

帰国研修員が紹介された「Kenya Engineer」誌 (1997年冬号)

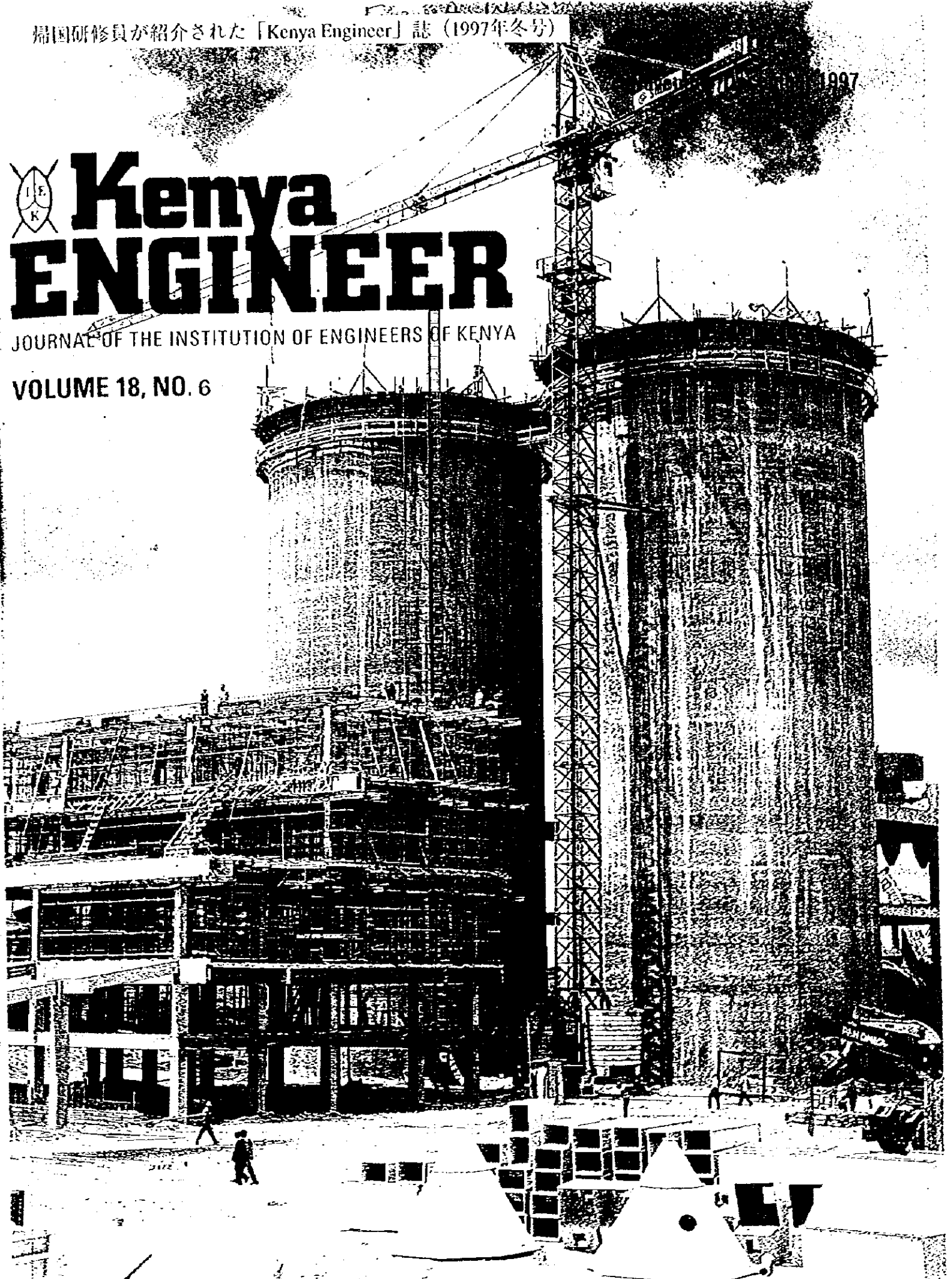
1997



Kenya ENGINEER

JOURNAL OF THE INSTITUTION OF ENGINEERS OF KENYA

VOLUME 18, NO. 6



Bamburi's Grinding Plant



Eng A W Waswa, Superintending Engineer (Roads), Ministry of Public Works & Housing, Bridges Section, attended the Group Training Course in Construction Engineering (Civil Works) sponsored by JICA in conjunction with Japan's Ministry of Construction, held in Osaka, Japan from 4 August to 13 November 1997. The course training covered international tendering procedures, project planning, management and computerisation, maintenance and management of construction machinery, foundation improvement techniques, construction of roads, concrete and steel bridge, tunnels, river based works and concrete structures. Eng Waswa graduated in 1988 from the University of Nairobi with an honours degree and joined MOW&H in 1989.

ton DC from 26 October to 7 November. The conference covered project financing in the era of privatisation, management principles and practices, pavements, information and maintenance management systems among other topics.



Eng Johnson Ole Nchoe, Personal Assistant to the MD and ISP Project Leader, Kenya Power & Lighting Co, attended a three day Southern Africa SAP Group Conference in Sun City, South Africa on the theme "Gearing for the Future" from 12 October. SAP is one of the software applications used extensively in the Institutional Strengthening Project.



Joseph Kariuki member were guests in Spain of Union Fenosa at their 10th Anniversary Celebrations of Customer Management Systems. They also participated in a workshop for the system users. Eng Kariuki also attended a three day information technology conference in South Africa organised by African Information Technology Exhibition and Conference (AITEC) from 8 October.



F M Mwasi and Telecommunications Corporation is currently seconded to the East Africa Co-operation Digital Transmission Project Co-ordination Office in Arusha. Eng Mwasi was formerly Manager/Transmission and Radio.



Eng Makori Bikundo, Street Lighting Manager, KPLC, visited the Netherlands and France from 9 to 15 November for a familiarisation and training tour with Philip Lighting. Eng Bikundo's responsibilities include design, installation and maintenance of street lighting systems in Nairobi and other towns in consultation with local authorities.



Eng Patrick I Mawala, Senior Systems Control Officer at KPLC's National Control Centre, attended a course on "Modern Power System Control" organised by the US based Decision Systems International in Amsterdam between 1 and 4 December.

Eng F M Mwasi of Kenya Posts



Eng P P Hovi, Chief Superintending Engineer, Ministry of Public Works and Housing, attended a two week eleventh IRF Executive Conference on Road Asset Management in Washing-



Eng Joseph Gathuru Deputy Project Leader Institutional Strengthening Project and Eng Joseph Kariuki, 2nd Assistant Engineer in ISP, KPLC, in No-

エジプト国「ニューコミュニティ計画」紹介パンフレット

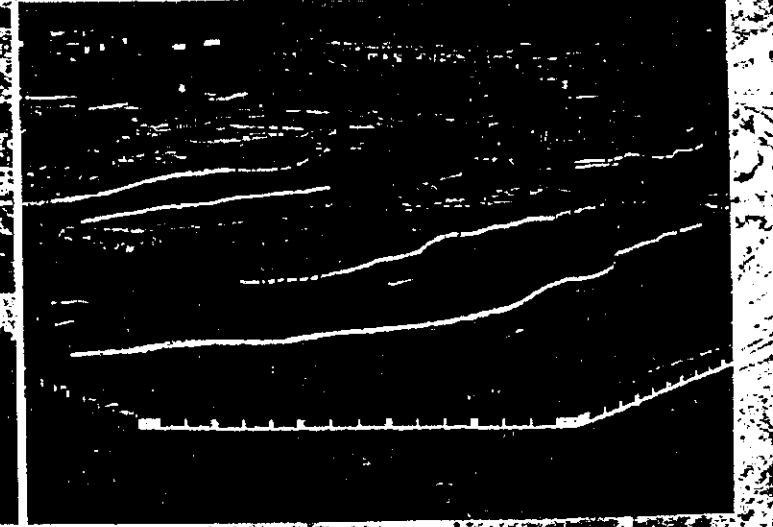
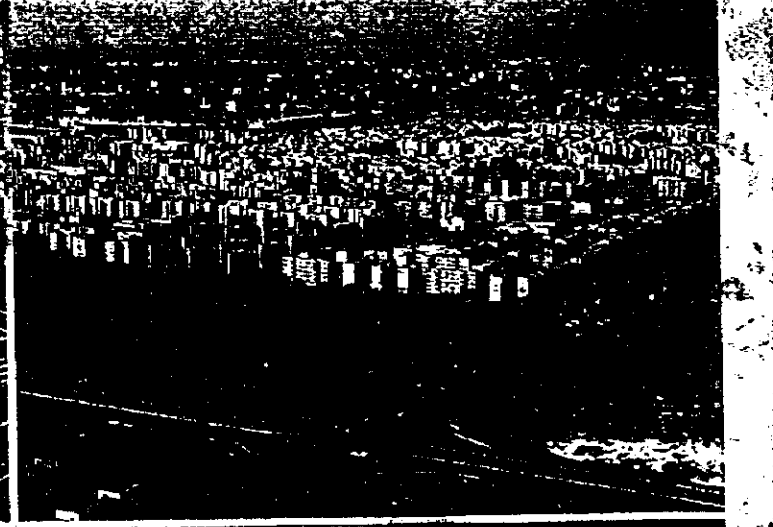
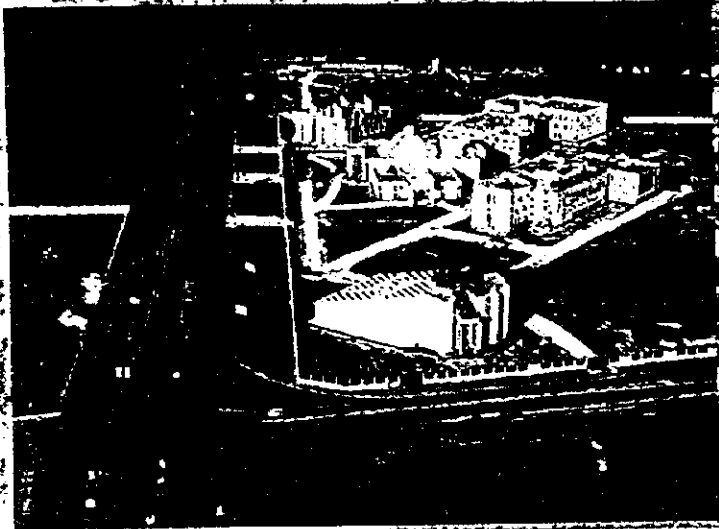
1976 - 1996

TWENTY YEARS OF DEVELOPMENT



WE BUILD FOR PEOPLE
NEW COMMUNITIES IN EGYPT
MINISTRY OF HOUSING, UTILITIES AND URBAN COMMUNITIES

1976 - 1996

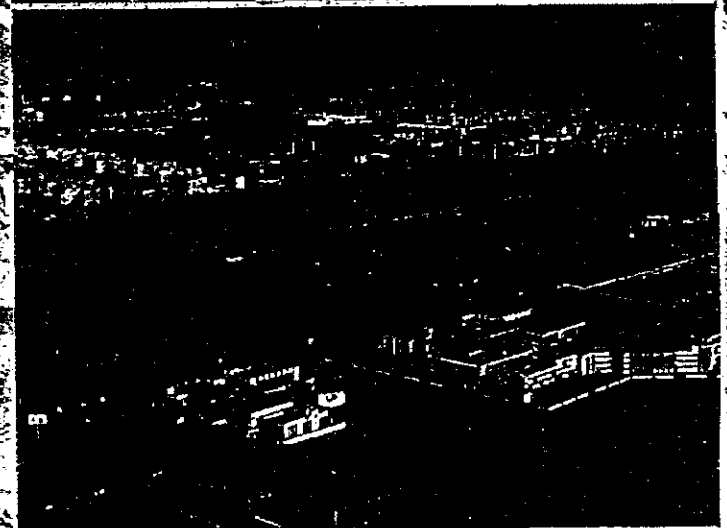


MINISTRY OF HOUSING, UTILITIES & URBAN COMMUNITIES

NEW COMMUNITIES IN EGYPT

In ancient Egypt, architects of the Pyramids built history one stone at a time. Through methodological disciplined planning they created one of the world's most enduring miracles. In modern times, Egypt is still adding new miracles to the world heritage. Since the late Seventies Egypt started an ambitious programme to build a series of New Communities to redistribute population and economic activities, protect agricultural land, create job opportunities, and upgrade the quality of the living environment.

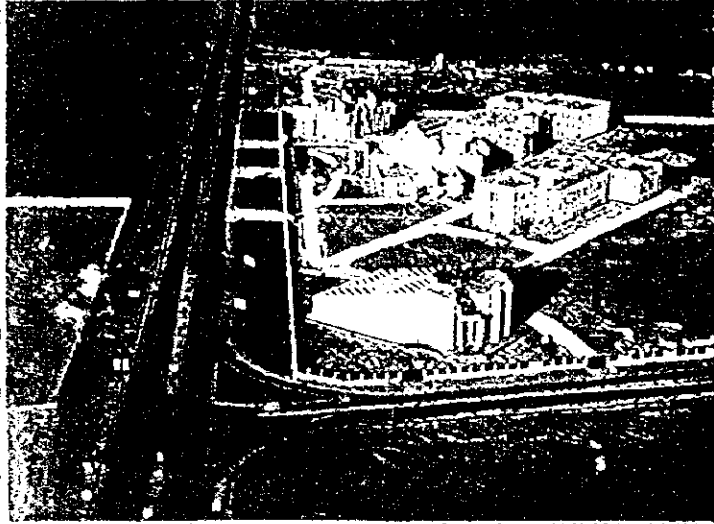
Through comprehensive planning and coordination of sincere efforts, several achievements have been realized, and we are pleased to present in this booklet some of them, hoping that the future will witness more achievements for the welfare and prosperity of Egypt.



TWENTY YEARS OF DEVELOPMENT 1976 - 1996

ORGANIZATION FOR NEW COMMUNITIES

1976 - 1996

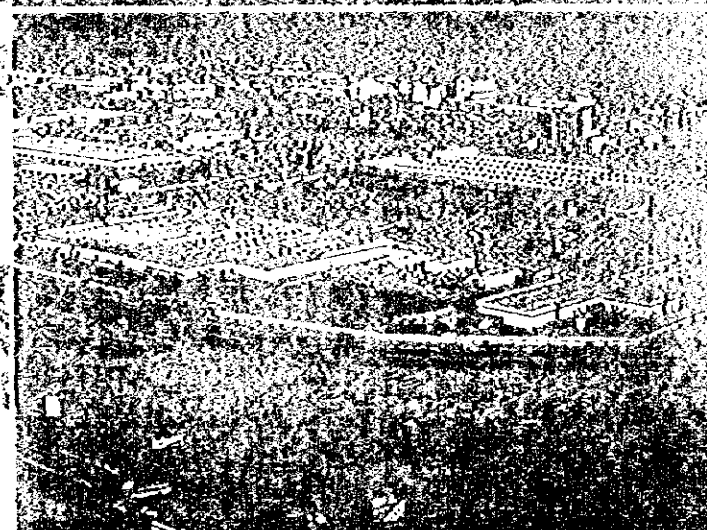
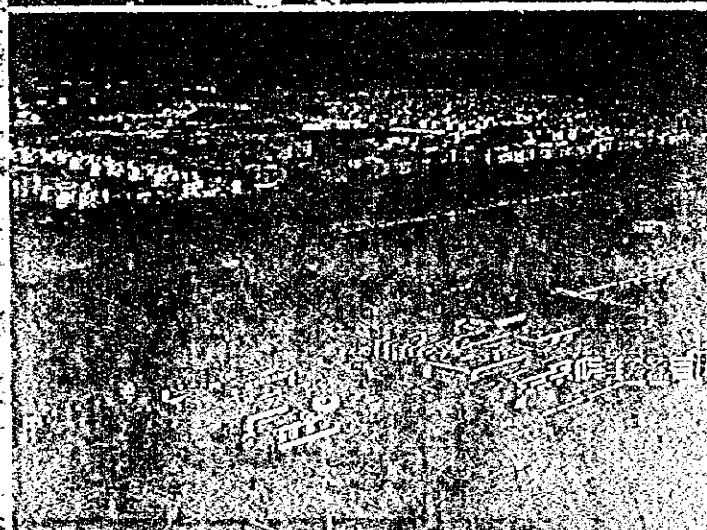


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TWENTY YEARS OF DEVELOPMENT 1976 - 1996

ORGANIZATION FOR NEW COMMUNITIES

6th OCTOBER CITY

It is considered as a development and economical center, located on Cairo / Fayoum / Upper Egypt / Cairo ring road axes and is developmentally, economically, socially and touristically distinguishable. It provides new job opportunities and contributes in relieving excess population in Cairo and Guizeh, and stopping the urban encroachment on agricultural lands near Guizeh Governorate.

Location

The city is located in a levelled area, its altitude varies from 150-190 meters above sea level, allowing favourable climatic conditions.

6th of October City has a distinguished natural and environmental location as it is overlooking the pyramids plateau and is about 17 km away from it, and 38km from Cairo's center.

The city has two entrances, the first from km 25 on Cairo/ Alexandria desert road and the second from km 19 on Cairo / Fayoum road, to link the city with Cairo ring road.

City Master plan

Total area of the city 360km²

Total built up area 60km²

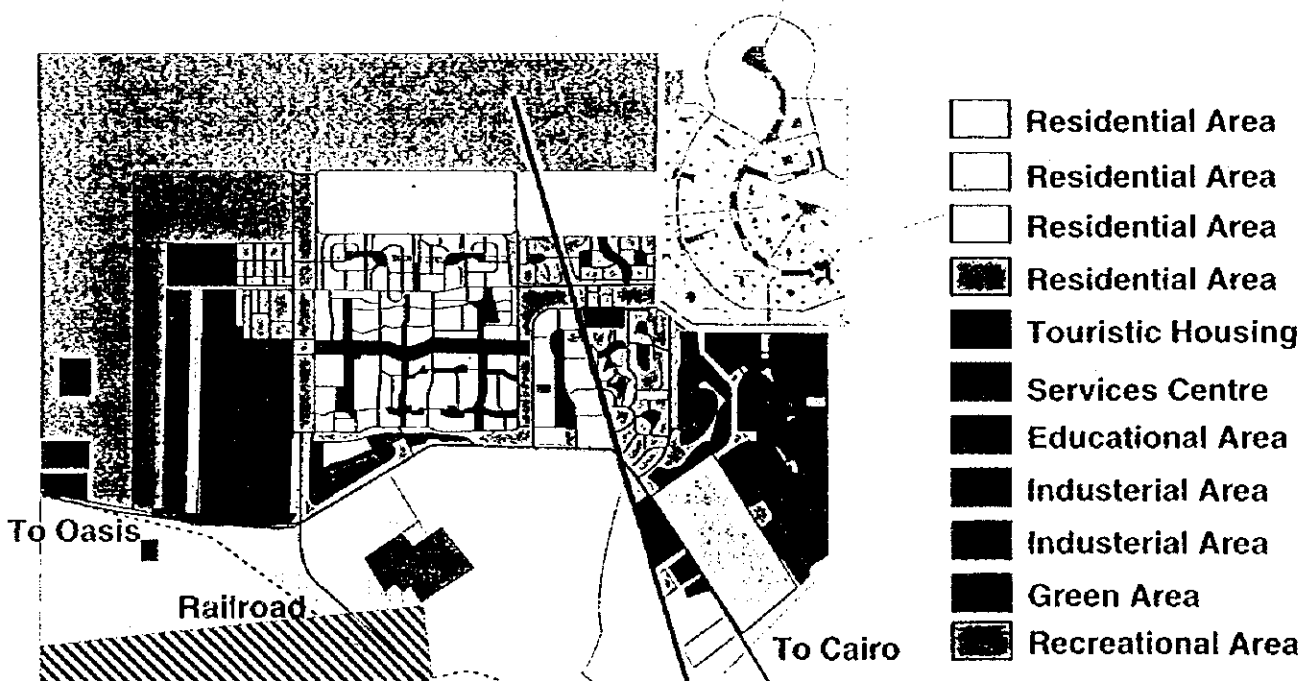
Land uses in the urban area are distributed as follows:

Land Use	Area (km ²)	% of Total Built up Area
Residential	17.4	29
Industrial	17.4	29
Green Areas	10.8	18
Touristic	14.4	24
Total	60	100%

Due to the increasing demand on land, the plan was modified to absorb the extension of the city on both Northern and Eastern directions. The new added areas have a total of 72 km² for touristic (12.6km²), residential (17.4km²) and industrial projects (10.5km²) besides 31.5km² in the eastern direction, thus reaching a total area of twice the allocated area for the city.

According to these extensions the target population will reach about 1.5 million inhabitants.

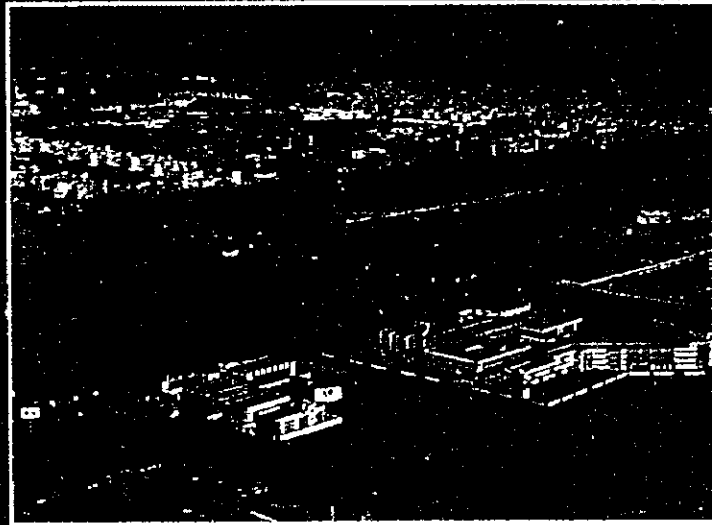
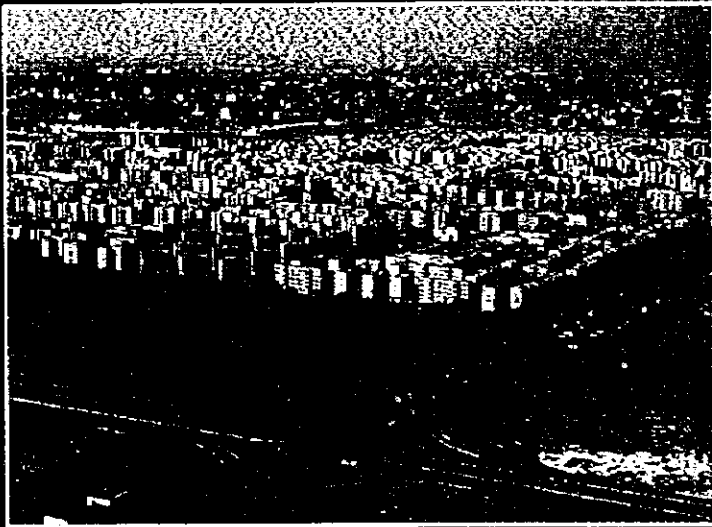
The built up area is distributed as follows according to activity:



Master Plan

NEW COMMUNITIES IN EGYPT

MINISTRY OF HOUSING & UTILITIES AND URBAN COMMUNITYS - TWENTY OF DEVELOPMENT



Due to the vicinity of the city to Guizeh pyramids, and the archeological area around it, in addition, to the favourable climatic and environmental conditions, an area, within the Master plan was designated for touristic activities to accommodate :

Touristic villages , touristic projects and sport- ing clubs with a total area of 14.4km².

With a total area of 17.2 millions m², divided to 12 districts, each is divided to 4 up to 14 neigh- bourhoods. It is divided by the central axis , 6km long and 350 m wide going from east to west. The residential areas are perpendicular to it , and it includes the services of the city center.

Housing categories differ from economic to low cost housing allocated near the industrial area to serve the factories workers.

Some districts were planned for cooperative housing units.

It is allocated in the south western part of the city , and is composed of 4 areas , with an area of 15 km² apart from the storing area, which will be es- tablished on an area of 3.5 km².

Numerous worldwide big corporations with huge in- vestments are found in the industrial area , their most important productions are cars, medicines, food and chemicals, ready made garments, wooden and paper products.

392 factories started production offering 102850 new job opportunities in addition to new factories under construction. There are 355 factories under construction offering 40617 new jobs.

The capital of the productive factories is L.E 258,113 millions. and under construction factories is L.E 291,433 millions.

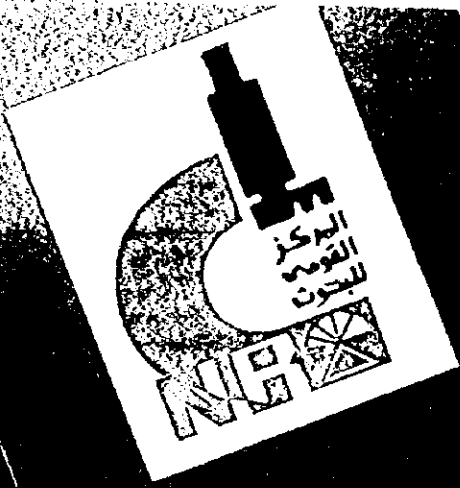
The annual industrial production has reached L.E 557,18 millions. and under construction factories is L.E 412,42 millions.

A secondary school , markets and commercial ser- vices, a post office, a police station, a fire brigade , a-medical center , pump stations, offices, social unit , educational and a youth center.

WE BUILD FOR PEOPLE

エジプト国立研究所概要

National Research Centre*

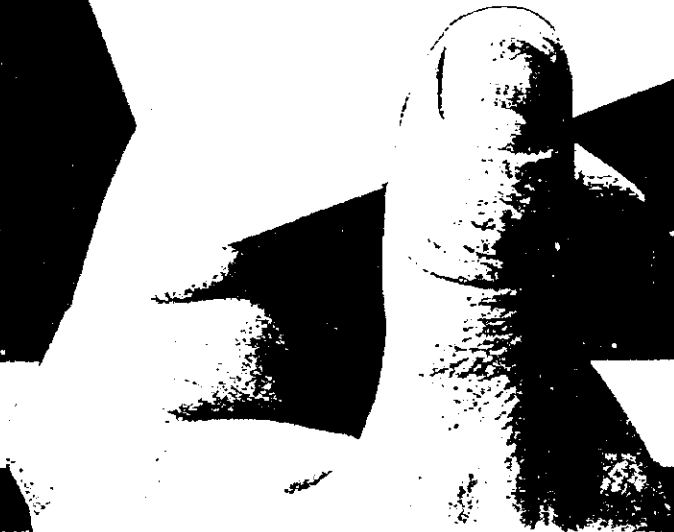


NRC

established in

1956

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The National Research Centre

NRC

The National Research Centre is by far the largest multi-disciplinary R&D center devoted to both basic and applied research within the major fields of interest.

The NRC is headed by a President with a ministerial status and is assisted by two Vice-Presidents, one for research and the second for technical affairs. The NRC is governed by a board of directors headed by the President of the NRC. Board members are the two Vice-Presidents, five experienced members in scientific affairs appointed by the Minister of state for Scientific Research, and the heads of the thirteen NRC Research Divisions. The meetings are headed by the Minister of State for Scientific Research should he/her attend.

The following institutes developed from departments at the NRC to separate institutes: Petroleum Research Institute, Theodore-Bilharz Research Institute, Central Metallurgical Research Institute, Ophthalmology Institute and Electronics Research Institute.

Since its establishment in 1956, the NRC passed through three stages. The first stage, 1956-1968, concentrated on basic sciences and staff development. The second stage, 1968-1973, was characterized by a growing interaction with the production and services sector. The customer oriented research stage, 1973 to the present, features plans for research activity that serves specific needs of the end users.

The mission of the NRC was defined in 1956 " to support the national economy and respond to priorities established in the overall development plan". Over the years this mission shifted and changed to finding solutions to many of the complicated problems in areas of environment, water and food supply, energy, health technologies for wealth and job creation, and global quality of life. The new knowledge is the NRC's tool to achieve its goals: to develop as a nationally and internationally recognized research institute, to strengthen basic research capabilities, and transfer of technology on a national level. It will require building mutually profitable partnerships among universities, government, private industry, national or international.

Research Structure

Staff Members consist of 2468 researchers including 1231 Ph.D. holders. These are assisted by 903 technical workers and 1819 administrative staff.

The NRC consists thirteen Research Divisions including sixty three Departments:

1- *Pharmaceutical Industries.*

Pharmaceuticals, Therapeutical Chemistry, Natural and Microbial Products

2- *Chemical Industries*

Paper and Cellulose, Tanning Materials and Protein Chemistry, Polymers and Pigments, Chemistry of Pesticides, Glass and Refractories, Building Materials and Ceramics.

3- *Textile Industries*

Dyeing, Printing and Textile Auxiliaries, Spinning and Weaving, Pretreatment and Finishing of Cellulosic Fibers, Protein and Synthetic Fibers

4- *Food Industries and Nutrition*

Food Technology and Dairing, Fats and Oils, Food Science and Nutrition.

5- *Genetic Engineering and Biotechnology*

Cellular Biology, Human Genetics, Molecular Biology, Plant Cell and Tissue Culture, Microbial Biotechnology, Microbial Genetics

6- *Engineering*

Mechanical Engineering, Solar Energy, Chemical Engineering and Pilot Plant, Information and Systems.

7- *Applied Organic Chemistry*

Organic Chemistry, Biochemistry, Chemistry of Flavoring Agents and Related Substances.

8- *Applied Inorganic Chemistry*

Physical Chemistry, Inorganic Chemistry

9- *Medical Sciences*

Basic Medical Sciences, Pharmacology, Child Health, Community Medicine, Hormones, Clinical Medical Sciences.

10- *Environmental Sciences*

Water Pollution, Air Pollution, Occupational Health and Industrial Medicine.

11- *Physics*

Solid State, Spectroscopy, Microwave, Theoretical Physics, Electron Microscopy and Thin Films, Advanced Materials.

12- *Basic Sciences*

Microbial Chemistry, Cytology and Genetics, Earth Sciences, Photochemistry, Plant Systematics and Egyptian Flora.

13- *Agriculture and Biology*

Botany, Pest and Plant Protection, Soil and Water Use, Animal Production, Animal and Poultry Nutrition, Parasites & Animal Diseases, Agricultural Economy, Plant Diseases, Agricultural Microbiology, Field Crops, Horticulture.

Research and Development at the NRC

In the late fifties and early sixties, research at the NRC was self-oriented, as the few laboratories present at that time were involved in establishing scientific cadre. In the late sixties, the first interaction between scientists and end users, in the form of specialized conferences took place. This led to the introduction of applied research points. Each laboratory set its priorities through personal contacts between researchers and end users in different industries.

In the early seventies, a Programming Office was established, which introduced, for the first time, the concept of proposal writing. Two main targets were involved:

- a- Acquainting researchers with the idea of proposal writing with a fixed budget.
- b- An 80% applied research was to be achieved over a period of 3-5 years. This was the second stage of changing from self-oriented research to client-oriented research.

During the following 15 years, the NRC went through phases of changes involving the establishment of Marketing Committee, Transfer of Technology Committee, International Relations Committee and a Technical Office affiliated to the office of the President of the NRC. By the mid-eighties, the Technical Office included the work carried out by the Programming Office and gradually the Marketing, Technology Transfer and International Committees were abolished.

In 1992 three offices were established, Research and Development Projects Office, Marketing and Feasibility Studies Office and International Relations Office. In 1994, an Information Center and a central secretarial office were added to the three offices. Job descriptions for each office are as follows:

Research and Development (R&D) Projects and Marketing Office

1. Focal point for monitoring R&D projects, in-house, local and foreign, starting from application till finalization through specialized committees.
2. Identifying the needs of the local market for services and new products, evaluating the results of applied projects with promising end-users and connecting both together.

3. Consultancy in forming research teams in areas of multidisciplinary projects, local and foreign, with high potentials in collaboration with the International Relations Office.
4. Focal point for applications for M.Sc. and Ph.D. degrees.

The International Relations Office

1. Identifying priorities for developing international programs as a guide for bilateral agreements or scientific collaboration.
2. Consultancy to principle investigators of international research projects and activities, and co-ordinating with international funding agencies.
3. Establishing strong links with international sister organizations with mutual research programs.
4. Establishment of a database of international opportunities, funding organizations and libraries by direct contact or through the use of INTERNET.
5. Connecting the NRC with local and international databases of research organizations and libraries through the INTERNET and preparing a home page for the NRC as a marketing tool.

The Information Centre

1. Establishing a database for researchers, research publications, final projects reports, M.Sc. and Ph.D. theses as well as services conducted by the NRC to help in the marketing activities.
2. Establishing a database for all NRC administrative departments which with the databases in 1 will support decision making for the top management.
3. Issuing booklets on research departments, scientific bulletin, news letter, collective volumes on publications, M.Sc. and Ph.D. theses and the annual report.
4. Supervision of reports to mass media, newspapers, radio and television.

A Technical Secretarial Office assists the R&D management offices in performing their responsibilities and organizes international events like conferences, workshops, meetings under the supervision of the International Relations Office.

Research and Development and Technology Transfer Projects

R&D and TT projects at the NRC are carried out according to their different financial sources. The main users of this kind of the R&D and TT projects activity, are the industrial, agricultural, environmental and medical sectors represented in:

- a. large governmental and public sector enterprises
- b. private sector, medium and small enterprises

They can be enumerated as follows:

1- *In-House Research Contracts*

In-house research projects are those projects, which fall within major program areas as determined by NRC top management and the governing body of the NRC. These projects are financed from the NRC governmental budget. In recent years, the NRC is trying to get the users involved in this kind of R&D activity. A new three years research projects plan started in July 1995. It includes the so-called priority projects, which are tailored to satisfy the needs of specific end users. The need and kind of projects are determined together with the end users or clients themselves who are encouraged to participate in the projects' implementation.

2. *Local Contracts*

- 2.1. These are R&D contracts and agreements between the NRC and the ASRT. This kind of activity started in the NRC in 1973 to either strengthen R&D capabilities at the NRC; or they are devoted to assist production and service sector, mainly big industries in public sector.
- 2.2. Contracts with various public and private industrial, commercial, and service enterprises in Egypt. These projects are primarily financed by the clients.

3. *Foreign Contracts*

- 3.1 These are contracts and agreements with foreign agencies. Within these contracts, joint research work is implemented by the NRC various research teams together with equivalent researchers from different parts of the world, mainly in developed countries.
- 3.2 These are contracts with the Egyptian-US program, Science and Technology Cooperation (STC). This program is entirely designed to establish working relations between Egyptian R&D institutions and their industrial clients.
- 3.3 These are contracts with foreign clients and/or customers in which R&D and TT services are offered against full payment. This type of activity is considered very promising and needs further exploration and exploitation.

