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NATIONAL AND REGIONAL PLANNING  
OF TOWNS AND COUNTRYSIDE

L'AMENAGEMENT SUR LE PLAN NATIONAL ET  
REGIONAL DES VILLES ET DE LA CAMPAGNE

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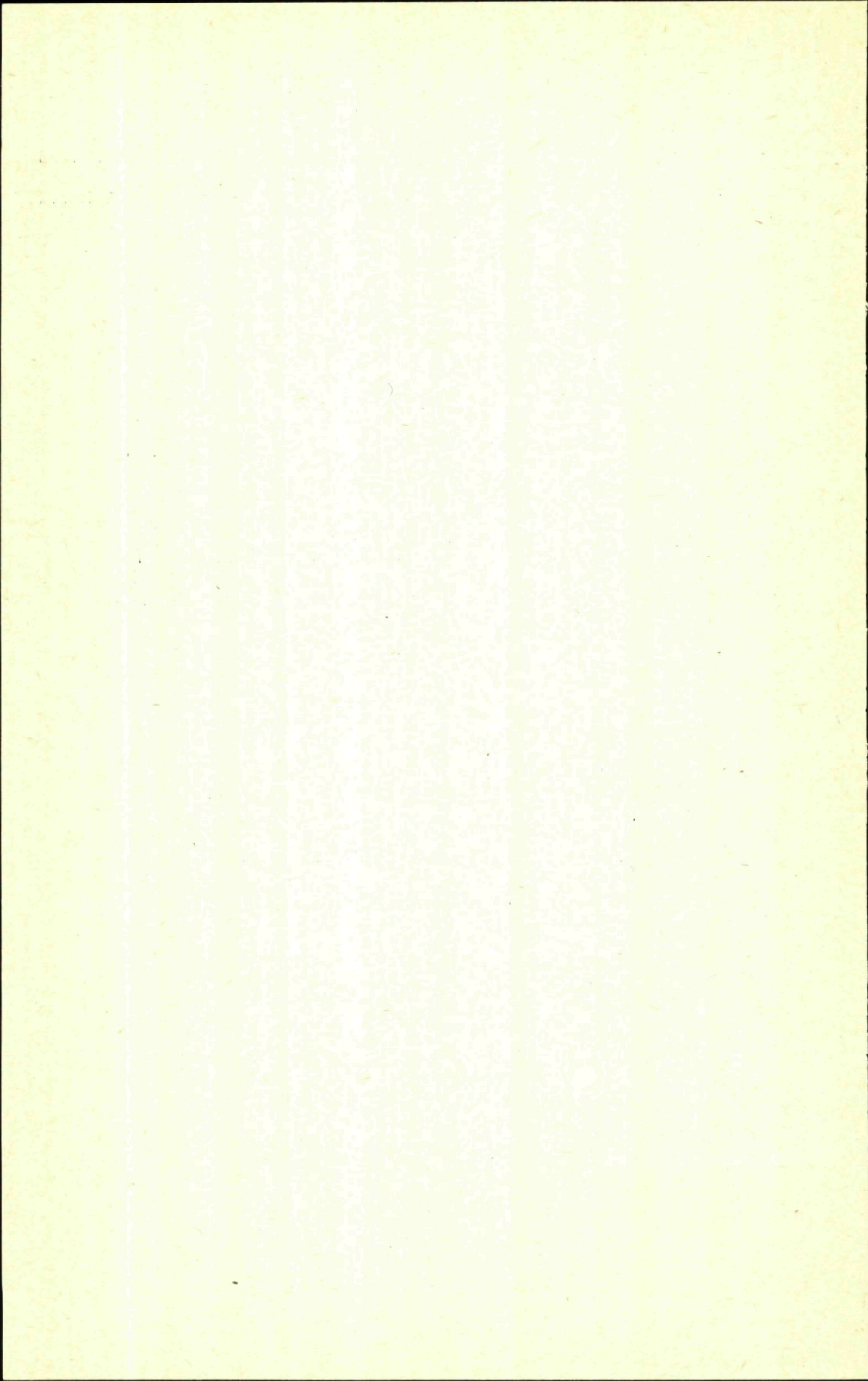
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SOUTH AFRICA

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# NATIONAL AND REGIONAL PLANNING OF SOUTH AFRICA

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## Part I

### 1. *Historical Background of the Development of the Country*

It is felt necessary to consider the history of the development of South Africa from the very earliest recorded times to obtain a clear picture of the possibilities and limitations of the planned development of the country.

The first authentic reference to South Africa is the well-known passage in Herodotus (Melphomene 42) of the Egyptian fleet sent by Necho about 600 B.C., which sailed southwards through the Red Sea.

It is probable that the expedition of Sesosbris (Rameses II) about 1400 B.C. visited South-East Africa and collected gold dust.

There is much evidence that iron, tin, copper and gold have been worked for many centuries and the amount of ore extracted is estimated to be as high as 100,000,000 tons.

Without doubt these mining operations were undertaken by invaders from the North, as there is no evidence of the use of metals by the African native or bushmen, and, moreover, there is no evidence of the results of trading in these minerals.

Not until A.D. 1486 is there any record of Europeans visiting South Africa, and from then onwards Cabo Tormentoso (later named the Cape of Good Hope), Algoa Bay (Port Elizabeth) and Delagoa Bay (Lourenço Marques) were ports of call on the route between Lisbon and Goa.

In 1595 the Dutch Republic competed with the Portuguese for the Indian trade and were followed in 1601 by the British with the English East India Company.

The first recorded European settlement in South Africa was in 1651 when Jan van Riebeeck settled with 100 men for the purpose of victualling Dutch ships on the East Indian route.

Two years later vine was introduced, whale and seal fisheries were established, trade in timber was commenced and farming on a large scale.

In 1806 Great Britain, who were then at war with Holland, defeated the Dutch army at the Cape. At that time the European population had risen to 29,861.

The first extensive British settlement consisted of over 4,000 men, women and children (the Albany Settlers), who arrived at Port Elizabeth in 1820.

Up till 1834 the only working connection between the Europeans and the natives was the native slave worker, of which there were about 35,700.

A year later, owing partly to the abolition of slave labour and partly to escape British rule, some 10,000 "Voortrekkers" crossed the Orange River, and from that time the Provinces, known as the Orange Free State and the Transvaal, were born.



Natal was first opened up to Europeans in 1823 by the establishment of trading stations and the Great Trek of 1835 influenced Natal.

Sugar, tea and other crops were cultivated in Natal, and on account of the inefficiency of the native as a labourer for this work, it was decided to immigrate Indians, and by 1870 some 6,500 Indians were imported into Natal.

Perhaps the most important feature in the development of South Africa was the discovery of gold in 1854, near the present site of Johannesburg, and during the next twenty-five to thirty years gold was found in various other parts of the country; and in 1886 a portion of the Rand was proclaimed a goldfield.

The finding of gold undoubtedly had the greatest influence upon the development of the country, and people rushed from all parts of the world to settle on the various goldfields.

During the 20th century the development of the country has been influenced and accelerated by this important asset, but only in particular areas.

Before leaving the history it is necessary to appreciate the effects of the various developments of the country in the order: agriculture, shipping, diamonds, gold, and to appreciate the European, native and Asiatic influence.

The early European farmer farmed an area of approximately 10 sq. miles, and on his death the farm was split up equally between his sons, each to have a frontage on to any watercourse on the farm.

Such sub-divisions of land by succeeding generations has, in many cases, split up the farms beyond the economic limit and has caused a "Poor White Problem," and considerable difficulties in procuring co-ordinated development as the land is transformed from farm to town.

With the gradual invasion of the white man the native occupied the hilly districts of the south-eastern coastal belt, Zululand, and the Protectorates of Basutoland and Swaziland, which are the main water catchment areas for South Africa.

By overcrowding, cutting down of the natural bush, cultivating the hillsides against the contours and overgrazing, the run-off rate of water was accelerated, resulting in soil erosion and exhaustion of the soil.

A serious contributory factor to this condition is the fact that the rural native still counts his wealth in head of cattle and the "Lobolo" (payment of cattle by a bridegroom to the bride's father) results in ever-increasing overstocking of the reserve areas and the further erosion of soil and quicker run-off of water.

The industrialisation of the gold and diamond areas, poll tax of £1 per head on all males over eighteen years of age and a local tax of 10s. per dwelling per annum in the native reserves, forced the natives to migrate to the industrial areas for periods of work.

The ease with which the natives' simple requirements have been met from the genial soil and sunshine and the great game herds of past centuries has bred in him a natural indolence which is highly incompatible with that of a willing and efficient worker. This general low standard of the natives' efficiency is a major problem in South Africa.



The census of population for the years 1904, 1911, 1921, 1936 and 1946 are set out :

Year	Europeans	Asiatics	Natives	Coloureds, etc.	Total
1904	1,116,806	112,734	3,491,056	445,228	5,175,824
1911	1,276,242	152,309	4,019,006	525,837	5,973,394
1921	1,519,488	163,896	4,699,433	545,548	6,928,580
1936	2,003,857	219,691	6,596,689	769,661	9,589,898
1946	2,372,690	285,260	7,805,515	928,484	11,391,949

The importance of these figures is that by far the largest section of the population is the native, whose efficiency as a workman is very low and whose rate of increase is very much higher than that of the European. This factor is of extreme importance in the planned development of the country.

With the mining and industrial development of the country, a considerable number of natives have relinquished their tribal life in the native reserves and on the European farms and have flocked to the urban areas with their families to settle permanently, involving the problems of mass migration.

Since the end of the 1939-1945 war, new goldfields have been opened up in the Orange Free State.

These goldfields will cause the mass migration of about 150,000 Europeans and about 400,000 natives when they are in full operation.

The legislature governing the development of townships and town planning is enacted by Provincial Ordinances under the powers granted by the Union Government.

The four provinces of the Union have each passed Ordinances controlling the laying out and development of townships and three of the provinces have also Ordinances empowering local authorities to prepare town planning schemes for the various local authority areas and, with the consent of the administrators of the provinces, planning schemes for lands outside the local authority areas.

This legislature has proved to be very limited in application because many townships are laid out in areas where there are no town or regional planning schemes, and the townships are designed on the basis of ownership boundaries without regard to the necessary provisions of regional services and functions.

Immediately after the termination of the 1939-1945 war very great activity took place in connection with the development of new gold mines in the Orange Free State Province and there was a great danger that development would take place in a very haphazard manner, based primarily upon speculation in land and the laying out of townships for speculative purposes without regard to the good development of the region.

To prevent this condition, the Government made an Order in June, 1946, declaring the area of the new goldfields a "Controlled Area" in which development, the subdivision of land, and land values were controlled.

A year later an Act of Parliament, "The Natural Resources Development Act, 1947," was passed, setting up a "Natural Resources Planning Council" whose functions are to advise the responsible Minister of the Government, *inter alia*, as to the Establishment of Controlled Areas through-



out the Union, and to investigate the manner in which the natural resources of the Union can best be exploited, developed or used, including the use to which any land could best be allocated.

To summarise the historical background of the development of the country it will be noted :

- (a) By far the greatest proportion of the peoples of the Union (the natives) are a backward race whose efficiency and economy are very far below the standards of Western civilisation. So much so that while the standard of income of the native is low, his price as a worker is very expensive.
- (b) Until well into the 20th century the main occupations of the population were connected with shipping, agriculture and gold, coal and diamond mining.
- (c) Cutting off the natural bush, overgrazing by stock on the land and poor cultivation have accelerated the run-off of water, causing erosion and drying up the land which, at the present time, does not provide all the food necessary for the population and which necessarily has to provide for an ever-increasing population in the future.
- (d) The population of the country is very small and including South-West Africa has a density of fifteen persons per sq. mile, against a population density of 766 per sq. mile in England, and in 1939, 353 per sq. mile in Germany. These factors, considering that the non-Europeans outnumber the Europeans by more than four to one, and that the coastline of the Union and South-West Africa is more than 3,000 miles long, indicate the need for a considerable increase in the European population for defence alone.

This is even more important when it is considered that major development of the country has been concentrated in four very vulnerable areas, the main ports and in the gold-field areas of the Witwatersrand.

- (e) With the increasing population and the advancement of the backward races, the demand for agricultural and other produce is increasing parallel with the erosion and exhaustion of the soil.
- (f) Really effective legislature for the control of development has only recently been introduced.

## 2. *Geographical and Geological Conditions*

South Africa is situated on the main shipping routes between the Western and Eastern hemispheres and considering the vulnerability of the Suez Canal in times of war, the situation of the country is of the utmost strategic importance for the shipping routes of the world.

The major part of South Africa is on a plateau varying between 3,000 and 6,000 feet above geodetic datum, and while the northern part of the country is within the tropics and the southern part is only 34° South of the Equator, the mean annual temperature is only 60·6° F.

The average rainfall is 19 inches per annum, and the evaporation about 70 inches per annum, against 15½ inches in London.



The rivers and streams, except for a few exceptions, are not perennial (it is a common saying that when you fall into a South African river you do not change your clothes but merely ask for a clothes brush). This factor has a considerable bearing upon the possible location of industry and settlement.

The country is richly endowed with mineral wealth and besides gold and diamonds, coal, iron and chrome, some forty other metals and important minerals have been worked.

The lack of transport routes and high transport costs have prevented the full development of many of these resources.

Undoubtedly the immense coal resources will play a very big part in the development of the country because besides the vast coalfields which can be worked for industrial, domestic and bunker purposes, there are even greater areas of low-grade coal suitable for the extraction of petroleum and by-products.

It will be seen that South Africa is a country richly endowed with mineral wealth and climate and so strategically situated that it must develop considerably to ensure its own security. Also, that legislature has recently been passed to ensure that the natural resources shall be worked and used in the best possible manner and that development shall take place according to preconceived plans.

The flora and fauna of the Union are unique and although much has already been done for their protection, it must necessarily be a part of national planning to secure suitable protection.

## Part II

### 3. *National and Regional Planning of Town and Countryside*

As mentioned in Part I a National Resources Development Council has been set up to :

- (a) Advise the Minister of Economic Development upon the establishment of "Controlled Areas," i.e., areas where the development shall be controlled by regional committees.
- (b) Investigate the natural resources of the Union and the manner in which they can best be exploited, developed and used, including the use of any land.
- (c) Prepare schemes for the exploitation, development and use of the natural resources.
- (d) Facilitate and guide the establishment of industries and undertakings.
- (e) Advise and assist statutory authorities in the subdivision and use of land and in the exercise of powers.
- (f) Encourage the teaching and study of regional and town planning and to advise and assist administrators, townships boards, and local authorities regarding the establishment of townships and town planning.
- (g) Advise and assist associations established for the purpose of promoting regional and town planning.
- (h) Advise the Minister regarding financial assistance to institutions for the teaching and study of the objects of the Act.



- (i) Encourage research and the collection of information relating to the purposes of the Act, and in relation to health, housing and other matters and to co-ordinate and disseminate such information.

*National Survey.*—The first function of the Council is to make or promote a national survey covering such matters as :

- (a) The existing use of the land and subdivisions.
- (b) The nature and possibilities of the land (soil survey), to ensure that the best use is made of land and that lands near development areas shall be reserved for growing produce for urban populations.
- (c) The geological formation and workable minerals.
- (d) The climatic conditions, rainfall, temperatures, flow of rivers and streams, water table, humidity, areas subject to malaria, tsetse fly, and other conditions likely to affect development.
- (e) Transport routes, rates and time of travel.
- (f) Distribution, quantity and quality of labour resources.
- (g) Ultimate possible population of the country, having regard to : full beneficial employment ; possibilities of feeding, either by internal agriculture or importation of foods ; the security of the country.
- (h) Vulnerability of existing development from attack from land, sea and air, and the desirable methods of dispersal of industry and population to attain good health and security.
- (i) The conditions under which the present and future population do and can live, having regard to density of population in urban areas, distance of travel between home and work, school, shopping, recreation, etc., and the percentage of family income spent upon travel by the various races constituting the population.
- (j) Wage structure of the various social groups in conjunction with the cost structure of the country and the most desirable methods of obtaining an efficient, happy and contented population.
- (k) The ratio of the various races in the country to each other, their natural rate of increase and the possible population of each race at future dates and the ratios to each other.
- (l) The housing requirements of each racial group and the desirable location of housing requirements.
- (m) The sociological aspects of housing the populations in flats, tenements and single family dwelling-houses.
- (n) The advantages and disadvantages of the existing land use in agricultural and industrial development and the effects of sprawling urbanisation.
- (o) The causes of, and means of combating, industrial fatigue due to distance of travel, diet, housing conditions and recreation.
- (p) Causes and means of preventing accidents on the highways and in occupation.
- (q) Conservation of water and effluents and the best use to be made of them.



- (r) Reclamation of scrap and use of by-products.
- (s) Timber resources and future needs.
- (t) Existing and potential fishery resources, both sea and inland.
- (u) Alterations necessary to any existing legislature.

In addition to the co-ordination of these surveys and the necessary recommendations to the Minister and to the responsible planning authorities, the Council will prepare a town and regional planning code for the guidance of responsible planning authorities and correlate their various schemes.

The Minister responsible for the planned development of the country is the Minister of Economic Development and at this very early stage the Minister and the Council are feeling their way carefully and designing an appropriate policy.

A great handicap to the work will undoubtedly be that while the Council will have to prepare or promote many surveys, there appears to be no legal obligation on State departments, local authorities, etc., to assist or to give information necessary for these surveys.

Further, it would appear that Government departments and provincial administrations are exempt from the provisions of the Act.

While it may be desirable that State and provincial administration departments shall be exempt from the provisions of the Act, provision should be made to ensure that they submit all their development proposals to the appropriate planning authority and that they should not unreasonably refuse to co-operate with the planning authority.

Various Government departments will, undoubtedly, be called upon to prepare surveys and to supply information, for example :

The Department of Agriculture will make the necessary soil surveys, surveys of existing agricultural land use and supply information regarding the possible quantities of foods which can be supplied internally, and the lands necessary for the various agricultural projects to feed the country, and the desirable subdivision of farm lands, marketings, etc., and land conservation schemes.

The Irrigation Department will provide information regarding schemes for water conservation, the quantities and quality of water in the various regions. The possibility of diverting water from one place to another.

The Census and Statistics Office will supply information regarding the population : distribution of population ; growth of the various races ; birth rates ; death rates ; industrial and commercial undertakings ; existing housing ; occupations, etc.

The Department of Commerce and Industry will supply information regarding commercial and industrial undertakings and requirements ; distribution of goods, costs of goods and distribution ; requirements of commercial and industrial undertakings ; commodities grown and manufactured in the country and those imported and the source of imports.

Deeds Offices will be responsible for supplying information regarding ownerships of land and restrictions against title of land. .

Defence Department will be responsible for securing that all defence requirements are incorporated in town and regional planning schemes, including provision for any new ports ; communications ; suitable dispersal of industry and population ; provision for suitable aerodromes and landing



grounds ; emergency camping areas , munition dumps, etc. It will be necessary for the Defence Department to study carefully all development proposals and to advise upon suitable locations and to ensure that all development can be suitably defended. The strategic security of the country may well depend upon the interest taken by the department in the planning.

The Forestry Department will be responsible for ensuring that the increasing supply of timber is available and that suitable areas are allocated for afforestation.

The Department of Labour will supply information regarding labour conditions and any reserves of labour.

The Mines Department and the Geological Survey Department will provide information regarding the life of existing mines, areas suitable for future mining, probable labour requirements for mining, undermined lands which are liable to subside, the quality and quantity of coal resources, depths of seams, suitability of low-grade coals for petroleum and by-product distillation, areas proclaimed under the Gold Law, etc.

The Native Affairs Department will supply the necessary information regarding the social, housing, working, and recreation conditions for the natives.

The Postmaster-General's Department will have to be consulted regarding overland telephone and telegraph communications, etc.

Provincial Administrations being the responsible authorities for education ; local government control ; hospitals ; provincial roads ; township development and town planning, it will be necessary to ensure the closest co-ordination.

The Public Works Department, being a major development department for the Government, will have to be consulted.

The Department of Health being responsible for nutrition, infectious diseases, child welfare, and in general, all aspects of national health, and through the National Housing and Planning Commission for the housing of the lower-income groups of all races, will have to work closely with the planning authorities.

The Asiatic Land Tenure Board's functions will be important considerations in Natal and the Transvaal.

The Ministry of Transport and the South African Railways and Harbours will function considerably in the national planning of the country by ensuring suitable communications by road, rail, sea and air. The location of good transport routes will be important and other considerations will be marshalling of railway traffic, location of civil aerodromes, ports, junction points and particularly the effects of the transport rating policy on the location of development. It will be necessary for all highway-controlling authorities to supply information regarding traffic census for numbers, weights and types of vehicles using the roads, directional census of traffic, maximum weights that bridges and culverts can take, head-room under bridges, etc.

The Surveyor-Generals and the Trigonometrical Survey Office will be required to supply maps, diagrams, general plans, contours, etc., necessary for the basic work of planning.



On the basis of any or all of these surveys the National Resources Planning Council will be able to determine :

- (a) The maximum amount of food which can be grown and the maximum number of stock which can be grazed without ruining the land, and together with other information can determine the ultimate population which the country can carry and the amounts and kinds of goods which will have to be imported.
- (b) The areas most suitable for development having regard to existing urbanisation, location of mineral, fuel, power and water resources, possibility of defence, etc.
- (c) The number and situation of houses for all races and the scientific location of industry, truck vegetation, commercial and recreational areas.
- (d) Communication routes with regard to direction and carrying capacity.
- (e) Pleasure resorts, medicinal spas, sports stadia, etc.
- (f) The measures to be taken regarding density of population ; types of dwellings (multi-family or single family) ; siting of industries and communications ; size and shape of urban development and the provision of green belts and green wedges, all to secure the greatest possibilities of defence and good health.

With this and other information the National Resources Planning Council will advise the Minister upon the parts of the country which shall be declared "Controlled Areas."

### Part III

#### 4. "Controlled Area"

When the Governor-General, on the advice of the Minister, has declared an area a Controlled Area and published the necessary proclamation in the Gazette, all land and land use and the subdivision and change in use of land or buildings is forbidden, except with the consent of the appropriate controlling authority, except that subdivision of land in pursuance of an inheritance of legacy or a Court Order made prior to the date of proclamation is exempt from these provisions. Also exemption is granted for subdivision and use of land required in terms of any law, or in accordance with an approved town planning scheme or for agricultural and, with certain exceptions, mining or prospecting for minerals or the use of land for the purposes of a road.

The Governor-General may appoint a Regional Committee for the Controlled Area, to assist the Council in the control of the area and the preparation of development and planning schemes.

Upon declaration of an area as a Controlled Area, the Minister shall cause a register to be compiled containing a description of the purpose for which every piece of land in the area was being used on the date of proclamation of the area, and a record of all permits issued and the terms of such permits ; with the exception of any land controlled by an approved town planning scheme and the use of land for agricultural and pasture purposes and certain mining and prospecting purposes.



The preparation of schemes by the Council, with the assistance of the Regional Committee and the control of interim development, shall be undertaken after consultation with any statutory authority, including Ministers of State and provincial administrators.

The schemes will be prepared by the Council with the assistance of the Regional Committee (except in the case of town-planning schemes promoted by local authorities) and the basis of the schemes will be the various surveys mentioned and developments contemplated by industrialists, mining organisation, Government and local government departments, etc. On completion of the schemes they will be submitted to the Minister, who will advertise the scheme and invite objections from interested parties.

After consideration of the schemes and any objections, the Minister will refer them to the Governor-General with or without modification, who if he approves the schemes will proclaim them as the schemes for the particular controlled areas.

#### Part IV

##### 5. *Location of Regional Planning Areas*

The location of regional planning areas will, undoubtedly, be influenced by many factors.

In South Africa, a vast country with a small population, location cannot merely take in such factors as watersheds or existing development, but must necessarily be based upon more considerations. Some of the governing factors will be :

- (1) Existence of payable mineral deposits, including coal.
- (2) Existence of water in sufficient quantities.
- (3) Suitable transport routes, power supplies, etc.
- (4) Port facilities.
- (5) Existing urbanisation.

While the country is richly endowed with vast mineral resources, some of the most valuable are away from the existing transport routes and perennial watercourses.

These factors have been major considerations in opening up the new Orange Free State Goldfields, where a new railway line has been constructed, roads built and provision made for the pumping of water from the Vaal River some thirty-two miles away.

The first of the Controlled Areas has already been proclaimed, and is the above-mentioned Orange Free State Gold Area.

In this region a Regional Committee functions and already permission has been granted to mining interests to lay out an entire new town (Welkom), and to extend an existing town (Odendaals Rust).

In each of these cases development is taking place on the basis of preconceived town plans which have been and are being correlated with the mining activities ; through and local traffic requirements (road and railway) ; electric power and water supplies and the necessary housing ; business, industrial, educational, recreational, etc., requirements of the mining and incidental populations of all races.

Necessary considerations in the location of township development in this region have been the requirements of land for mining activity and



the contours of the gold-bearing reef, to avoid township development on land which, if undermined, would be likely to subside.

In the township development the ultimate populations of the towns have been predetermined and the business and civic areas so designed that there will always be sufficient natural light and air and no problems of traffic and parking.

All shopping zones have been provided with back access roads for loading and off-loading of goods and the plots are designed to provide sufficient room for all incidental parking for the occupants of the buildings.

The residential neighbourhood units are surrounded by wide, fast traffic highways, and the internal roads as designed to discourage traffic not essential to the unit.

All plots are designed to afford north or south orientation, on those facing south the dwellings are designed to secure the sunlight from the north, while still maintaining a well-designed elevation facing the streets.

The basis of the design of the town of Welkin is a system of Green Belts surrounding the residential and business and civic zones and Green Wedges through the centres of each neighbourhood unit radiating from the town centre to the green belts.

The civic and business zones are designed to form their functional use in a garden atmosphere, thus departing from the traditional strings of shops abutting on to draught and dust corridors, called streets, on which there is a congestion of motor vehicles.

Strict limitations control the height, coverage and design of the buildings in these zones.

#### Part V

##### 6. *Planning Code*

The preparation of a Code for Planning for the guidance and not direction of planning authorities is a necessary function of the Council.

This planning code will recommend certain standards for :

- (a) Minimum sizes of towns.
- (b) Standard widths, alignments (vertical and horizontal), types of road intersections ; street cross-sections, showing carriage-ways, cycle tracks, verges, tree planting, over and underground services, etc., provisions for parking and motor transport bays and street furnishings for through and local traffic roads.
- (c) Height ; coverage ; density ; spacing ; provisions for incidental parking, refuelling and loading and off-loading ; maximum permissible density of population in buildings ; orientation and siting of buildings in residential, general business, commercial and civic zones.
- (d) Public open spaces, sports fields, parks, children's playgrounds, green belts and green wedges, etc.
- (e) Hospitals ; institutions ; clinics ; schools (including nursery schools, primary schools, high schools and colleges) ; cemeteries ; social centres ; theatres and places of entertainment ; hotels ; shopping space in relation to population, etc.
- (f) Proportions of the area and size of stands to be allocated to the various income groups of the various races ; and the proportions of frontage to depth of the stands.

- (g) Domestic industrial requirements of populations with the number and sizes of stands per 1,000 persons.
- (b) The maximum distance of travel between home and work, school, shopping, recreation and open countryside to avoid fatigue and secure good health.
- (i) Any other relevant standards.

The code should in no way be a fixed standard, but only for general guidance, thus encouraging individuality in planning and avoiding monotony.

#### Part VI

#### 7. *Complications in the National, Regional and Town Planning of South Africa*

The national, regional and town planning of the Union is complicated by many factors, including :

- (a) A small population for a large area of country in which considerable movement of population takes place.
- (b) Many racial groups and sub-groups of the population, the economic value and wage-earning capacity of the vast majority being very small.
- (c) The mineral wealth of the country, while very great, is scattered.
- (d) The development of much of the country, its mineral and agricultural wealth is restricted by the water factor and lack of rainfall and transport routes.
- (e) The lack of trained personnel with years of practical experience in national, regional and town planning and experience in applying the particulars of the various surveys must necessarily delay the completion of the schemes.

In any case, the planning must be adaptable to the ever-changing conditions.

The mistakes made by so many countries of exploiting and exhausting their natural resources for the benefit of present generations must be avoided and parallel with the planning for such exploitation there must be a planned national policy of conservation of the natural resources.



## FRENCH TRANSLATION OF SUMMARY

### L'AMENAGEMENT SUR LE PLAN NATIONAL ET REGIONAL EN AFRIQUE DU SUD

#### I. *Arrière-plan historique*

La plus grande partie de la population est composée de peuplades indigènes, dont la capacité et la vie économique sont bien au-dessous des standards de la civilisation occidentale. Tandis que le standard de revenu de l'indigène est bas, son coût, comme ouvrier, est élevé. La population totale a augmenté de plus de 100% pendant les 40 dernières années. Elle est actuellement 11.391.949, répartie comme suit : Européens 2.372.690, Asiatiques 285.260, Indigènes 7.805.515, gens de couleur, etc., 928.484. Jusque tard dans le 20ème siècle, les occupations principales des habitants étaient le transport maritime, l'agriculture et l'industrie minière.

La coupe de la brousse, les pâturages excessifs par le bétail et la mauvaise culture, ont accéléré l'écoulement des eaux, provoquant l'érosion et asséchant la terre. Actuellement, l'Afrique du Sud ne se suffit pas à elle-même pour sa production alimentaire. Le pays est grandement doté de richesses minérales, y compris d'immenses gisements de houille. Des lois ont été récemment adoptées pourvoyant l'utilisation convenable des ressources naturelles suivant un plan qui servira au meilleur intérêt du pays tout entier.

#### II. *Aménagement sur le plan national et régional des villes et de la campagne*

En 1946, une grande activité régnait dans les nouvelles régions aurifères de la Province de l'Etat Libre d'Orange. Pour parer aux dangers provenant d'un développement fortuit, basé sur la spéculation des terres, et pour empêcher le traçage des communes sans considération des intérêts généraux de la région, le Gouvernement, en Juin 1946, a déclaré la région des nouveaux champs aurifères "*Région Contrôlée*." Un an plus tard, le Parlement a voté "*La loi de 1947, sur le développement des Ressources Naturelles*," créant "*Un Conseil de Développement des Ressources Naturelles*" pour conseiller le Gouvernement sur la politique pour les Régions Contrôlées, dans toute l'Union Sud Africaine, et pour déterminer les meilleures méthodes pour l'exploitation des ressources naturelles.

La première tâche du Conseil de Développement est d'entreprendre, sur le plan national, une étude comprenant les ressources et l'état de l'Union toute entière. Il examinera inter alia les conditions requises pour assurer l'emploi total et avantageux de la population, les besoins et les possibilités d'une augmentation de la production alimentaire, la densité et la composition de la population, les standards des habitations et leur emplacement convenable, et la répartition des niveaux de salaires des divers groupes sociaux. En plus de la préparation de ces études, le Conseil élaborera un *Code de l'Aménagement des Villes et des Régions* pour la gouverne des autorités, en matière d'aménagement. Dans la préparation de ses études, le Conseil aura le concours et la co-opération active, technique et pratique, de quelques dix-sept ministères du Gouvernement.



### III. " Régions Contrôlées "

Une " Région Contrôlée " est celle où l'utilisation de tout terrain et le morcellement ou le changement d'utilisation de la terre ou des bâtiments, est interdite sans l'assentiment de l'autorité réglementaire compétente. La sous-division des terrains est permise ultérieurement suivant un plan agréé d'aménagement urbain. Quelques exonérations de la loi sont accordées lorsque le terrain est destiné à l'agriculture, à l'exploitation minière ou à la construction routière.

### IV. *Etablissement des Divisions de l'Aménagement Régional*

La première des Régions Contrôlées a été déclarée dans les nouveaux champs aurifères de l'Etat Libre d'Orange. Une nouvelle ligne de chemin de fer a déjà été établie, des routes construites et un service d'eau aménagé de la Rivière Vaal. Dans cette région, un Comité Régional fonctionne et l'autorisation a été accordée aux intérêts miniers de tracer une ville entièrement neuve (Welkom) et d'agrandir une vieille ville existant déjà (Odendaals Rust), sur les bases d'un plan d'aménagement coordonné avec les exploitations minières.

La base du plan de la Ville de Welkom est un réseau de ceintures vertes (terrains non bâtis), qui entourent les quartiers d'habitation, de commerce et d'administration. Des enclaves vertes (terrains non bâtis en forme de coin) passent à travers le milieu de chaque quartier (" neighbourhood unit ") du centre de l'agglomération aux " ceintures vertes. " Les zones administratives et commerciales sont conçues pour remplir leurs fonctions dans une ambiance de cité-jardins, se départant ainsi des rangées habiteulles de boutiques aboutissant sur des rues poussiéreuses et encombrées.

### V. *Code de l'Aménagement*

Le Code recommandera certains standards de dimensions et d'écartement, de l'aménagement des habitations et des édifices publics, des allocations de superficie et de distribution de groupes de divers niveaux de revenu, de demandes domestiques et industrielles, etc. Le code n'est nullement envisagé comme un standard immuable, mais comme une indication générale pour encourager l'aménagement individuel et empêcher la monotonie.

### VI. *Difficultés présentées par l'Aménagement sur le Plan National, Régional et Urbain, dans l'Afrique du Sud*

L'Aménagement de l'Union est compliqué par plusieurs facteurs, tels que: une petite population pour une grande superficie, groupes raciaux importants, dont la capacité de gagner est réduite, emplacements éparpillés des ressources, manque de pluie et de voies de transport, manque de personnel ayant une formation professionnelle dans l'urbanisme. Il existe, cependant, la détermination résolue d'éviter, par une politique de conservation conçue sur le plan national, l'erreur de l'exploitation et de l'épuisement des ressources naturelles.