the Ministry. Only minor public conservation works are carried out. Within the Ministry, the Department of Natural Resources is the Board's main implementing arm. Its organizational structure is shown in Chart 27631. The main units in the Department include the Lands Inspectorate, the Extension Branch, a Research Section, and a Board served by a Secretariat (see Chart). While most of the officer posts have been filled, there is a shortage of experienced technical staff which, combined with the limited funds and equipment, prevents the Ministry from carrying out its mandate.

3.08 AGRITEX, within the Ministry of Agriculture (now the Ministry of Lands, Agriculture and Rural Resettlement), is presently building up its conservation capacity by establishing a Soil and Water Conservation Unit. This is a move in the right direction.

3.09 Although concerned mainly with commercial wood production, recently the Forestry Commission within MNRT has begun to promote the planting of trees in the Communal Areas through its newly-created Rural Afforestation Department with the assistance of World Bank financing. This program is still in its infancy, however, and so far has had very little impact.

#### IV. MAIN ISSUES AND RECOMMENDATIONS

##### A. Land Use and the Relationship between the Communal and Commercial Areas

4.01 In analyzing land use in Zimbabwe, few can look at the present land ownership patterns and not be convinced that this division is widely skewed both in terms of land sizes and the quality of land. In the Commercial Areas, a relatively small number of farmers (less than 5,000) occupy approximately 39% of the country's agricultural land, while in the Communal Areas there is land scarcity due to population pressure, both human and livestock, resulting in increasing land degradation, the reduction of the commons, growing numbers of livestock, and the continuing subdivision of land through inheritance. Furthermore, the history of how

these settlement patterns developed is replete with examples of how one group, which was more aggressive, better educated and economically and politically more powerful, at best dominated and at worst exploited another group. Quite understandably, therefore, this issue is sensitive, if not emotionally charged.

4.02 However, merely identifying the problem and tracing its genesis do not automatically suggest the solution. Any attempt to solve the problem of land use in Zimbabwe must assess the development alternatives in both the Communal and Commercial Areas and the trade-offs between these areas. One tempting solution, especially in view of the inequalities of the past, would be to redistribute commercial land to relieve pressure in the Communal Areas. But the Commercial Areas are highly productive, accounting for about 60% of the country's marketed food production, 76% of the country's agricultural export earnings, and 87% of the total marketed offtake from the national herd. It is quite clear, therefore, that these farmers make a major contribution to the nation's welfare and general development. A compulsory system of land transfer, therefore, is likely to cause significant economic and social disruptions. In any case, the Government has quite wisely rejected any compulsory system of resettlement, favoring instead a voluntary willing buyer/willing seller approach.

4.03 Within this overall policy framework, several questions remain regarding the extent to which the Commercial Areas can serve to relieve land pressure in the Communal Areas. The following sections analyze these questions by examining: the availability of surplus land in the Commercial Areas; the efficiency with which agricultural land is utilized; the land market; and the progress to date and lessons learned from the Government's Resettlement Program.

#### B. Surplus Agricultural Land in the Commercial Areas

4.04 In searching for solutions to relieving the kinds of population pressure in the Communal Areas described in the preceding chapters, the question often arises as to whether the Commercial Areas might provide some relief. Are there, in other words, significant amounts of unutilized or surplus land in the Commercial Areas? This section seeks to answer this question as it relates to the availability of truly surplus land in the sense of being over and above what is required for the quantity of crops and cattle grown. To answer this question, it may be helpful to divide the Commercial Areas into three categories: grazing, cropped, and fallow land. The situation in the Commercial Areas is summarized below:

Table 4.1: Distribution of Commercial Areas  
by Natural Region and Land Use  
(000 ha)

	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>TOTAL</u>
Grazing	261.6	2,318.2	1,338.3	2,094.0	2,459.9	8,472.0
Cropped	9.0	361.0	87.0	35.0	57.0	549.0
Fallow or Grazed	33.8	335.5	178.5	266.7	315.3	1,129.8
Other <u>a/</u>	76.2	753.6	401.0	598.8	707.8	2,537.4
TOTAL	380.6	3,768.3	2,004.8	2,994.5	3,540.0	12,688.2

a/ Unsuitable for agricultural purposes (rock outcrop, etc.).

Source: Adopted from AGRITEX estimates.

4.05 As can be seen from the above table, the Commercial Areas comprise about 8.5 million ha of grazing land (about 67% of the total commercial land) of which about 3.0% is located in Natural Region I, 27% in Natural Region II, 16% in Natural Region III, 25% in Natural Region IV and the remaining 29% in Natural Region V. In addition, only about 0.5 million ha are currently cropped, leaving a little more than one million ha as either fallow or grazed land. (Data on the exact disposition of the one million ha is not available.) To get a rough estimate of how much of this land is currently needed for grazing, it is necessary to compare the total grazing land (inclusive of the more than one million ha fallow or grazed lands) with the estimated cattle numbers and recommended safe (sustainable) stocking rates by natural region. This information is summarized below:

Table 4.2: Stocking Rates and Carrying Capacities in the Commercial Areas by Natural Region

Natural Region	(1)	(2)	(3)	(4)	(5)
	Grazing Land ('000 ha) a/	Cattle Population	Livestock Units (2) X 0.7	Stocking Rate (ha/LSU) (1)÷(3)	Recommended Safe Stocking Rate (ha/LSU)b/
I	295.4	37,546	26,282	11.0	3-4
II	2,653.7	878,676	615,073	4.3	3-4
III	1,516.8	476,356	333,449	4.6	5-6
IV	2,360.7	477,798	334,459	7.1	8
V	2,775.2	163,079	114,115	24.3	12+
Total	9,601.8	2,033,455	1,423,378		

a/ Includes 1.1 million ha of either grazed or fallow land.

b/ AGRITEX estimates.

Source: Cattle population figures are based on Table 2.6.

4.06 In Natural Region I, the results are not significant because of the small number of cattle and grazing area involved. In Natural Region IV, it would appear that there is even some overstocking. Only in Natural Region V (depending on the specific recommended rate that one uses) is the actual stocking rate significantly below the recommended level, thus suggesting the possibility of some surplus land, although grazing capacity could be over-estimated in this region. Based on an average recommended stocking rate of 15 ha/LSU for NR V, the residual land works out to about 968,000 million ha.

4.07 One can only speculate that, had the land market not declined so dramatically during the late 70s and early 80s due mainly to political uncertainty, probably a good portion of this land would have been sold. At present, the price of commercial farm land, even in Natural Region V, remains well below what might be judged normal market value. Various restrictions on land transactions, and weak effective demand would appear to explain most of this phenomenon (para 4.18).

4.08 In summary, therefore, it would appear that there could be close to one million hectares of truly surplus land in the Commercial Areas. Unfortunately, all of this surplus land is located in Natural Region V which is the least suitable for cultivation and resettlement by farmers and other residents of the Communal Areas. While bringing this land into use would not result in loss of commercial crop production, it would not represent an improvement over present conditions in the Communal Areas and would only exacerbate the problem of intensively utilizing the most ecologically fragile land available.

### C. Efficiency of Land Use

4.09 Another related question is whether agricultural land is efficiently utilized. In this connection, it is interesting to note that in the Commercial Areas at present only about 549,000 ha are under crops, compared with an admittedly rough estimate of arable land ranging from 3.0 to 3.5 million ha. This means that a large proportion of the arable land in the Commercial Areas is not under cultivation. In fact, a good part of it has become grazing land and is stocked with cattle; one finds that as much as 79% of the agricultural land in the Commercial Areas in the higher rainfall regions (Natural Regions II and III) is used for grazing (Table 4.1). At the same time, in the Communal Areas in the lower rainfall regions (Natural Regions IV and V), as much as 17% of the agricultural land is under crops (Table 2.3), which, for these natural regions, represents a very high proportion of cropping.

4.10 So far as efficiency is concerned, one would normally expect considerably more regional specialization in accordance with agronomic potential; that is, more extensive production systems (livestock) in the drier regions and substantially more intensive agriculture (cropping) in the higher rainfall areas. Why this pattern of land use did not develop in Zimbabwe is perhaps best explained by the past dualism and imperfections in the land market, not the least important of which was the fact that until recently Africans were, for all practical purposes, restricted from settling in the Commercial Areas which encompassed most of the country's higher rainfall regions. At the same time, the grazing land in the Tribal Trust Reserves was off-limits to commercial development. Undoubtedly, had these artificial boundaries not existed and had people, regardless of race, been free to settle wherever they wished, a much larger proportion of the available arable land in the country would be under cultivation today instead of holding cattle, while the shortage of arable land inevitably would have forced most of the country's livestock production into the drier areas of Natural Regions IV and V.<sup>19/</sup>

4.11 Although the restrictions on Africans holding land in the Commercial Areas have been removed, other factors in the land markets have tended to reinforce the historical land use patterns. In the land market, restrictions on the sale of commercial land (para 4.18), in addition to the lack of effective demand by African farmers due to their relatively low purchasing power, and the absence of a formal leasing market have tended to keep land prices low, thus favoring more extensive farming systems. This

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<sup>19/</sup> In regard to regional specialization, one qualification needs to be made. Wherever the smallholder traditional farming system is located (whether it be in Natural Regions IV and V or II and III), it will still be a mixed farming system involving both crops and livestock in which the latter are held for a variety of reasons, including draft power, manure, milk, and a host of social and cultural reasons as well.

trend towards more extensive farming systems has been further reinforced by the large increases in minimum agricultural wages since Independence and by the shortage and high cost of capital equipment associated with the rationing of foreign exchange.

4.12 In view of these relative input prices, the limited size of the food and export crop markets, and the relatively high price that good quality beef can fetch on the domestic market (not to mention in the EEC market which Zimbabwe has recently entered under the Lome III Agreement), it is not surprising that commercial farmers (even in Natural Region II) have decided to invest heavily in livestock which requires much land and relatively little labor and capital. Thus, for the commercial farmer, livestock is not just an excellent "crop" from the agronomic standpoint to rotate with tobacco (a crop that is extensively produced throughout the Commercial Areas), but it is also a financially lucrative enterprise in its own right under present economic conditions, even in the higher rainfall areas.

4.13 To change present land use patterns, therefore, and to move towards greater efficiency and regional specialization without resorting to compulsory resettlement schemes which would be very disruptive and also contrary to Government policy, it will be necessary to change the underlying economic factors that are presently affecting land use and related investment decisions. This essentially entails creating incentives for the more efficient use of land, labor and capital. Because of its relative importance in affecting land use decisions, the land market is further discussed below.

#### D. The Land Market

4.14 Historically, Zimbabwe has had two land markets - one relatively open, and the other, controlled. The former covered the European areas, and, from 1930, the African Purchase Areas as well, while the latter applied to the Communal Areas. Even after Independence, the two markets have continued to exist.

4.15 In the Communal Areas, the law expressly prohibits the sale of land; there is only a right to occupy and use. Nevertheless, in the Communal Areas there is an "informal" land market. The prices paid are closely related to land potential and location. Ostensibly, however, these sales (as in other African countries where sales of land are prohibited) are disguised as purchases of buildings or other permanent improvements, including planted trees. Furthermore, as in many other countries, it is normally the powerful and wealthy who are able to take advantage of these loopholes. In addition to being inequitable, this situation tends to inhibit agricultural growth since the persons who make these purchases often see land not as a productive asset but only as a store of wealth and as a source of economic security.

4.16 In the Commercial Areas, the land market operates like most free land markets in which land prices are related to land quality, capacity for multiple uses and proximity to means of communication and markets. However, the land market in the Commercial Areas is also significantly affected by two other factors: political uncertainty and legal constraints.

4.17 In the years before Independence, the Commercial Areas were affected by political uncertainty. Land prices plummeted and panic sales were common. This situation continued until 1981. Thereafter, in the environs of Harare and to the north, land prices have gradually risen. They are, however, still an estimated 30-45 percent below what they were in 1975. In the area around Bulawayo and south of that city, political insecurity continues to depress land prices.

4.18 However, there continue to be serious imperfections in the land market. The leasing market is highly undeveloped and restrictions under the Rural Land Act, 1979 prevent an owner from entering into sales to more than one person, or completing a share-cropping agreement, without the express written permission of MLGTP (now MLGRUD). Moreover, the volume of land transactions is likely to be reduced by the foreign exchange laws which control the flow of foreign exchange outside the country and, hence, discourage the sale of commercial land by those farmers who are unwilling to accept payment in local currency. If the proposed Land Acquisition Bill is passed, this could pose an additional restriction by giving the Minister of MLARR the privilege of being offered the first opportunity to buy all lands that are presented for sale. These existing and potential legal restrictions increase uncertainty while reducing the circulation of land among more enterprising persons since a significant number of land owners continue to hold land in the expectation that the land market will improve.

4.19 Because land prices would appear to be well below market value (and the factors responsible are unlikely to change in the short term), a prima facie case could be made for the imposition of a land tax to raise land prices and thereby provide the incentive for farmers either to utilize land more efficiently or to sell it. One tax proposal that has been considered by Government consists of two alternative options - the first is based on what is called the "gross rated output capacity" of the land, and the second on the size of land holdings above a prescribed minimum. In the case of the former, land would have to be classified and a judgment made on gross rated output capacity (i.e., the value of production that land of a particular classification could be expected to produce). The tax would be assessed on gross rated output capacity subject to an exempt minimum. This tax, however, would be offset, dollar for dollar, against income taxes. Therefore, the greater the production, the lower the income tax payable. In the case of the second option, a certain minimum size holding of land would also be exempt from taxation, on the assumption that the area of land above this amount is either not needed to ensure an adequate level of farm income, or underutilized. Land holdings above the minimum would be taxed progressively. A third alternative which would be far simpler to implement would be to increase present land tax rates for the Commercial Areas, allowing these to be fully offset against income taxes on production. These taxes were formerly collected by the rural councils which have since been incorporated within the district councils.

4.20 It is realized, however, that none of the options mentioned above is perfect. The selection of any option must be influenced by considerations of simplicity, cost of administration, impact on efficiency and equity. The goal would be to raise agricultural productivity and to compel farmers to decide to what extent they can afford to leave land idle (beyond reasonable rotational fallows) or to sell the land.

4.21 In conclusion, land transactions in both the Communal and Commercial Areas are constrained by various restrictions on the sale of land. These restrictions need to be reviewed and an assessment made of their impact on agricultural productivity and growth.

#### E. Resettlement

4.22 While the foregoing focuses on removing market distortions and allowing prices to more efficiently allocate resources, the Government's Resettlement Program essentially entails working through the existing land market and assisting interested smallholder African farmers in settling on vacant commercial land sold by farmers and purchased by the Government. Needless to say, therefore, the removal of market distortions, which would lead to more land sales, would also help the Resettlement Program.

4.23 Although resettlement has received considerable publicity, it has remained a relatively small program since its inception after Independence. The situation in terms of land area actually settled and number of settlers is summarized below:

Table 4.3: Resettlement  
(As of April 30, 1985)

<u>Model a/</u>	<u>Area</u> ( <u>'000 ha</u> )	<u>Number of</u> <u>Settlers</u>
A (intensive) b/	1,332	21,552 families
A (accelerated) c/	502	8,118 families
B	95	2,400 coop.members
C	18	515 families
D	23	636 families
Total	<u>1,970</u>	<u>33,221</u> families

a/ The model definitions are given in para 1.37, footnote 9.

b/ Including provision of infrastructure (access roads, water, etc.)

c/ Without infrastructure.

Source: Former Ministry of Lands, Resettlement and Rural Development (MLRRD), now merged with Agriculture.

4.24 In terms of the amount of money spent, the conclusion is much the same - a relatively small amount (only Z\$58.5 million as of March 31, 1985) about equally divided between development and land acquisition costs. 20/ The reasons for the relatively small size of the program have already been noted (paras. 1.40-1.43), namely, the demand for farm land by ex-combatants, former farm laborers, and other landless Zimbabweans (the Government's initial target group) has been largely met; and secondly, the commercial farm population appears to have stabilized, resulting in very little new commercial farm land coming onto the market for sale. Furthermore, even had these supply and demand forces not been operating, the Government probably would have found it difficult to accelerate the program much beyond what has already been achieved. Just to reach the present rate of resettlement, the Government's administrative and planning capacity (mainly centered in the consolidated Ministry of Lands, Agriculture and Rural Resettlement) has been stretched to the limit. At this juncture, it is perhaps appropriate to take stock of the program and to assess the prospects for the future.

4.25 For the last couple of years, as part of its ongoing financial support for resettlement, ODA (U.K.) has been reviewing the Resettlement Program. Those reviews have consisted of annual visits to a sample number of resettlement schemes. Annual reports have been produced, detailing, mostly in qualitative terms, the findings of the visiting team. While useful in many ways, they do not, however, provide a continuous verifiable account of agricultural performance. In addition, a monitoring and evaluation section within the Central Planning Unit of MLARR (supported by ODA) has recently designed and is now implementing a monitoring and evaluation system for the resettlement areas. This system presently comprises a sample of eleven schemes, including ten of Model A and one of Model C. The data cover the 1983/84 and 1984/85 crop seasons. Plans exist, but have not yet been implemented, to include some Model B schemes that are in close proximity to the existing sample of Model A schemes.

4.26 In general, the data reveal mixed results, with some schemes performing on target compared with the AGRITEX plans and others performing either above or below their targets. How these results compare with performance on the same land, prior to resettlement, is not known.

4.27 To compare performance on the resettlement schemes with performance in the Communal Areas, census data have been used. The census data on the resettlement schemes cover the agricultural season ending September 30, 1983, which, incidentally, was a drought year. The data show that the average yields achieved on the resettlement schemes under Model A were just about equal to or somewhat lower than the average yields obtained by farmers in the Communal Areas, the exception being tobacco where yields on some specialized resettlement schemes were substantially higher. These yields are shown below:

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20/ ARDA Sub-Committee on Resettlement, Summary of Capital Expenditure as of 30th March, 1985.

Table 4.4:  
Comparative Yields - Resettlement and Communal Areas (1982/83 season)  
Average Yield (kg/ha)

<u>Crops</u>	<u>Resettlement</u> (Model A)	<u>Communal Areas</u>
Tobacco		
Burley	1,021	536
Oriental	318	240
Cotton	444	496
Maize		
Hybrid	340	n.a.
Others	234	n.a.
Total	338	379
Other Grains		
Sorghum	85	209
Wheat	436	n.a.
Munga (pearl millet)	65	194
Rapoko (finger millet)	125	145
Rice	65	n.a.

Sources: —1983 Census of Resettlement Schemes, Agricultural Statistics, Central Statistical Office.  
—AGRITEX estimates for the Communal Areas

4.28 Probably the main reason for these similarities in performance is that agronomic conditions in the resettlement areas are not significantly different from those prevailing in the Communal Areas; about 75% of the resettlement that has taken place has occurred in Natural Regions III and IV. This pattern is similar to the existing distribution of communal lands (Table 2.2) of which 74% of the land is in Natural Regions IV and V. In many cases, resettlement has occurred on former commercial grazing land, primarily in Natural Region IV.

4.29 For Model B (collective farms), while the census data on production are sparse and unreliable, the fairly widespread impression, held by those who are familiar with these schemes, is that they are not working. Lack of farm skills and management expertise within the schemes, coupled with undue dependence on the Government to supply inputs (particularly machinery and spare parts which are in short supply), has made it difficult, if not impossible, for many of these schemes to achieve a viable operation.

4.30 For Model C (nucleus estate with outgrowers), the evidence from the Nyamazura Scheme indicates that progress to date has been slow in getting settlers to adopt a new cash crop (flue cured tobacco). In any case, in terms of the number of settlers, Model C is relatively insignificant. <sup>21/</sup> Model D (a rotational grazing scheme) has been analyzed in the context of grazing schemes generally (para 4.38).

4.31 On balance, Resettlement (essentially Model A) has been relatively successful in addressing some immediate post-Independence problems. It can be credited with putting almost two million ha of vacant

21/ The only other Model C scheme is the Rusitu Small Scale Dairy Scheme.

commercial farm land back into productive agricultural use, while providing, in many cases, a new vocation (farming) for several thousand unemployed Zimbabweans, many of whom were returning from the war. Resettlement has not, however, addressed the longer term land use problems facing Zimbabwe. It is now generally recognized that even had the Government's previously held resettlement target (162,000 families in three years) been achieved, it would not in all likelihood have had much impact on land use conditions in the Communal Areas. Rural population growth alone within a few years would offset these shifts. Resettlement, therefore, may serve certain goals, but, by itself, cannot provide the needed safety valve for the Communal Areas. A strategy for directly tackling the land use problem in the Communal Areas is, therefore, urgently needed.

#### F. Tackling the Communal Area Problem More Directly

4.32 The foregoing suggests that, while something can and should be done to improve the efficiency of land use and possibly to even slightly accelerate the Resettlement Program (Model A in certain areas), there are definite limits to the extent to which the Commercial Areas can substantially relieve land pressure in the Communal Areas. Therefore, one is obliged to consider solving the land use problem in the Communal Areas more directly. The Government is already beginning to move in this direction. The following sections first identify some of the main obstacles (communal grazing and tenurial insecurity) that will need to be overcome and then set out the basis for a land use strategy.

#### G. Communal Grazing and Overstocking

4.33 Overstocking of cattle is probably the single most important factor contributing to the degradation of land in the Communal Areas. Because of this, conservationists and agriculturalists alike clamor for the control of stocking rates, often overlooking the fact that overstocking is only the result, not the cause of the problem. Individual cattle holders, under the present communal grazing system, have a very strong incentive to stock the land with as much cattle as they can since, to them, the land is free for all practical purposes, even though in the long term (which few consider), they individually, and the community as a whole, would suffer from their failure to conserve the land resource.

4.34 Under the communal grazing system, cattle holders (including absentee owners) have free and unrestricted access to all the common grazing land. Thus, if one area becomes overgrazed and is unable to sustain the individual's herd, that individual is free to move on to another area. No one, therefore, is required to manage a specific area of land which would automatically give that land an opportunity cost that the individual would be forced to take into account in deciding how to use the land. Instead, under the present system, the herd grows with human population growth, the land becomes overstocked, the number of cattle deaths increases, herd growth rates decline, the cattle to land resource ratios become tolerable again, the herd increases, and the cycle is repeated; however, there is always a return at the end of each cycle to a progressively lower carrying capacity as the recuperative qualities of the land are diminished by this essentially destructive process. The evidence suggests that this cyclical process is already in an advanced stage in many of the Communal Areas.

4.35 The question which arises, therefore, is whether the herd is to be managed in such a way that the maximum sustainable carrying capacity of the land is maintained in a stable manner, and perhaps expanded with better technology and management practices, or whether the situation will continue to be characterized by the downward spiralling ratchet effect described above. Because the latter essentially arises from the communal grazing system, in which land is treated as though it were a free resource, it is a problem that is not likely to disappear or even diminish until the dominant land use system changes from communal to some form of community or village, if not individual, grazing responsibility.

4.36 At the same time, it should also be mentioned that, although it does not solve the communal grazing problem, raising offtake rates (currently estimated at only 3.0% for the communal herd) could also contribute to relieving some pressure on the land. In this regard, the promotion of a more extensive cattle marketing system, with the Cold Storage Commission (CSC) as well as other marketing intermediaries playing a much larger role in the Communal Areas, could lead to cattle producer prices and levels of service that result in more cattle being taken off the land and offered for sale.

#### H. Grazing Schemes

4.37 One attempt to deal with the problem of communal grazing is the grazing scheme, whereby a group of villagers, normally comprising a "kraal", agree to set aside from the communal grazing resource a specific area to be subdivided into blocks (paddocks) for rotational grazing (including a certain resting period). These schemes, which have a relatively long history in Zimbabwe, were normally initiated and supported by the authorities, and therefore were not always popular among the people. During the war, many of the schemes either fell into disrepair or were destroyed. Recently, however, as a result of ongoing extension programs, there has been a resurgence of interest and some new schemes have appeared.

4.38 The Government is also experimenting with a pilot grazing scheme in Gwanda District in Matabeleland South in which a vacant commercial ranch is being used to hold communal cattle under a rotational grazing system in order to allow a group of families from the nearby Communal Area to rest their land during part of the year and replan its use. Because this scheme was introduced primarily to deal with the problem of how to resettle vacant commercial land in the drier natural regions, it has been viewed mainly as yet another approach to resettlement and, consequently, it has been given the name Model D to distinguish it from the other resettlement models (A, B, and C described in para 1.37). Nevertheless, as a grazing scheme, it has many of the same characteristics as the other privately initiated schemes, except, of course, for the fact that it depends on the availability of vacant commercial land.

4.39 In the grazing schemes, where fencing has been used, almost invariably the materials have been donated or given as prizes. Members normally pay an initial fee to cover the costs of herdsman and watering facilities, and an annual fee to cover maintenance costs. Participants in the scheme also frequently include non-cattle owners who benefit from the use of draft power and manure. By-laws are sometimes drawn up, stipulating

the rights and obligations of the members, and often including the maximum number of animals that will be allowed in the scheme.

4.40 Apart from the fact that in the past these schemes were often seen as being imposed by the authorities, the more basic constraint preventing the success of these schemes has still not been overcome. As long as the grazing schemes are isolated experiments surrounded by the much larger and universally accepted communal grazing system, there is no way to prevent non-members from encroaching on the grazing scheme and to keep members from reverting to the traditional grazing system outside the scheme. Ironically, the likelihood of this occurring is even greater during those times (e.g., drought) when the need for strict range management practices is greatest. For this reason, a piece-meal modification to the communal grazing system is unlikely to work. Clearly, a nationwide program that deals with large contiguous areas is needed.

#### I. Local Boundary Demarcation and Land Use Planning

4.41 Present indications are that the Government is, in fact, beginning to embark on a nationwide program that could substantially modify the communal grazing system. By promoting the demarcation of boundaries at the village and ward levels, and thereby restricting access to the common grazing resources, the Government has effectively adopted a program to alter the basic practices of the communal grazing system. While this demarcation program is often seen as part of a general policy to decentralize and have local governments manage their own resources, it will also very definitely and irrevocably alter the communal grazing system. It is, therefore, a very significant development.

4.42 If villagers know the limits of their resources and, because of those limits and the knowledge that they cannot graze elsewhere, are forced through their own self-interest to manage those resources in an economical manner, then one of the major land use and conservation problems in the Communal Areas could probably be solved. Of course, to overcome one of the major limitations experienced by the various grazing schemes that have already been experimented with, namely, encroachment by non-members and freedom of members to graze outside the scheme (para 4.40), the program of village boundary delineation will need to be adopted in contiguous areas on a very broad (preferably national) scale.

4.43 Conceivably, within the villages, residents would be able to adopt whatever land management and tenure system they desired. For example, this might even include individual tenure. <sup>22/</sup> Also, presumably there would be nothing to prevent villages from introducing land use levies, the revenues from which could be used to maintain village level development committees (VIDCOs) and implement village schemes. While all these are only ideas at this stage, they clearly suggest that the proposed approach has considerable merit. It remains to be seen how the village land use planning concept will be implemented in practice. Already, however, there are some worrying signs.

4.44 There is at present the risk that an overly mechanistic approach will be adopted whereby each local governing or administrative body (VIDCO,

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<sup>22/</sup> See paras 4.46 - 4.55 for a more detailed discussion of related issues.

WADCO and DIDCO) will be instructed to follow a certain developmental blueprint (e.g., each VIDCO must be comprised of certain posts to perform prescribed tasks) and, in particular, people will be encouraged to move into large central villages in order to reduce the overheads from providing social services. As the evidence from many other countries suggests, such mechanistic approaches have not worked for a variety of reasons, not the least of which are the independent attitudes and need for individual identity of, and control by, the people themselves. It should also be noted that villagization (i.e., the concentration of the rural population in large villages) has the additional risk of causing considerable environmental damage as has been experienced by the countries that have experimented with this concept.

4.45 Needless to say, the Government has a critical role to play in the demarcation of boundaries and in the development of land use planning and management capacity at the local level. However, the Government's role should not replace the active participation of the local communities; its role should be more in the form of catalyst, honest broker in the case of boundary disputes, and technical advisor and trainer. This is an area in which some assistance may be required (Chapter V).

#### J. Land Tenure

4.46 There is a continuing debate about the form of land tenure most likely to induce agricultural growth in Zimbabwe. The two major systems in place today are the communal and individual land tenure systems. The former applies to the Communal Areas; the latter, to the Small and Large Scale Commercial Areas. There is also the system of granted permits in Resettlement Areas. With regard to all systems, however, there is uncertainty as to future directions.

4.47 In the Commercial Areas this uncertainty arises from the fear that the nature of title will be altered - from absolute title to something less (possibly long-term leases). Further, there are already legal restrictions on the right to transfer to more than one person and to enter into sharecropping agreements without Ministerial approval (paras 1.38 and 4.18).

4.48 Tenure in the communal lands is now covered by the Communal Lands Act (1982). However, the Act leaves many questions unanswered. While confirming that title to these lands is vested in the President, it gives the power of allocation and re-allocation of these lands to district councils (which may eventually delegate these powers to VIDCOs). In practice, however, where land for allocation is available, there are cases where both the chiefs and the district councils have allocated land, resulting in some overlapping of power.

4.49 The Act does not clarify the rights of persons who, under the former Land Husbandry Act (NLHA), had the right to transfer their rights of use. More generally, however, the Act leaves unchanged the fact that the person actually using the land has nothing more than a right of use and occupation. The question which then arises is whether this situation is conducive to the undertaking of long-term improvements on the land -- such as contour bunding, terracing, tree planting, etc.

4.50 Before attempting to address these questions through adjustments in land tenure, it is necessary to view the land issue in proper perspective. As stated, the idea that every person is entitled to have access to land is feasible only when there is land abundance. There is, however, insufficient land for distribution to everyone without causing economic disruption. Further, with increasing land scarcity and rapid social change, the indigenous system is frequently unable to provide the security it provided during the period of land abundance. This means that the emphasis must shift from land opportunities to employment opportunities. This shift may cause some difficulty, especially since there has been an overriding attachment to land and constant reaffirmation of the theory of inalienable rights of access to land. But land is a finite resource and the more it is carved up into very small parcels, the greater the likelihood of diminishing labor productivity. Human resources, on the other hand, are restricted mainly by lack of skills and opportunities. It is these skills that need to be developed.

4.51 Both the Chavunduka Commission and the "Communal Lands Development Plan -- A Fifteen-Year Development Strategy" have recommended changes in the present tenurial system, leaning towards greater tenurial security through the provision of leases and an "optimal mix" of tenures.<sup>23/</sup> Some additional tenurial security would appear to be required, if the most productive farmers are to be encouraged to use the limited agricultural land to maximum potential.

4.52 There can be no dogmatic approach in prescribing the most appropriate system of tenure. Any recommendation for the adoption of a system of "individual title" throughout the nation would be as inappropriate as a recommendation for the adoption of a national system of "communal tenure". The basic question, determining the choice of the appropriate tenurial system is: "What tenure would suffice to increase security?" In the sense used here, security implies not only undisturbed possession but also a recognition by the user of land that he would secure the benefits of any capital improvement (such as terracing or investment in capital equipment). The matter could be approached gradually in a number of successive stages, concentrating first on those areas where conditions would appear to generate an immediate need for increased tenurial security. The conditions to look for would be high population density, land "sales" (which under present law would need to be "disguised"), and increasing disputes about rights to land indicating uncertainty in the customary land law. To some extent, these conditions can already be found in the urban peripheries of Zimbabwe. It is in these areas that mapping and initial identification of the actual users of land (together with cadastral surveys to determine for the public record the extent, value, and ownership of land) ought to commence. It may also be necessary for the Government to consider the establishment of land tribunals to speed up the process of dispute adjudication.

4.53 While this process might begin in the urban peripheries, it could then be expanded in an ever-widening circle. It would not be an inexpensive program and it would probably require technical assistance to train the requisite staff.

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<sup>23/</sup> Communal Land Development Plan - A Fifteen-Year Development Strategy, February, 1985.

4.54 The introduction of VIDCOs and the demarcation of village boundaries (paras 4.41 - 4.45) provide an additional opportunity for the selection (possibly on a pilot basis in the early stages) of different mixes of tenure. That is, once VIDCO boundaries have been demarcated, the members could then work inwards, defining the type of tenure to govern common areas, agricultural plots and areas of residence. Of course, any attempt to define the types of tenure would need to have the substantial support of the local population. Thus, there could be no uniform tenure system - only a variety of systems based on the preferences of the individual VIDCOs.

4.55 In conclusion, there is a need to review the present distinctions between land rights of citizens based on the types of agricultural land they occupy (Commercial, Communal and Resettlement). If the strivings for growth are to be achieved, the land tenure systems of the Commercial, Communal and Resettlement Areas must be viewed together in the context of the nation's development. The variations which should be permitted are those which emerge from the local preferences of the individual communities (i.e., VIDCOs and WADCOs).

#### K. A Land Use Strategy

4.56 With the demarcation of village and other local government boundaries, the recognition must eventually come that land in the Communal Areas is simply not abundant enough to provide every resident with his own plot sufficient to eke out a living. The needs of a growing population are likely to be satisfied only by improving levels of productivity in the Communal Areas. This means that the land market and tenure system need to work in such a way that only the better and more efficient farmers have access to the scarce agricultural land that is available while others are induced, and possibly also assisted, to find alternative employment elsewhere. The recommendations regarding the land market and tenure system are directed towards this long-term objective. At the same time, for this strategy to succeed, it will be necessary to provide off-farm employment for those who leave the land. Providing these alternative employment opportunities in a country where employment is already a problem, is certainly no easy task. However, absorbing more and more people on the land where their marginal productivity is very low, is not a solution either since it only tends to disguise the unemployment that exists. Furthermore, such population pressure in the communal areas, through its impact on the quality of the land resource, will inevitably lower overall agricultural productivity. Clearly alternative off-farm employment needs to be generated, recognizing of course that this is a long-term objective and that steps can be taken now towards achieving this goal as discussed below.

4.57 The large cities are certainly not capable of absorbing large numbers of communal area residents. A long-term strategy for the Communal Areas must provide for the development of many smaller towns with non-agricultural employment opportunities in and around the Communal Areas. One welcome sign is the Government's plan to develop rural service centers and growth points. However, often the discussion is presented in terms of developing new towns. It is essential not to approach this problem too theoretically. Already, growth is occurring in many existing towns that border the Communal Areas but business ties are confined to the commercial farming areas which make up the hinterlands. Efforts need to be

made to capitalize on this existing growth and to link commercially the Communal Areas with these actual growth points. There must, therefore, be an identification of those areas capable of attracting new industries that would provide the needed backward and forward linkages with the Communal Areas.

4.58 It is also fairly clear that these growth points and Government assistance cannot be spread evenly throughout the country, however politically attractive this may be. Assistance will need to be tailored both to needs and potential. And lastly, there will need to be a careful assessment of the extent of human resources the Government can provide - an overambitious program which cannot be implemented is more likely to create disaffection and lack of belief in the capacity of Government than one which is modest but implementable.

#### 1. The Institutional Framework for Implementing a Conservation Strategy

4.59 The Government is currently in the process of formulating a conservation strategy. Towards this end, the present section is intended to identify some of the key institutional issues and available options.

4.60 An effective conservation strategy needs to include both the promotion of individual/local initiatives and a national Government program. The latter is required mainly because some conservation works are beyond both the interest and financial capacity of the local population. Yet where substantial environmental externalities are involved (i.e., where benefits and costs extend well beyond the local boundaries and affect the national welfare and a large segment of the population), it is often in the public interest for the national government to intervene. There are several such areas in Zimbabwe where national government investment in conservation works of both a preventive and corrective nature is urgently needed. The catchment area for the Sabi River, which is located mostly in the provinces of Manicaland and Masvingo, is a good example. In this area, land degradation and soil erosion are so extensive and severe that nothing short of a major land reclamation program is likely to succeed in halting and hopefully reversing this trend. Large-scale public conservation programs of this nature will require a major commitment from the Government. At the same time, the villages and individual cultivators need to be encouraged to adopt sound conservation practices.

4.61 So far as the promotion and enforcement of good conservation practices at the local level are concerned, the institutional framework and division of responsibility within Government appear to be fairly well defined. The Ministry of Natural Resources and Tourism (MNRT), through its Lands Inspectorate within the Department of Natural Resources, is entrusted with the responsibility of monitoring the state of the country's natural resources and where violations of prescribed conservation practices occur, enforcing compliance. At the same time, the Extension Branch of the Department of Natural Resources and AGRITEX within MLARR are responsible for extending conservation advice and assistance directly to farmers and to conservation committees, which themselves perform an important monitoring function. However, both organizations (the Lands Inspectorate within MNRT and the Soil and Water Conservation Unit within AGRITEX) need to be strengthened to carry out their responsibilities.

4.62 With respect to the implementation of large-scale public conservation works, however, the institutional framework and division of responsibility within Government is far less clear and, perhaps partly for this reason, there is no significant public conservation works program in the country today despite the urgent need. Before Independence, the Conservation Branch within CONEX (the former extension service that served the commercial farmers and which was later merged with DEVAG to form AGRITEX) was entrusted with the responsibility of carrying out public conservation works in the Commercial Areas. It even had its own plant and tractor fleet for this purpose. While AGRITEX (CONEX's successor) does not have the capability today to carry out this work, there is some thought in Government to building up this construction capacity within AGRITEX or, at least, giving AGRITEX the capacity to identify where and what needs to be done so that the work could be appropriately contracted out. At the same time, the budget for carrying out these works is located in another ministry - MNRT (although only a nominal provision is made at the present time). As mentioned, MNRT is also charged with the responsibility of monitoring the state of the natural resources and as such is in a perfect position to advise on when and where, if not how, public conservation works should be implemented.

4.63 Clearly, there are definite advantages to having all the principal tasks associated with implementing a public conservation program (identification of the problem, choosing the right solution, implementing or contracting out the work, and exercising financial or budgetary control) within one Government department or ministry. This, as mentioned, is not the case today. Regardless of what department or ministry is chosen, it will need to be strengthened as the necessary technical capacity does not yet exist in any of the present departments. Once a public conservation works program is identified, the merely nominal provision that is now made in the budget will need to be replaced with quite substantial allocations of investment capital.

4.64 In summary, the centralization of the various interrelated tasks for implementing large-scale public conservation works within a single organization, and the suitable strengthening of that organization to carry out those tasks, are far more important than the choice of the organization itself. The present ambiguity and fragmentation of responsibilities militates against a concerted approach to deal with land degradation problems.

## V. AN ASSISTANCE PROGRAM

5.01 On the basis of this study's overview of the land subsector, there would appear to be at least three major areas where Zimbabwe could benefit from assistance. These are: (i) in training and equipping a few suitably qualified teams within MLGRUD to help train, advise and assist VIDCOs and WADCOs in the demarcation of boundaries and related planning; (ii) in financing and implementing major public conservation works; and (iii) in strengthening one central organization within Government

(essentially through the training and equipping of a few interdisciplinary teams) to identify conservation problems, propose solutions, oversee the implementation of large public conservation works and monitor and enforce conservation practices. Each of these in turn is briefly discussed below, but only from the standpoint of illustrating in general terms what could be done. To translate these general ideas into implementable action programs, which goes well beyond the scope of this subsector study, will require detailed project preparation work. It is hoped that the ideas presented below will stimulate interest in this regard.

A. Boundary Demarcation and Related Land Use Planning

5.02 As previously noted, the Government's decision to encourage local governments (down to the level of the village) to define the limits to their resources and then to manage them accordingly, is clearly a move in the right direction, provided, of course, that it is not implemented in a mechanistic fashion with prescriptions filtering down, if not imposed, from the top - an unfortunate mistake previous governments in Zimbabwe, and others in neighboring countries, have made repeatedly. This section sets out what assistance might be required to implement present policy and keep it on the right course.

5.03 While a completely integrated planning framework (from the level of the village up to the level of the district and province) might facilitate the implementation of the Government's land use planning policy, it would also require extensive resources (not merely financial but more importantly human, both in terms of number of personnel and skills required) which are not, and for some time will not be available in Zimbabwe, even assuming the realization of the most optimistic training program. This means that policy implementation will need to be practical and concentrate on priorities. At the present time, the highest priority includes developing at the village, and also at ward level, the skills required to: encourage local participation; demarcate and allocate land; select the land use control mechanisms; determine the rights of individuals; and undertake resource inventories (physical, human and financial).

5.04 On the basis of population alone, it is estimated that there are about 6,000 VIDCOs in Zimbabwe. However, not all of these are actually operating. Highest priority needs to be given to those communities that have already expressed an interest in land use management and which have recognized and respected leaders who could help organize the work, keeping in mind, for the reasons already mentioned (para 4.42), that a certain critical mass of participating communities is required. For this target group, the Government, through MLGRUD, could play an extremely effective catalytic role. MLGRUD would need to organize multi-disciplinary teams to visit the VIDCOs and WADCOs to provide the necessary training, advice and assistance. In this connection, a few well-trained teams would be far more effective than a large cadre of inexperienced staff. The equipping and training of these teams would be an area in which the Government could benefit from assistance.

5.05 In regard to demarcating village boundaries (and within the village, the arable, grazing, and residential areas), there is a need for

trained surveyors and survey assistants. These professionals would also need to select the most suitable (and least costly) method of demarcation. Sophisticated and costly systems are obviously to be avoided.

5.06 In selecting the appropriate method, one rule of thumb is that the cost of surveying, mapping and documenting a parcel of land should be about 2 percent of the value of the land, and should rarely exceed more than 5 percent. A reduction in the number of boundary markers can also reduce costs. In addition, the cooperation of the local population should be sought in clearing bushes and shrubs in anticipation of boundary demarcation. Also, the introduction of measures such as photogrammetric techniques, and inertial surveys to speed up implementation, can lower costs. But, if these methods are to be introduced, the country must already have sufficient expertise, staff resources and commitment to the program. Finally, if there are reliable electricity supplies, repair services, training facilities and personnel, computers can reduce costs significantly, especially when new data can be fed directly into the computer and there is (as in Zimbabwe) a minimum amount of existing data to be converted to forms readable by machines. The use of microcomputers to process, store and update legal and fiscal data would provide significant savings in most situations.

#### B. Major Public Conservation Works

5.07 On the assumption that the demarcation of local boundaries and consequent modification of the communal grazing system would be carried out as previously described (since without it, no lasting or long-term improvements could be accomplished), then public conservation works could be expected to have a very high pay-off. However, it would be impossible to expect all such works to be undertaken by villagers, or even VIDCOs. Two of the most important reasons are: first, villagers do not have the resources (financial and skills) to undertake these works. Second, some works would extend beyond village, and even provincial boundaries, and would therefore demand implementation on a national level. The primary objectives of any conservation program would be (i) to protect and develop the natural resources (soil, water, flora and fauna); (ii) to reverse man-made degradation that in most Communal Areas has been going on for decades; and (iii) to reduce siltation which is primarily, though not only, the consequence of cultural and grazing practices.

5.08 Where erosion control is a critical priority and Government intervention is required, the plans for such an area would require independent analysis and consideration of alternatives. Although some may be small, each watershed has its own set of complex and interrelated technical problems since watersheds vary in size, topography and hydrology. In arriving at the solution for erosion control, it is necessary to consider the alternatives for: water and sediment control, flash flood mitigation and disposal of water, irrigation, land shaping and disposal of streambed sediment loads. Thus the number of factors involved in the planning process is large. Some possible large-scale conservation works and measures are discussed below.

5.09 The technology for arresting, if not reversing, soil erosion and decreasing siltation is well-known. Of the various alternatives available, it is necessary to select the least-cost alternative which has the approval and participation of the local population. In some countries, in extreme cases, the only solution available has involved the temporary withdrawal of the human and livestock population until natural revegetation could take place. Such a measure undoubtedly involves some personal loss and therefore, provision has to be made for compensation. With regard to livestock, Government-assisted programs sometimes involve temporary removal of cattle and accommodation in Government byres. Again, the type of vegetation chosen during the period of closure should result in improved pastures and increased development of multipurpose tree species.

5.10 Technological measures might include small conservation structures such as vegetated and stone check dams, channel grade stabilizers, small drop structures, crate wire dams and debris basins. These could be constructed in gullies to augment reforestation while grass planting could be planned for non-gully areas. Most of the structures, after being properly fenced, would complete the task of gully stabilization after two or three years; thereafter, vegetation would complete the task of soil protection. Planting would normally commence in areas closest to the villages having the greatest damage, with more remote areas being treated last. Trees could be planted along contour trenches, and grasses along the downslope berm of each trench. Grasses which are unpalatable to cattle could be planted on contours in areas with frequent cattle movement.

5.11 For the construction work, paid manual labor could be employed, with priority employment being offered to resident local labor. Some machinery, however, such as bulldozers, concrete mixers, vibrators, and dewatering pumps, would probably be required,

5.12 Possible conservation projects and programs like the ones described above are likely to require considerable human and financial resources. This would require a significant effort on the part of the Government and undoubtedly is an area in which assistance would be beneficial.

### C. Implementing a Conservation Program

5.13 The foregoing section sketched the measures necessary to undertake watershed protection and erosion and soil conservation works. The underlying theme was that these programs require interdisciplinary team work and expertise if they are to meet with any measure of success.

5.14 As previously mentioned (paras 4.62 and 4.63), there is an urgent need to consolidate within one department or ministry the various conservation activities either being carried out or presently planned. Wherever these activities are centralized (either in MNRT or AGRITEX), it will be necessary to strengthen implementation capacity. To do this, it is envisaged that interdisciplinary teams will need to be set up.

5.15 As in the case of land use planning, it would not be practical at this stage for every province to have a core team of experts who could work on matters of soil conservation and erosion control. What would be far more effective is the creation of a few teams which can effectively plan and oversee works on a national scale, as well as monitor and enforce conservation practices.

5.16 These core teams would comprise the following disciplines: agriculturalists, foresters, ecologists, engineers, hydrologists, sedimentation experts, sociologists and economists. Assistance would be required for the rapid training and deployment of these teams which could then work with the surveyors.

5.17 In addition, an effective and skilled monitoring unit at the national level would be needed to coordinate and compare the different data arriving from the core teams and various works undertaken, and from other reports on the state of the natural resources. Assistance will be needed in developing this capacity.

## VI. SUMMARY OF MAIN CONCLUSIONS AND RECOMMENDATIONS

6.01 The principal conclusions and recommendations of the Report are summarized below.

6.02 Population pressures (both human and livestock), occurring mainly in the Communal Areas, have altered land use patterns very significantly. In response to population pressures in the Communal Areas, more and more marginal land has been brought under cultivation at the expense of grazing land. At the same time, livestock owners, operating under a communal grazing system, have not had the economic incentive to limit the size of their herds. In addition, livestock continue to serve a number of important economic and social objectives in the rural economy. The result has been serious overstocking and the destruction of the veld's vegetative cover, leading finally to extensive sheet and gully erosion. The soil erosion and desertification process has been further accelerated by deforestation in the most heavily populated areas.

6.03 The impact that these changes are now having on the quality of the land resource is so serious that in many of the Communal Areas, land degradation from soil erosion is limiting the prospects for further agricultural development.

6.04 In view of the inequalities of the past, one tempting solution to Zimbabwe's land use problem and related conservation issues would be the redistribution of commercial farm land to relieve pressure in the Communal

Areas. However, the Commercial Areas are highly productive and any compulsory system of land transfer is likely to cause significant economic disruptions. Therefore, the Government has wisely rejected any compulsory system of resettlement, favoring instead a voluntary willing buyer/willing seller approach. Within this overall policy framework, several questions remain regarding the extent to which the Commercial Areas can serve to relieve pressure in the Communal Areas.

6.05 One question that often arises in this context is whether there is unutilized land in the Commercial Areas. This study estimates that there may be close to one million ha of unutilized land distributed throughout Natural Region V, but this land is not well located (climatically speaking) to offer much prospect for resettlement by communal area farmers.

6.06 Another related question is whether agricultural land is efficiently utilized. By this criterion one would normally expect greater regional specialization, with more extensive agricultural production systems (livestock) in the drier regions and substantially more intensive agriculture in the higher rainfall areas. Why this pattern of land use did not develop in Zimbabwe is perhaps best explained by the past dualism and imperfections in the land market, not the least important of which was the fact that until recently Africans were, for all practical purposes, restricted from settling in the Commercial Areas which encompassed most of the country's higher rainfall regions. Although the restrictions on Africans holding land in the Commercial Areas have been removed, other distortions in the land and other factor (labor and capital input) markets have tended to reinforce the historical land use patterns. To change these patterns and move towards greater efficiency and regional specialization, without resorting to compulsory resettlement schemes which would be very disruptive and also contrary to Government policy, it will be necessary to create the incentives for the more efficient use of land, labor and capital.

6.07 With regard to the land market, the matter is further complicated by the fact that there are actually two land markets in Zimbabwe - one in the Commercial Areas which is relatively free with certain restrictions, and the other in the Communal Areas which is controlled. The present restrictions on land transactions, including leasing, need to be reviewed and an assessment made of their impact on agricultural productivity and growth.

6.08 At present, the price of commercial farm land appears to be well below what might be judged normal market value. It could be argued, therefore, that these low prices do not encourage an efficient use of the land resource. The analysis from this study suggests that if a land tax is deemed necessary to encourage a more efficient use of land, it should be relatively simple to administer and not impede efficiency.

6.09 While the foregoing focuses on removing market distortions and allowing prices to allocate resources more efficiently, the Government's Resettlement Program essentially entails working through the existing land market and assisting interested smallholder African farmers in settling on vacant commercial farm land sold by farmers and purchased by the Government, and in this regard the Program has been relatively successful. However, even under the most optimistic implementation assumptions, this program could not be expected to keep pace with present rural population growth, (2.7% per annum), let alone relieve pressure in the Communal Areas.

6.10 Thus, while there are certain measures that can and should be taken to improve the efficiency of land use and possibly to even slightly accelerate the Resettlement Program, there are definite limits to the Communal Areas' capacity to substantially relieve land pressure in the Communal Areas. Other more direct approaches or strategies are needed to address the land use and related soil degradation problems of the Communal Areas.

6.11 The Government is beginning to move in this direction by encouraging land use planning at the village, ward and district levels. The basic idea of having local communities define their boundaries, and hence, the limits of their resources, is well conceived for it attempts to deal with the main cause of the land degradation problem, namely, the free and unrestricted access to the communal grazing resource. As Zimbabwe's own history clearly demonstrates, it does not help to prescribe that stocking rates should come down. Such compulsory methods have been unsuccessful. To solve the problem, one must address the cause - the communal grazing system - which does not provide farmers with the incentive to reduce their stocking rates. The present policy of demarcating village boundaries and then managing resources to best advantage within those boundaries, seeks to modify the communal grazing system and, if properly implemented, could accomplish the desired result of reducing stocking rates and arresting the degradation of the land resource.

6.12 However, if this program is to succeed, it will need to overcome one of the major limitations experienced by the various grazing schemes which, over a fairly long history, have also attempted, unsuccessfully, to deal with the problem of communal grazing by demarcating the grazing resource at the village level. That limitation is the fact that these schemes were and continue to be surrounded by the much larger and universally accepted communal grazing system, making it virtually impossible to keep non-members out and to prevent members from reverting to the traditional communal grazing system outside the scheme, particularly in times of drought. Similarly, a piece-meal approach to the demarcation of local boundaries is doomed to failure for essentially the same reason. A nation-wide program is clearly needed.

6.13 In addition, it is essential that the policy be implemented flexibly, with local governments adapting this policy to their own needs. A too mechanistic approach, with each local governing or administrative body following a certain blueprint, including the gathering of people into large villages (i.e., villagization) could be counter-productive. As the evidence from many other countries suggests, such mechanistic approaches have not worked.

6.14 The Government has a critical role to play in the development of local land use planning as catalyst, honest broker in the case of boundary disputes, and technical advisor and trainer. Limited financial and human resources require practical approaches and the concentration on priorities. The highest priority at the present time includes developing at the village level, and also at the ward level, the skills required to: encourage local participation; demarcate and allocate land; select the land use control mechanisms; determine the rights of individuals; and undertake

resource inventories (physical, human and financial). Although on the basis of population alone there are some 6,000 VIDCOs, not all of these are actually operating. Highest priority needs to be given to those communities that have already expressed an interest in land use management and have the requisite leaders, keeping in mind, for the reasons already mentioned (para 6.12) that a certain critical mass of participating communities is required. To serve this target group, the Government, through MLGRUD, will need to organize multi-disciplinary teams to visit the VIDCOs and WADCOs to provide the necessary advice and training. In this connection, a few well-trained teams would be far more effective than a large cadre of inexperienced staff.

6.15 While pursuing this strategy, it must also be recognized that even within the communal sector there are increasing appropriations of land by individuals and households, particularly in the urban peripheries and that land transactions are taking place, despite their non-recognition in formal law. Furthermore, population growth has made it increasingly difficult to exercise the theoretical right of access to land. A situation will soon be reached under which the Government will be compelled to place some limitations on the exercise of the theoretical rights of access. It would, therefore, be more desirable to make provision for this possibility now, so that the land market and tenure system can work in such a way that only the better and more efficient farmers can afford to use the scarce agricultural land that is available while others are induced and, possibly also, assisted to find alternative employment elsewhere.

6.16 At present, the land tenure system in Zimbabwe is under review and consequently there is uncertainty as to future directions. If productive use of land, not entitlement alone, is to be the objective of land tenure, some measures for increased tenurial security need to be introduced. This could be approached gradually in a number of successive steps, concentrating first on those areas where conditions would appear to generate an immediate need for increased security. The conditions to look for would be high population density, land "sales", and increasing disputes about rights to land indicating uncertainty in the customary law. To some extent, these conditions can already be found in the urban peripheries. It is in these areas, moving gradually in a widening circle, that mapping, initial identification of the actual users of land, and cadastral surveys should be carried out.

6.17 Of course, for this strategy to succeed, it will also be necessary to provide employment for those who leave the farm. To provide the necessary off-farm employment, a long-term strategy for the Communal Areas must provide for the growth of many smaller towns in and around the Communal Areas. Present Government plans provide for the development of rural service centers and growth points. However, often the discussion is presented in terms of developing new towns. Efforts need to be made to capitalize on the growth of existing towns by commercially linking them to the Communal Areas. Furthermore, these growth points and the associated Government assistance cannot be spread evenly throughout the country due to limited resources, both financial and human. Assistance will need to be tailored to needs and potential.

6.18 With the demarcation of local boundaries and consequent modification of the communal grazing system included as part of an overall land use strategy, investment in conservation should have a very high pay-off. The Government is currently in the process of formulating a conservation strategy. Such a strategy will need to include both the promotion of individual/local initiatives and a national Government program. The latter is required mainly because some conservation works are beyond both the interest and financial capacity of the local populations.

6.19 So far as the promotion and enforcement of good conservation practices at the local level are concerned, the institutional framework and division of responsibility within Government (MNRT and MLARR) appear to be fairly well-defined. However, with respect to the implementation of large-scale public conservation works (of both a preventive and corrective nature), the institutional framework and division of responsibility within Government are far less clear and, perhaps, partly for this reason, there is no significant public conservation works program in the country today despite the urgent need. Clearly, there are definite advantages to having all the principal tasks associated with implementing a public conservation program (identification of the problem, choosing the right solution, implementing or contracting out the work, and exercising financial or budgetary control) within one Government department or ministry. The centralization of the various interrelated tasks for implementing large-scale public conservation works within a single organization, and the suitable strengthening of that organization to carry out those tasks are, in fact, far more important than the choice of the organization itself. The present ambiguity and fragmentation of responsibilities militates against a concerted approach to the land degradation problem.

6.20 On the basis of this study's overview of the Land subsector, there would appear to be at least three major areas where Zimbabwe could benefit from assistance: (i) in training and equipping a few suitably qualified teams within MLGRUD to help train, advise and assist VIDCOs and WADCOs in the demarcation of boundaries and related planning; (ii) in financing the implementation of major public conservation works; and (iii) in strengthening one central organization within Government (essentially through the training and equipping of a few interdisciplinary teams) to identify conservation problems, propose solutions, oversee the implementation of large public conservation works, and monitor and enforce conservation practices.

The "Statement of Policy and a Directive by the Prime Minister"

1. The 1985 Provincial Councils and Administrative Act and the 1957 District Councils Act do not describe the structure of local government, or the functions of officials below the level of the ward. Further, the District Councils Act only refers to assistance by MLGTP in the appointment of "designated officers" and "senior designated officers". The designated officer merely acts "in an advisory capacity to the council and may attend and speak at any meeting of the council or any committee .. but may not vote" at such meetings. The roles and functions of the line ministries, and the further extension of development committees down through the ward to the village level were clarified in a policy statement and directive of the Prime Minister (1984).

2. The statement discusses the political, consultative, development and coordinating functions of the Governor. The Governor has a statutory relationship and right of access to the Minister of MLGTP (now MLGRUD), and is expected to chair joint meetings of the Provincial Council and Development Committee, and the Council alone. But he has the executive right, in keeping with his duties and to enable him to function more effectively, of access to the Provincial Administrator, Provincial Heads of other Ministries and to the Cabinet.

3. With regard to planning, the statement says: "The main purpose of the Provincial Development Committee is to produce the Provincial Development Plan for the coordinated development of the Province. The Provincial Development Plan shall consist of short and long term plans encompassing community projects as well as Government funded schemes and wherever possible, they should reflect major development plans of private organizations. The Provincial Development Plan shall reflect --

(a) the District Development Plan; (b) development plans of Urban Councils; (c) provincial plans of Ministries; (d) the Provincial Development Committee's own ideas and resources; and (e) Government's National Policies. Provincial Officers from the Provincial Development Committee may attend District Development Committee meetings to further the preparation of the Provincial Development Plan ... once adopted (the plan) shall become the Governor's plan for the development of his province. The annual Public Sector Investment Program, prepared by each Ministry, shall incorporate programs drawn from the Provincial Development Plan".

4. The Prime Minister then involves the Ministry of Finance, Economic Planning and Development (MFEPD) in the provincial planning process:

"It is crucially important that the allocation of national resources take into account the needs and priorities of the Provincial Councils. To facilitate this the Ministry ... shall evaluate each Ministry's bid for funds against the framework of the Provincial Plans."

Further, to ensure the economic viability of provincial plans, MFEPD must appoint a Provincial Economic Planning Officer for each province. The duties of this officer include: assisting in the preparation of financial and economic data for the provincial plans and assessing their economic viability; and preparing, with staff assistance, a financial assessment of the provincial plan for the Public Sector Investment Program.

5. At the district level, the senior government officer is the District Administrator. This officer (a) is responsible for coordination of the activities of all ministries and local authorities at the district level; (b) chairs the District Development Committee; (c) gives secretarial services to the District Development Committee (DDC); and (d) compiles the District Development Plan with the committee's assistance.

6. The District Development Committee (DDC) comprises the same officials who are district departmental heads. They have functions similar to their counterparts on the Provincial Development Committee. The prime function, of course, is the preparation of the plans, with annual submissions to the provincial committee of estimates for the Public Sector Investment Program. In addition, the DDCs are supposed to coordinate the activities of other ministries, and implement and monitor approved district plans.

7. Since the boundaries of the line ministries do not coincide with administrative boundaries, the Prime Minister stipulated that line ministries would have to realign their boundaries so as to be coterminous with administrative boundaries within three years from the date of the directive -- presumably 1987.

8. Further explanations of the structure and functions of developmental organizations at the village and ward levels, and of the officials attached to these, are contained in a paper prepared by MLGTP (now MLGRUD) titled "Structure of Village Development Committees. Ward Development Committees and Extension Services". This undated paper is the outcome of a directive from the Prime Minister that "a committee of Ministers look into structures at Village, Ward and District level while at the same time assessing manpower requirements at these levels for the eradication of rural under-development".

9. The basic unit of organization at the village level is the Village Development Committee (VIDCO). A VIDCO comprises six members, at least, four of whom are elected by adults from 100 households (that is, a population of 1,000, estimated at 10 members per household). The other members would represent Youth and Women's Mass Organizations. The functions of a VIDCO are: (a) assisting villagers in identifying and articulating village needs; (b) coordinating village development proposals and forwarding these to the Ward Development Committee; (c) facilitating the growth of decentralized planning; and (d) linking villagers with the Ward Development Committee. In each VIDCO it is planned that there will be a Village Development Centre (VIDEC) consisting of consumer cooperative shops, market stalls, a health post (dispensary), a pre-school center, adult literacy facilities (including a library), village court premises, income-generating projects (such as a bakery, poultry, and uniform making projects), a handicrafts and technology center, provision for water supply

and adequate sanitation, a community hall for training, and a party office. VIDEc activities are to include technical training (agriculture, gardening, management), leadership classes, family life education and child-spacing. Based on an estimated rural population of 6 million, there would be 6,000 VIDCOs and VIDEcs for the whole country.

10. Official assistance to VIDCOs is provided by Village Community Workers (VCW). VCWs are a new multi-purpose cadre ("for whom a comprehensive syllabus will need to be drawn up for the training") comprising the original Village Health Worker (VHW) and the Home Economics Demonstrator (HED). VIDCOs with a population of 1,000 would have two VCWs; those with a population of 500 and less, one VCW. The total number of VCWs needed would, therefore, range between 6,000 and 12,000. VCWs are paid a monthly stipend of Z\$50 through grants to local authorities. The activities to be undertaken by VCWs cover a wide range: assistance in identifying and articulating village needs, pre-school supervision, adult literacy classes, youth promotion, encouraging the formation of interest groups (savings clubs, women's clubs and the like), teaching communities about basic hygiene, treating minor illnesses and clinic referrals, distribution of contraceptive aids, and liaising with ward-level community workers. Teachers in primary schools at the village level are also expected to participate in development activities.

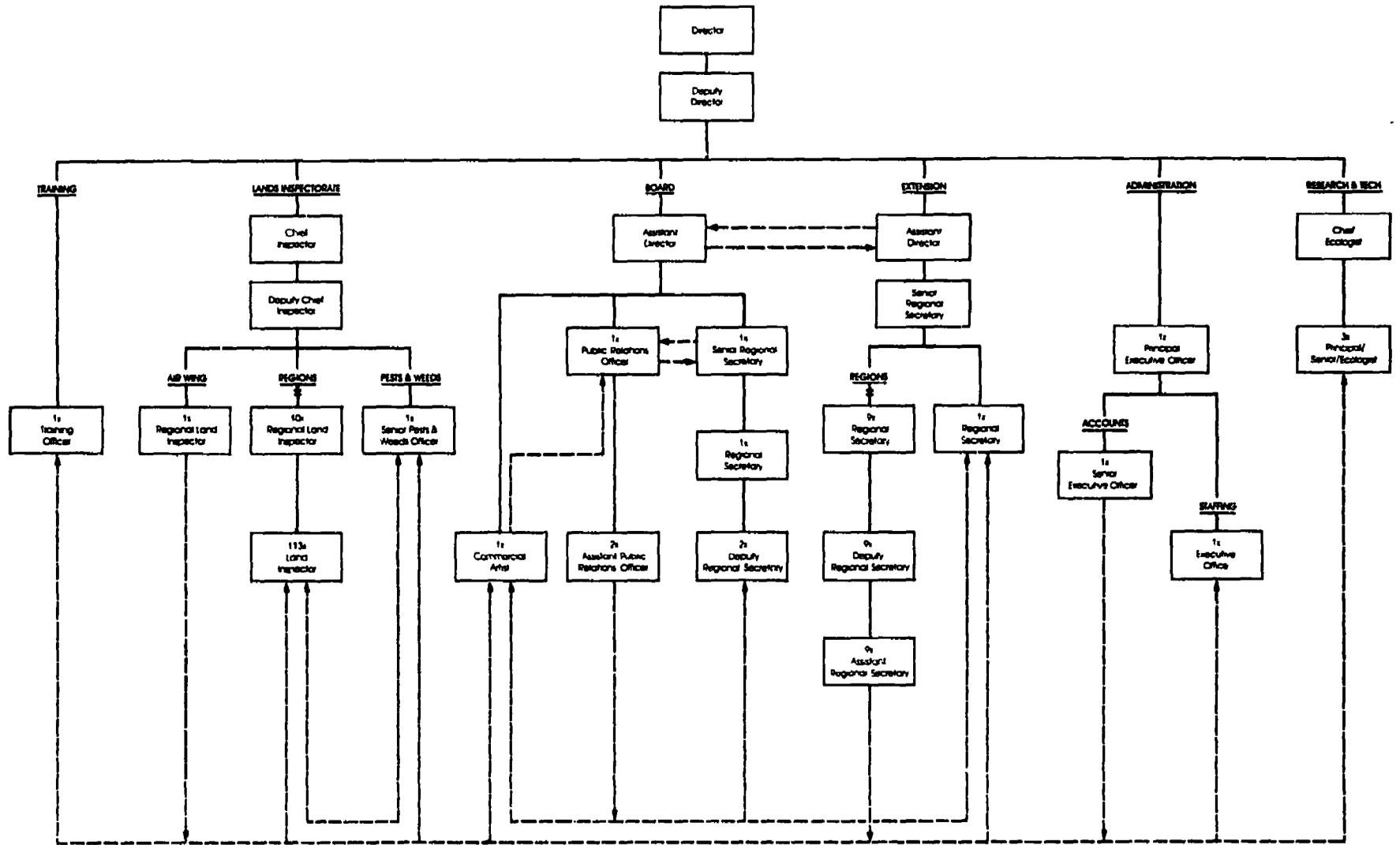
11. Six VIDCOs are said to constitute a ward. Each ward, with an estimated population of 6,000, would have a Ward Development Committee (WADCO). A WADCO comprises the chairperson and secretary of each constituent VIDCO, one representative each from Youth and Women's Mass Organizations, and the District Councillor for the ward who acts as chairman of the WADCO. Like the VIDCO, the WADCO would have a Ward Development Center (WADEC). A WADCO would coordinate VIDCO development plans, in accordance with guidelines received from the district council. The coordinated plans would be sent on to the District Council.

12. Three categories of workers would provide official assistance at the WADCO level: Ward Community Workers for agricultural extension, Ward Community Workers for health extension from the Rural Health Center, and a new category, Ward Community Coordinators (WCCs) comprising of the original Community Development Workers and the Child Spacing Educator/Distributor. In addition to their other duties, the Ward Community Worker for health would supervise the VCW on health-related matters, while the Ward Community Worker for agriculture would continue to serve villages but now in coordination with the VCW. Each WADCO would have at least one of each category of worker. The total number of workers necessary at this level would amount to 3,000. Secondary school teachers would undertake the same tasks at the WADCO level as their counterparts do at the primary school level.

13. At the district level, extension assistance would be provided by: (i) Local Government Promotion Officers (at present the official estimate of requirements is 4 per district); (ii) cooperative and resettlement officers (5-6 per district); (iii) youth promoters (4 per district); (iv) district literacy and pre-school coordinators (2 per district); (v) cultural officers and their assistants; (vi) district community development officers; and (vii) the district education officer. These officials would

provide specialized services both to the VIDCO and the WADCO. The activities of the district level workers would be coordinated through the District Development Team meetings chaired by the District Administrator. Since the implementation of the plan requires a great deal of inter-ministerial coordination, it is proposed that workers at the district, ward and village levels be trained in a common core course which would highlight their roles and interdependence, as well as permit a realization of "the importance of coordinating development and political structure to bring about rural transformation".

ZIMBABWE  
Department of Natural Resources Existing Structure, January 1985

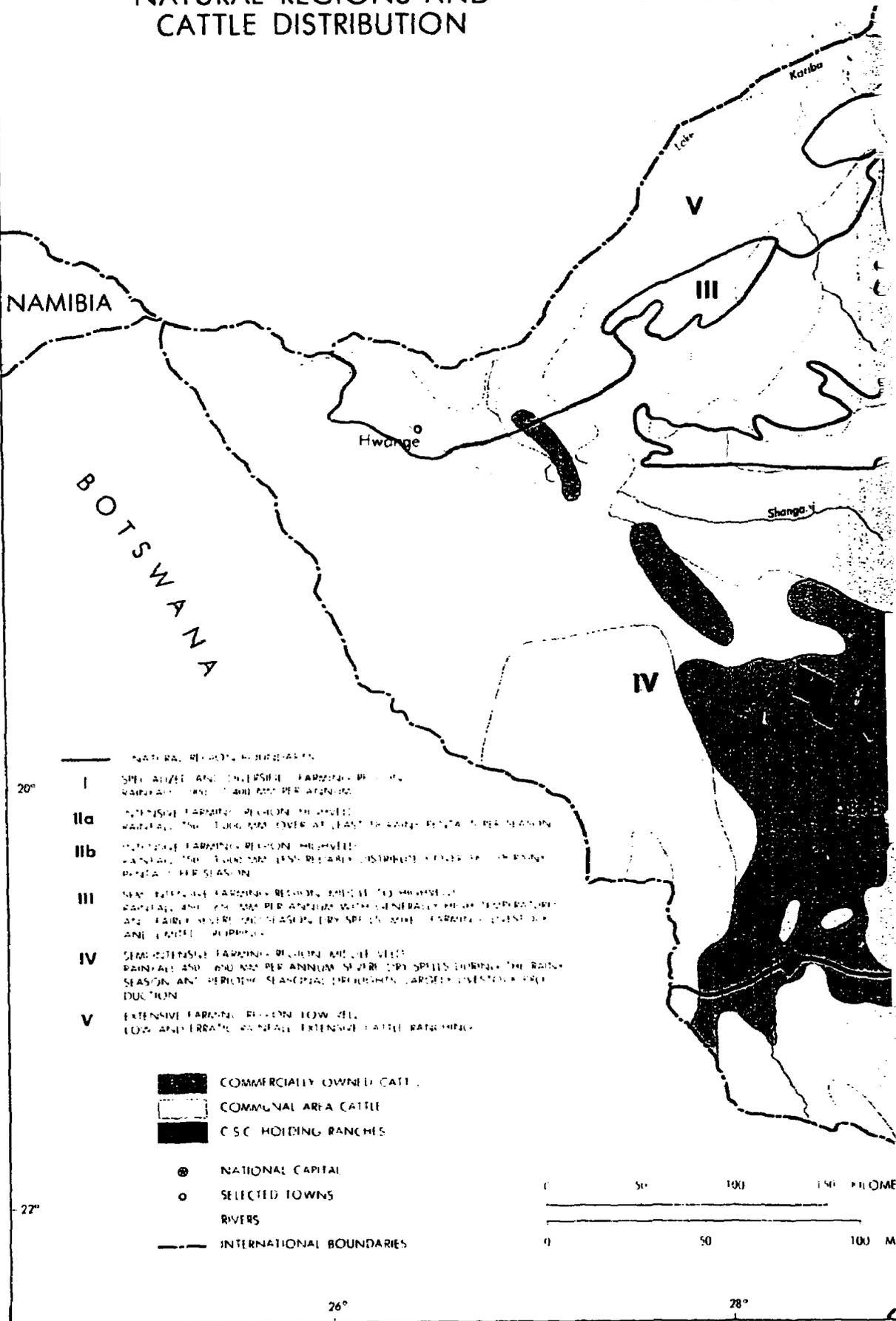


# ZIMBABWE NATURAL REGIONS AND CATTLE DISTRIBUTION

ZAMBIA

NAMIBIA

BOTSWANA



20°

22°

26°

28°

26°

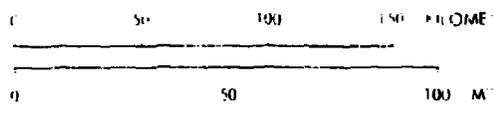
28°

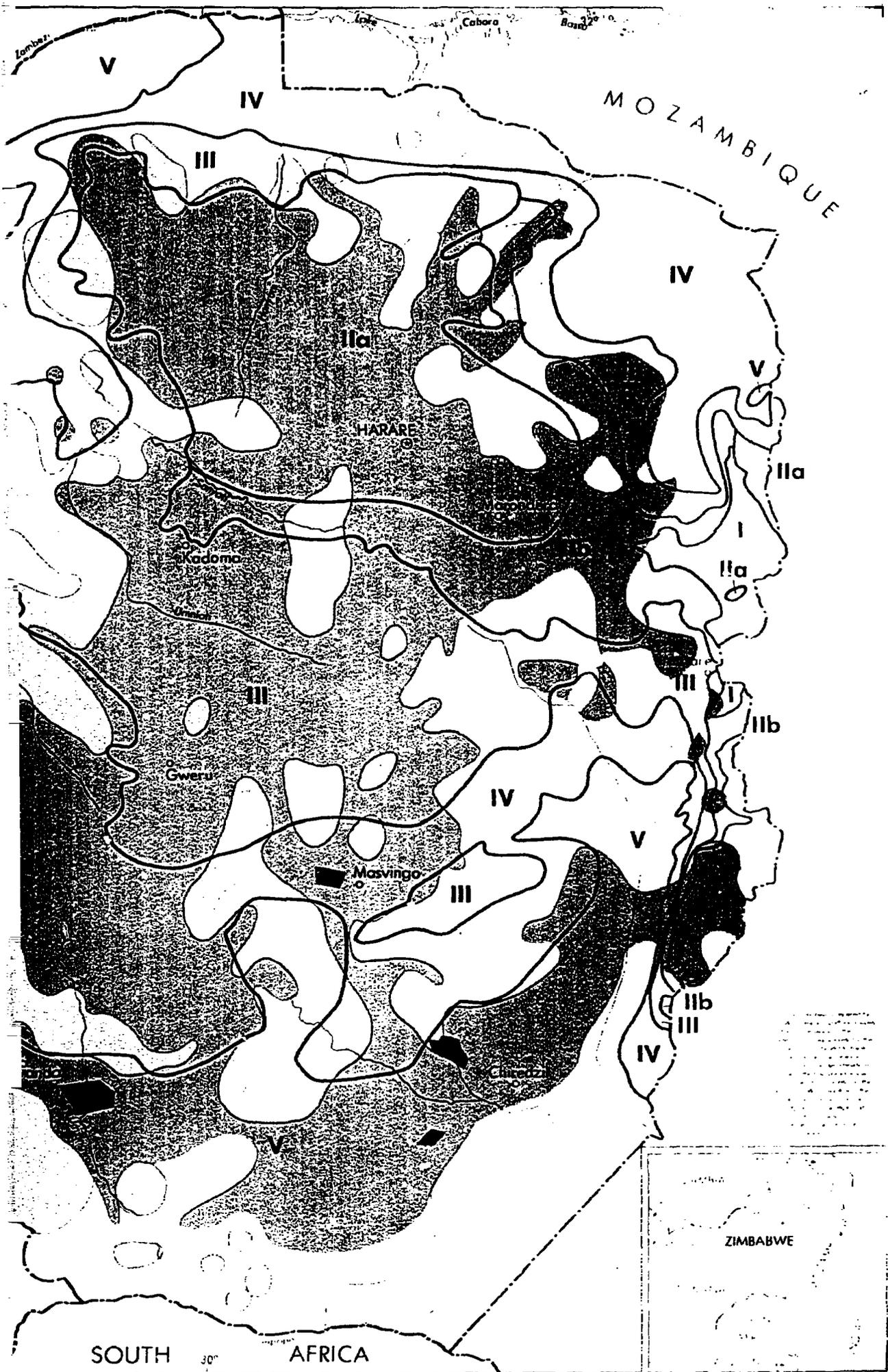
NATURAL REGION BOUNDARIES

- I SPECIALIZED AND INTENSIVE FARMING REGION: RAINFALL 1000-1500 MM PER ANNUM
- IIa INTENSIVE FARMING REGION: HIGHLY VARIABLE RAINFALL 1000-1500 MM COVER AT LEAST 100 DAYS PER ANNUM
- IIb INTENSIVE FARMING REGION: HIGHLY VARIABLE RAINFALL 1000-1500 MM LESS REGULARLY DISTRIBUTED OVER THE GROWING PERIOD PER ANNUM
- III SEMI-INTENSIVE FARMING REGION: SUBJECT TO MODERATE DROUGHTS AND 1000 MM PER ANNUM WITH GENERALLY HIGH TEMPERATURES AND FAIRLY SEVERE DROUGHTS DRY SPELLS OF 3-4 MONTHS DURATION AND FREQUENT DROUGHTS
- IV SEMI-INTENSIVE FARMING REGION: SUBJECT TO MODERATE RAINFALL AND 1000 MM PER ANNUM WITH DRY SPELLS DURING THE RAINY SEASON AND PERIODS OF SEVERE DROUGHTS LARGELY DEPENDENT ON DROUGHT
- V EXTENSIVE FARMING REGION: LOW RAINFALL AND ERRATIC AND ONLY EXTENSIVE CATTLE RANCHING

- COMMERCIALY OWNED CATTLE
- COMMUNAL AREA CATTLE
- CSC HOLDING RANCHES

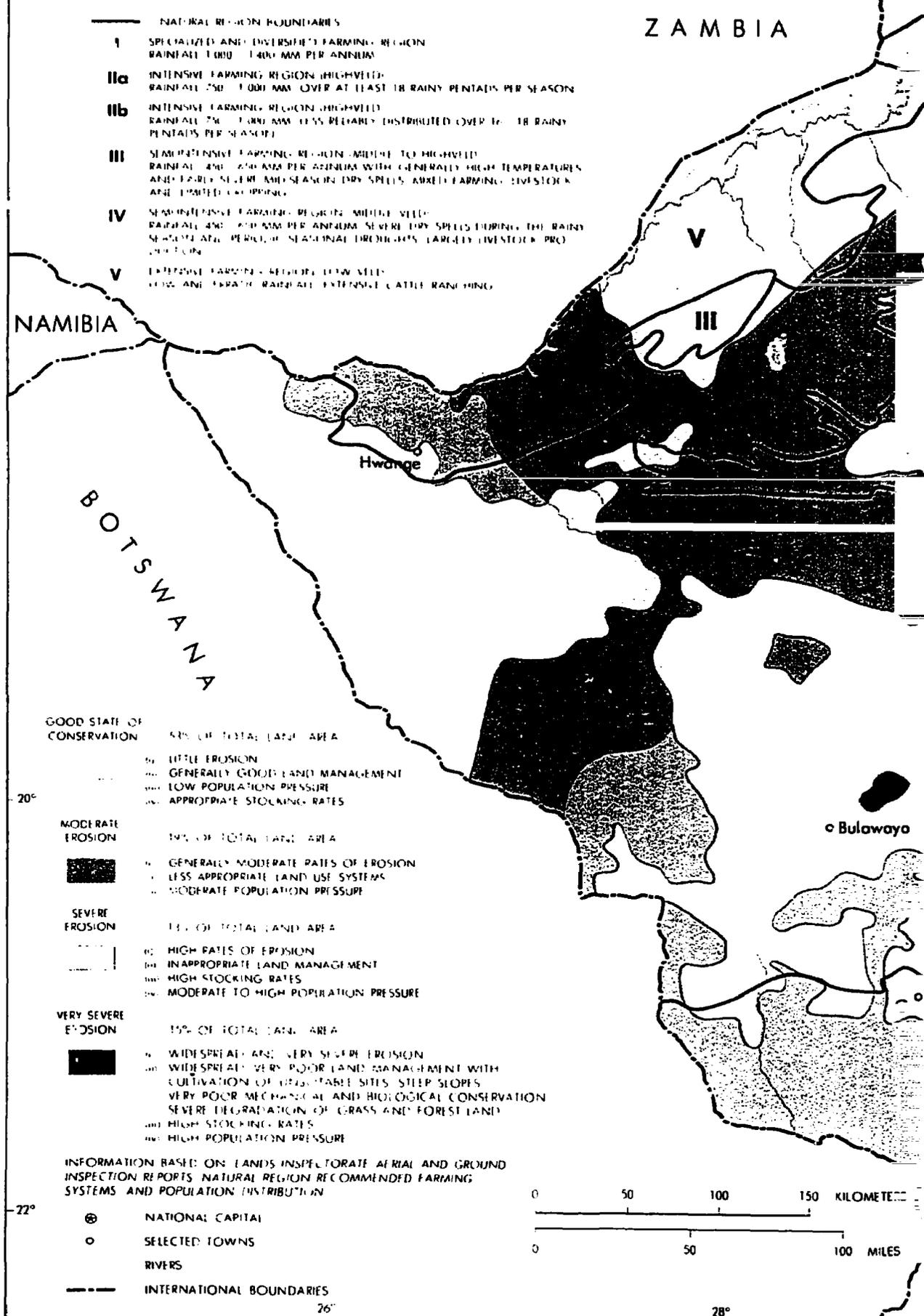
- NATIONAL CAPITAL
- SELECTED TOWNS
- RIVERS
- INTERNATIONAL BOUNDARIES





# ZIMBABWE

## STATE OF SOIL CONSERVATION AND EROSION BY NATURAL REGION

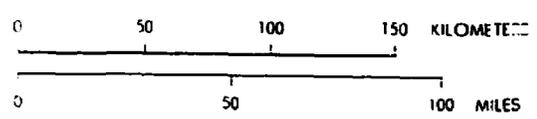


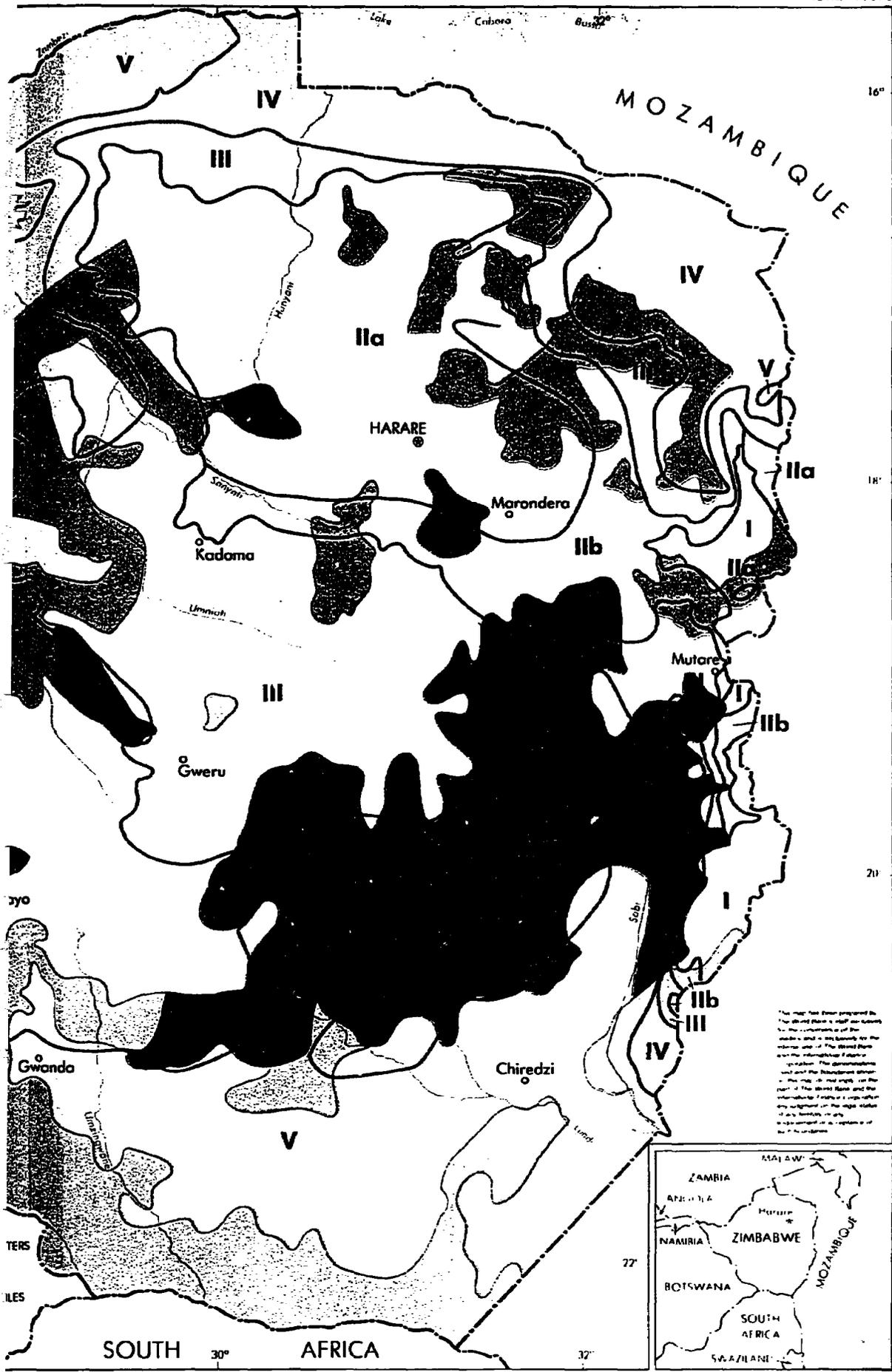
- NATURAL REGION BOUNDARIES**
- I** SPECIALIZED AND DIVERSIFIED FARMING REGION  
RAINFALL 1 000 - 1 400 MM PER ANNUM
  - IIa** INTENSIVE FARMING REGION (HIGHVELD)  
RAINFALL 750 - 1 000 MM OVER AT LEAST 18 RAINY MONTHS PER SEASON
  - IIb** INTENSIVE FARMING REGION (HIGHVELD)  
RAINFALL 750 - 1 000 MM LESS REGULARLY DISTRIBUTED OVER 16 - 18 RAINY MONTHS PER SEASON
  - III** SEMI-INTENSIVE FARMING REGION (MIDVELD TO HIGHVELD)  
RAINFALL 400 - 700 MM PER ANNUM WITH GENERALLY HIGH TEMPERATURES AND EARLY SEVERE AND SEASON DRY SPELLS. MIXED FARMING, LIVESTOCK AND LIMITED CROPPING.
  - IV** SEMI-INTENSIVE FARMING REGION (MIDVELD)  
RAINFALL 400 - 700 MM PER ANNUM. SEVERE DRY SPELLS DURING THE RAINY SEASON AND PERIODS OF SEASONAL DROUGHTS. LARGELY LIVESTOCK PRODUCTION.
  - V** EXTENSIVE FARMING REGION (LOWVELD)  
LOW AND SPRAZY RAINFALL. EXTENSIVE CATTLE RANCHING.

- GOOD STATE OF CONSERVATION** 5% OF TOTAL LAND AREA
- (i) LITTLE EROSION
  - (ii) GENERALLY GOOD LAND MANAGEMENT
  - (iii) LOW POPULATION PRESSURE
  - (iv) APPROPRIATE STOCKING RATES
- MODERATE EROSION** 1% OF TOTAL LAND AREA
- (i) GENERALLY MODERATE RATES OF EROSION
  - (ii) LESS APPROPRIATE LAND USE SYSTEMS
  - (iii) MODERATE POPULATION PRESSURE
- SEVERE EROSION** 1% OF TOTAL LAND AREA
- (i) HIGH RATES OF EROSION
  - (ii) INAPPROPRIATE LAND MANAGEMENT
  - (iii) HIGH STOCKING RATES
  - (iv) MODERATE TO HIGH POPULATION PRESSURE
- VERY SEVERE EROSION** 1% OF TOTAL LAND AREA
- (i) WIDESPREAD AND VERY SEVERE EROSION
  - (ii) WIDESPREAD VERY POOR LAND MANAGEMENT WITH CULTIVATION OF UNSUITABLE SITES, STEEP SLOPES
  - (iii) VERY POOR MECHANICAL AND BIOLOGICAL CONSERVATION
  - (iv) SEVERE DEGRADATION OF GRASS AND FOREST LAND
  - (v) HIGH STOCKING RATES
  - (vi) HIGH POPULATION PRESSURE

INFORMATION BASED ON LANDS INSPECTORATE AERIAL AND GROUND INSPECTION REPORTS. NATURAL REGION RECOMMENDED FARMING SYSTEMS AND POPULATION DISTRIBUTION.

- ⊙ NATIONAL CAPITAL
- SELECTED TOWNS
- RIVERS
- - - INTERNATIONAL BOUNDARIES





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IN FEBRUARY 1985

ZIMBABWE  
STATE OF SOIL CONSERVATION AND F

# ZIMBABWE LOCATION OF RESETTLEMENT SCHEMES AND NATURAL REGIONS

Z A

## LOCATION OF RESETTLEMENT SCHEMES.

### ACCELERATED INTENSIVE RESETTLEMENT

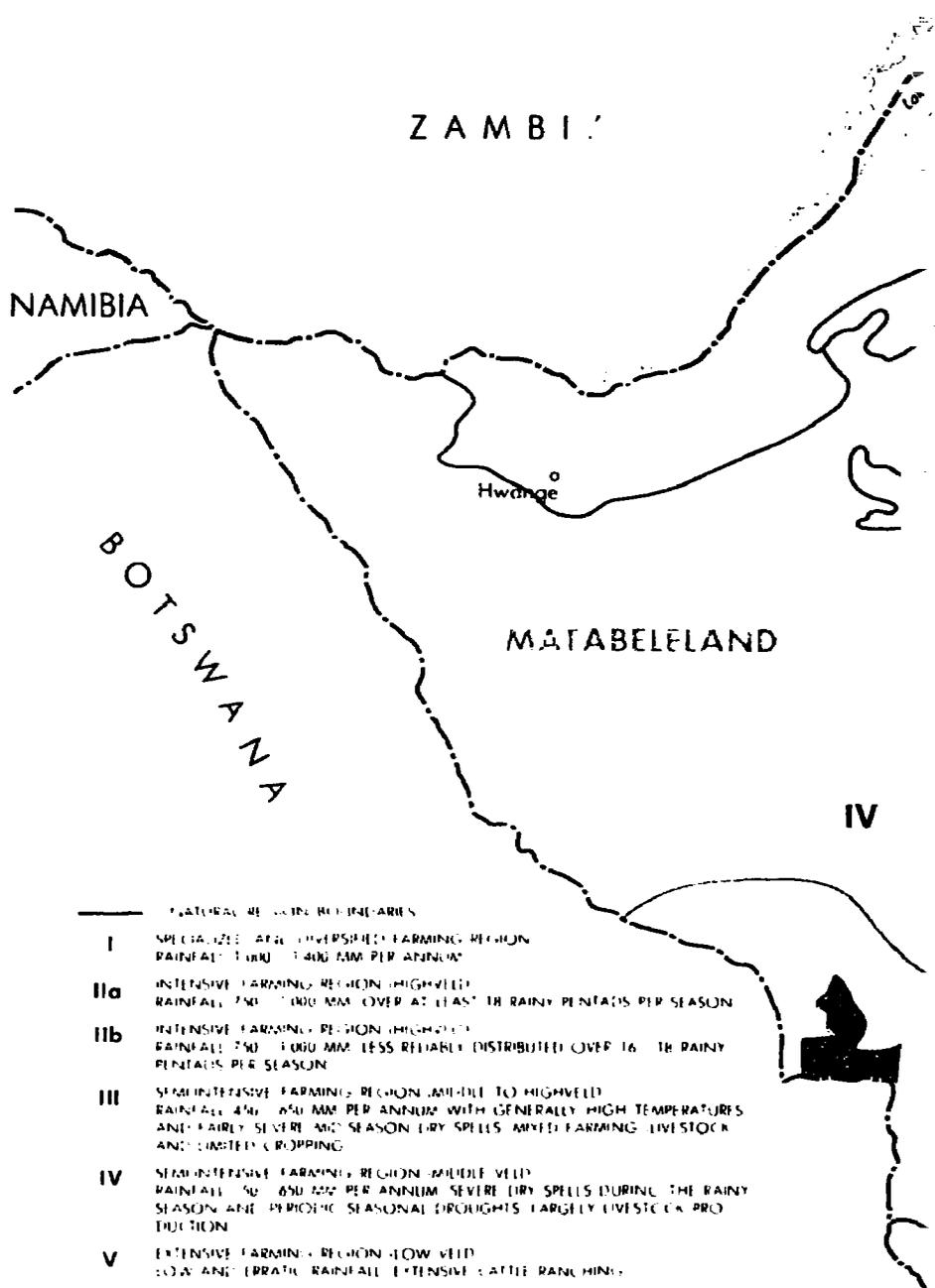
- |                               |                      |
|-------------------------------|----------------------|
| 1 MARONDERA                   | 34 THORNGROVE        |
| 2 WEDZA                       | 35 TOWNLANDS         |
| 3 RINGA                       | 36 NYANGAMBE         |
| 4 WHEELERDALE                 | 37 VIKIUS            |
| 5 NYAMANJI                    | 38 VICTORIA          |
| 6 ELHANDAMA                   | 39 MAROWA            |
| 7 GREMLIN HEIGHTS             | 40 NGOMAHURU         |
| 8 BEAUFORT                    | 41 PASTURES          |
| 9 BINDURA                     | 42 LOT 19 WENIMBI    |
| 10 MUTUNGAGORE                | 43 LORTONDALE        |
| 11 ALFA                       | 44 FIABUSI-KENTUCKY  |
| 12 THE RANGE                  | 45 HOLLINS BLOCK     |
| 13 CHEGUTU 6                  | 46 INOYZANE          |
| 14 SEDGWICK SYNDICATE         | 47 GLEN GREY         |
| 15 VUTI A & B                 | 48 WEDZA             |
| 16 HAMILTON HILLS             | 49 RIVER RANCH       |
| 17 NGEZI                      | 50 MANYOIE (MODEL D) |
| 18 POTE II                    | 51 JOPEMPI           |
| 19 TAKAWIRA                   | 52 LOWER GWERU       |
| 20 GWINDINGWI                 | 53 ZVISHAVANE        |
| 21 CHIPIMUTSITO               | 54 UNDA              |
| 22 SHANGWE                    | 55 NORWOOD PENGÉ     |
| 23 INYASHUTI                  | 56 VEEGERVONDEN      |
| 24 GOOD HOPE SHASHA FOUNTAINS | 57 TORANANGA         |
| 25 MASYORI                    | 58 NGEZI POORT       |
| 26 NYAHODI                    | 59 BARKLY            |
| 27 NEW CASTLE                 | 60 HASTINGS          |
| 28 CHIKOMBA                   | 61 GLENNIVET         |
| 29 CHIVHU                     | 62 MBALA BALA        |
| 30 EDUNOVAN                   | 63 HILZVIRIZVI       |
| 31 RIVERPROMI                 | 64 RIPPLING WATERS   |
| 32 LAKE KYE EAST              | 65 THORNS            |
| 33 LAKE KYE SOUTH             | 66 MWEZEZI           |

### NORMAL INTENSIVE RESETTLEMENT

- |                     |                 |
|---------------------|-----------------|
| 1 SENGEZI I         | 29 KUMFANI      |
| 2 SENGEZI II        | 30 COPPER QUEEN |
| 3 ACTION REYNOLDS   | 31 NYAMA        |
| 4 JONDALE RUMBE     | 32 MUSENGEZI    |
| 5 TOKWE 4           | 33 ST. BARWIN   |
| 6 SESSOMBI III      | 34 MUPFURUDZI   |
| 7 TOKWE 1           | 35 NYADHIRE     |
| 8 TOKWE 3           | 36 HOTOYI       |
| 9 SHURUWU           | 37 NYAMUSIZI    |
| 10 SHURUWU TANJA    | 38 MATO         |
| 11 VIMVI            | 39 NYAJEZI      |
| 12 SORTI SOURCE     | 40 NYANGA SOUTH |
| 13 FULTON SOUTH     | 41 CHINYIKA     |
| 14 CHIPINDA         | 42 NYAMAZURA    |
| 15 MUSHANHWE        | 43 MUTANDA III  |
| 16 MUPFUSI          | 44 MUTANDA II   |
| 17 NYAMUMBI         | 45 MUTANDA I    |
| 18 SHURU            | 46 NYA...       |
| 19 MATUP...         | 47 MURARA       |
| 20 WANEZI           | 48 MUPFURUZI    |
| 21 INSIZA           | 49 ...          |
| 22 DOMBODEMA        | 50 ...          |
| 23 UMGUSA           | 51 ...          |
| 24 REAMBES          | 52 NYAGADZI     |
| 25 WESTERN SESSOMBI | 53 HILZVIRIZVI  |
| 26 SESSOMBI         | 54 ...          |
| 27 MUZVEZE I        | 55 ...          |
| 28 MUZVEZE          |                 |

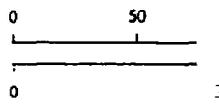
### MODEL B COOPERATIVE

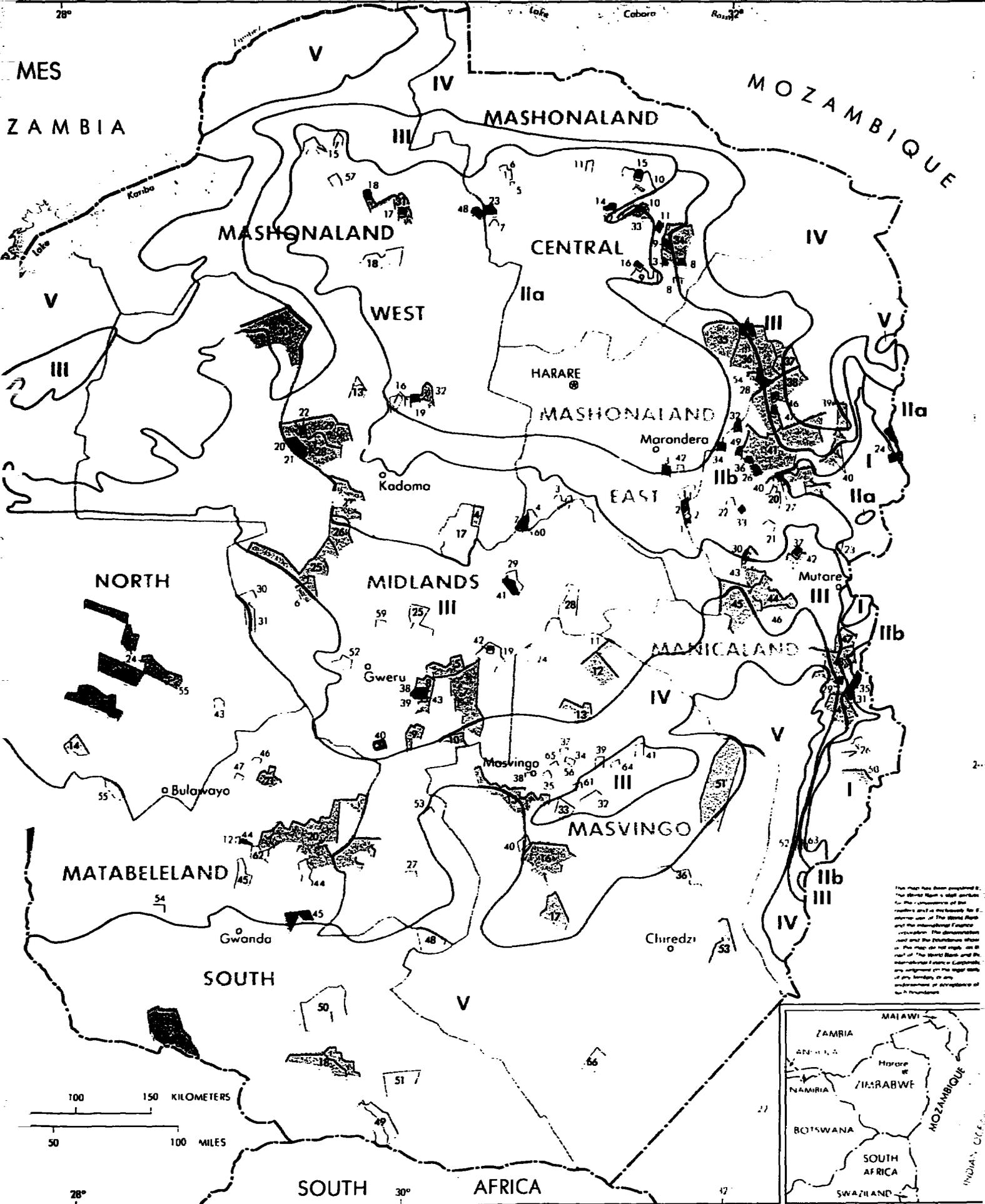
- |                    |                         |
|--------------------|-------------------------|
| 1 KWAEDA           | 26 KUBATANA             |
| 2 MT. ST. MARYS    | 27 TANHI                |
| 3 SHANDISA PRUNGWA | 28 TAMUKA               |
| 4 TABUDIRIRA       | 29 CHITIMBI             |
| 5 KUMHANYA         | 30 RUFUKO               |
| 6 MAROWA           | 31 RUFUKA               |
| 7 DANAPENDOVU      | 32 MAGURA BATANAI       |
| 8 BATSIRANAI       | 33 ZINDOGA              |
| 9 SIMBA YOUTH      | 34 KUENDA MASIMBA       |
| 10 CHAROMA         | 35 SVINURAI             |
| 11 KUSHINGIRIRA    | 36 NYAGADZI             |
| 12 KUENDA          | 37 CHIONISO             |
| 13 KUBUDIRIRA      | 38 SHUNGUDZEVHU         |
| 14 NYARUDYA        | 39 GUTSARUZHINJI        |
| 15 KURINA INHAKA   | 40 VIMBA RUFARO         |
| 16 KUBATSIRANA     | 41 HATINETI             |
| 17 MALUYA          | 42 ZEZAYI               |
| 18 NYAMAKATE       | 43 MAKWIKWI             |
| 19 MUFUVAPASI      | 44 CLARK'S FARM         |
| 20 GOWE            | 45 ENCHUCA NYAMINI      |
| 21 GANYANGU        | 46 POGOGO               |
| 22 TASHINGA        | 47 AIRI                 |
| 23 KUWADZANA       | 48 CHISIMBI RIVER RANCH |
| 24 TANGENHAMO      | 49 BELHE                |
| 25 RUPONESO        |                         |



- NATURAL REGION BOUNDARIES**
- I** SPECIALIZED AGRICULTURE/SPREAD FARMING REGION  
RAINFALL 1 400 - 1 600 MM PER ANNUM
  - IIa** INTENSIVE FARMING REGION (HIGHVELD)  
RAINFALL 750 - 1 000 MM OVER AT LEAST 18 RAINY PENTADS PER SEASON
  - IIb** INTENSIVE FARMING REGION (HIGHVELD)  
RAINFALL 750 - 1 000 MM LESS RELIABLE DISTRIBUTED OVER 16 - 18 RAINY PENTADS PER SEASON
  - III** SEMI-INTENSIVE FARMING REGION (MIDDLE TO HIGHVELD)  
RAINFALL 450 - 650 MM PER ANNUM WITH GENERALLY HIGH TEMPERATURES AND FAIRLY SEVERE DRY SPELLS MIXED FARMING LIVESTOCK AND LIMITED CROPPING
  - IV** SEMI-INTENSIVE FARMING REGION (MIDDLE VELD)  
RAINFALL 500 - 650 MM PER ANNUM SEVERE DRY SPELLS DURING THE RAINY SEASON AND PERIODIC SEASONAL DROUGHTS LARGELY LIVESTOCK PRODUCTION
  - V** EXTENSIVE FARMING REGION (LOW VELD)  
LOW AND ERRATIC RAINFALL EXTENSIVE CATTLE RANCHING

- ⊙ NATIONAL CAPITAL
- SELECTED TOWNS
- RIVERS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES





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