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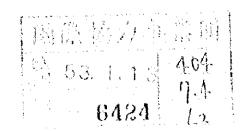
REPUBLIC OF KENYA

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# NYERI INDUSTRIAL ESTATE DEVELOPMENT PROJECT FEASIBILITY STUDY REPORT



November, 1977



JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力等	1業回
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#### PREFACE

The Government of Japan, at the request of the Government of the Republic of Kenya, has decided to undertake a feasibility study on Development of Nyeri Industrial Estate in the Republic of Kenya and entrusted its execution to the Japan International Cooperation Agency.

The Agency organized a survey team consisting of eleven experts, headed by Dr. Sadakazu lijima, Executive Director of the Japan Industrial Location Center, and dispatched it to Kenya for the period from February 19th to March 15th, 1977.

The survey team visited the existing industrial estates in Nairobi, Mombasa, Nakuru, Kisumu and Eldoret for data collection, site reviews and interviews with related authorities. The team carried out detailed studies and field surveys of industries in Nyeri Region and the peripheral areas, economic and business situation of the region and other subjects. With regard to the site of the industrial estate, the selection of potential site was made and site surveys and studies for making a master plan and basic design were carried out.

After returning to Japan the survey feam undertook analytical and design work based on the data collected in Kenya and completed this report.

This report presents a plan and a basic design for the site, an analysis on the kind of industries to be introduced into the estate, an economic and financial analysis, an idea of strategic program and additional comments for promotion of the project.

We would like to express our sincere gratitude to the Kenyan officials for extending hospitality to the survey team and providing cooperation to expedite its research work. Our particular appreciation goes to the Kenyan counterpart team members of the Kenya Industrial Estate Limited.

In presenting this report, we hope that it will contribute to the economic development of the Republic of Kenya as well as Central Province, thus promoting the friendship between the two countries.

Shinsaku Hogen

President

Japan International Cooperation Agency

November, 1977

November, 1977

Mr. Shinsaku Hogen
President
Japan International Cooperation Agency

Dear Sir,

Attached please find our report on the results of our studies carried out in Japan concerning the "Study on the Nyeri Industrial Estate Development Plan of the Republic of Kenya" with which we have been entrusted.

This complements the report submitted to you in March this year on the on-the-spot studies effected between February 19 and March 15, 1977.

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#### FOREWORD

#### -Objectives and Development of this Study-

The development of industrial estates can take varied forms depending on such factors as goals, the developing entity, location, the nature and size of tenant industries, the parceling out formula and the ways of maintenance and control. However, these forms for development can be basically divided into two types. These are (a) when the estate is developed with a standpoint to meeting land requirements of enterprises planning to establish themselves in the estate and (b) when an effort is made to realize potential demand for industrial locations by offering an estate with a highly developed infrastructure. In the first instance, this means providing services meeting demand at a proper price, after having ascertained the characteristics of such demand for industrial property. Consequently, such development activities can be carried out by private enterprises. In the latter case, where priority is given to the creation of a foundation for the development of the economy and industry, it becomes inappropriate to judge the suitability of developing an industrial estate from a profit standpoint as would be the case in the first instance. On the contrary, importance should be given to the part such a development plays in stimulating and provoking the socioeconomic development of the region. In other words, the dominant concept for evaluation should be social development rather than economics.

In the case of the Nyeri Industrial Estate, emphasis must be given to the significance of the latter of the two cases cited above. That is to say that from a standpoint of profitability, more favorable conditions prevail for locating an industrial estate in the urban areas of Nairobi, Mombasa, Nakuru, and Kisumu or their surroundings. For instance, numerous large-scale industries, including Japanese enterprises, have begun the operation or construction of plants at Thika outside Nairobi. On the other hand, a program, based on the public interest, seems to have been adopted to locate industrial estates in agricultural areas.

This program aims at energetically controlling the concentration of industry and employment in existing large urban centers under a policy to promote industries in agricultural areas in order to narrow the gap between urban and rural areas. Although this signifies that, from an economic standpoint, enterprises could find more favorable locations, social and administrative objectives have been given priority to promote the creation of a base for the social and economic development of agricultural areas, albeit such a course would give rise to expectable difficulties in creating demand for industrial locations.

Viewed in this light, the development of the Nyeri Industrial Estate could well be described as a milestone in the implementation of such a policy. Although it offers favorable economic and social conditions for industrial development, next to the areas such as Nairobi, Mombassa, Nakuru, Kisumu and Eldoret where industrial estates have already been established, it cannot be said that a strong demand for industrial locations exists in the predominantly farming Nyeri area. But, there is a latent possibility for industrial development in the social conditions of the area such as location, resource availability and manpower. The special nature of the undertaking of creating the Nyeri Industrial Estate can be found in giving precedence to the development of a foundation to realize this potential which shows promise for future burgeoning.

It is against this background, that the decision was made to establish the Nyeri Industrial Estate and it forms part of the 1974-1978 Development Plan of the Republic of Kenya now being implemented. Its execution awaits the completion of planning by the K.I.E. Ltd., the undertaking entity. This study will provide the basic direction taken in this planning.

The subject of this study—the Nyeti Industrial Estate—is an undertaking whose characteristics have already been clearly defined as follows:

- Developing Entity: The Kenya Industrial Estate Ltd. (One of the fully-funded subsidiary companies of the Industry and Commerce Development Corporation.) It has the character of a public corporation.)
- Location of the Estate: Nyeri district of the Central Province. It is an industrial estate to be built in a central city of an inland agricultural area.
- Composition of Tenant Industries: Aimed at a mixed type of composite industries.
- Size of the Estate: Small sized estate (Less than 100 ha)
- Size of Tenants: Small industries
- Development Objective: An undertaking aimed at nurturing small industries and developing a rural area.
- Substance of Development: Preparation of the land and construction of factory buildings and public utility facilities.
- Parceling Method: Rental system.
- Types of Plants: Mixed. Standard type and custom made factory buildings
- Benefits to Tenants: Technical services provided by the technical service center, lowinterest loans for the purchase of machinery, management guidance, technical guidance, provision of technical training, etc.
- Limits on the Estate and Tenants: Priority shall be given in attracting selectively new industries, export and transfer industries and industries with employment capacity that will utilize the resources of the industrial estate. Priority will be given to investments by Africans with Kenyan nationality.

The character of this undertaking is clearly defined as stated above. This definition springs from the development program and the industrialization policies of the Republic of Kenya. Proposals to carry out extensive changes in strategy are not allowed.

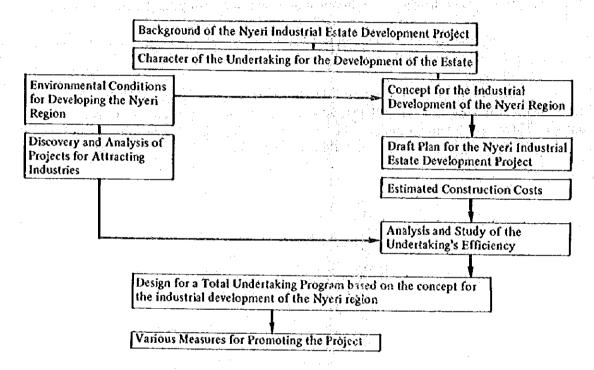
In consequence, the aim of this survey is to analyze and evaluate the efficiency of the Nyeri Industrial Estate development plan and to propose methods for the implementation of the undertaking.

In carrying this out, it becomes necessary to clarify the background for the proposal of this project with its clearly defined character and to understand it.

With this as a base, the need arises to conceive an effective industrial development program for the development of a rural area, which constitutes one of the aims of this undertaking and to discover an industrial project that can be evaluated as feasible in the Nyeri Region and study its efficiency in realizing the establishment and development of medium and small scale industries by Africans of Kenyan nationality, which is another aim of this undertaking.

At the same time, taking into consideration the fact that the location, the size and planning details for the industrial estate are still undecided, a draft plan for the estate compatible with the aim of the undertaking and the project for attracting industries will have to be elaborated in order to analyze and evaluate the technical and economic effectiveness of the industrial estate development project.

In addition, the study was carried out to meet these issues with a view to proposing various measures that would ensure effectiveness.



Before submitting a report on the results of our study, we wish to state our understanding of the project as follows:

The Nyeri Industrial Estate Development project is a project designed to conform with the industrialization policies of the Kenya government under its Third Development Plan (1974-1978) and, in particular, with the policy for small-scale industrial development. This development undertaking will be carried out by K.I.E. Ltd.

In addition, this project is understood to be one of several projects coming under the Kenyan government's Industrial Estate Development Program (IEDP) and Regional Industrial Development Program with the aim of developing the Plyeri region.

Consequently, while the Nyeri Industrial Estate development project is directly an undertaking for the development of this industrial estate, it may be considered as an undertaking to form the core for the proposed industrialization of the Nyeri region, and, in particular, to promote the integrated development of small-scale industries. Therefore it may be said that the broad

objectives of the development of the Nyeri Industrial Estate lie in promoting the development program for the whole region.

The planning scope of the Nyeri Industrial Estate Development Program may be considered to signify:

Firstly, the undertaking for development of the Nyeri Industrial Estate under the I.B.D.P. and secondly, regional development, under the R.I.D.P. designed to nurture and develop small scale industries in the Nyeri region, including development by the R.I.D.C. and others.

While the Nyeri region is a defined region in the economic area with Nyeri City at its center, it refers to a district of the Central province.

It is on the basis of this understanding that we have examined in the most comprehensive manner possible the Nyeri Industrial Estate development project for the realization of its contents that we consider appropriate, the elaboration of a process for realization, problems that can be foreseen and the manner in which these can be avoided.

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#### I GENERAL OBSERVATIONS

(Summary of Study Results and Recommendations)

#### Chapter 1

#### Summary of Study Results

1-1 The keynote policy of the Third Development Plan of the Republic of Kenya aims at the rapid growth of the national economy by Kenyan Africans and the equitable distribution of the fruits of this development. The promotion of industrialization is considered to be one of the effective methods for attaining this goal.

For this purpose, the industrialization policies envisage the active acceptance of investments in the form of foreign capital and technology, on the one hand, and, on the other, the implementation of various measures for the nurturing of samall-scale enterprises by Kenyan Africans. The latter policy is combined with the policy to correct the growing gap between urban and rural communities as well as the productivity gap between the modern urban industrial sector and the agricultural and small handicraft industry sector with a view to achieving a more balanced income level. In order to realize this goal, this policy aims at the nurturing and promotion of small-scale industries in rural areas.

The program is carried out by the implementation of the Industrial Estate Development Program (I.E.D.P.) and the Rural Industrial Development Program (R.I.D.P.). It is on this basis that the Kenya Industrial Estate Ltd. (K.I.E.) has built and manages industrial estates and the Rural Industrial Development Centers (R.I.D.C.).

These policies and their execution, as well as management experience accuired therefrom, can be evaluated as being appropriate at the present stage of the country's socio-economic development. Consequently, considering that the policy background and objectives of the Nyeri Industrial Estate Development Program are appropriate, we have studied the basic directions for the implementation of the industrial development program for the Nyeri region after absorbing lessons acquired from past experience.

#### (Summary of Chapter 1)

1-2 This project aims at developing a series of industrial activities in the Nyeri region, centered on an industrial estate for small-scale industries, with the ultimate long-range objective of promoting regional development. It is intended to raise effectively the economic level of the region by organizing, through appropriate development methods suited to the appropriate character of each district within the area centered on Nyeri City, an economic region that will embrace, where possible, surrounding areas.

The Nyeri Industrial Estate is the core activity within this system of successive programs. It is therefore the undertaking that must be given the first priority. However, in view of the con-

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siderations mentioned above, it is important that the industrial estate project should maintain a correlation with the related undertakings being established in other part of the Nyeri region and play the role of promoting the growth process towards the next stage.

Looked at from the standpoint of developing an industrial estate, the environment 1-3 of the Myeri region, is not as favorable as other areas which offer better demand conditions for the location of industries. However, judged from the point establishing a base for the nurturing and promoting small-scale industries in a rural area, in keeping with the policy, stated in 1-1, and when the possibilities for effective action are considered, the Nyeri region can be evaluated as being the most appropriate chosen site for the development of the seventh industrial estate after Nairobi Phase 1 and 2, Nakuru, Kisumu, Mombasa and Eldoret.

We estimate that the Nyeri region, judging from its state of socio-economic maturity, its industrial base, market for industrial products, resources, manpower, regional relations, and other conditions, is an area which has ample possibilities for the successful development of small-scale industries by the establishment of an industrial estate and the provision of a related base.

#### (Summary of Chapter 2)

- Taking into consideration the background of this project and the policy objectives 1-4 of the super-ordinated programs, the experience acquired from earlier developments of industrial estates and the environmental conditions for development of the Nyeri region, the industrial development of the said region should consist of the following undertakings:
  - Construction and operation of an industrial estate in Nyeri City
    - Planning, design, preparation, construction of the industrial estate and its maintenance and management.
    - Creation and nurturing of industries and their establishment in the estate.
    - Technical and management guidance to the enterprises.
  - (2) Establishment of R.I.D.C.s at Nyeri, Nanyuki, Nyahururu and Muranga.
    - Planning, design, construction and operation of R.I.D.C.s at each location.
    - Guidance for handicraft cottage industries and the nurturing of small enterprises in these areas.
  - (3) Establishment and operation of an Industrial Promotion Area at Karatina.
    - Planning, design and construction of an I.P.A. in Karatina and its maintenance and management.
    - Nurturing of local I.P.A. enterprises.
  - (4) Completion of a unified, systematic program for the nurturing of small industries in an economic area centered on Nyeri and including Nyahururu, Nanyuki, Karatina and Muranga.
    - Completion of a network system, centered on the Nyeri industrial estate and linked to each R.I.D.C.
    - Systematization of the network and the stabilization of its functions.

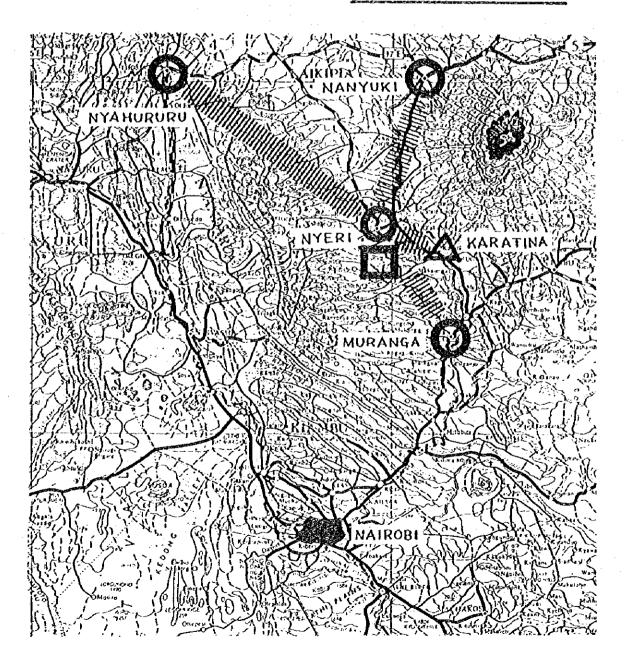
We conceive this integrated program as the "Nyeri Set-Up".

See map on following page.

(Summary of Chapter 3)

# NYERI I.E.D. PROJECT

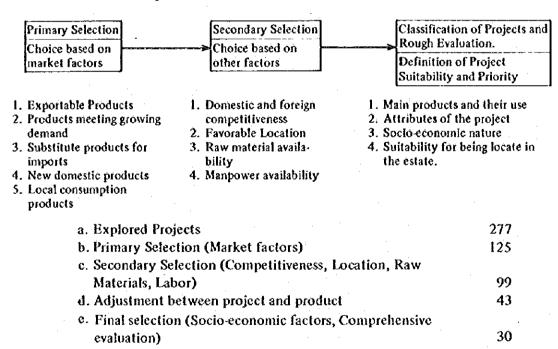
□ I.E.○ R.I.D.C.△ I.P.A.



1-5 The main question in the project for developing the Nyeri Industrial Estate is what kind of industry should be nurtured there. Industrialists and businessmen in the Nyeri region look with anticipation at the investment opportunities that the establishment of such an estate will offer. However, as stated previously, there are few enterprises at present that wish to install themselves in the proposed estate. Consequently, this study must address itself to finding out what type of industrial project will succeed in the Nyeri region and what type of small-industry would be profitable in it. This is also the task that the K.I.E must carry out in the course of undertaking the development of the estate.

This study, has supplemented, through on-the-spot investigations, the preliminary project list prepared by the Republic of Kenya to determine success possibilities and has examined 277 varieties of projects. Following evaluation and selection based on market factors, resource factors (raw material availability), competitive conditions, location characteristics, manpower availability, degree of contribution to the local society, degree of contribution to the national economy, size characteristics and other factors, this study has selected 30 types of industrial projects that could succeed in the Nyeri region, out of which 17 could be inducted into standard factory buildings.

The selection process was carried out as follows:



Among the selected projects, the following 17 are suited for being established in standard factory buildings:

- 1. Carpet manufacturing
- 2. Towel manufacturing
- 3. Ready-made wear manufacturing
- 4. Urea resin processing

- 5. Sundry rubber goods manufacture
- 6. Secondary processing of hides
- 7. Leather goods manufacture
- 8. Ironworks
- 9. Manufacture of agricultural tools
- 10. Manufacture of metal goods used in construction
- 11. Valve manufacture
- 12. Manufacture of electrical components
- 13. Sundry plastic goods manufacture
- 14. Sporting goods manufacture
- 15. Bamboo processing, manufacture of wood products
- 16. Sundry glass goods manufacture
- 17. Mechanical repair workshop

Among the selected projects, the following 13 are better suited for being situated in the free design area instead of prototype buildings:

- 18. Meat Processing
- 19. Vegetable oil manufacture
- 20. Urea resin raw material manufacture
- 21. Sawdust charcoal manufacture
- 22. Pottery manufacture
- 23. Irrigation machinery manufacture
- 24. Animal feed manufacture
- 25. Manufacture of fermented products
- 26. Starch manufacture
- 27. Plywood manufacture
- 28. Cardboard manufacture by a continuous process
- 29. Refining of pine resin
- 30. (Primary) hide tanning

(Summary of Chapter 4)

The Nyeri set-up, summarized in 1-4, is the basic preparatory undertaking for the nurturing of small-scale industries in the whole region. However, it is the primary undertaking and one of the tasks of this study is to examine an appropriate plan for the industrial estate, which forms the nuclear undertaking in the set-up, and to establish a basic plan for the industrial estate. The details of this plan will be submitted in the Detailed Observations which follow and we shall limit ourselves here to a summary of the basic direction taken in establishing this plan.

Firstly, in the selection of a suitable site for the industrial estate, we have made a comparative study of areas designated as industrial zones within the boundaries of Nyeri City and have concluded that the land proposed by K.I.E., Ltd., is an appropriate site. This land with an effective area of 4.9 ha is small when compared to other industrial estates that have been developed so far, but is amply capable of exerting its functions as an industrial estate through effective designing. Moreover, it has possibilities for expansion and we have thus determined it is an appropriate site.

In as much as the utility of industrial estates lies in part in allowing enterprises to benefit from a favorable location environment by enabling them to share common facilities and services that would be uneconomical if individual enterprises should provide them, the basic direction adopted is one that will enable tenant enterprises to share these various service facilities. In particular, the estate will provide common facilities for the group of small-scale industries.

However, the nurturing and promotion of small-scale industries will probably call on the estate to provide non-material services, that may well exceed the scope of the tangible services provided by these facilities. Management guidance, technical guidance and low-interest financing offered by the estate management will provide the incentive for the establishment of enterprises. We shall deal with such functions later.

(Summary of Chapter 5)

1-7 From the aspect of a program designed to assure the growth of industrial development in the whole Nyeri region, it becomes necessary to study the construction and operation of R.I.D.C.s and I.P.A., which are closely related to the industrial estate.

An R.I.D.C. is presently operating in Nyeri to promote and nurture cottage handicraft industries in the region. The continued maintenance of this R.I.D.C. (Nyeri) after the establishment of the industrial estate is desirable. The R.I.D.C. addresses itself to cottage handicraft industries which belong to another category from small-scale industries. Therefore, even after the industrial estate is established there will be entrepreneurs who will require R.I.D.C. functions, aside from the services provided by the industrial estate. As a consequence, the functions of the R.I.D.C. could well extend to promote the take-off of small industries giving rise to expectations that coordinated activities between the R.I.D.C. and the industrial estate will have favorable results.

When the geographical reach of R.I.D.C. services is taken into consideration, the concept of establishing R.I.D.C.s at Nyahururu, Nanyuki, and Muranga, which are situated within the industrial development region and which are the centers of comparatively independent economic areas, after the one now operating at Nyeri, is most appropriate in that thees will serve as satellite centers that will give impetus to industrialization.

We therefore wish to propose facilities and functions to implement the already conceived program for the nurturing and promotion of industry in the whole region that foresees the overall management of these R.I.D.C.s by the K.I.E. regional manager who will be assigned to Nyeri, where he will also be responsible for the management of the industrial estate. (Our recommendations will be summarized in the following chapter.)

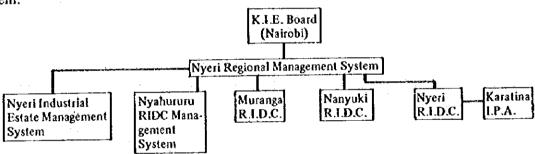
Moreover, an undertaking by the I.P.A. to integrate existing cottage handicraft industries by bringing them together into the estate should be possible depending on the extent of integration that can be achieved. In the Nyeri area, there is a cluster of wood-working industries operating on a very small scale. These have joined together into an association and have scheduled the construction of a joint plant. It is to be anticipated that this undertaking will be realized at a comparatively early time under the guidance and supervision of the Nyeri R.I.D.C. to form part of

the set-up mentioned earlier.

### (Summary of Chapter 6)

1-8 The principle, on which the strategy for the promotion of development activities for the whole region is based, consists in creating an infrastructure that will form the foundation for industrial development such as R.I.D.C., and industrial estate in cluster areas that are geographically scattered throughout the Nyeri region, in the same manner as the industrial development program for the Nyeri region has been carried out until now. For this reason, the firm establishment of a unified system for the whole region should play a most important role in the operation of the undertaking for development.

It is deemed appropriate that the activities of each district should be managed under the Nyeri Regional Management System (R.M.S.), with a regional manager at its center, according to the scheme below to achieve the purposes of the Nyeri Industrial Development Management System.



The development program based on such a management system is shown following. It is anticipated that the Nyeri set-up will be completed within the next 10 years.

An estimate of the expenditures required for undertaking such a development is also given following.

(Summary of Chapter 7)

Then, all kinds of high-quality services needed by the businesses operating in the estate must be provided at the lowest possible cost. Moreover, these services will help to expand their earnings. In return, while the businesses are encouraged to grow, their earnings must be used to share and bear the cost of services provided in the estate.

We investigaged the costs for the construction, management, and T.S.C. services of the industrial estate described in the preceding section and assessed its cost-effectiveness based on N.C.F. and I.R.R. As the result, it became clear that we must be careful on the following points to realize the financially well-balanced operation of the estate.

- If the funds for the construction and management of the estate is borrowed at 4% interest rate with 20 years' repayment period after 5 years' grace, the pay-back period will be 41 years and no significant I.R.R. will be realized.
- If the rent is raised, this will discourage those wishing to operate in the estate and will

NYERI INDUSTRIAL DEVELOPMENT PROGRAM (ASSIGNMENT OF CONSTRUCTION AND ADVISORS)

	FY 77 F	FY 78 F	FY 79	FY 80	80 FY 81	Ā	1 1	82 FY 83	Ţ	37.	84 FY 85	1	FY 86
NYERI SET UP													
R.M.S.	Project	Team ( KIE, Nairobi Team ( Nyeri )	ido Judo Judo Judo Judo Judo Judo Judo Ju		Regional	, i	Management	Office	ļ				
MANAGEMENT	Advisor	<b>→</b>	Industrial	ŀ	Economist					-			-
INDUSTRIAL ESTATE	Design	& Construction	Ĭ.	Machinery Instr Tenancy Begins	Machinely Installed Tenancy Begins	1 1	( TSC)		Tenar	၂ <mark>ပို</mark>	Tenancy Completed		
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R.I.D.C NYERI	O Advisor :												
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R.I.D.C NANYKI		99	Design	∞ '	Construction D ( Mechanical		Engineer)			·			
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ESTIMATION OF PROJECT COST

Summary Table —

( Smillion )

	R.M.S	NYERI I.E	NYERI R.I.D.C	NANYUKI R.I.D.C	MURANGA R.I.D.C	NYAHURURU R.I.D.C	KARATINA I.P. A
CONSTRUCTION ACCOUNT							•
LAND PURCHASE	0	0	0	0	0	0	0
CONSTRUCTION	0	1.343	0	0.148	0.144	0.143	0.081
SURVEY & DESIGN	O	1.201	0	0.022	0.022	0.021	0.012
SUB TOTAL	0	1.544	0	0,170	0.166	0.164	0,093
RELATED PUBRIC WORKS	O	0,425	0	ø	0	0	0
MACHINERY INSTALLATION							
COMMON MACHINERY	0	0.200	0.020	0.040	0.00	0.000	
TOTAL ( ABOVE )	0	2.169	0.020	0.210	0.206	0.204	0.093
FINANCIAL ACCOUNT							
MACHINERY & WORKING CAPITAL	٥	1.000	0.150	0.075	0.11	0.110	0
MAINTENANCE ACCOUNT					- <b>-</b>		
MAINTENANCE & MANAGEMENT		Y/960.0	Y/480.0	٨/٦80.0	¥/780.0	٥.084/٣	O
ADVISOR SURVICES	10 P.Y 1 Person/0 Years	16 P.Y 2Person BYears	2 P.Y 1Person 2 Years	4 P.Y 1 Person 4Years	4 P.Y 1 Person 4 Years	4 P.Y 1Person Lyears	
	0.450	0.720	0.090	0.180	0.180	0.180	0

pose financial burdens on those already in it. Therefore, it does not fit the goals of its existence becauses its services are no more provided at a low cost and the growth of small businesses are not promoted.

If the number and space of the estate buildings is increased at a lower marginal cost,

some improvement can be made in cost-earning ratio.

If businesses are encouraged to move to the estate at a quicker pace, its profit margin can be expanded. Moreover, the facilities and services provided in the estate must be improved and incentive measures for the businesses planning to move to the estate must be reinforced.

If funds are procured on easier terms, the estate's profit margin will improve.

If management cost is reduced to the half of its present level, the pay-back period can be shortened to 25 years with approximately 7% I.R.R. even if the funds are procured at the same interest rate and with other conditions described previously. It is absolutely necessary that the management cost of the estate is borne by the businesses operating in it. All other measures described in the above cannot solve the financial problems by themselves alone. If the management personnel is staffed exactly as given in the K.I.E. guidelines, its cost will cut into the estate's earnings.

If, however, the number of the estate management personnel is reduced to such an extent that its goals, such as fostering the growth of small businesses, selection of industrialization projects, industrial development, and provision of management guidance will put the rationale of the estate's existence into question. Therefore, we must make every effort to lower its management cost without reducing the size of its

needed staff.

#### Chapter 2

#### Recommendations

2-1 The Nyeri Industrial Estate Development Project has been declared to be an undertaking to be started during the 1974-1978 Development Plan of the Republic of Kenya. It is, therefore, a prerequisite that the K.I.E. Ltd., the executory agency for the undertaking, should begin work on it within the 1977 fiscal year.

The industrial estate and R.I.D.C. development undertakings carried out by the K.I.E. Ltd., which have for their object small-scale industries, have hitherto been wholly executed with foreign economic and capital assistance and the K.I.E. Ltd. must rely on foreign support for the Nyeri set-up operation. This is because, while the K.I.E. has constructed industrial estates and R.I.D.C.s, the various existing undertakings have been unable to generate profits and consequently it has not reached the stage where it is capable to carry out plant and equipment investments with its own capital. In as much as these are undertakings aimed at creating opportunities for profitable investment by Kenyan Africans, nurture and establish industries, an essential condition for their success lies in securing sources for low-interest, long-term funds, it becomes necessary to induce government investment and foreign assistance based on an understanding of the nature of the undertaking when an attempt is made to promote small-scale industrial development in rural areas.

We have reached a concept for the Nyeri set-up after looking back at the experiences in the development of industrial estates at Nairobi, Monbasa, Nakuru, Kisumu and Eldoret; the R.I.D.C. undertakings, led by those of Nyeri and Embu; and the I.P.A. undertakings at Machakos and studying the direction taken by the K.I.E. undertakings. This is because, in our evaluation, it is possible to promote an industrial development that will effectively contribute to raising the socio-economic level of an entire region, by defining a rural area with a more or less independent character, by systematically locating various K.I.E. undertakings for a unified control and operation.

For this purpose, we wish to propose an organizational form for the control of the varied industrial development undertakings in the subject region under a regional manager who would be delegated a large degree of authority from K.I.E. headquarters for the elaboration of the implementation plan for the undertaking, its execution and the unified management thereof. We propose, as a first step, the organization of project and research teams for the Nyeri set-up, under the regional manager, to carry out an execution program for the undertaking and related necessary investigations. It would appropriate to transfer the set-up operations to the Nyeri regional office taking into consideration the progress achieved in the construction of the industrial estate, which will be the primary undertaking.

In the course of this study, we have selected industrial projects that can be situated in the Nyeri area, but we have not been able to determine the feasibility of launching each individual project. It will therefore be necessary to make a final selection of inducible industrial projects, among those that have been proposed, by examining market prospects for their products,

the prospects for raw material procurement and evaluate production costs and profitability. One of the missions of the research team proposed in the preceding paragraph will consist in making a minute feasibility study of these various projects. It will be necessary to have a foreign advisor participate in this study.

The projects selected as suitable for the industrial estate (12 categories) are projects that could be technically miniaturized and many of them have the possibility of being implemented individually. It is therefore desirable that, from a scheduling standpoint, these should be given priority in the feasibility studies.

- Among the projects deemed unsuitable for the industrial estate there are many that require medium-sized investments and that are closely related to other industries in respect to conditions for obtaining raw materials and for delivering products. It therefore becomes necessary in carrying out feasibility studies for these projects to conceive, as a prerequisite, a plan that will take into account a balance with these related sectors. Consequently, it will be necessary to carry out a thorough survey on the long-range prospects in the raw material aspects in conjunction with the development plan.
- Their presence will be essential to the advance of the set-up operations. Able economists will be required, firstly, in the stage of elaborating the execution plan of the Nyeri set-up and, secondly, in the fields of exploring and evaluating the marketing possibilities of industrial products, as well as the industrial projects themselves. Thirdly, expert advice will be required in providing guidance for the management and financial control of the enterprises. Fourthly, engineers will be needed to select equipment and to provide guidance in its technical use. These advisors will be assigned to the T.S.C. of the estate and the R.I.D.C. workshops. Moreover, should, for instance, foreign economic and technological assistance be offered for the entire Nyeri set-up, an accountant will be necessary to provide advice for the accounting system of the Nyeri set-up operation. These advisors will be expected to contribute towards the promotion of the undertaking by cooperating with each other, keeping in mind their role in promoting the industrialization of the entire area, and also cooperate with the regional manager and the estate and R.I.D.C. managers and their staffs.
- The land chosen as appropriate for the estate is believed to be rather too small when one takes into consideration the projects that can be attracted there. Its size makes it difficult to secure a sufficient free design area. Moreover, when looked at from the standpoint of the economics of the undertaking, it entails the risk that appropriate leasing fees and other operational revenue will not be obtained. (By appropriate leasing fees we mean appropriate in the sense of reducing to a minimum the cost burden of small-scale industries). This is because the small land area does not correspond to the size of the cost of creating the infranstructure and, in particular, with the size of the operating and management expenditures of the industrial estate, that will include numerous advisory services. It is therefore necessary to give thought to expand the site, not only to introduce economies of size, but also to assure the success of as many industrial projects as possible. We have selected this site because of its excellent location as an industrial location and because we have determined that it could be expanded.

While it is anticipated that the Kenya government will also extend facilities in a positive manner for securing land, capital and technology for the execution of the project, it is to be expected that the Kenya and regional governments will make efforts to solve this problem, since the securing of a free design area is one of the most important issues.

- 2-7 The task ahead for increasing the profitability of the enterprises lies in increasing the productivity of labor and reducing the ratio of raw material costs, rather than condoning the actual state of existing manufacturing enterprises. Naturally, there may be market factors in the background, but the important task is to raise at least the technical ability of industrial workers. The establishment of a procurement policy for raw materials is also an important key at the planning stage of an industrial project. It is therefore necessary to take into ample consideration a technical training plan and a raw material procurement plan in drawing the plans for an industrial project.
- As to the operational aspects of the R.I.D.C.s, the Nyeri R.I.D.C. should continue to nurture the craft industry in the Nyeri district, while there is the need for carrying out surveys, under the direction of the regional manager, by the Nanyuki, Nyahururu, and Muranga R.I.D.C.s so that they may properly grasp the actual state of the craft industry in each district and to establish the future possibilities of each district. It will be desirable that the needs of each R.I.D.C. will be ascertained by this survey in order to draw programs for their functions, installations and management.

The promotion, procurement and marketing functions that were lacking in the existing R.I.D.C.s will be carried out by the staff and advisors, under the regional manager, in cooperation with the R.I.D.C. managers.

- Considering that the nature of the undertaking consists in nurturing small-scale industries in rural areas, the procurement of funds for the Nyeri set-up calls for the introduction of long-term, low-interest capital. Firstly, in order to lower the cost burden of tenant industries, efforts should be made to reduce construction costs so as to keep rental fees at a minimum. Secondly, endeavors should be made to reduce management expenses. Thirdly, in order to reduce the plant and equipment expenditures of tenant industries, common facilities meeting their needs should be established when introducing T.C.S. machinery and equipment. Pourthly, efforts should be made to obtain virtually free assistance in the installation of the T.S.C. machinery and in obtaining the services of foreign advisors. Fifthly, we also propose that endeavors should be made to obtain governmental or foreign assistance, that would be virtually free, for the installation of R.I.D.C. machinery and for advisor services.
- 2-10 It cannot be conceived that tenant enterprises in the Nyeri industrial estate will have sufficient capital. Consequently, there will be a limit to their capability of shouldering the burdens arising from their tenancy in the industrial estate. For this reason, it will be necessary to restrict as much as possible construction and other expenditures. However, since on the other hand, high-level services will have to be provided, it becomes necessary to pay ample heed to the economics and the sophistication of the project. Required are superior thinking and excellent technical and management leaders, by giving strict consideration to achieving, at the same time, both high-level services and low cost.

2-11 The strategic approach to the design for the industrial development of Nyeri is characterized by the industrial development of geographically scattered districts and their wide-area control in order to distribute the benefits of size and to lead towards independent development. Consequently, the industrialization of the area calls for careful consideration, not only of productive functions, but also of almost the entire economic process such as securing marketability and distribution. Consequently, the R.M.S., the operating system, centered on the regional manager who controls the R.I.D.C.s, industrial estate and the I.P.A must function with the awareness that, in addition to the operation of the system in these districts, other conditions must be met in promoting industrial development. In addition, it is desirable the Nyeri set-up should take shape within a short period (with 10 years as objective) to profit from the systematization of industrial activity at various levels in the region, insofar as it possible depending on the formation of the system.

From this viewpoint, haste should be made in establishing, in particular, the substance of industrial development in drawing up a master plan for the industrial development project for the Nyeri region. For this reason, it becomes necessary to launch a project team, which will become the parent body for the execution of the Nyeri industrial estate and the R.M.S., that are at core of this project, with the Nyeri regional manager at its center, to begin a study of a program for undertakings that will serve to the development over a wide area.

In addition, all development projects in each area, the R.I.D.C., industrial estate and the I.P.A., etc., will have to be able to respond in a flexible manner so as to sufficiently reflect the tendencies of each district. This is an essential condition for the nurturing of small-scale industries.

However, on the other hand, an important problem will be to pay attention to the possibilities that cannot be developed within the limits of the division of functions in the entire Nyeri region. The unification of the area will not only bring economic benefits arising from expansion in size. Proper evaluation must be made to the benefits derived from the possibility of planned production by avoiding competition. Attention must be directed in drawing the construction plan to the fact that the industries cannot be expected to have enough funds and that their ability to bear burdens is limited. An industrialization plan must be carried out with the prior perception that it is, in itself, an integrated part of society.

#### II DETAILED OBSERVATIONS

#### Chapter 1

## Background of the Nyeri Industrial Estate Development Project

1-1 The Republic of Kenya, after achieving steady economic development during the 10 years since attaining independence, experienced a slowdown of its economic growth in 1975 to 1975, as a result of the deterioration of both internal and external economic environments. While the production of agricultural products for export has recovered and the markets for this produce have recovered and the markets for this produce have remained firm, indicating a return to a growth pattern, a report by a World Bank study team shows that the country is faced with a number of problems in its second decade of independence that cannot be solved by a mere extension of past policies, thus making necessary a change in policy.

The main problems confronting the Republic of Kenya are:

- A deterioration in its international balance of payments. (A major factor for this is a temporary reduction in exports caused by poor harvests of agricultural produce for export.)
- The aggravation of conflicts of interest among the various nations in the East African Community.
- The accumulation of foreign debts.
- The unemployment and poverty problems caused by a high rate of increase in population and the absence of employment opportunities.
- Inequalities in the distribution of wealth.
- The widening gap between urban and rural areas.
- Inflation
- The political and social unification of a nation comprising numerous tribes.
- The modernization of its economy and Kenyanization.

# 1-2 Industrial Development Policies in the Third Development Plan

A set of policies intended to meet the above problems is set forth in the Third Development Plan (1974-1978) with emphasis placed upon the expansion of employment opportunities in order to meet the population increase and equalization in the distribution of wealth. Industry in the Republic of Kenya consists of the following:

- The Modern Sector represented by commerce and industry.
- The Traditional Sector consisting of agriculture and traditional crafts.
- The Informal Sector comprising home industries and artisanal industries such as repairing.
- Key policy measures being considered are the modernization and increase in productivity of the traditional and informal sectors and the establishment and nurturing of the modern sector. One of the important means for the modernization of the economic structure and

the maintainance of economic growth consists in industrial development.

The goals of industrial development in the Republic of Kenya are:

- The creation of employment opportunities.
- The geographical distribution of industry.
- The increase in added value by the processing of domestic raw materials.
- The Kenyanization of the economy.
- The economization of foreign currency.
- Equal distribution of income.

The steady growth in industrial production during the 10 years after independence has been supported by industrialization policies for the production of goods to replace imports. Howevever, this base for industrial policy is showing signs of change in order to meet the various problems cited above with increasing weight being given to export-oriented industry and a revision of customs tariff policies.

The new direction adopted for industrialization policies can be summarized as follows:

- Untit now compensation for the smallness of the Kenyan domestic market was secured by exports to the East African Community markets. However, in the future, the competitiveness of export-oriented industries will be encouraged to meet the demand in markets of industrially-developed countries, especially those in the European Community. (Actually exports are increasing to areas outside the East African Community countries.)
- Aiming at the establishment of an industrial structure capable of further processing of raw materials to finished products, including intermediate processing. (Diversification of the industry)
- Modernization of the non-currency economic sector by the development of rural areas, thus increasing the purchasing power of rural villages, thereby promoting regional small and medium industries.
- Encourage and nurture exports of processed domestic resources.
- Promotion of Kenyanization of the economic sector through the establishment and development of small and medium industries by Kenyan Africans.

Although the Republic of Kenya has adopted African Socialism as its basic national policy, its system of government can be more accurately described as one pursuing freedom and equality. It allows foreign investments in areas where its own capital and technological resources are insufficient and actively accepts such investments for the operation of medium and large enterprises, besides guaranteeing the transfer overseas of profits. It assures the path of Kenyanization, through capital participation in enterprises by the Industrial and Commercial Development Corporation, the governmental agency for financing development, and also has established and developed nationalized industries. However, it has adopted policies basically respecting the freedom of enterprises.

#### 143 Policies for the Dévelopment of Small Industries

The Kenyan government's industrial development policies lay more emphasis on the establishment and nurturing of small industries than on that of large and medium industries. This is because it can expect larger contributions to its industrialization policy from small rather than large industries. The rationale is that small industries provide more employment in relation to investment; that they can provide industrial products matching the purchasing power and needs of the potential domestic market; and that they contribute to the modernization of rural economy and make possible entrepreneurial activities by Kenyans with small capital resources. We evaluate this policy implementation as most appropriate in that it places major emphasis on small and medium industries in pursuing the industrialization policy, on the one hand, and, on the other, it guarantees the freedom of activity of medium and major industries established with foreign technology and capital, in which the government has equity interests.

The placement of medium and large industries in major urban areas and their neighborhood appears to have come to an end. A number of medium and large industries have recently chosen locations in agricultural areas to avail themselves of regional resources and manpower supply (Sugar refining, paper pulp and textiles). The modernization of the economy and the promotion of industry in rural areas are coming to a turning point, with budding opportunities for the establishment of small-scale industry through the rationalization and modernization of craft industries which are being created in connection with the placement of medium and large industries and the development of rural markets.

Against this background, the adoption of policies aimed at curbing an excessive concentration of population and industry in large cities, the modernization of rural areas and the development of latent resources and markets, through the establishment and nurturing of small-scale industries in rural areas and correcting the gaps in employment opportunities and incomes, depending on industrial and regional differences, can be evaluated as being proper and rational.

The actual implementation of these policies is being carried out from six bases in rural areas under the Special Regional Development Program (S.R.D.P.) for the modernization of agriculture and rural communities guided and put into practice by the Development Research Institute established in Nairobi University at the request of the Finance and Development Department, on the one hand, and, on the other, in so far as the industrial sector is concerned, under the Industrial Estate Development Program (I.E.D.P.) and the Rural Industrial Development Program (R.I.D.P.) of the Kenya Industrial Estate Ltd., a wholly-owned subsidiary of the I.C.D.C. (The Kenya Industrial Estate Ltd., hereafter referred to as the K.I.E. actually has the character of a public corporation). In this manner, efforts are being made to establish a formula for an industrialization plan for rural areas on the basis of an experimental system obtained from experiments successively carried out with foreign assistance.

Taking into consideration the fact that, as stated previously, the nurturing of small-scale industries in rural areas is a strategic task that will assume a vital status in the future socio-economic development of the Republic of Kenya, we intend to carry out our study with a full understanding of K.I.E.'s basic concept with regard to the strategy to be followed in the industrialization of rural areas on the basis of past experience.

The policies in effect today to assist in the promotion of small-scale enterprises are the following:

- (1) Loans extended through the I.C.D.C.
- (2) The development of industrial estates by the K.I.E. Ltd., a wholly-owned subsidiary of the I.C.D.C.
- (3) Activities of the Rural Industrial Development Centers (R.I.D.C.) also carried out by the K.I.E. Ltd.
- (4) Selection of projects by the K.I.E. and the I.S.P.C.
- (5) Management and skill training by the M.T.A.C. and the K.I.T.I.

The main pillars for the actual execution of these assistance measures will be provided by the development of industrial estates by the K.I.E. and the undertakings of the Regional Industrial Development Centers.

#### 1-4 Evaluation of the Results of K.I.E. Undertakings

The industrial estates program was adopted in 1966 and is being put into effect by the K.I.E. Ltd. Originalty, industrial estates were to be developed at Nairobi, Nakuru, Kisumu, Mombasa and Eldoret. In addition to these five locations, Nyeri and Kakamega were added, as was Phase II at Nairobi. At present, Nyeri is the next undertaking.

After Nyeri and Kakamega, Kisii, Kericho, Embu and Nanyuki have been chosen as possible sites for industrial estates. While at first, estates were developed in big cities, where conditions for locating industries are more favorable, but it is noteworthy that these are now moving to regional urban ceners and central cities in agricultural areas.

The objectives in developing industrial estates are: (i) Promote regional participation in industry, (ii) Create employment opportunities, and (iii) Promote exports and substitutes for imports at the level of small-scale enterprises.

To achieve these goals, five strategies have been adopted. They are: (i) financial assistance to enterprises, (ii) assistance in the construction of facilities in industrial estates and other locations, (iii) technical assistance in the selection of projects and studies prior to investment, (iv) technical and economic assistance at the execution stage, and (v) assistance in marketing.

Looking at the results, a number of indicators showing the success in the development of industrial estates can be discerned, such as (i) the marked increase in the number of applicants for tenancy, (ii) the preparations made for foreign assistance, and (iii) the profitability achieved by Nairobi Phase I in outputs to both the domestic and export markets.

Table 1-1 Industrial Estate Construction Results

Name	Start	Completion
Nairobi Phase   Nairobi Phase    Nakuru Kisumu Mombasa	FY 1969 FY 1970 FY 1971 FY 1973 FY 1973	FY 1971 FY 1975 FY 1976 FY 1976 FY 1976
Eldoret	FY 1975	FY 1978*
- 4	*	*Completion expecte

The amount of investments required by the industrial estates development program under the Third Development Plan are as follows:

Table 1-2 Industrial Estates Development Program

New Industrial Estates	1973/74	1974/75	1975/76	1976/77	1977/78	(K£) Total
Kisumu		300,000	250,000	100,000	'	650,000
Mombasa	_	300,000	250,000	100,000	<del>-</del> .	650,000
Eldoret	<u></u>	i _	150,000	150,000	100,000	400,000
Nyeri	<u></u>	·	1 – .	100,000	125,000	225,000
Kakamega	-	<del></del>		· *-	75,000	75,000
Total		600,000	450,00	450,000	300,000	2,000,000

#### Rural Industrial Development Program

The Kenyan government launched a Rural Industrial Development Program with the objectives of:

- (i) Promoting rural economic development.
- (ii) Creating a large number of jobs in rural areas by encouraging labor-intensive small-scale enterprises.
- (iii) Promoting industries using principally locally available raw materials.
- (iv) Developing the entrepreneurial spirit and the technical ability of Kenyans.

This program is being managed by the K.I.E.

In practice, the Rural Industrial Development Centers (hereafter abbreviated to R.I.D.C.) have been carrying out undertakings compatible with the objectives cited above. In concept, R.I.D.C.s are established in each district. We have studied 14 R.I.D.C.s established in the primary stage. When the Third Development Plan was established, R.I.D.C.s were already in operation at Nyeri, Kakamega, Machakos, and Embu. Since then, they have been established at Kisii, Voi and Malindi. In the future, they are scheduled to be established as shown in Table 1-3. The required investments in the course of the Third Development Plan are estimated as follows:

Table 1-3 R.I.D.P. Development Expenditure-1974-78

R.I.D.C.s	1973/74	1974/75	1975/76	1976/77	1977/78	Total
CAPITAL EXPENDITURES						
1. Kisii, Malindi, Voi	170,000	100,000	-	_		270,000
2. Meru, Siaya, Kericho, Muranga		200,000	160,000			360,000
3. Naivasha, Busia, Bungoma, Kitui	_		200,000	160,000	_	360,000
4. Homa Bay, Kwale, Kapsabet, Garissa	. –			200,000	160,000	
5. Karbanet, Nyahururu, Kerugoya, Kajiado	_	_	_	_	300,000	
Sub-Total Capital Expenditure	170,000	300,000	360,000	360,000	460,000	1,650,000
Operating Expenditure	30,000	60,000	70,000		100,000	
TOTAL	200,000	360,000	430,000	450,000	560,000	2,000,000

#### 1-5 The Set-Up of Industrial Estates and R.I.D.C.s

A summary of the experiences obtained from the results of the undertakings shows that the industrial estates and the R.I.D.C.s are being established independently, with the former being located in major cities such as Nairobl and Mombasa, and the latter in the center of areas with a more rural character.

As the importance of the need to develop rural areas increases, more attention is being paid to the distribution of industrial estates in regional cities, which in the future will become urban centers of rural areas, rather than in existing urban areas. Moreover, the K.I.E. is experimenting with a formula that will promote the gradual growth of industry in target areas of the plan through a set-up that will achieve an organic relationship between the industrial estates and the R.I.D.C.s. Such an experiment is already underway in the Mombasa area. The set-up concept calls for:

- (i) Establish a comprehensive strategy for the R.I.D.P. on a provincial scale.
- (ii) The industrial estates will be at the core of the strategic distribution, with the R.I.D.C.s and I.P.A.s providing the required extension services. A system for a unified management by the regional manager is envisaged.

In the case of the Mombasa area, an industrial estate will be established in the special municipality of Mombasa, with R.I.D.C.s at Kwale, Kilifi, Malindi and Voi. This concept for the nurturing of small-scale industries in the three surrounding areas, with Mombasa at the core, is clearly stated in the Mombasa Set-Up Plan and is being implemented. A more unified system, which would expand this concept, is being envisaged for the Nyeri area.

The Nyeri Industrial Estate Development Plan has for its aim the establishment and nurturing of small-scale industry in a rural area, which constitutes the central task in the development and industrialization policies of the Republic of Kenya and proposes to put into practice in the Nyeri area a set-up combining industrial estates and R.I.D.C.s drawing upon past experience.

Fig. 1-1 Distribution of Industrial Estate and R.I.D.C.

