

MINISTRY OF SCIENTIFIC RESEARCH



Research Landscape of Egypt 2010



Ministry of Scientific Research 2010

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Acronyms and Abbreviations

AENGRI	Agricultural Engineering Research Institute
AERDRI	Agricultural Extension and Rural Development Research Institute
AERI	Agricultural Economics Research Institute
AGERI	Agricultural Genetic Engineering Research Institute
AHRI	Animal Health Research Institute
APRI	Animal Production Research Institute
ARC	Agricultural Research Center
ARRI	Animal Reproduction Research Institute
ASRT	Academy of Scientific Research and Technology
AU	Assiut University
CAPL	Central Agricultural Pesticides Laboratory
CCL	Central Chemical Laboratories
CDC	Cairo Demographic Center
CLAC	Central Laboratory for Agricultural Climate
CLAES	Central Laboratory for Agricultural Expert System
CLDPRD	Central Laboratory for Date Palm Research and Development
CLDSAR	Central Lab for Design and Statistical Analysis Researches
CLEQM	Central Laboratory for Environmental Quality Monitoring
CLOA	Central Laboratory of Organic Agriculture
CMRDI	Central Mettalurgical Research and Development Institute
CORI	Coastal Research Institute
CRI	Construction Research Institute
CRI	Cotton Research Institute
DRI	Drainage Research Institute
ECRI	Environment and Climate Research Institute
EFDC	Egyptian Fertilizer Development Center
EMRA	Egyptian Mineral Resources Authority
ENIT	Egyptian National Institute Of Transport
ENPPI	Engineering For The Petroleum & Process Industries
EOS	Egyptian Organization For Standardization And Quality
EPRI	Egyptian Petroleum Research Institute
ERI	Electronics Research Institute
ETTIC	Egypt Technology Transfer And Innovation Centers
FCRI	Field Crops Research Institute
GASCO	Egyptian Natural Gas Company
GOPP	General Organization For Physical Planning
HRI	Hydraulics Research Institute
HRI	Horticulture Research Institute
MERI	Mechanical And Electrical Research Institute

L

MUCSAT	Mubarak City for Scientific Research and Technology
NARSS	National Authority For Remote Sensing and Space Sciences
NCERD	National Center for Educational Research and Development
NCNSRC	National Center for Nuclear Safety and Radiation Control
NCRRT	National Center for Research and Technology Radiation
NIDE	National Institution for Diabetes Egypt
NIOF	National Institute Of Oceanography And Fisheries
NIS	National Institute For Standards
NMA	Nuclear Materials Authority
NODCR	The National Organization for Drug Control & Research
NRC	National Research Centre
NRC	Nuclear Research Center
NREA	New and Renewable Energy Authority
NRI	Nile Research Institute
NRIAG	National Research Institute Of Astronomy And Geophysics
NTI	National Telecommunication Institute
NU	Nile University
NWRC	National Water Research Center
PETROJET	Petroleum Projects and Technical Consultations Company
PPRI	Plant Pathology Research Institute
PPRI	Plant Protection Research Institute
QCAP	Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food
RCFF	Regional Center for Food & Feed
RIGW	Research Institute for Groundwater
RIMC	Research Institute Maintenance Channels
RIME	Research Institute Of Medical Entomology
RIO	Research Institute of Ophthalmology
SCA	Suez Canal Authority
SCU	Suez Canal University
SCU	Suez Canal University
SRI	Survey Research Institute
SVU	South Valley University
SWRI	Soil, Water and Environment Research Institute
TBRI	Theodor Bilharz Research Institute
TIMS	Tebeen Institute of Mineral Studies
TPA	Transport Planning Authority
WMRI	Water Management Research Institute
WRCL	Weed Research Central Laboratory
WRRI	Water Resources Research Institute

Introduction

The scientific research has a great importance in building communities and developing them, which participates in the human progress. The developed countries have recognized this fact long ago, so they decided on using their human resources and their facilities to support scientific research and open all channels to find markets for marketing research and patents, which have strengthened their political and economic power. Not so long ago the Arab countries started realizing this fact and gave interest to the importance of the scientific research.

From the pharaohs' era, Egypt had a great history in the scientific research, which was represented in the fields of science: astronomy, chemistryetc. This was clearly evident in the era of Muhammad Ali, who significantly encouraged the development of activities which led to major scientific civilization that is seen in the present.

The researchers and scientists in various scientific institutions take the responsibilities of the scientific research without encountering the fact of necessity of connections between different sectors and levels of the scientific research even though we are into the 21st century , thus the establishment of the umbrella of science in the form of ministry is necessary to support the scattered scientific research activities in the ministries and various governmental departments and the coordination between them.

In November 1939, The State issued a decree establishing the National Fuad I of the research which began its scientific activities in 1947, and since then the Government gives a strong support to scientific research and its regulations by issuing a law for establishing the higher Council of Sciences in January 1956, which was the core to prepare Cadre of scholarship in various fields.

The first Ministry of Scientific Research established in January 1963, and then it was decided to construct a Scientific Research and Technology Academy in September 1971 as a national support for science and technology in Egypt.

As our have a long history of the civilization of ancient Egyptian and Arab demand, suggest we must be taking a firm and an accurate trend.

It became necessary to make a survey of the research centers and companies working the field of research and development in Egypt. Therefore, the idea of making this book about scientific research in Egypt as a reference and initial step in Egypt's research landscape.

This book includes 13 scientific research centers related to the Ministry of Scientific Research and largest number of research centers related to various ministries and universities in addition to example of private companies which are working in the field of scientific research, All in alphabetical order.



Ministry of Scientific Research

Research Landscape in Egypt 2010



www.asrt.sci.eg

The Academy of Scientific Research & Technology (ASRT) was established in September 1972 by the Presidential Decree No 2405 as the national authority responsible for science & technology in Egypt. ASRT affiliates to the Ministry of Higher Education and Scientific Research

Mission

ASRT's main mission is to encourage scientific and technological development; strengthen links among national and international scientific institutions and to activate the role of science and technology, considering



them as integrated and effective elements in the environmental, social and economic array through:

- Planning, promoting, coordinating and following up national scientific research and technological development programs and projects,
- Encouraging research in different branches of science and supporting research centers tackling new and future sciences,
- Planning and activating a national system for scientific and technological information, and developing specialized data bases and networks; all flowing into the national system, providing information about the institutions and the activities of scientific research and technological development, scientists, researcher and the available scientific and research potentialities, monitoring research achievements and technological development as well as developing new methods to disseminate and facilitate utilizing this information,
- Raising the public awareness about the importance of scientific research and technology as a life-style, promoting scientific culture, planning and implementing scientific media programs and publishing activities, supporting and updating science museums, planning and developing programs supporting the scientific Unions & Societies.

Vision

The vision of ASRT is to contribute to the promotion of the Egyptian economy into a developing S&T based economy, improving the state's service sector to comply with the parallel development through the following four themes: the development of S&T human cadres, contributing to the transfer of modern technology; its assimilation and development, participating in improving linking mechanisms between national research centers and all foreign centers of excellence, expatriate scientists and production and service sectors, and spreading technological awareness among the public.

Organization

ASRT is headed by a President who is assisted by three Vice-Presidents. The Council of ASRT represents the supreme power in making the decisions concerning the activities of ASRT. The President, who chairs the Council in case the Minister is absent, is the Deputy-Chairman.

The organization of ASRT consists of five main sectors

• Specialized Research Councils Sector (SRC`s): SRC`s plan, finance and follow up the implementation of priority programs and research projects which integrate with and meet the state's social and economic plans in different trends and fields.

• Scientific and Cultural Relations Sector: it supports regional and international scientific and cultural relations through concluding joint collaborative agreements with corresponding academies and institutions. The sector includes the Science Museum.

• Technological Development and Scientific Services Sector: it consists of the Scientific Instruments Center, Invention and Innovation Development Agency, and the General Directorate for Marketing Technological Research, Innovations and Inventions.

• Informatics Sector: The Egyptian National Scientific and Technological Information Network (ENSTINET) and the National Information and Documentation Center.

• Scientific Communications and Technical Support Sector: it contains the Regional Development Research Centers, the units for communication with production and service centers, S&T incubators and scientific communications.

• In addition to the above mentioned five main sectors, the Egyptian Patent Office, the Scientific & Technological Cooperation Center, the Training Center, the Technical Office, the Central Administration for Financial and Managerial Affairs, the General Administration for Juridical Affairs, Public Service Office and General Directorate for Prizes & Incentives are all affiliated to the President of ASRT.

• ASRT, within its organizational structure, includes scientific bodies responsible for scientific and technological planning, formulating policies that ensure connecting science and technology institutions nationally to the basic trends of advanced technological and scientific research internationally, and hence forming the national development plans. These scientific bodies consist of 14 specialized research councils and 4 inter-council commissions, they carry out research studies in different fields, as well, includes in its scientific bodies 32 national committees responsible for connecting the national scientific research to international activities such as the 40 international Scientific Unions. In addition to the above, there is as well the Principal Committee of Technological Development for the Investment of Research Applications.

Activities, Technological and Scientific Know-how

- The formation of technology & science policies. The integration of scientific research & technology planning with the overall national development plans. Planning technological development programs that fit the national economic and social objectives and the marketing of technical knowhow. R&D management. Supporting scientific research and technology applications. Drawing policies that ensure the effective linkage between R&D scientific institutions and the national main trends included in the State plans for socioeconomic development.
- The dissemination of the global technological progress potentialities. The collaboration in improving educational programs and systems to meet the national needs of the modern State.
- Regulate financial and moral incentives for scientists as well as awarding State Prizes.
- Suggesting new legislations to stimulate scientific and technological researches on national levels.

Available Technical and Scientific Potentialities

- The Egyptian Patent Office (EPO): the mission of EPO is to protect intellectual property rights of inventors through the issuing of patents. EPO aims at the transfer of knowledge and ideas represented by millions of global patents to R&D scientific personnel. EPO as well encourages researchers in R&D centers and specialists in service and production sectors to patent their inventions and applicable research results, thus displaying their efforts and intensifying national contribution on technology transfer and development.
- Invention and Innovation Development Agency (IIDA): the mission of IIDA is to transfer technical know-how, and to optimize the utilization of the large number of inventions and innovations which lead to the generation of a national technology that is commercially exploitable to serve social and economic development. To achieve this goal, all possible efforts whether financial or moral will be exerted.
- **Information Services**: it aims at gathering, documenting and storing the Egyptian intellectual production and disseminating it through computers and communication technology to researchers and decision makers.
- **Travel and Conference Support**: travel support is given to scientists from the Egyptian universities and research institutions to attend international conferences worldwide. Financial support is given to scientific research institutions to hold and organize scientific meetings in all technological and applied fields.
- Scientific Theses: support is given to young researchers in universities and research centers.
- Scientific Fellowships: it contributes to the development of human resources working in S&T, generate opportunities to honors-graduates to participate in scientific research issues and optimize their capabilities.
- **Development of Human Resources**: through improving the Training Center which is responsible for promoting human cadres in the framework of the national S&T policy to train manpower in all fields.

Services Produced by ASRT

Services of ENSTENET

These services include building data bases for basic sciences, research applications, theses, periodicals, technical reports and conferences, the contents of the Egyptian libraries and scientific societies, information services, internet (networking between centers and institutes), developing technical cadres,

and providing courses for individuals and organizations, and the continuous updating of data.

Services of the National Information and Documentation Center (NIDOC)

These services include the Central Library for serving Egyptian and foreign researchers, the General Directorate of Libraries for all periodicals published by the Center, publication of research studies, scientific photography from slides, 3d models, laboratory experiments, seminars, conferences and scientific films, and professional training in the fields of bibliography and scientific publishing.

Service of the Science and Technology Information Center

Search and Automated Retrieval in Databases: It aims at introducing all specialized published materials which the beneficiary is interested in, where the beneficiary identifies the search items through technical discussion with the information specialist, who searches local and scientific data bases. The search outputs are immediately rendered to the beneficiary in the form of abstracts or soft copies. In addition, according to their request the selective transmission service is provided to the beneficiary who receives abstract-like outputs for a year that might be extended upon request.

Services of the Scientific Instruments Center

These services include categorizing, cataloguing, installing and operating scientific instruments, designing stereotype and non-stereotype scientific instruments similar to the imported ones by using local materials, machine operating workshops, and designing and modifying circuits for all kinds of scientific instruments.

International Relations

• Scientific Exchange and Bilateral Research through Scientific Agreements: conclude S&T agreements and protocols with counterpart foreign institutions in specific areas determined according to the national needs and to the scientific distinction and excellence of these countries. Scientific experience is exchanged through bilateral projects, including the transfer of new research methods and training by means of scientific visits, conferences, international meetings, workshops and seminars.

• Technical Cooperation and Bilateral Research with Regional and International Organizations: giving the opportunity for and the expanding of S&T cooperation with specialized international institutions and foreign countries. Supporting mutual Arab scientific activities through uniting S&T efforts.

Major Achievements

National Campaigns: To keep pace with the obvious socioeconomic development in Egypt which is clearly apparent in the field of agricultural development and food, ASRT has prioritized this field since its establishment. ASRT has executed several campaigns and national programs, projects and activities that stimulate scientific research and the application of its results, building scientific and technical cadres and the appropriate exploitation of available potentialities, with the cooperation of concerned authorities, especially the Ministry of Agriculture and Land Reclamation.

Patents: Develop property legislations in four books to handle patents, utility models, lay-out designs of integrated circuits, restricted information, relations, commercial data, geographical indications, industrial graphics and designs, and copyright.

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Central Metallurgical Research Institute

www.cmrdi.sci.eg



CMRDI started in 1956 as the division of metallurgy at the National Research Center. In 1983, the institute was established by the Presidential Decree No. 389 and moved to its premises at El-Tebeen, Helwan.

Mission

CMRDI mission is to participate in the national economic growth by enhancing material competitiveness in the industrial sector. To fulfill this mission, CMRDI has kept abreast of scientific and technological development.

Vision

National, Regional, and International Center for Materials Research and Development.

Goals

- Improvement of the quality of products and processes.

- Maximum utilization of indigenous mineral resources and materials.
- - Replacing imported products and materials by locally made goods .

 Introduction of environmental aspects in industry by developing clean processing, decreasing emissions and wastes, recycling and treatment of industrial wastes.



• - Technical training and human resources

development in mineral, metallurgical, chemical and engineering industries

Organization

CMRDI is divided into four main departments including sixteen divisions as follows :

1. Minerals Technology : includes four divisions :

Ore evaluation, Ore beneficiation & agglomeration, Chemical & electro chemical processing, Pyro metallurgical processing.

2. Metals Engineering : includes four divisions : Steel Technology, Non ferrous metallurgy, Plastic deformation, Corrosion control & Surface protection.

3. Advanced Materials : includes four divisions : Composite materials , Magnetic materials , Ceramic & refractory materials , Nano structured materials & technology

4. Manufacturing Technology : includes four divisions Casting Technology , Welding & NDT ,



Human Resource

CMRDI staff includes 20 research professors, 21 assistant research professors, 48 researchers, 17 assistant researchers, 29 research assistants, 42 engineers and chemists and 92 technicians.

Facilities

- Laboratories equipped with modern research facilities and set-ups.
- Pilot plants for mineral beneficiation & agglomeration, chemical processing, metals and alloys melting, foundry shop, powder metallurgy, sheet metal fabrication, welding and rapid prototyping.
- Technical services for physical, chemical, mechanical and metallurgical tests, analyses and measurements.

Main Areas of Expertise

- Optimum exploitation of indigenous ores to replace imported materials.
- Technology transfer in the fields of mineral processing and metallurgy.
- Development of materials and processes through running pilot plant and prototype units.
- Improvement of products quality and reducing production costs .
- Troubleshooting for production and solving technical problems.
- Preliminary techno-economic feasibility studies, technical consultancy, testing, laboratory analysis and measurements.



Main Accomplishments

About 250 R & D industrial projects have been accomplished over the past 10 years.

The projects objectives are classified as follows :

- Introduction of new technologies to the Egyptian industry
 - Production of new products as import substitutes.
- 3. Development of a product or production process.
- 4. Maximization of indigenous raw materials exploitation.
- 5. Development of new alloys .
- 6. Environment protection .
- 7. Development of small and medium enterprises SME's.
- 8. Failure analysis and trouble shooting.
- 9. Technical services and consultations .
- 10.Nondestructive testing and third part inspection.
- 11. Training and human resources development.
- 12.Capability strengthening of CMRDI staff.

Future programs

• Preparing special programs for private sector industries to foster services provided to this sector.

- Producing technological packages including technical and economic information needed for direct investment .
- Strengthening the newly established advanced materials department by allocating required human, material and financial resources.
- Promoting international relationship with relevant internationally recognized research institutions. As well as encouraging cooperation with international donor organizations .





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1.



Egyptian Petroleum Research Institute

www.epri.sci.eg

Mission

The objectives of EPRI as stated by the Presidential Decree are to supply the National Petroleum Industry with the technical and applied research needed for its development as well as contract research and services.

Vision

1. Working on turning the institute into a house of expertise in the field of petroleum industry and petrochemicals not only on the local level but on the regional and African level as well.



- 2. Support of co-ordination efforts between Arab countries in the field of petroleum research.
- 3. Studies and applied research in the field of exploration leading to the increase of oil recovery, proper exploitation of natural gas and petrochemicals.
- 4. Finding renewable sources for energy instead of the traditional.
- 5. Studies on the application of microbiology in the field of petroleum.
- 6. Using nano-technology in the different applications of the petroleum industry.
- 7. Twinning and co-ordination agreements between EPRI and similar institutes on the international level.
- 8. Enforcing a more better marketing policy for EPRI's various services, expert advice and oil field chemicals.
- 9. Raising the skills and capabilities of EPRI's employees through continuous advanced training programs.
- 10. Conservation of energy consumption.

Human Resources

Total Personnel	1005
Top Administration	2
 Researcher Personnel Including Researcher Prof. Emeritus (over seventy years old) Researcher Prof. Emeritus Researcher Professor Assistant Research Prof. Researchers Assistant Researchers Researcher Assistant 	306 11 53 47 48 75 50 22
Administrative Personnel and technical service	687



R&D Annual Budget: (5 millions L.E.)

Facilities

Scientific and Tech. Capacities

EPRI's laboratories house a big number of well advanced and specialized equipment to follow-up the advances in the petroleum technology, EPRI also has its own library, and internet services.

These divisions are namely:

The Exploration division, which includes: (Sedimentology, Peleanyology, and Geo-physics labs).
 The Production division, including (Drilling Fluids, production mechanics, and enhanced oil recovery labs).

3. Analysis and Evaluation division, including (Gaschromatography, Spectrometric analysis and Standard methods of analysis labs).

4. Refining division: including (Chemical refining, Physical refining and Catalytic Refining labs).

5. Petrochemical division including (Petrochemical technology, Surfactants, and Polymers labs).

6. Applications division: including (Additives, Asphalt, and Special applications labs).

7. Operations Development division, including (Reactors and Operation engineering, Special Operations, and Energy and Materials engineering, Biological & Biotechnology Applications in Petroleum labs).



EPRI has established (8) technical and research services centers:

1. Production services and Gas condensate center PSGCC (1979) - which aims to study the physical properties of crude oil under conditions similar to that existing in the reservoir such as pressure & temperature and their effects on volume (PVT). It carries out the required analyses - to evaluate the reservoirs & the produced crude oil - and also analyses for petroleum samples. Moreover, the condensate center (established in 2005) carries out the analysis of natural gas & its condensates in 2 – weeks and at less cost with the same accuracy as the international specialized centers.

2. Asphalt and polymer services center APSC (1992) – which undertakes the responsibility of the evaluation & analysis of asphalts for different pavement companies, consultancy services to asphalt producers & various user organizations. Besides, the centre produces the crack filling materials & crack sealing materials (hot & cold). But the most significant activity of APSC is the production of a new formula for use as a sealant mix with aggregates to form the thermal expansion joints, known as EPRI SEALANT 77.

- Storage tank services center STSC (1993) which applied a novel technique for the recovery of petroleum hydrocarbons accumulated in the open pits at the Egyptian deserts neighboring to the oil companies. The process is applied also for cleaning all other petroleum closed vessels; such as tanks, separators, heat exchangers and pipelines.
- 4. Core analysis service center CASC (1995) –which aimed to satisfy the growing local market needs in core analysis services. It's also interested to develop and update its own facilities and instruments to



realize self reliance and complete all types of core analysis locally.

- 5. Drilling technology and oil field development center DTOFDC (1996) which covers the following services : coating, painting & welding inspections of the pipelines, evaluation of drilling fluids materials & chemicals, mechanical tests for steel, concrete and Bitumen materials, consultant for the pet. sectors for anticorrosion and concrete coating for offshore oil and gas pipelines...etc.
- 6. Metallic surfaces protection center MSPC (1999) which owns a group of experts, on a very high standard of performance, in the inspection of oil and gas pipelines. Besides, MSPC offers its technical information as a consultant in the field of coating for many of the petroleum companies.
- 7. Central analytical lab CAL (2001) which provides the analytical services and scientific consultants for petroleum and natural gas companies in Egypt and Arab world, according to the international standards, and under the supervision of high qualified staff. In addition EPRI central lab is specialized in serving the different public sectors like cement industries, power station, flight sector, costumes and universities. It operates to qualify system that is seem as compliant with ISO 17025.
- Chemicals services and development center CSDC (2001) which produces over 32 chemical products; as a result of continuous scientific research in EPRI, used in the petroleum and civil sectors – with international standards & competitive prices and efficiency.



Main Accomplishments

- Cleaning tanks and other pet. Closed vessels and converting the sludge into worthwhile and saleable product.
 - Production of 32 chemical products used in the pet. sector & other civilic sectors.
 - Production of the thermal expansion joints and implementing in a number of bridges e.g. The 26 of July Mehwar & the 6 th October bridge.
 - Production of Aluminum Chloride to purify drinking water instead of brass.
 - Production of different types of greases.



- Engineering inspection of the coating, painting and welding of the oil & gas pipelines and petroleum equipment e.g. The Arab Gas Pipeline from AI Areech to AI Rehab in Jordan.
- Erection of many projects for the conservation of energy consumption.
- EPRI obtained ISO-17025 on some tests for the central lab & chemical services and development



center.

- Making studies "crude oil Assay" for oil search company - to evaluate the company's raw materials before being sold to the refining labs.
- Enriching the building of "Applied Researches" with advanced equipment serving in the advanced analyses, studies & researches in the field of nano-technology.
- Training of university graduates in the field of information technology using computer programs.
- EPRI has also undertaken the responsibility of making training programs for the chemists,

technicians & engineers in the various petroleum companies – interested in raising the capabilities of its own staff.

• EPRI encourages the international scientific publications and the registration of patents, and is keen on the application of scientific researches in the petroleum and civil sectors. As a proof, EPRI edited & published the Egyptian Journal of Petroleum – the only scientific journal on the Arab regional level that published the scientific researchers in the field of petroleum and energy and what is related to these fields. EPRI Journal is abstracted: Chemical Abstracts: CA69636 and its ISSN: 1110-0621

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Electronics Research Institute

Mission

To undertake studies, basic and applied research in advanced technologies in the field of electronics and field of electronics and informatics. These studies will develop an indigenous capacity in the appropriate technologies to enhance economic, industrial and strategic competitiveness through increased value-added quality and productivity.



Vision

To be a center of excellence in the field of electronics and informatics by national, regional and international standards.

Human Resources

ERI has a staff of about 150 highly qualified R&D technical Personnel and about 100 supporting administration staff.

Scientific Staff	No.	Administrative Staff	No.
Senior management (President of the Institute)	1	Senior management (General manager)	-
Research Professor	11	General manager Chief	9
Assistant Professor	16	First degree	33
Researcher	51	Second degree	42
Research Assistant	66	Third degree	37
Assistant researcher	39	Fourth degree	11
Full Professor	16	Fifth degree	3
Senior Professor	2		
Total	202	Total	125
The total number of employee			327

Facilities

- 1. ERI is composed of the following Departments:
- 2. Power Electronics and Energy Conversion Department
- 3. Computers and Systems Department
- 4. Microwave Engineering Department
- 5. Microstrip Circuits Department
- 6. Photovoltaic Cells Department
- 7. Informatics Research Department
- 8. Microelectronics Department
- 9. The institute is equipped with the following items:
- 10. Two HPC Computers based on Intel Processors.
- 11. SUN Workstations.
- 12. Electric and electronic measurement equipment for research applications.
- 13. A number of electric motors used in control systems.
- 14. A number of Solar Energy Units.
- 15. Solar Cell Tester.
- 16. Printed circuits unit.
- 17. A complete laboratory for hybrid integrated circuits fabrication using thin film technology and photolithographic technique, in the microwave range of frequency.
- 18. ERI is a focal point for many institutes in the research community providing INTERNET access.
- 19. Different S/W packages for, VLSI design, CAD/CAM design, MEMS design applications, FPGA S/W tools, ANN simulation, AL systems simulations, MATLAB, finite element analysis tools, etc...
- 20. Vector network Analyzer.
- 21. Radiation meters to measure the intensity of electromagnetic waves and their effect on human tissues.
- 22. VLSI Probe Station.
- 23. Optical Dispersion and Loss Analyzer.
- 24. Power Quality Analyzer.
- 25. Array tester



Address : Elbhoos St.- Dokki - Giza Tel: +2 0233310500 Fax: +2 0233351631 E-mail: mosherif@ed.gov.eg



Mubarak city for Scientific Research and Technology www.mucsat.sci.ed

Mission

MUCSAT has been established according the presentational decree No85 in 1993 to develop the first science park in Egypt in order to improve scientific technologies in different areas of human life.

Vision

To accomplish the foreseen mission, several measurements have been carried out.

- 1. Establishing a center of excellence in the field of molecular biology to serve health and pharmaceutical sector in Egypt and the surrounding areas. The center includes laboratories for molecular oncology, bioavailability, tissue engineering and drug delivery.
- 2. Developing central lab. facilities to continue its mission serving consultancy and services for industrial sector.
- 3. Funding several research proposals in order to accomplish the investment plan (previously submitted to the ministry) to encourage research in the field of genetic engineering, information technology new material and arid land research
- 4. Attraction of private sector and young talented human resources to invest ideas for establishing technology based incubators in the field of biotechnology, informatics and materials science.

Objectives

- To enhance the Egyptian capacities for innovation, where education, research and technology merge in one road leading to innovative enterprises, the products of which are targeted towards solving local economic and national problems.
- Strengthening all elements involved in the four Ps chain (publications, potencies, prototypes and products).
- Mubarak Science Park being a hub for high tech and innovative research related businesses, with a focus on technology transfer and product advancement, especially in biopharmaceutical, molecular biomedicine, nanotechnology and IT.







Facilities and Staff and Annual Budget

Genetic Engineering and Biotechnology Research Institute (GEBRI)

- State of the Art Laboratories with well trained personnels.
- A central well equipped laboratory with well trained specialists was established at the institute.
 - Well trained researchers in the institute departments.

Number of staff: 90 persons Annual Budget is 448431.95

Informatics Research Institute (IRI)

 State of the Art equipment for 3D Imaging processing access grid and Internet I I applications.
 Number of staff 21 persons
 Annual Budget is 1565000



Advanced Technologies and New Materials Research Institute (ATNMI)

 The Institute structure estimated infrastructure such as laboratory equipment and devices more than 30 million pounds.
 Number of staff is 46 persons
 Annual Budget is 305750.12

Arid Lands Cultivation Research Institute (ALCRI)

Under construction

Annual Budget is 212500

Technology Capabilities Development Center (TCDC)

- Computer laboratories with the latest accessories and Computer operations training.
- Workshop for refrigeration and air conditioning supplement
- The Hall of theoretical training and education of all media.
- Welding Workshops with welding machines for training and services.
- Lather Workshop equipped by the tools needed for training purposes and services.
- A carpentry workshop for training and services.

Currently preparing a language teaching laboratory.

Number of staff is 25 persons

Annual Budget is 2748000

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Main Accomplishments

- Center to adopt Industry Modernization.
- Center for training 800 trainees on computer applications .A second group will be starting soon.
- Cooperation with the Swiss Fund for the Development .
- Implementing the draft of cooperation with Eyak Consulting for Training.
- Accreditation of 2 computer labs for training and testing of the ICDL certificate with the UNESCO.
- Cooperation with the Arab Academy for Maritime & Transport for granting diplomas and Microsoft Office certificates.
- E- Commerce
- Tele-Education and Training
- Tele-Medicine
- CAD-CAM









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National Authority for Remote Sensing and Space Sciences www.narss.sci.eg

Mission

NARSS mission is to pursue, transfer, and provide the most advanced technology in the fields of Remote Sensing and peaceful applications of Space Sciences, and build the self-capability to utilize these technologies to support the National development activities.



Vision

NARSS aims to be the most distinguished scientific center of excellence in the field of development and

applications of Remote Sensing and Space Sciences technologies at the local and regional levels, to support scientists and decision makers in the various development sectors in exploring and managing earth resources.

- Human Resources development, work force IT training, and office work automation
- Paying more attention to the projects supporting the National development plans
- Strengthening cooperation with the local and foreign agencies in NARSS fields of activities
- Strengthening ties with regional Arabic and African agencies and organizations working in related fields
- Entering the space era through a series of remote sensing satellites, space Labs, and satellite data receiving and processing stations to support the national development objectives and local institutions



Strategy

NARSS should perform in a way to provide development and application services and activities in remote sensing and space sciences efficiently to enhance business with existing users and to encourage new users. Also to achieve profits on investments currently and on the long term. This is to support scientists and decision makers in the various development sectors of exploring and management of earth resources toenable them manipulate their quality and time production dimensions.

Human Resources

NARSS has a team of staff members in different fields supported by a group of specialists (130 persons). Based on the actual needs of projects, this work force could be augmented by selected staff members from local universities and research centres. Besides, there are more than a hundred experts working in the space program and one hundred personnel in finance administration, and personnel affairs.



Facilities

NARSS possesses physical resources, and lab equipment that enable offering of distinguished scientific and technical services to the governmental and non governmental agencies in the fields of Remote Sensing and Geographical Information Systems. This is to support the execution of the development projects and research activities of studying phenomena and changes in lakes, rivers, shorelines, atmosphere, water, rock and soil. This is in addition to the field of space sciences and technology.

NARSS has the following capabilities:

- An airplane for aerial photography and laser surveying capability
- Weather station for receiving of information from NOAA satellite. (NOAA is a series of satellites launched in the early eighties to track weather changes on earth and it is capable of photographing and sensing the weather information for the whole earth surface on a daily basis). This information is used for weather and climate research
- Satellite control station to operate, manage, and plan the missions of the Egyptian satellite (MisrSat-1) in its orbit.



- Space city in which all the activities of the Egyptian Space Program are located. These include research work, test and measuring labs, and the satellite control center.
- A Satellite data processing lab, equipped with the most modern specialized software. It has the capability to produce topographical maps from aerial and space photos
- Simulation, data presentation and high performance computing lab with application in the fields of remote sensing and information systems.
- NARSS purchased a super computation featuring 1000 processor with a throughput of 1.5 terra FLOPS with a capability of carrying out complex scientific calculations.

Main Accomplishments

NARSS had many achievements through research work and contracts with local and foreign agencies:

- During April 2007, NARSS succeeded to launch the first Egyptian Remote Sensing satellite (MisrSat-1). This was the first step for Egypt to get into the space era. Also it was an introduction to a series of future satellites to support the scientific research as well as the national development plans.
- Transfer of the control over EgyptSat-1 to Egypt on April 2008.
- Installation of the first supercomputer in Egypt featuring 1000 processors which will be used in modelling and simulation efforts at NARSS.
- Implementation of more than 250 research projects through self financing, and local contracts and foreign contacts.
- Implementation of more than 30 service projects, for local agencies, in NARSS related fields

• Issuing of eight space atlases during 1980-2006 (South western desert, Geology of Sinai, Space Images of Sinai Peninsula and south western desert, Climate of Sinai, North western desert, Space Atlas of Egypt, Hydrology of Sinai, Prehistoric Human cultures in Egypt)





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National Institute for Standards

www.nis.sci.eg

The National Institute for Standards (NIS) was established in 1963 just after Egypt become signatory to the Meter Convention in June 1962 under

the umbrella of the BIPM in Paris.

Mission

The main goal is to provide traceability to international measurements Standards, through the maintenance of national primary Standards of physical quantities and the realization of base and derived units and disseminating such units. To help Egyptian production to penetrate world markets through promotion of Standardization and quality.



Vision

By the convention between NMIs, NIS is thus responsible for operation of the Egyptian measurement system linked to the international system of units (SI) with an ultimate goal of international recognition of the Egyptian measurement standards and the calibration certificates issued by NIS laboratories. The main objectives are:

- Furnishing the NIS departments with the up to date infrastructure and advanced metrology techniques required to comply with the international specifications.
- HIGH CURRENT 5000 AMPERE
- Participating in international comparisons for ensuring the accuracy of the standards traceability to the SI units.
- Carrying out researches, development of intelligent measurement techniques, and calibration metrology aiming to developing the national standards.

Human resources

a) Staff members

Degree	Retired Prof.	Prof.	Ass. Prof	Researcher	R. Ass.	Ass. R.	Total
NO	49	7	32	40	37	35	200

There is an agreement for assigning 10 of assistant researchers at 5 departments for achieving the principle of settlement in NIS, thus supporting young researchers to fill the shortage of human resources gradually.

Degree	Admin.	Clerk	worker	Tech.	Specialist	Total
No.	126	129	110	80	77	522

R&D Annual Budget

The average of the investment plan is about 10 Million L.E. through the last five-year plan with about (2 Million L.E) annually for R&D.

Facilities

NIS provides traceability of national Standards for the reference and working measurement standards maintained and used by the industrial, governmental, non - governmental and private organizations. This is achieved through six main scientific metrological divisions comprising 20 departments.

The infra structure:

1- Scientific and Metrological Divisions:

- Optical Length and Dimensional Engineering Metrology
- Thermometry and Ionizing Radiation Dosimetry
- Mass and Force Metrology
- Electrical and Electronic Metrology
- Chemical Metrology
- Photometry and Radiometry Metrology

2- Library:

It includes scientific books of different fields and international literatures in fields of science and metrology.

Main Accomplishments

The infra structure

- Force and Material Metrology Department.
- Length and Precision Engineering Division.
- Client Services Building (Technical Office for Calibration).
- TQC Total Quality Consultancy Center.
- The main Calibration Hall.

International Recognition of National Primary Standards

Complete gaining trust from the Quality EURAMET Organization for five NIS activities in prepare for the international recognition.



NIS Services

Noticeable increase in the number of the clients (about 1500) asking NIS for quality to achieve traceability of their measurement results, proficiency testing, training and consultancy. This is an assign for disseminating the national Standards, increasing the needs from different national sectors for measurement and calibration and the function of NIS in improving the quality of the Egyptian products and economy.









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National Institute of Oceanography and Fisheries www.niof.sci.eg

NIOF, being the oldest research institution in the Middle East and the Arab region that is entirely devoted to marine research

Mission

The mission of the National Institute of Oceanography and Fisheries is "to achieve sustainable development of marine and fresh water resources through increasing their potentials for food production, combating pollution from all sources and working towards reducing poverty and improving the standard of living by developing and introducing new techniques in fisheries and aquaculture.



Vision

The mandate of the NIOF was specified in the Presidential Decree No. 436 of 1983 as follows: "To maintain, protect and promote the different national water bodies and their natural resources.

Strategy

To achieve the aims and objective of NIOF within its approved medium term (5-year) strategy (2007-2012), NIOF focuses its attention on a wide range of problems that are primarily of scientific, environmental, and socio-economic importance, nationally and regionally, keeping in mind the international dimension and the global challenges that are likely to face the marine and coastal environments in the 21st Century through:-



1- Achieving Sustainable Development of Fishery Resources of the Egyptian Waters

2- Development of Research Capabilities for the Isolation of bioactive Products from Marine Organisms in the Red Sea

3- Adaptation of biotechnological techniques in combating some pollutants in the marine environment

4- Promoting the scientific culture and raising public awareness on the marine and coastal environments and their resources.

Division	Scientific Staff	General Staff	Total
Numbers	721	613	1334

Annual Research Budget : This budget reaches almost 500 thousand pounds per year.

Facilities

1.Central Laboratories

NIOF has three central laboratories located and operating, one at each of its three branches . These Laboratories are equipped with modern instruments, such as atomic absorption spectrophotometers, X-ray defractometers and other sophisticated equipment. Highly qualified with trained expert researchers operating these equipment.



2. Research Vessels

The Institute owns and operates two twin Research Vessels ; "Salsabil" works mainly in the Mediterranean Sea, while its sister ship "Yarmouk" works mainly in the Red Sea region.

These vessels "Yarmouk" and "Salsabil" are equipped with a number of modern instruments which are used effectively in studying the Various Aquatic Environments

3. Scientific Libraries

NIOF holds the largest collection of reference books,

specialized scientific journals and periodicals, covering all disciplines of marine sciences.

4. National Oceanographic Data Center (NODC- Egypt) NODC –Egypt was established more than 35 years ago.

5. Scientific Documentation and Media Unit (SDMU) Documents report all of the Institute's projects and other

6. Marine Museums They display excellent and unique collections of Egyptian



7. Marine Aquaria

It plays a great role in spreading scientific knowledge and culture among citizens, tourists, visitors, etc.





Main Accomplishments

International - National Projects & Programs in different fields such as :-

- A. Environmental monitoring and research Programs
- B. Research and Study on fish productivity & fisheries Management
- C. Aquaculture Development



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National Research Centre www.nrc.sci.eg

It is the largest of all institutions affiliated to the ministry of Scientific Research and employs about 70% of all scientists working in these institutions. It consists of 14 Research Divisions, including 111 departments.

Mission

NRC was designated to support and carry out basic and applied researches in different fields of science and technology to serve and strengthen the national economy and respond to priorities established in the overall development plans of the country.

To pioneer innovative information & communication technologies Towards growing globally competitive indigenous Industries

Vision

In order to fulfill its mission, NRC is entitled to:

- Conduct research in different fields of natural sciences and advanced technologies to serve the national economy and developmental plans.
- Provide services and scientific technological consultations to productive units to solve their problems and develop their capabilities.
- Guide the national economy sectors to the requisite of technology and stimulate efforts in the rapid assimilation and transfer of imported technologies.
- Train young researchers in various scientific fields as a base for balanced growth of national technological capabilities.
- Contribute to the national efforts for upgrading of science and dissemination of knowledge.
- Strengthen scientific linkages and cooperation through agreements with local and international organizations.

Human resources

Number of research scientists :

- Ph.D. holders: 2540
- Scientific assistants: 2078
- Administrative staff: 2486
- Overall human strength: 7104

R& D Annual Budget

Total Budget through 2007-2008 was 72 million L.E 1- Governmental budget 2007-2008 (44 million L.E) 2- Other sources of NRC fund 2007-2008 (28 million L.E)

Facilities

The National Research Center is built on 12 acres and it consists of :

10 Research Buildings , 2 Administration Buildings, 10 Store Rooms, 829 Labs, 12 workshops, 5 Experimental pilot and Plant Units , Animal House, Green Houses,



Two Large conference halls in addition to 34 small ones for workshops and trainingcourses with all facilities, This is in addition to a research farm in Nubaryea on 145 acres.

Training and Capabilities Development "TCD" Unit

- Organizes training courses in various scientific and technological areas and at different levels.
- Transferring specially tailored experience industry, production and services sectors in Egypt, Arab World and African Continent.
- Joint Training Courses in collaboration with international organizations .

Marketing Research Products And Services

1- Businessmen and Investors'Office: Contracts & Protocols

2- " Committee of Research & Development and Technology Transfer" (NRC & Federation of Egyptian Industries

3- Annual Scientific Exhibitions

Monitoring & Evaluation office

- Periodic monitoring at all levels
- Research sectors
- Technical sectors
- Administrative sectors
- Evaluation Indicators with Different Weights

Main Achievements (Major Scientific Results or Products)



Patents

International Patent

Advanced Materials and NanoTechnology

1.Oxygen evolution anode; Ahmed Abd El-Moneim, Koji Hashimoto and Naokazu Kumagi, EUR Patent no. 07119971.4-2119, 2007

2. Anode for electrochemical reaction Ahmed Abd El-Moneim, Koji Hashimoto and Naokazu Kumagi, EUR Patent no. 07119971.5-2119, 2007

Egyptian patent

- Method for Preparation of Molybdenum Doped Alumina as Anticorrosive Pigment.
- A new method for regeneration of nickel catalyst used for hydrogenation of edible oil.
- Isolation of soya oil from the crude commercial lecithin and decolourisation of the pure lecithin using simple and economic method.
- A simple efficient and generally applicable method for grafting of vinyl monomers onto nylon-6 fibers.
- Novel free formaldehyde adhesive system for production of environmentally friendly composites from agricultural waste (Artificial wood).
- Preparation of Na-A Zeolite from egyption kaolin.
- Preparation of Na-Pzeolita form Egyptian kaolin.
- Preparation of (Na Faujasite) Zeolite from Egyptian kaolin.
- New method for preserving fresh cuts of potatoes, onion and carrots during storage and marketing.
- Production and application of environmental friendly biopolymers from toxic formaldehyde of wood –product adhesive.
- Preparation for polyamide membranes via casting technique.
- Developing a multi-function apparatus for reinforced earth testing.
- Low fusion opaque porcelain for coating chromium- nickel containing alloys.
- Air lift pump.
- Synthesis of PH papers.
- Injection fertilization as full nutrition technique for trees and shrubs.
- Method and equipment for detection of helminthes' eggs in human and animals.
- Low fusion translucent porcelain with novel composition and good mach inability for dental crown application.
- A New method for preparation of Ni catalyst used in Hydrogenation of edible oils.
- A novel approach for the control of the red palm weevil Rhynchophorus ferrugineus (f) using microsporidia.
- Oxygen evaluation electrode.
- Anode for electrochemical reaction.





Health sector

- Avian Influenza H5N1 Inactivated Vaccine
- Gold Nanoparticles : Toxicological and pharmacological Assessment of Some Nano-gold materials Used in Cancer Diagnosis and Therapy
- Production of diagnostic kits for HCV through the Drug Constrictive Company.
 - Production of functional foods for treatment of certain genetic diseases e.g. phenyl ketonuria.
 - Successful environmental therapy of some immunological
 - diseases such as psoriases and rheumatoid arthritis in Safaga resort.
 - Production of "Proximol" a spasmolytic drug by Cairo Drug
 - Pilot Projects for the Development of Health Status in Rural and Urban Communities.
 - Clinical genetics
 - Oro-Dental Genetics
 - Prenatal diagnosis & fetal medicine
 - Development of Pharmaceutical and Food industrial sectors.
 - "Synthesis and assessment of nanostructured materials for drug delivery"
 - "Synthesis of Benzoxazole Derivatives with Potential Antitumer and Antiviral Activity"

Agriculture sector

- Synthesis of Benzoxazole Derivatives with Potential Antitumer and Antiviral Activity.
- Genetic Transformation of some Pathogenesis Related Genes for fungal Resistance into grain legumes (faba bean and pea).
- Micro- Nutrients and plant Nutrition Problem in Egypt

• Trace Elements with Special attention to Zinc and Copper in Edible Vegetattion As Related to Egyption Geographical Distibution and Envoirnmental Surroundings Through chairing of NRC researchers in several national campaigns to ameliorate the quality and quantity of several agriculture crops which improve our national economy by an annual income of 1.677 billion Egyptian pounds (e.g. Wheat, rice, citrus fruits, maize campaign etc....).

Environmental sector

Implementation of Environmental Technologies for Water and Air Pollution.

A successful example of drinking water station (El-Fostat Station) which is now applicable in Cairo and Alexandria

- Recycling of waste water by a new method that prevent any health hazards
- Construction with Rice Straw Bales as a Sustainable Environment Friendly Building Material
- Technological and Engineering Development for Production of desalination Hollow Fibre Membranes
- Spiral Wound RO Membrane for water desalination
- Economical and environmental friendly lignocellulosic composites
- Development and optimization of pesticide industry effluent treatment system using Nanofiltration (NF) and oxidation technologies

Textile sector

- Production of new biocidal textiles using advanced nano and melt spinning techniques
- "Improving Healing Performance of Wound Dressing through Formation of High Surface Area Chitosan/Cellulose Structures from Electrospun Nanofibers " Through chairing in the National comparison to amplianete the textile products in 2004.

campaign to ameliorate the textile products in 2004 in which NRC researchers had succeeded to develop some chemical procedures in the textile industry which lead to annual saving of approximately 5 million pounds to the concerned textile companies.

Energy sector

- Nanomaterials Design for Solar Energy Conversion
- The Conversion of Solar Energy Utilizing Sizequantized Inorganic Nanostructure Materials
- Cellulosed Waste Treatment from Garbage and Agriculture to get liquid Fuel.
- Development in biodiesel production and sources.
- Synthesis, characterization and evaluation of new hydrogen storage materials.
- Synthesis and investigation of the physical and electrical properties of BaSrTiO3 (BST) nanostructures prepared by sol-gel methods.
- Catalytic gasification of biomass for synthesis gas
- Cost-effective Renewable Energy For Rural Areas In The Mediterranean Region.

Scientific Products

Products traded

- 1- Functional Foods : for the treatment of various diseases, such Phenyl Ketonuria
- 2- Paints and Coatings
- 3- Talc powder.
- 4- Ointment for the treatment of skin eczema "Nigella Sativum" plant.
 - Large global markets exist for industrial products derived from natural products
 - Pharmaceuticals : Natural & microbial products.Cultivation, production & chemistry of medicinal plants
 - Pesticides
 - Industrial enzymes
 - Biotechnology enzymes
 - Medicinal plants ---- Drugs
- 5-Treated Fodders.
- 6- Treated Fertilizer.
- 7- Rubber Gaskets and O ring
- 8- Resin Formaldehyde.
- 9- Some Chemicals used in Leather Tanning.

Photo Sensitizers

- Sunlight and photoactive compounds
- Photo generate reactive oxygen species
- Insecticide against mosquitoes, codling moths, house flies, cockroaches, mealworms, boll weevils, face flies, cabbage butterflies, cabbage loopers, and corn earworms.





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National Research Institute of Astronomy and Geophysics www.nriag.sci.eg

NRIAG is the oldest multidisciplinary research institute in Egypt devoted to basic and applied research within the fields of Astronomy and Geophysics.

Mission

NRIAG mission is to conduct basic and applied research within the major fields of Astronomy and Geophysics in order to develop production in the field of seismic retrofit of vital constructions and earthquakes hazard mitigation. It is mainly to perform observations, theoretical and applied research studies in Astronomy, Space, Solar activity, Geomagnetism, Seismology, gravity and



Geodesy. NRIAG serves as a consultant organization to different national firms and institutions in their developing plans in the framework of nation development. NRIAG plays an important role in training scheme on both national and regional level in Astronomy and Geophysics.

Vision

NRIAG has to correspond to the country's key production and services sectors through the researches conducted in different areas of Astronomy and Geophysics, scientific consultation and training as well.

Human Resource

The research staff is 245 aided by 500 technical and administration personnels.

R&D Annual Budget

The annual budget for Research and development is 900,000 LE or the year 2007-2008.

Structure and Management

NRIAG Is headed by a president, assisted by two vice presidents, one for research and the other for finance and administration. NRIAG consists of 5 departments and 11 main laboratories.

- (1) Solar and Space Research Department (2 laboratories)
- (2) Astronomy Department (2 laboratories)
- (3) Seismology Department (2 laboratories)
- (4) Geodynamics Department (2 laboratories)
- (5) Geomagnetic & Geoelecteric Department (2 laboratories)

In addition to a special Laboratory, the National Data Center (NDC) for the Comprehensive Test Ban Treaty Organization (CTBTO).



NRIAG is managed by a board consisting of the president of NRIAG, two vice president, General-Secretary, Heads of scientific departments and ten eminent specialized scientists from different branches of astronomy and geophysics and representatives from ministries and authorities that cooperate with the institute.

Facilities

- Shallow and deep seismic sounding.
- Ground water investigation and evaluation.
- Earthquake hazard assessment and risk analysis
- Geophysical prospecting for oil and buried bodies and cavities.
- GPS and Crustal movements.
- Geophysical archeological investigation.
- Annual Astronomical Index for Muslim world.
- The Identical times for some crimes.
- Solar radiation and the Optimum method for utilization.
- Satellite observations and environment.
- Light pollution and energy loss.
- Realimonizing the mirror of scientific and medicine instrumentation

Main Accomplishments

Astronomy

- Observation of Halley's Comet in 1910 and 1986.
- Share in the discovery and observation of the planet Pluto in 1930.
- Total eclipse observation of the Sun in 1952 in Khartoum, Sudan and 2006 in Salloum, Egypt.

Geophysics

 Establishment of the Aswan Regional Seismic Network for Monitoring and studying the induced seismicity and the stability of the High Dam (1982).

- Establishment the Egyptian National Seismic Network (ENSN) for earthquakes activity and micro-zonation studies in and around Egypt (1997).
- Installation of the permanent Egyptian GPS network for detection of crustal movements and deformation analysis (2006).
- Earthquake hazard evaluation and risk analysis in areas of major constructions: nuclear power plant, electrical stations, bridges, Dams, tunnels...etc.
- Estimation of the seepage water beneath Nasser Lake, Aswan.
- Ground water invasion around sphinx.



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Research Institute of Ophthalmology

www.rio.sci.eg

RIO was established according to the Presidential Decree No: 40/1989.President has inaugurated the Institute on March 4th 1990.

Mission

Investment of all scientific, research, clinical, human and financial resources as follows:

 Studying and determining eye problems in Egypt, and attempt to protect it through field studies, medical camps, infectious surveys to



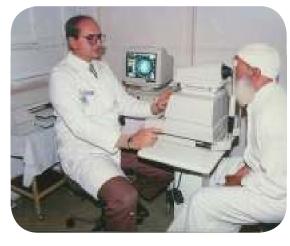
achieve correlation between scientific research and the problems of the society in the field of ophthalmology.

- 2. Provision of distinguished and healthy medical service in relation to the three aspects (diagnosis, medication, protection), and particularly for low and middle classes of the society, and establishment of healthy awareness of ophthalmology between the citizens.
- 3. Development and promotion of scientific and vocational cadres in the field of ophthalmology to prepare distinguished generations of researches, physicians in this field, and achievement of international cooperation between the institute and other research bodies all over the world.
- 4. Scientific and medical registration for the ophthalmology diseases in Egypt to form national scientific database for the ophthalmology diseases in Egypt.

VISION

The institute is considered distinguished center in the main and applied researches for the ophthalmology in addition to training, qualification and medical education in Egypt and the whole area. Through continuous development for the potentials of the institute, its scientific, research, clinical and vocational abilities to cope with most advanced criteria and levels, the institute could be:

• Pioneer national reference research center in the field of ophthalmology for all ophthalmology departments in all national and regional universities.



• Focus and center of joint international cooperation with various international institutes in common interest fields.

Human Resource

RESEARCH AND MEDICAL CADRE

Research professor	64
Assistant research professor	46
Researcher	73
Assistant researcher	61
Researcher assistant	2
First specialty	8
Second specialty	7
Third specialty	42
Total	303



Senior specialist Specialist

GENERAL CADRE

Specialist	129
Nursery	145
Administrative	135
Technicians	74
Craftsmen	55
Supportive services	68
Contracts	38
Total	663



R&D Annual Budget

389000 (three thousand eighty nine thousand only)

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Facilities

The institute has various medical and specialist sets in the field of diagnosis and treatment of ophthalmology diseases treatment that support the members of researches authority to provide the research and medical service for patients including:

- 1- Vision correction set
- 2- Field of vision correction set
- 3- Optic nerve scanning set
- 4- O.P.D scan
- 5- Cornea thickness meter
- 6- Cornea topography set
- 7- Ocular fundus test
- 8- Photo slight lamb set
- 9- Eyesight grade computer based
- 10- Argon leaser set
- 11- Yag leaser set
- 12- Dayo leaser set



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- 13- Photo dynamic set
- 14- Ocular fundus scanner through fluoresce pigment
- 15- Ocular fundus scanner through endothynine pigment
- 16- Implanted lens force set
- 17- Eye Ultrasonic set
- 18- O.C.T set
- 19- SLO set
- 20- Electronic microscope scanner
- 21- Electronic microscope penetrating
- 22- Heart attacks set
- 23- Cardiographer
- 24- Blood vessels and heart sonic waves set
- 25- Dentistry unit
- 26- Operation chambers equipped with advanced devices required for incineration.
- 27- Information center connected to Internet
- 28- Digital specialist library in the field of ophthalmology and eye surgery.

Main Accomplishments

SIGNIFICANT ACHIEVEMENTS

ON THE INTERNATIONAL LEVEL

- 1. Joint project with Nottingham University for diagnosis of cornea disease led eyesight loss, the main reason for cornea implantation operations.
- 2. Scientific cooperation project Eye tumors department in Saint Paul Hospital, Liverpool University.
- 3. Research project for joint scientific cooperation in the field of research and exchange of visits and experience between cardiology unit in the institute and cardiology department in Kyoto Japan (Effects of HCV C on heart and blood vessels study).
- 4. Cooperation with Spain to search the specialized scientific program between the institute and University Hospital Foundation, Alcorcon, Rey Juan Carlos University, Alcorcon, Madrid, Spain.
- 5. Participation in the establishment of the African union for research institutes for development of scientific research methods in the field off ophthalmology.
- 6. Establishment of the second conference for cataract operations, vision correction, in cooperation with the international foundation for vision correction operation affiliated to the American academy for ophthalmology.
- 7. Third international conference for retina and glass object in cooperation with the American foundation for retina operations.
- 8. Participation in 18 international project
- 9. Inviting Spanish expert from Madrid University
- 10. Invitation to Prof. Dr. Dada 9professor in Higher institute of Ophthalmology in New Delhi) to participate in the actualities of the scientific day of glaucoma.
- 11. Invitation of 8 surgeons affiliated to the American foundation of retina to perform operations in the institute as part of the retina conference.



12. Invitation of Prof. Dr. President of Ophthalmology department in Nottingham University to support relations and comparison of cases, and performance of operations in the institute.

ON THE LOCAL LEVEL

1. Execution of the research project between in the institute and integrated care society.

2. Execution of research project between the institute and Angelic Coptic authority for social services

3. Participation in 28 local conferences through attendance of 83 members, Behoos authority.

4. Operation of field researches unit to develop the research project entitled (medical survey for child ophthalmology from one day age to six years in the A.R.E.) in order to obtain accurate statistics for local ophthalmology diseases and development of blindness confrontation policies.

5. Several medical staffs to various governorates of the republic, particularly the far distant one, which are in need to these services.

6. Training to physicians and qualifying them to obtain Egyptian Fellowship, in cooperation with the Egyptian Ministry of Health.

ON THE LOCAL LEVEL OF THE INSTITUTE

1. Establishment of 3 international scientific days in the institute

2. Delivering 144 lectures for the various scientific specialties in the institute, and restructuring the research department to 11 department and 22 specialist units in all micro fields of ophthalmology and basic sciences.

3. Enrollment of 26 Master's degree theses and 3 Doctorate of philosophy theses.

4. MA holders reached 5 and Doctorate of Philosophy holders are one.

5. 21 training course were held for the promotion of the efficiency of the staff of administrative and nursery outside the institute.

6. training course were developed for promotion of the staff inside the institute.

7. Training and appointment of 11 physicians in different medical fields for some universities and specialist medical institutes.

8. Transfer to the one day operations system, which result in clear economic return.

9. Amendment of the research cadre system in the clinics and operations which contribute in increase in number of visitors and improve the quality of service, decreasing waiting lists for delays in operations.

10. Expansion in micro fields clinics and complementary checks and extension of working hours up to 5p.m.

11. Establishment of clinics for face, hands and eyes operations.

12. Preparation to form a committee for scientific researches evaluation.

13. Establishment of electronic library

14. Establishment of information centre

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www.tbri.sci.eg

Mission

The control, diagnosis and treatment of endemic diseases and their complications especially those affecting the liver, the gastrointestinal and the urinary tracts, mainly as result of schistosomiasis and viral hepatitis. This is to meet the social, economic and technological needs of Egypt and the regional area.

Vision

To be a leading centre in research and training concerning diagnosis, control and management of endemic diseases in the region.



Human Resource

- Total: 1462 employees.
- The research Staff Members (in the fields of Medicine- pharmacology- Science and Agriculture): 244
- Assistant researchers & residents: 166
- Specialists, technicians & nurses: 464
- Clerical jobs & laborers: 588

R & D Annual Budget

- Total Annual Budget: 43.000.000 LE
- R&D Annual Budget: 8 million LE (including hospital expenditure)

Facilities

The institute includes the following specialities: Gastroenterology, Hepatology, Nephrology, Public Health, Radiology, Anesthesia, Intensive care, Surgery, Urology, Clinical Chemistry, Electron Microscopy, Hematology, Microbiology, Pathology, Immunology, Parasitology, Pharmacology, Biochemistry, Medicinal Chemistry, Environmental Research and Medical Malacology.

1-Laboratory Facilities

- Equipment for life cycle of schistosomes and biological and chemical control of snails
- Equipment for plant extraction and testing as molluscicides
- Atomic absorption apparatus to detect elements in water, soil.
- Equipment for parasitological studies of excreta and experimental parasitology
- Equipment for pharmacokinetic studies of drugs and trials for newer approaches of treatment of schistosomiasis, using experimental models
- Equipment for preparation of antigens and antisera and diagnostic humoral immunology (utilizing column chromatography, ultrafiltration, lyophilization, gel techniques, ELISA, IFA, IEP,

EITB, ...etc)

- Tissue culture unit for cellular immunology studies including tissue typing and monoclonal antibody production
- Equipment for protein chemistry purification and characterization-Molecular hybridization and

PCR technology-Equipment for clinico-chemical investigations utilizing an autoanalyzer and including kinetic enzyme studies-Radio-isotope unit (Lab C)-Equipment for haematological investigations (blood picture, red and white cells and platelets studies, coagulation, bleeding and haemostatic alterations)-Equipment for blood banking-Equipment for aerobic and anaerobic culture and study of microbiology-



• Equipment for histopathology studies including immunohistochemistry, genetic and molecular studies

aided by cell image analysis-Equipment for electron microscopic studies including immuno labeling, molecular procedures and image analysis of electronmicrographs-Field station for epidemiological studies and community participation of targeted population.

2 -Clinical Research Departments Facilities

Three surgical theatres-Endoscopic facilities (colonoscopy, gastroduodenoscopy and ERCP) with ultrasonography and Doppler-electrocardiography-Laparoscopic facilities for diagnostic and therapeutic purposes-Minimal invasive urosurgery utilizing ureteroscopy; nephroscopy and cystoscopy, under fluoroscopic and endo-camera guidance-Blood gas monitoring with estimation of serum electrolytes-Twenty machines for haemodialysis



3-Animal House

The animal house is concerned with breeding of different standard strains of experimental :- Big animals e.g. sheep, goats and pigs-- Small animals e.g. mice, hamsters and rabbits.

4 -Field Facilities

• Snail Research Station: for running snail researches under simulated natural conditions. It is on 4000 m2 located 25 kilometers far from Cairo. It has 18 parallel ditches with muddy bottoms and sloping banks each 30 m long. Two channels at right angles to the ditches serve as common feeding and draining channels. This system of experimental ditches is supplied by underground water (40 m deep). It includes two field laboratories.

• Field research Unit : It was established with the cooperation of the Ministry of Health since 1983,

in Gezerat Mohamed village, Imbaba, Guiza three km to the north of TBRI for conducting field work. It has two rooms for clinical examination, a laboratory, a room for registration and another one for social studies and support of villagers.

5 - The Library

 The library collection is mostly in English and they are in the field of liver and endemic diseases especially schistosomiasis and its complications. The total titles in the library are 4500 of which 1500 are for periodicals, 500 are for MD, Ph.D. and M.Sc. theses and 2500 are for books. The contents of the library have been kept and can be recalled using the Advanced Library Information System Soft ware (ALIS).



• Computers in the Library. This is in addition to a Local Area Network (LAN) of 10 PC's which are connected to a server and to the Egyptian National Scientific and Technical Information Network ENSTINET. Two digital photocopying machines are available.

6-Training Facilities

- The institute organizes annual training courses in various specializations running in the Institute. The Training and Consultation Unit" fulfills the requirements of trainees from scientific institutions and/or personnel from Egypt and regional countries.
- Annual international workshops on therapeutic endoscopy with the collaboration of the American

Society for Gastrointestinal Endoscopy and the European Society for Gastrointestinal Endoscopy as well as annual international conference on infection control are held at TBRI.

Annual International workshop on Infection Control

Main Accomplishments

At the international Level

- 1. TBRI was chosen in 1984 to be WHO collaborating center for the control of schistosomiasis in the Middle East.
- TBRI was chosen by the Organisation Mondiale de Gastroentérologie (OMGE) to host the Cairo Training Center (CTC) for Gastrointestinal Endoscopy for trainees from the Middle East and English speaking countries of Africa.
- 3. TBRI staff member participated in the task force of





the African Network of Drug/ Diagnostic Innovations (ANDI). This participation was on request of WHO to be representative on the level of North Africa.

4. The endoscopy unit of TBRI has been selected by the World Organization of Digestive Endoscopy as the Egyptian Training Center (ETC).

5. TBRI ranks among the important centers that provide training on the regional and African levels. It organizes successfully an annual international workshop on diagnostic and therapeutic gastrointestinal endoscopy since 1999 in collaboration with the American and European Societies of Gastrointestinal Endoscopy, and the annual International Workshop on Infection Control for 5 successive years.

6. The schistosome biological supply center provides more than 20 international research institutions with all stages of the life cycle of Schistosoma mansoni and haematobium.

7. More than 50 research projects were implemented with the following international organizations and institutions: Gesellschaft fur Technische Zusammenarbeit (GTZ), Germany; United Nations

Environmental Program (UNEP); World Health Organization (WHO); Carl Duisburg-Gesellschaft (CDG), Germany; Deutscher Akademischer Austausch Dienst (DAAD), Germany; Deutsche Forschungs-Gemeinschaft (DFG), Germany; French Cultural Centre (CEDIM), France; Institut Pasteur de Lyon, France; Canadian International Development and Research Centre (IDRC), Canada; United States Agency for International Development Bank (USADB); Islamic Bank (IB), United States Agency for International Development (US AID); Swedish International Development Authority (SIDA).

8. Scientific Agreements were signed with Hopital Beaujon – Paris –VII, France, and Witten University /Herdeke ,Germany.

In the field of medicine and biotechnology

1. Establishment of drug discovery unit

2. Establishment of tissue engineering & culture unit.

3. Establishment of a biotechnology and genetic engineering unit for research and development (R&D) of diagnostic kits and biopharmaceuticals for liver diseases.

4. quality control for the 2008 Egypt Demographic and Health Survey (EDHS) for hepatitis C testing component funded by USAID.

5. TBRI provided the Ministry of Health and Population(MOHP) with the information that the local brand of the antischistosomal (Distocide) drug has equal efficacy and bioavailability to the imported one (Biltricide). Approval of the efficacy of the local formulation saved the country the costs of importation of the foreign brand.

6. Upon official request from the MOHP in Egypt and in a trial to avoid setting back all control

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measures undertaken to control schistosomaisis, the Institute provided the MOHP with the data concerning lack of evidence that the newly introduced antischistosomal drug "Mirazid" possesses any antischistosomal activity both experimentally and in school children and household members.

- 7. Production of monoclonal antibodies for the early diagnosis of active schistosomiasis and Fascioliasis in serum and in tissues.
- 8. Innovation of a technique for the processing of urine samples, simultaneously for light and electron microscopic examination, which enhanced the diagnostic sensitivity of urine cytology for malignant lesions.
- 9. the recommendation of a regimen for renal dialysis that has been applied in all dialysis center in Egypt.
- 10. Stem cell culture and the start of experimental trial for stem cell transplantation.



Patents

-Detection of anti-fasciola IgG4 as a specific diagnostic marker for fascioliasis .

- Invention of a new device used in anesthesia called "Tracheal tube - bronchial tree".

- Invention of a device for epidural identification and catheterization using continuous hydrostatic pressure.

Award

- The state award in medical sciences was awarded to five of the researchers for their achievements in haematology, pharmacology, nephrology, urosurgery and anaesthesia.

- The American Biological Institute, Relaig, North Carolina 27622 USA award one of our researcher the distinguished leaderships in the fourth International Directory of Distinguished Leadership, 1992.

- the Silver Medal from Cambridge university was awarded to one of our researcher for her work done to simplify some laboratory techniques.

- Inclusion of the bibliography of one of our researcher

in Who's Who in Medicine and Healthcare 2006 and Who's Who in the world 2008 for her scientific achievement . Also, the bibliography of another researcher was included in Who's Who in Science and engineering.

- One of the staff members of TBRI was awarded the Arab Women Organization Award for science and technology in biological sciences, 2008.

- Many posters presented by the institute staff members in international conferences were awarded prices of the best poster.



Scientific Research Projects (running)

- 12 Projects in collaboration with international organizations and Institutions .
- 5 projects in cooperation with foreign countries in the frame of combined agreements (Academy of Sciences of the Czech Republic, University of Pittsburg, USA, University of California San Diego, USA, Lund University, Sweden, Swiss Academy for Medical Sciences and Velux Foundation.,
 - 1 project funded by WHO.
 - 1 project in cooperation with Yamagata university faculty of medicine.
 - 5 projects in cooperation with Beaujon hospital, France, in the frame of the Egyptian French Scientific and Technological cooperation program, IMHOTEP.
 - 5 Projects funded by Academy of Scientific Research and Technology (ASRT).
 - 54 Projects funded by Theodor Bilharz Research Institute (TBRI).

Publications (2008)

- International Publications: 80.
- National Publications: 40.









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Ministry of Higher Education

Research Landscape in Egypt 2010

Ain Shams University Centre for Developing English Language Teaching http://edu.shams.edu.eg/cdelt

The Centre for Developing English Language Teaching was established in 1977 to serve the development of English Language Teaching on the national scale. Since 1990 CDELT has adopted creativity as its guiding policy, which is elaborated into a well-planned strategy based on the objective of promoting creativity in the field of English education as part of national and cultural development of Egyptian society. Areas of activity include organizing teacher education and professional development programs for university and Ministry of Education staff, conducting research on creativity in English



Language Education, producing academic, refereed journal Occasional Papers, holding seminars, hosting international speakers and last, organizing the annual National Symposium in march at the Ain Shams University Guest House.

Mission

Center For

Developing English Language Teaching

To respond to Egypt's development and employment needs for individuals with high level English language skills. We work with the ministry of Education and faculties of Education as well as other target faculties in the university to provide the highest quality, world- class English language programs and English language teacher education for Egypt . This requires setting standards for English teaching agreed upon by the Ministry, university faculties and other partners across Egypt. It also requires developing programs to teach those standards to ensure that they are met.

Vision

Fluent english language use for all.

CURRENT ACTIVITIES

In addition to organizing the CDELT annual symposium, CDELT is currently engaged also in the following activities:

- Publishing the bi-annual CDELT refereed academic "Occasional Papers" that cover the fields of language, literature and methodology.
- 2. Publishing the annual CDELT symposium proceedings.
- 3. Providing English language courses particularly preparated for TOEFL for Ain Shams graduate students and other ESP courses.
- 4. Providing Math and Science teaching courses to upgrade their teaching performance.





- 5. Conducting financially supported conversation courses for FOE undergraduate students.
- 6. Providing the CDELT library with internet access.
- 7. Conducting the Educational Technology in School "Ed Tech program" applied in Egyptian Schools to create a practical and competitive educational environment, using current methodologies and computer technology.

8. Supporting the use of technology to facilitate student-centered project-based learning. In collaboration with USAID, CDELT adopts this training course specialized and piloted with the professional diploma students in FOE.

9. Conducting a conversation courses for undergraduate FOE students.

10. In addition, Macmillan, Oxford and Utopia publishing houses, with CDELT had contributed to the experimental language schools EFL teachers' development through successful workshops from 11 – 13 December 2005





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Ain Shams University Geographic Information System Unit

A Geographic Information System (GIS) is verified technology that has been in use for several decades by many agencies and organizations as a decision support tool and information management system. GIS provides the capability to collect, manage, manipulate, analyze, and distribute information that is tied to a location, and it layers that information in a map-based environment to provide a better visual image of location, patterns and relationships. GIS is enabling and core technology that touches numerous business processes, systems, data, and other applications.

Mission

The GIS Unit's Mission is to provide practical services in consultancy and training for the Egyptian Society, with means of innovative support and assistance in both technology and experienced staff. This will lead to improve modeling and analysis of problems and optimize the consequent decisions.

Vision

Our Vision is to disseminate the benefits of the use of geospatial information and supporting technologies at the different scales of the society.

Objectives

- Establish and Maintain the unit infrastructure from both a technical and managerial perspective;
- Establishing a highly experienced and knowledgeable steering committee;
- Provide Technical and Managerial support to foster the Diffusion of GIS to an Array of End-Users, to Increase awareness;
- Provide timely, accurate, and meaningful GIS Data to different research and consultancy projects;
- Use GIS technologies to improve efficiency & increase productivity, in enhancing the university's mission;
- Enable different faculty Departments to effectively use GIS Technology for improved services and response to different projects request in a collaborative and integrated way;
- Produce training and education materials for all levels of GIS users;
- Coordinate and collaborate on enterprise-wide GIS efforts with external entities.

Human Resource

The GIS unit has a very well trained and professional staff from the different department of the engineering departments (Water resources, public works and urban planning). Different applications and case studies are taught and applied within the postgraduate and undergraduate courses as well as the short training courses.

Facilities

Hardware

- a. Main Lab
- Surface area 180m²

- 25 Trainees (25PCs, 2 Printers (Laser and deskjet), Plotter, Digitizer, Datashow, Copy machine, Internal Network)

- b. Extension Lab
- Surface area
- 10 Trainees (10PCs, 2Printers (Laser and deskjet), Datashow, Internal Network)

Software

- a. GIS
- 2 ARCINFO Licenses
- 20 ARCVIEW Licenses
- b. Modeling fields experts
- Mike Basin (an Integrated River Basin Planning and Management Tool)
- Mike Urban (Urban Water Distribution WD & Collection Systems CS)
- WMS, SMS & GMS (watershed, surface water and ground water modeling systems)
- Arc Hydro
- Watercad, Sewercad (water hydraulics simulations in water pipes and sewers)
- Swat (sediment transport modeling)
- Erdas Imagine (Remote sensing and image processing)





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Ain Shams University Scientific Studies and Consultations Center

Mission

The center is committed to offer specialized scientific studies and consultations that meet national and regional needs. The center seeks strong linkages with the local and regional industrial sector, public service organizations, and environmental protection centers to improve the socio-economic status of the Egyptian citizens.

Vision

The vision of the Scientific Studies and Consultations Center is to gain the confidence and respect of the Egyptian, the Arab World and the International agencies through its distinguished scientific research and recruit all its sources and experiences to outreach with the community and participate in solving its problems.

Human Resource

All Staff members of the Faculty of Science can offer their experiences through their units and Faculty research Labs., in addition to some accountants and computer specialists.

R&D Annual Budget

The Center Depends on Budgets from contracts and consultations

Facilities

The Center is formed from 27 special units specialized in basic sciences and offer the following services:

- Earth Sciences: Geologic, Geophysical, Hydrogeologic and Remote Sensing applications.
- **Computer Sciences**: Computer Science Applications and Internet.
- **Physics**: X-ray diffraction and Crystal Structure, Renewable and Temporary Energy, material properties, Laser Technology and High Energy Physics.
- **Biologic Sciences**: Genetic Engineering, Molecular Biology, Sustainable Environmental Development.
- Chemistry: Polymer Applications, and Cement and Building Materials.

The faculty contributes by their capabilities from Research Labs., and scientific instruments to realize the Center's goals.

Main Accomplishments

- Training courses in the following fields:
 - Properties of ionizing radiation and the role of nuclear technology in society and environmental services.
 - Radiation pollution (Detection and protection)
 - Sustainable Environmental Development
 - Technology of building materials and pore structure of solids

- Scientific and consultation studies on:
 - Protection from ionizing radiations for Environmental Affairs Agency.
 - Geo-environmental studies on some developing projects in the new Urban areas
 - Applied Researches:
 - Study and development of polymers used in Egyptian manufactures (2004-2007)
 - Marketing Services:
 - Molecular Biology Unit participates in scientific research projects on vaccine production.



Alexandria University

www.alex.edu.eg

Mission

Alexandria University has been a bold and innovative leader in providing an accessible, adaptable and challenging learning environment to develop postgraduates and research that meet the needs of its regional, national, and international communities as an academic institution. Its Programs are designed to broaden perspectives, enrich awareness, deepen understanding , establish disciplined habits of thoughts, and prepare for meaningful knowledge for students, thus helping to develop individuals who are informed, responsible, and productive citizens.



Vision

The University of Alexandria acknowledges that higher education is a challenge to meet the needs of society in the 21st century. Alexandria University accepts this challenge and responsibility so that it can continue to achieve advances in educational and technological innovation, scientific discovery, and creative expression by fostering an atmosphere of intellectual excitement. Alexandria University remains committed to interdisciplinary research and education, not only within and across academic fields, departments, schools, and colleges, but also across institutional, national, and cultural boundaries.

Human Resource

- Professors 1645
- Assistant Professors 819
- Lecturers 1379
- -Assistant Lecturers 1335
- Demonstrators 1298
- Number of employees 14,978.

R&D Annual Budget

- 1. Annual research fund from Ministry of Higher Education 214,000 Egyptian pounds .
- 2. Alexandria University allocated 1.5 to 2 million Egyptian pounds annually for research
- 3. Projects from its own resources (around 200,000 L.E. / Project) starting from 2007 / 2008.
- 4. Rewards to encourage the publication of scientific research in international high sites
 - 5. Journals from the University's own resources: 236,741(during the last five months).
 - 6. Contribution to faculty members by 2,799,670 pounds to attend international conferences, During fiscal year 2007-2008.
 - 7. Expenditure on scientific instruments, supplies and chemicals: 740,851 Egyptian pounds in The fiscal year (2007-2008).
 - 8. Seven applied research projects for the year 2007 2008 at the University of Alexandria with a Total budget 1,297,341 L.E.
 - 9. The EU's sixth framework for Research and Technological Development (FP6) with a total Budget of 2,046,905 L.E.

Facilities

Faculties and Institutes

- Twenty two Colleges and High Institutes covering nearly all disciplines.
- Eight Colleges for Damanhour Branch.
- Two Colleges for Marsa Matrouh Branch.

Main Accomplishments

1. Cultural Relations: (2007/2008)

- (16) Grants for assistants teachers,(112) grants for faculty scientific missions members.
- The number of missions for joint supervision, foreign missions and internal mission of assistant lecturers (70).
- (161) Visiting professors from 24 Arab and foreign countries.
- The participation of (673) faculty members in various international conferences.
- (73) Bilateral agreements with Arab and foreign countries.

2. Graduate Studies

- Adoption of credit hour system for graduate studies in all fields.
- Degrees awarded during academic year 2007/2008 :
 - 372 Doctorate degrees
 825 Master degrees
 3.186 Diploma degrees
- Total of graduate students in year 2007/2008 as follows
 - 661 Doctorate degrees
 2968 Master degrees
 9014 Diploma degrees
- Number of foreign students enrolled for Graduate studies 2007/2008:
 - 89 Doctorate degrees 232 Master degrees 45 Diploma degrees

3. Student Affairs in 2007-2008

Number of university students: 151,299 Egyptian students and 917 Foreign students.

4. Development projects in 2007/2008 :

- 1. Fund project to develop higher education HEEPF : total budget 12,109,701 L.E.
- 2. Quality assurance and accreditation project QAAP : total budget 2,138,608 L.E.
- 3. Faculty & Leadership Development Project (FLDP): the total number of workshops 975 for 21,769 trainees : total budget 1,720,000 L.E. The FLD Centre acquired accreditation from the World Bank to be a globally certified centre.
- 4. Tempus Projects: total budget 12,504,899 L.E.
- 5. Information and Communication Technology Project ICTP : total budget 6,724,530 L.E.
- 6. Faculties of Education Enhancement Project : total budget 2,085,840 L.E.
- 7. University hospitals: 566,831 visitors to the outpatient clinics, 3070 inpatients 53,949 and university hospital operations for the year 2007/2008.
- 8. Establishing new Obstetrics & Gynaecology Hospitals at Smouha, at a cost of 750 million Egyptian pounds. (Public Private Partnership)
- 9. Equipping Paediatric and Emergency Hospitals at Smouha & Borg El- Arab Hospital through Dutch grant and the participation of the Egyptian government estimated at 360 million Egyptian pounds.

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• Assiut University was inaugurated in 1957 to encourage research, education and community services in Upper Egypt.

Assiut University

www.aun.edu.eg

 The University comprises sixteen faculties and two higher institutes. The faculties are those of: Sci-Engineering, Agriculture, Medicine, ence, Phar-Veterinary Medicine, Commerce, Edumacy, Physical Education, cation, Law, Social Work. Arts, Nursing, Specific Education, Computer and Information Sciences

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comprehensive development.

• Assiut University endeavors to consolidate and enhance the historical heritage, traditions, moral and religious values of the Egyptian people.

• The University also tends to strengthen the relations with other Arab and foreign academic organizations.

• This can be achieved through providing distinguished academic programs in the light of international standards, conducting scientific and applied research, and activating the role of the university in community service and environmental development.

Vision

The University seeks to provide the basic elements for constant development of education in general and of University and higher education in particular to keep up with the ever accelerating technological and scientific developments. It seeks to improve the University performance and graduates so as to reach the level of excellence and high competitiveness.

Moreover, it aspire to accomplish distinct scientific studies and researchs and maximize the role of the University in community service and environmental development.

Human recourses

Careers	Number
Professors	666
Professors above 60	362
Professors above 70	105
Assistant professors	451
Assistant professors above 60	25
Assistant professors above 70	4
Lecturers	866
Assistant professors	12
Lecturers above 70	2
Assistant lecturers	883
Demonstrators	596
Total number of faculty staff & teaching assistants	3972
Number of administrative employees	14190
Total number of the University employees	18162

R&D Annual Budget

For the period 2004/2005 - 2008/2009 "In Egyptian Pound"

2006/2007	2007/2008	2008/2009
947000	947000	1151000

Research projects

During the last ten years, the University has accomplished about 188 research projects, and 46 projects for the development of higher education. The research projects included the fields of underground water, development of animal, plant, fish, and poultry possessions.

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Benha University

www.benha-univ.edu.eg

Mission

The mission of the university is to establish a distinct teaching and learning system that can build up well-qualified graduates to compete nationally and internationally and to draw upon creative researchers who can develop the scientific, cultural and social aspects for Egyptians and to direct the strategic research plans to serve the community and participate in the whole development process.



Vision

Benha university is looking to achieve an advanced international level and to actively participate in the national and international developmental process.

Human	Resource
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Staff	Number
Assistant Lecturers	425
Demonstrators	592
Active Staff	2489

Main Accomplishments

 Benha University accepts around (12000) students annually to have more than 66000 students in all of its faculties and institutes. The university has been participating in the electronic system of selection successfully since last year via the Internet.

 Benha University has signed memoranda of understanding and strengthening of scientific cooperation and information exchange, capacity and scientific per-



sonnel visits and conferences between the university and some of the international scientific community (for example Uzbekistan – Oman-Japan and USA). The university relations are characterized by a divergent international cooperation programmes with Amid East, French Cultural Center, British Center, American Cultural Center and Fulbright.

The Project Management Unit – Benha University (PMU) monitors the various developmental projects to ensure its continuity where regular training sessions are held periodically. PMU hold a number of workshops to train staff members on the essential skills for writing proposals for fund raising.

A number of awareness seminars and workshops had been also held periodically in collaboration with the specialized centers and projects to describe TEMPUS and other international projects, Digital library, Faculty and leadership Development Project (FLDP), Quality Assurancem Accreditation Projects (QAAP&CIQAP) and Information and Communication Technology Projects (ICTP).

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- Regarding the community services and development of the environment, Benha University held numerous conferences, symposia, workshops and training courses co-organized by most university staff members in collaboration with the local community.
- There are 36 special units serving the community such as printing, publishing and distribution centers, languages Center and the Center of Information and Services. The university distinguished training programmes to raise the skills and abilities of students and alumni, where it was involved many projects such as Pathway for Higher Education Project. The University also forming work groups of studies and research of population and environmental studies and political and constitutional studies.



- Benha University conducted the studies of environmental impacts for the stakeholders. The university has also World Environment Day celebration every year since its inception in 2005 and celebrated weeks of regional environmental protection. There are also different and distinct projects with partners in various sectors such as health sector and the construction sector.
- Benha University has given special attention to human rights' issues and women's issues, and empowerment, and protection. also prepared a generation of teachers holding advanced courses in this area

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Cairo University

www.cu.edu.eg

Historical snapshots:

•CU was established in 1908, and started off with only a few colleges. In the beginning: social thinkers called for the establishment of an Egyptian University that would become a lighthouse for liberal thought and set up the basis for a comprehensive academic revival in all fields of knowledge.

• In 1940, a royal decree was issued to rename the National University to King Fouad's University. In 1946, the Faculty of Dar El-Ulum was affiliated to the university and an inauguration stone was erected for the building of student hostels. In 1950, the Students Hospital was inaugurated to provide the students with healthcare. In 1953, only a year after the 23rd of July Revolution, the cabinet issued a decree to rename the University (King Fouad's University) to Cairo University, the name that has lasted till the present day.

•Since then, The ever-growing increase in the number of Cairo University students was accompanied by an equal increase in the number of Cairo University members of staff and a considerable increase in the number of its faculties.

Mission

The University of Cairo is dedicated to enhancing the learning process through interactive learning methods and modern information technologies, and to the discovery and application of knowledge.

•CU is committed to preparing students for the challenges of a rapidly changing workplace with the skills needed for success in today's global marketplaces.

•CU will Endeavour to transform the society by providing for knowledge and by applying knowledge to the marketplace.

•CU endeavours to serve the region and the world by providing an environment of creative enquiry which embodies critical thinking, human values, technical competence, and practical and social skills.

•CU keen to provide the highest world class standards of academic excellence.

•The University is dedicated to advancing the intellectual, cultural, and economic ambiance of the state and the world at large.

Vision

To be a beacon for scientific research (on the regional and international levels), an exemplary international University for higher education, to provide for a better future in which students, faculty and staff will continue to thrive and all citizens of Cairo along with the whole nation and the world at large would benefit.

Administration

- 1. University President
- 2. Postgraduate Studies and Researches Sector
- 3. Education and Student Affairs Sector
- 4. Community and Environment Service Sector

Cairo University Faculties:

Faculty of Arts	Faculty of Archaeology	
Faculty of Computer and Informatics Sciences	Faculty of Dar El-Ulum	
Faculty of Engineering	Faculty of Law	
Faculty of Pharmacology	Faculty of Physiotherapy	
Faculty of Veterinary Medicine	Faculty of Nursing	
Faculty of Agriculture	Faculty of Commerce	
Faculty of Oral Dental Medicine	Faculty of Medicine	
Faculty of Mass Communications	Faculty of Science	
Faculty of specific Education	Faculty of Kindergarten	

Institutes

National Cancer	Statistical Studies and	National Laser
Institute	Research Institute	Institute
African Studies and Research Institute	Institute of Educational Studies and Research	

Study Methods for Bachelor Degree Stage:

The duration of study in most faculties is usually four years. which may be extended in some faculties (engineering, dentistry, pharmacy and veterinary) to five years; but, the duration in the faculty of medicine extends to six years. The internal regulations of each faculty determines the syllabi, determining the curricula and the allotted period for each syllabus.

Moreover, the University Council determines, in accordance with the concerned departments, the topics of each syllabus. The study in the university is divided into two semesters for each academic year, but some faculties, such as Faculty of Medicine, designate an extended term for the academic year.

Arabic language is the main language of study except in some faculties, in compliance with the University Council's decree, such as languages departments in the faculties of Arts, Commerce, Economics, Law, Agriculture, Medicine, and Dentistry.

Postgraduate Studies System:

Postgraduate studies are divided into:

1- Diplomas:

The curricula of these diplomas are of practical and academic. The duration of study is restricted to a minimum of one year.

2-Master's degree:

Study courses involve fitting training on methods of research and extrapolation. Upon completion of a written thesis, a committee of examiners is formed, after the approval of the supervisor, to held a viva. A minimum preparation period of two years is a requirement to obtain this degree.

3- Doctor of Philosophy degree (Ph.D)

The degree is granted on the basis of doing an authentic research, after a minimum period of two years. Upon receiving a letter of approval of the thesis form the supervisor, a viva committee is formed to examine the candidate. The viva committee may recommend further advanced studies for the candidate, in accordance with the internal regulations of colleges

4- DSc.

The Faculty of Science awards the doctorate of science (DSc.). To obtain the degree, students should fulfill the following requirements: He/She

1. should be a holder of PhD in science, with at least a period of five years subsequent to the PhD degree.

2. should present authentic published researches that were not part of the MA and the PhD dissertations in science.

The student should present the framework and the outlines of the study, in addition to the benefits of his/her previous studies, the joint researches, and the names of supervisors of the MA and the PhD.

5- Honorary PhD Degree

The university awards this degree by virtue of the University Council decision or according to a recommendation from any council of a university or an institution for those who have achieved distinguished services to the state, university, or humanity in general.

Distinctive Centers and Units Affiliated to the University

- 1- Scientific Computer Centre.
- 2- Development Research and Technological Planning Centre.
- 3- Guest House.
- 4- Cairo University Centre of Press and Publishing.
- 5- Environment Research and Studies Center.
- 6- Community Service Centre.
- 7- Cairo University Centre of Eliminating Hazards and Their Impacts on Agricultural Productivity.
- 8- Arabic Language Centre.
- 9- Center for Foreign Languages and Professional Translation.
- 10- Centre of Land Utilization and Regional Development.
- 11- Oriental Studies Centre.
- 12- Future Studies Centre.
- 13- Conferences Centre.

In addition to more than 160 research centers affiliated to the University faculties and institutions, in different fields of specialization.

THE CENTRAL LIBRARY

- 1. The first central library was officially opened in 1932 inside Cairo university campus, since then it continued to serve university students both in undergraduate and postgraduate divisions for more than 75 years.
- 2. in 2008 and while celebrating the university centennial, the new central library was partly opened on an area of 4000 m2.
- 3. The main building contains 8 floors with a unique architectural design.
- 4. The new library was equipped with up to date technologies for index operations, Electronic print and publishing.
- 5. The new library also includes a great reading hall, electronic researches hall, special hall for visually impaired students. The university treasures museum and a heritage panoramic display hall.

Journal of Advanced Research (JAR)

- Aims and Scope
- Editorial Board
- Manuscript submission
- Instructions to Authors
- JAR is a peer- reviewed journal of interdisciplinary scientific research, theories and observations.
- JAR aims to serve scientists through prompt publications of significant advances in any branch of science, and to provide a forum for the reporting and discussion of news and issues concerning science.
- The editorial objective of the journal is facilitation of knowledge enhancement related to studies in the following fields:
- Science Medicine Dentistry Pharmacy Veterinary medicine Agriculture Engineering -Information Technology
 Address : Cairo University - Giza



Fayoum University www.fayoum.edu.eg

Mission

Fayoum University as a public university, is committed to a mission creating competitive graduates to advance rapidly in the labor market nationally and internationally, to join lifelong learning in order to face the recent challenges of the 21st century.

Quality is a benchmark of all scholar fields and research at the university; in particular, those oriented to solve society problems and environment development to keep abreast of the latest demands.



Vision

Fayoum University is willing to be recognized for quality in accordance to the national criteria in education, scientific research, community service and environment development.

It seeks high position between the Egyptian universities to enhance its rank between its international peers.

Human resource

Assistant lecturers and Demonstrators: 1449

Facilities

It includes 13 faculties. The faculties are: Faculty of Education, Faculty of Agriculture, Faculty of Engineering, Faculty of Social Work, Faculty of Dar Al-Uloom, Faculty of Science, Faculty of Tourism & Hotels, Faculty of Specific Education, Faculty of Archaeology, Faculty of Medicine, Faculty of Arts, Faculty of Information & Computer Sciences and Faculty of Kindergarten.

The university embraces around 25 thousand students and about two thousand of teaching staff members.

Student Housing: of 10 which 4 for males & 6 for females with total capacity of 5000.



University Administration	 Community Service & Environment Development Centre Central Press Unit Consulting & Development Research Centre Fayoum Civilization & Heritage Centre
Education	 Community Service Centre Computer Laboratories Languages Laboratories Pedagogical Training Centre Counselling Centre
Agriculture	 Counselling Centre for Studies and Agricultural Service Centre Plant, Water and Soil Analysis Lab
Engineering	 Faculty Production Workshops Engineering Research & Consulting Centre
Social Work	Social Work Research and Community Development Centre
Specific Education	Community Service Centre
Tourism and Hotels	 Community Service, Training, and Free Studies Centre Language Laboratories Computer Laboratories Teaching Hotel
Science	 Community Service and Environment Development Service and Consulting Unit Analysis and Measurements Unit Training and Skills Development Unit
Archaeology	Centre for Conservation of Antiquities

Main Accomplishments

Electronic University administration.

University Web: www.fayoum.edu.eg.

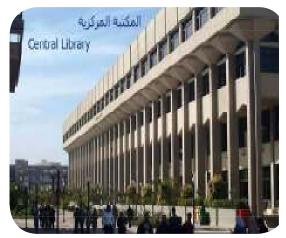
Conferences:	11
Symposiums :	54
Workshops & Caravans:	20



Helwan University www.helwan.edu.eg

Mission

The mission of Helwan University is to provide distinguished educational and research services to the students complying with the international quality and accreditation standards in different fields of science, arts and technology. This should allow a qualified graduate capable of competing with the local and international requirements and provides a suitable environment to achieve scientific researches that would make Helwan University well known internationally.



This is in addition to the effective participation of the

University in developing the local environment and the neighborhood industrial areas adopting distinguished applicable programs in this development.

Vision

Helwan University acts as educational technological organization to present developed educational services, disseminates the knowledge and provides distinguished researches in different fields of science, arts and technology. This is in addition to the rule that Helwan University plays to reach the international level and serves to develop high quality environment at international standards.



Human Resource

4000 staff members, and 7000 administrators

R&D Annual Budget

Including the out sources support may reach 25 million L.E.

Facilities

• Helwan University is a distinguished in the academic media specially in the fields of : fine arts, applied arts, music, tourisms/hotel managements, home economics, and physical education.

- University has more than 50 self sponsored centers for researches and community services.
- Helwan University has the necessary facilities for undergraduates, postgraduates and research activities.

This includes :

- An internet connectivity supported by a good back bone switch center.
- A digital library (21000 m2) connected to the unified libraries network of the supreme council of the Egyptian universities.
- Different sizes of class rooms some of which equipped with video conference equipment.
- Conference halls and conference rooms supported by a five stars hotel
- Modernized labs for teaching the researches.
- Quality and accreditation center.
- Project management unit
- Dorms and restaurants for about 10000 students
- Large playing and sporting grounds

Research Activities

Besides the profound professional education, Helwan university provides the staff and their assistances a suitable environment for research and development (R and D). The University focus intensively on the participation in the national and international research and development projects such as Tempus, FP7, USAID, Fulbright, ...etc.

The University pursues the applied research that serve the communities and supports development and innovation.

For this purpose, Helwan university has a special fund offered to the staff for research and development with partnership from industry.







Kafrelshiekh University www.kfs.edu.eg

The university is established by presidential decree no. 129 in 2006 for the request of high education increasing of students at universities, presenting research and community service and to share in comprehensive development.

Mission

Kafrelshiekh University is a governmental educational institution that seeks to create , integrate , apply and disseminate scientific knowledge , focused on excel

education, innovative research, and help developing and raising quality of life levels in a frame of progressive values.

Vision

Modern university of national and regional repute characterized by Excellency and inventiveness . (Under the acceptance of the university council)

Human Resource

Number of teaching staff and their assistants are (778)
Number of employees are (673)

Annual budget: 20000 L.E.

Facilities

- The university is located at Kafrelsheikh city , the capi-

tal of Kafrelsheikh governorate, which is (120) km far from both Cairo and Alexandria. It includes 8 faculties namely:

Agriculture- Education-Veterinary Medicine-Specific Education-Commerce- Arts – Physical Education-Engineering.

-There is a library in every faculty for students and professors , and there is a central Lab. Which provides services for students

And researchers in the university



Main Accomplishments First: Purchases

- 23 vehicles were bought costing 33 million pounds .

- Many instruments were bought costing 9 million and 500000 pounds like :

- Electrical instruments.
- Healthy instruments .
- Carpets.
- Fans and photocopiers.
- Instruments for central laboratory .
- Cameras and data show .
- 110 computers and 50 laser printing machines .
- Furniture for university institution and its faculties .
- 289 thousands and 371 pounds for printing machines and photocopiers .
- 236 thousands and 799 pounds for sound systems to the university hall .
- 183 thousands and 380 pounds for constructing the student hostel and the rest house of teaching staff and the students camp in Baltim .
- 107 thousands pounds for 14 fax machines and televisions .
- 114 thousands and 173 pounds for Lab. Machines in the faculty of Engineering .

Second: Constructions

- Constructing two floors in the institution building
- Constructing a fence and main gate for the university
- Constructing the Arts faculty building
- Constructing the Engineering faculty building
- Constructing the Commerce faculty building
- Constructing the student building
- Constructing the permanent building
- Constructing the central library building
- Constructing the central stadium building



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Kafrelshiekh University Central laboratory

Central lab in the university of Kaferelshiekh has been established as a part of the research unit which belonged to the sector of higher studies and research .

The central lab is located in the ground flour of the faculty of agriculture after developing the central lab of the faculty to cope the requirements of the lab of the university which aims to connect the faculties of the university in different research areas .

Mission

Enhancing the scientific research by facilitating the most recent equipment and scientific techniques, also providing training courses to raise the efficiency of researchers and contribute to solve problems of local community and surrounding environment.

Vision

" Research for excellence . Excellence for all "

Aims of the central lab

1- Research aims :

By providing the scientific equipment and techniques to carry out studies and analyses to push the scientific research in adequate time with high quality of performance .

2- Learning aims :

Via training courses under supervision of specialists to explain the theoretical bases of different determinations and give an opportunity to students to be familiar with modern techniques .

3- Services aims :

By providing analysis and determinations concerned with soil, water, food staffs, pollution studies and present consultations related with environmental aspects in the different projects of investments.

All reports issued by the lab are accredited by the university and document

Activities of the central lab

1 – Analysis of soil , water , and plants to determine the soil fertility to put the programmes of fertilization .

2- Analysis of animal and poultry feeds to measure the content of protein , minerals and ash .

3- Determine the degree of pollution by heavy metals in different materials.

4- Detect and measure the gamma radiation as a result of presents Cs, Co, K(40) in different materials.

5- Studies concerned with tissue culture .

6- Bio technology studies (Enzymes, Protiens, DNA, amino acids, and chlorofise)

7- Studies on polymers , plastics and rubber .

Facilities

- 1. Atomic absorption spectrophotometry with graphite furnuce
- 2. UV- 2450 spectrophotometer wavelength rang 190 800 nm.
- 3. Fluorescence RF 5301 wavelength scale 220 750 nm.
- 4. GEM Hp Ge Detector with pop top capsule .
- 5. Gradient thermal cycler PCR.
- 6. Gel decumentation.
- 7. Horizontal electrophoresis.
- 8. Kjeldahl combined digestion and distillation unit .
- 9. Rotatary evaporator.
- 10. Cooling centrifuge.
- 11. Trinocular steriomicroscope with digital camera.
- 12. Trinocular research microscope with digital camera.
- 13. Inverted microscope.
- 14. Flame photometer.
- 15. Spectrophotometer.
- 16. EC meters.
- 17. CO2 incubator.
- 18. Biosafty Cabienet.
- 19. Autoclave.
- 20. Homogenizer.
- 21. Ovens.
- 22. incubator with thermo regulations .
- 23. Hotplats.
- 24. (25) water path Shakers .

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Kafrelshiekh University Photo- and NanoChemistry Unit

The photo- and nanochemistry research group works in the fields of fast spectroscopy and molecular photochemistry. The group's research focuses on photo-induced new phenomena of photoactive

materials. Photophysics and spectroscopic characterization of nanocavities caged drug, interaction between drugs and proteins. Recently, the focal areas of the group's work are the synthesis, photophysics and photochemistry of nanostructures. Currently, the research centre focuses on the synthesis and characterization of semiconductor and metal nanoparticles with different sizes. The role of size and capping agent of nanoparticles on the modulation of the photophysical properties of some drugs and dyes are studied. These systems were studied by stationary and nanosecond time resolved fluorescence measurements.

Mission

The Unit is dedicated to the advancement of research and development, resulting in creative solutions to significant problems.

Vision

The Unit aspires to be a world-class Research Center in photo- and nanochemistry.

Human Resource

The group consists of approximately 8 researchers (2 staff, 2 Ph.D and 4 MS). The principal investigator has international cooperation with research groups in Spain, Japan, Germany, Sweden and USA. The effects are apparent as international projects, long- and short-term visits and a number of international publications.

Annual budget: 20,000 - 150,000 L.E

Facilities

- UV-Visible Spectrophotometer (Shimadzu UV-2450)
- Spectrofluorometer (Shimadzu RF-5301PC)
- FT-IR-4100 Spectrometer (JASCO)
- Nanosecond time correlated single photon counting (Edinburgh Instruments, model OB900)
- pH meter (Orion)
- Ultrasonic bath
- Deionizer
- Facilities to support the materials synthesis

Main Accomplishments

We have submitted two Joint- research projects:

• US-Egypt Collaborative research to design and enhance performance in current Dye-Sensitized Solar Cell Technology (100.000 \$).

• Swedish – Egypt Joint Research "Cyclodextrin Nanocavities as Modulators of Photodynamic Drugs in Cancer Therapy" (750,000 kSEK).

• 35 publications in international Journals as J. Physical Chemistry, J. Medicinal Chemistry, Chemical Physics, J. Photochemistry Photobiology, J. Photoenergy and Talanta,...etc





Mission

- The mission of Minia University is to offer effective and fruitful services to the community through offering new quality education, research and consultations and other community services in addition to adhering to national objectives and policies and supporting regional orientations in accordance with international standards and normalizations.
- In order to achieve this mission, the university is committed to qualifying its students enabling them to cope with the ever- sophisticated world of technology.

Vision

As an educational and research institution, Minia University seeks to access domains of higher education and scientific research and develop the part it plays in supporting all about development in upper Egypt from a global perspective.

Facilities

- A. Suzan Mubarak Obstetric hospital
- B. Dentistry Hospital (one of a kind in Upper Egypt)
- C. Sterility therapy and research centre

Human Resource

Number of staff members and staff assistants

Scientific degrees	Number
Professors	576
Associate Professors	389
Lecturers	687
Assistant Lecturers	550
Demonstrators	446

Number of employees and workers 4263 employees & workers

R&D Annual Budget

The budget is about 5.5 million pounds, in addition to 13 million pounds as finance for researches within the completed development projects.

Main Accomplishments

- 1. Enhancing medical services in the region of north Upper Egypt
- 2. Developing university information structure (electronic placement computer electronic announcement of students results – E. learning - E. training centre – mechanizing dentistry hospital
 - computer & language labs)
 - 3. New program & departments:
 - clinical pharmacy mechanical engineering- open learning programs in media & tourism

Community service project

- Cooperation protocols with adults learning institution through E-learning courses
- Children's care centre
- Organizing medical services caravans in remote villages in Minia
- Participating in preparing feasibility study for the new Minia city
- Participating in strategic planning of architectural spaces of 124 villages in Minia in cooperation with the Governorate
- Suzan Mubarak National Center for Arts
- 20 of the staff members got the state prizes in the fields of basic studies, engineering, agriculture, medicine, humanities and social studies
- The university is engaged with 34 foreign universities in international agreements, in addition to cultural and scientific cooperation
- Staff members effective participation in the quality assurance and accreditation project and other national education projects
- Free studies center in the faculty of arts

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Mission

Is to contribute to the development of the technologydriven economies of Egypt and the region through the pursuit of education and research at the highest levels of excellence.

This is accomplished by

- Offering leading edge graduate and undergraduate programs and executive education.
- Carrying-out interdisciplinary research.
- Collaborating with distinguished international universities and research institutions.

Vision

NU's Vision is to be a world-class, internationally recognized research University.

Objectives

- To establish a world-class graduate institution of higher education and interdisciplinary research
- To develop NU as an Integrated component of a Techno-polis to support capacity building in Egypt
- To graduate entrepreneurs and managers of technology for the dynamically changing global environment
- To improve competitiveness of Egyptian businesses by promoting applied research, technology start-ups and protection of intellectual property rights



• To contribute to the formulation of the national technology policy and agenda

• To create an environment for brain-circulation through mutual cooperation between members of the expatriate community, NU, local and international universities.

• NU's core values are excellence, integrity and service to the community, with a commitment to diversity and respect for the individual.



Human Resource

Nile University's Research Faculty and Scientists

- 23 Research faculties and scientists engaged in active research (15 full time equivalents)
- 28 full time research assistants

R&D Annual Research

2008-2009 R&D Operational Funding Secured and Budgeted by L.E. 5,690,000 (5 Million six hundred and ninety thousand Egyptian Pounds)

Facilities

- State-of- the-art IT infrastructure and computing facilities
- Wireless Sensor Network lab
- Cooperative and Cognitive Communication lab
- Microelectronics Lab

• New Campus is being built on 127 acres and is planned to contain all the academic, research, administration and service buildings. Construction is already underway on the first phase of the new campus consisting of two educational buildings totaling 40,000 Sq. meters.

Academic and Research Collaborators & Strategic Partners

- IESE Business School, University of Navarra, Spain
- University of Minnesota Center for Development of Technological Leadership
- University of Miami, Industrial Engineering
- International Association for Management of Technology (IAMOT)
- Carnegie Mellon Software Engineering Institute (SEI).
- Electrical & Computer Engineering (ECE), Institute of Sensor Systems (ISS), Ohio State University
- Imperial College of London, UK.
- University of Central Florida (UCF)

Conferences

Nile University held a Conference on "Wireless Intelligent Networks" under the auspices of H. E. Dr. Tarek Kamel, Minister of Communications and information Technology hosting 16 prominent international speakers from several countries and over 550 participants from academia and business.

Workshops and Seminars

One of Nile University's main objectives is serving the community and "Creating a Learning Culture". In this context, Nile University held several workshops hosting prominent industry and academic figures. Among these workshops:

- Wireless open access research platform workshop.
- Wireless Sensor networks workshop.

A joint international workshop with Seoul University and the Information and Communication University of Korea under the auspices of H.E. Dr. Tarek Kamel, Minister of Communications and Information Technology under the title of "ICT policy Management: A New Paradigm in the Globalization Era ".

NU has also launched a series of seminars for the industry, the business community and academics

from different Egyptian universities, touching upon, and opening debate in timely issues such as technology forecasting, sustainable energy options and commercializing R & D innovations.

Nile University's Research Centers Established & Functional

- The Center for Informatics Science (CIS)
- The Center for Innovation and Competitiveness (CIC)
- The Wireless Intelligent Networks Center (WINC)



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Sohag University

www.sohag-univ.edu.eg

Mission

University of Sohag is a public university at upper Egypt, providing educational programs in agreement with standards of quality for the two phases of undergraduate and graduate studies, and is committed to preparing graduates qualified to compete in the labour market, also the university committed to provide research programmes contributing in solving the problems of the society and participating in the national plans for sustainable development in the framework of transparency and commitment to preserve the ethical values and the policy of constructive criticism in the vicinity of the work of the university

Vision

University looks to become a centre of civilization radiantion, and culture which takes its place on the world map as an example of the League which is closely linked to the local environment. Also to provide learning opportunities associated with the needs of society at the local and national level, prepare graduates and qualifies them to compete in the labor market and be able to address the problems of society. The university also looks forward to play an active part in the events of the Enlightenment and the Renaissance of society through its programmes and scientific research and build up a further development of the environment for the surrounding community. The University seeks to obtain accreditation for institutional faculties and academic programmes

Human Resource

There are a 650 members of the faculty staff, 610 members of assistant teachers and demonstrators. Administrative apparatuses includes 1695 administrators and technical staff and 790 service staff.

Scientific Research

The university contributes profoundly in scientific research. The university members have published many publication in many disciplines in both local and international journals. The number of published articles by the university member has reached more than one hundred research articles a year during the past few years, most of these publication are in the fields of basic science and medicine

Facilities

There are 18 university centers and a research unit of a private nature, which provides research services to the university community in addition to that they were to meet societal needs in the vicinity of the work of the university, including Central Laboratory of Genetic Engineering, electronic microscope, Geophysics and environmental research laboratory, Analysis Unit of soil and water, Center for Social Studies, Heritage Center, Sheep production unit, crops, fruits and vegetables farm, Center for engineering consultancy, technical, and psychiatric clinic center.

Main accomplishments

The University of Sohag in the academic year 2007 / 2008 serves educational programs for a number (29453) students. The total number of graduates in all colleges until the year 2007 reached 88379 students.

Sohag University has scientific research and education relations with Arabic and foreign universities organized by the cooperation agreements, for example: Yarmouk University in Jordan, Ibn Khaldun University in Algeria, University of El-Eman in the Yemen Arab Republic, University Pote, France, Paul Aston University, Marseille, France and the Sudanese Red Sea and other. It is also linked with the Ministry of Higher Education at Btjkesten, Republic of Tunisia, and the Government of the Republic of Uruguay







South Valley University

www.svu.edu.eg

Mission

• The university is committed to offer the best teaching and learning opportunities to provide qualified graduates compatible to national and international standards.

• The university is committed to conduct academic and applied research that fulfills the national and international standards.

• The university is committed to enhance the quality of human resources in the South Valley Region.



Vision

South Valley University's vision is to be one of the state's leading universities. It is distinguished in terms of its' educational, intellectual and research commitments. SVU is well recognized, nationally and internationally, for its teaching and learning, research, creative activities, community service, and for advancing quality and innovations.

Human Resource

Professors (86) - Associate Professors (135) - Lecturers (420) Assistant Lecturers (300) - Demonstrators (536) - Administrative staff (1791) - laborer (1008)

R&D Annual Budget

- SVU annual budget at the fiscal years 2007

Total budget	Year	
137,580,00 pounds	2007	
185,766,00 pounds	2006	

- Annual research budget of SVU

	Total budget	
QENA	60000 pounds	
ASWAN	30000 pounds	

Facilities

- The university encompasses 21 faculties distributed throughout four campuses (Qena, Aswan, Luxor and the Red Sea)

Main Accomplishments

Achievements in Teaching and Learning

- New five Faculties have been started (Medicine, Nursing, Engineering, Law and Archeology)
- Three new classroom buildings are under construction these buildings belong to faculties of Commerce, Arts and Archeology.
- A decision has been taken to establish a new faculty: the faculty of Tourism and Hotels in Luxor.
- The foundation stone have been laid in place for constructing classroom buildings of the Higher Institute for Energy and the Faculty of Social Sciences in Aswan.
- Decisions have been taken to establish five new branches of five faculties at the university.
- A decision has been taken to establish a Department of Marine Sciences as part of Qena Faculty of Science at Hurgada City, Red Sea Governorate.
- A quality assurance and accreditation centre has been established at SVU : 232 Acadimic Staff have been trained.
- Ten faculties at SVU were contracted projects for establishing an internal quality assurance system.
- Project proposals are under way for establishing new quality assurance units at the rest of the Faculties within SVU.
- Digital library project has been implemented at SVU.
- E- learning project has been implemented with SVU.
- Twelve new Information technology labs and clubs have been established.

Research Achievements

- Approval of the publishing rules of the ministry of higher education.
- Publishing postgraduate student manual.
- Postgraduate programs commenced in six new faculties at SVU.
- A university research plan was founded which covered six scientific areas including: Science, Engineering, Arts, Vertenary, Education and Agriculture.
- Six bilateral agreements between SVU and six international universities.
- 835 degrees and scientific titles were granted including: Academic titles Masters Ph.D. Diploma.

Community Service Achievements

- Extending the cultivated farm of the university, adding 160 new acres
 - University contracted with some educational institutions in the region to establish a system ensuring the quality of those institutions.
 - In service school teacher training programs have been conducted at FLDP center at SVU
 - Consultancies were provided by the University to the Mubarak Center for order to decentralize of Egyptian Initiative Project .
 - Consultancies were provided by the University Mubarak Centre to many organizations and industries such as, Social affair Centre, Sugar factory, non-governmental organizations, the Ministry of Health ETC
 - Participation in the development of scientific studies related to natural- reserves particularly Adababya in Esna
 - The establishment of a Center for Research and Development of Livestock and control of animal epidemics in Shalatin City
 - Environmental conference held during the week from 8 March 13, 2008.





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Suez Canal University

www.scuegypt.edu.eg

Mission

To provide our students with the opportunities to learn the competitiveness required for employment and entrepreneurship in the globalization era with respect to our community needs and developing in the context of our own values and identity

Vision

Suez Canal University is looking forward to attaining a unique position among Egyptian higher education institutes based on its contribution to the development of university education in Egypt and its interaction with the community through a set of distinct pioneering community oriented Researches.

Objectives

- 1. To prepare and qualify high caliber professionals at both undergraduate and postgraduate levels in a variety of specialization in light of the challenges and opportunities of the globalization era.
- 2. To participate in the improvement of the environment and community standards through developing and increasing the effectiveness and efficiency of the university manpower.
- 3. To promote scientific research in order to enhance economical, social and cultural development, while maintaining our cultural integrity.
- 4. To make the best use of the advancement in the fields of information, communication and education technology to improve and develop the university educational processes.

Human Resource

The number of the university staff members, including professors, assistant professors, lecturers and their assistants (assistant lecturers and demonstrators) in all the faculties of the university were 3321 members in the academic year 2005/2006. This number is distributed as 1773 staff members and 1548 assistant staff members.

Strategic Plan for Quality Assurance in Suez Canal University : Features of the plan

The university's main interest is putting a strategic plan as a first step towards the improvement of its educational process. It is expected that this will strengthen the university competitive abilities and help overcome the handicaps that hinder the process of development, until reaching the stages of "Recognition" therefore "Accreditation ".

Such plan aims at putting the university on the proper track to attain a unique position among all Egyptian universities (governmental or private), attempting to surpass the accumulative deterrents and affect its role through adopting strategies suitable for achieving qualitative development in all sectors of the university.

The plan has been done bearing in mind the following points:

1. The plan is to built on calculating the results of all the processes which are time-framed and have quantitative measurable indicators.

2. The plan executive steps should be clear – cut in a way to ensure its continuity and its time frame work (Flow Matrix).

3. Constant and periodic follow up throughout the steps of the plan execution so as to ensure its stability and continuity.

4. The plan is evaluated by peer- viewers to discern its progress or deviation.

5. It is constantly evaluated occasionally to modify any of its measures or step to cope with any internal or external changes.

6. The plan is based on developing the competitive qualities of the university educational process.





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Suez Canal University Biotechnology Research Center

Mission

- Preparing scientific researchers, well trained to carry out creative & advanced researches in the field of biotechnology for problem solving
- Supporting the post-graduate studies programme within the university and other universities and research centers as well.
- Carrying out innovative research in the various biotechnology fields (medical, agricultural, food technology, environmental) to reach international standards;
- Supporting, strengthening, and linking scientific research with corresponding industries for problem solving and developing and improving productivity as well as developing new products;
- Encouraging developing new industries dependent on the results of conducted research;
- Promoting applied research in cooperation with production centers in order to arrive at the stage of self-financing of research needs at the institute.
- Training of competent professionals in the basic and applied sciences at all levels (including scientific personnel, technical staff and extension workers) as one of the most essential components of any programme of this kind.
- Creating awareness of the benefits and risks of biotechnology.
- Giving special emphasis on the importance of working as teamwork for training and exchange of knowledge in the field of biotechnology.

Vision

The establishment of a Biotechnology Research Center (BRC) mainly aims to prepare young researchers to be well trained in all fields of biotechnology and molecular biology within Suez Canal University and all Egyptian universities as well. It also seeks the preparation of information center to be connected with the internet to encourage publications in all fields of biotechnology in Egypt beside the preparation of a specialized scientific magazine for the publication of scientific products of Biotechnology at the national level.

Human Resource

Biotechnology Research Center consists of 35 members including the Center Council, the staff member, the research team, and the administrative team.

R&D Annual Budget

Financially, the BRC depends on the support coming from the Suez Canal University, beside the sharing from the participants of workshops and conferences held in the biotechnology center.

Facilitiess

Biotechnology consists of four main laboratories: the main lab, Microarray lab, Microbiology lab and the preparation lab. Beside, a specialized library with more than 300 books in the field of biotechnology and molecular biology. The most important available equipments in BRC are:

- 1. Eppendorf Mastercycler Gradient PCR
- 2. Agarose gel electrophoresis, Vertical PAGE for DNA
- 3. Horizontal gel electrophoresis SDS-PAGE for proteins
- 4. Photo documentation system (LTF Lab, Germany), UV Transilluminator, Polaroid camera
- 5. Nanodrop Spectrophotometer for the quantitative measurement of the DNA and RNA
- 6. Microarray (Scanner, Spotter & computer system for data analysis)
- 7. DNA Sequencing Machine (Pharmacia)
- 8. Sonic Dismembrator (Fisher Scientific)
- 9. Barnstead water deionization system
- 10. Rotary evaporator
- 11. Autoclaves (Systec, Germany)
- 12. Eppendorf centrifuges Models 5417R and 5417C
- 13. Laminar flow cabinet for PCR (Kottermann, Germany)
- 14. Shakers, Stirrers, Vortex, Cooling water bath (Lauda)
- 15. Freezers (- 80 Co & 20 Co)
- 16. Multiblock heater (Lab-Line)
- 17. Crushed-ice maker (Cornelius)
- 18. Water distillation unit

Main Accomplishments

- More than 30 mater and PhD thesis were finalized by the support of the BRC, covering post-graduate students from different faculties of the Suez Canal University and other universities as well.
- Several projects were carried out in cooperation with BRC:
- 1. Project of natural bioactive substances from the Red Sea.
- 2. Application of DNA-based method for the detection of genetically modified food, the BRC is now preparing for carrying out this project on a large scale.
- 3. Conservation of Medicinal Plant in North Sinai.
- 4. Towards the harmonization of analytical methods for monitoring food quality and safety in the food supply chain (MoniQA), in progress.
- Scientific lectures:

Many lectures have been held in BRC to approach exchanging of knowledge and experience in Egypt and abroad, it also seeks the increasing awareness of biotechnology applications to all researchers and in all relevant fields in Suez Canal University and other universities within Egypt.

The title of most important lectures are:

- Ethics of Genetic Engineering, March 2004
- Natural Products from Egyptian Marine Environment, June 2005

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- Principles of Genetics and its Applications, July 2005
- Application of Shsp Gene as a tracer for food Quality, April 2006
- -The use of Scanner Microarray in Diagnosis of Diseases, October 2006
- Extraction of protein and DNA from different sources, December 2006
- A Future look to the Genetic Engineering, May 2008
- The Genetically Engineered Food, June 2008

Workshops and conferences

- Detection of genetic modifications in food and feed workshop 2000
- Principals of Biotechnology workshop 2007
- Science and technology without frontiers conference 2007
- The new in biotechnology and genetic engineering conference 2008
- Molecular Diagnosis of Mycobacterium tuberculosis workshop 2008

Public service center of biological control (PSCBC) considers one of the special unites followed Faculty of Agriculture, Suez Canal University, it was founded in 10th June, 1999. PSCBC building consists of seven research laboratories (Temperature, humidity, light controlled) with several laboratory preparations, in addition controlled conditions glasshouse (Temperature, lighting). Additionally, the Seminars hall which include all recent show means (e.i.: Datashow, computers, slide projector and overhead transparent sheet projector) and meeting room for the administration council meeting.

PCSBC consider the nucleus to spread the biological control concept in canal regions, which are considered promising regions and remarkable with applying IPM polices and programs in most fruits and vegetables farming



Suez Canal University

Public Service Center of Biological Control

Mission

1. The contribution in the university role in connecting the scientific research with the environment through doing scientific researches aim to solve the real problems e.i. insects' pests damage which infest different crops by using biological control methods to increase the production and to get clean product free from pesticides and chemical fertilizers.

2. The applied scientific consulting to solve either insects or animal pests and plant diseases.

3. Training the agricultural engineers whose working in the field of pests control by held specific training courses to explain and to train on how they can use biological control either by bioagents conservation in the local environment or by the supplement of mass reared parasitoids and predators by releasing in this fields.

4. Mass rearing for many predators and parasitoids to release it in the infested fields to reduce its infestation.

5. Producing seedling of many vegetables crops which are free from viral diseases in the PSCPC glasshouse.

6. Training B.Sc students (Final year) on doing their graduate project (research and discussion course) and the post graduate students in completing their M.Sc or Ph.D researches.

7. Organizing the summer training courses for the 3rd year students (Faculty of Agriculture, Faculty of Sciences) Suez Canal University.



PSCBC Sections

- Mass rearing line of Mediterranean see flour moth, Anagasta (Ephestia) kuehniella.
- Mass rearing line of the chrysopid predator, Chrysoperla (Chrysopa) carnea.
- Mass rearing line of the true egg parasitoid, Trichogramma spp.
- Glasshouse for producing vegetables seedling which are free from viral infection and fungal disease.
- Greenhouse in the faculty farm for producing organic vegetables which are free from chemical fertilizers and pesticides and designed on the recent IPM technologies.

Current studies

- Rearing the Coccinellid predators and the ectoparasitoid Goniozus legneri.
- Ecological studies on Palpita unionalis, Prays oleae and Euphyllura straminea which infesting Olive trees in Sinai and Ismailia regions and its associated bioagents.
- Studies on the effect of certain entomopathogens on some natural enemies (Ph.D).
- Biological control studies on some insect and pathogenic pests infesting potato and tomato crops and either inference on the technological product properties in Ismailia Governorate.
- Studies on the biological control of Spodoptera exigua in Egypt (M.Sc).
- Supervising on the sucking mouth parts insects infesting pepper greenhouses (Carmen, Triple star, 1972, Vista, Silica) which are exported to European union countries in Libra company (one of the most famous companies in organic farming in Egypt and middle east as well and one of Sekem group companies).







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Zagazig University

Occupational and Environmental Health Services Center

Mission

To promote health and safety of all employees in all workplaces and protection of the environment, through, partnership, guidance, education, service, research and regulatory compliance

Vision

Be the leading National Center in meeting current and future occupational and environmental health and safety challenges.

Human Resource

- 1. A well established place (Adequate and equipped place for Seminar& training, lab, computer, data show, Library,.. etc)
- 2. A highly qualified multi-disciplinary work team (About 25 members) with expertise in a comprehensive range of occupational health and safety skills from the staff member at Occupational Medicine and Industrial Hygiene department at the Faculty of Medicine, Zagazig University

Main Accomplishments

- Conducting a series of Training Programs for a group of workers at some industrial establishments at 10th of Ramadan City During 2007 and 2008
- Organizing a Scientific Conference and a Training Workshop on "Health and Safety Procedures in Educational Establishments: Toward National Standards & Guidelines" at Faculty of Medicine, Zagazig University during the period from 17-19 March 2008
- Conducting a Seminar Training Workshop on : "Towards Mercury Free Egyptian Hospitals " at: Faculty of Medicine, Zagazig University during the period from 27-28 October 2008
- Launching a peer-reviewed scientific Journal titled "Zagazig Journal of Occupational Health and Safety –ZJOHS" for publishing the original articles and researches in the field of Occupational Health and Safety . ZJOHS (ISSN# 1887-8671) is indexed in The Directory of Egyptian Research Periodicals (DERP) is one of the directories developed by Egyptian National Scientific and Technical Information Network (ENSTINET) and the Index Copernicus .
- Issuing a periodical Newsletter titled " Occupational Health and Safety in Educational Establishments (ISSN #1687-868x).
- Accredit from the Egyptian Ministry of Manpower and Migration as a "Licensed Center" for training in occupational health and safety (License # 4 for the year 2008 that issued on 5 May 2008)
- Conducting awareness program on : " A model of Fire and Emergency Procedure on an educational building Faculty of Medicine, Zagazig University During the period from through

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Ministry of Agriculture and Land Reclamation

Research Landscape in Egypt 2010



Agricultural Research Center www.arc.sci.eg

Mission

- Planning and implementing research, extension and training to effect sustainable upgrading of Egyptian agriculture, tighten the food gap of strategic crops.
- 2. Generating continuous flow of appropriate technologies, developing local technologies, importing and adapting foreign technologies in order to ensure the advancement of the production porcine with regard to optimizing use of agricultural natural, resources, reducing production cost, increasing competitiveness of Egyptian agriculture



products, finding practical solutions to agricultural production constraints, pressuring environment and achieving sustainability of Egyptian agricultural development.

- 3. Special consideration is given to biotechnology with special emphasis on priorities of Egyptian agriculture.
- 4. Raising the added value of agricultural production, improving net income of producers in all sectors of agriculture, more attention to small farmers, increasing the contribution of women and improving their standard of living.
- 5. Establishing the required production and management operations which suit these new plant and animal genotypes, causes tangible increase in production and subsequently increase in farmer income and availability of food for the society.

Vision

To achieve sustainable development through the implementation of modern technology which will achieve the suitable use if agricultural natural



resources respond to the people 's needs such as food, clothes and improving the farmers' income.

Human Resource

ARC staff includes about 6000 researchers holding Ph.D. Master and BS.C. Degrees, in different agricultural science branches. In addition to 32.5 thousand technician and administrative employees from which 23.2 thousand are on temporary employment.

Annual Budget

The annual total budget of research reaches LE 627.6 million.

Facilities

The ARC incorporates 14 research programs that are being implemented by 16 institutes, 12 central laboratories, 10 regional stations and 46 specific research stations, in addition to 23 research administrations throughout Egypt and 4 research, extensions and training centers of high quality.

Main Accomplishments

• Field crops has increased in 2006/2007 e.g. Yield of wheat reached 18.0 Ardeb/acre., maize 25.7Ardeb/acre., rice 4.2 ton/acre., broad bean 9.17 Ardeb/acre., soya bean 1.3 ton/acre.



- Sugar cane yield increased to 5.9 ton/acre. In
 2005/2006 and sugar beet to 20.9 acre./fed., 2006/2007.
- Vegetable production increased to about 20 million tons and fruit production to about 10 million tons in 2006/2007.
- Egyptian horticulture exports has increased continually to reach 11.1, 12.9, 13.8 through the periods from (1990-1994), (1995-1999),(2000-2005) respectively.
- Red meat production has increased to about 612 thousand tons in 2006, and poultry meat production increased to 888 thousand tons in 2006. in addition, table egg production reached 7.4 bn eggs, dairy production reached 5.65 million tons and fish production has increased to about 971 thousand tons in the same year.
- Production of sun flower hybrids to decrease the gab between production and consumption of oil, and the most important early yielded varieties; are Sakha 53 (90-95days), and Giza 102 (80 days).

• Specific training courses were held for training about 116 thousand trainees of graduated student from universities and technical secondary schools in 280 centers.

• Supporting the extension program through strengthening the relationships between the researcher, extension engineer, and development technology transfer, to utilize applied research results to the different agricultural fields.



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Agricultural Economics Research Institute www.narims.claes.sci.eg

Mission

- To provide decision-takers, policy-makers, and planners with appropriate recommendations based on accurate and precise data and information regarding the economic variables influencing the agricultural sector to help them take appropriate decisions.
- To find proper solutions for the prevailing agricultural economic problems through conducting research studies that focus on achieving optimum use of agricultural resources and obtaining maximum production per available unit of land and water while sustaining and developing the environment in the same time.
- To improve and develop the statistical methods applied in agriculture in order to establish a sound database that can be used for setting successful agricultural policies.
- To participate in the process of technology transfer through evaluating the newly introduced agricultural technologies.

Vision

- Developing the scientific research skills of the research staff and agronomists by providing internal and external training.
- Cooperation and participation with the universities and other research centers, as well as regional and international organizations in the field of agricultural economics research.
- Marketing the Institute's research services by activating the role of the "Special Economic Research Services Unit".
- Establishing an "Early Warning Unit" in the field of agricultural production economics.
- Linking the Institute to the Internet, and the regional and international research networks to act as the centre for agricultural economics consultations.
- Restructuring the research staff to recover normal hierarchy by attempting to provide the required funds and research posts in order to cope with the ongoing changes in the global and regional agricultural economy.

Human resource

Research staff and agronomists	Number
Chiefs of Research	29
Part time - Professor	4
Professor emeritus	89
Senior Researchers	53
Researchers	74
Assistant Researchers	29
Researcher Assistants	16
Agronomists	149
Temporary Employees	632

R&D Annual Budget

- 600 L.E. thousand for the fiscal year 2007/2008.
- 480 L.E. thousand for the fiscal year 2008/2009.

Facilities

- 12 cars to provide transportation service for the research staff.
- 37 computer sets and printers in different departments.
- A Computer Unit that is equipped with 19 computer sets, 9 printers, and 2 photocopy machines.
- 23 photocopy machines in different departments.
- A Fax machine.
- The Institute is linked to the internet.

Main Accomplishments during the Period

I. Completed Research Studies (115)

- Economics of Agricultural Production (18)
- Agricultural Credit and Cooperation(10)
- Economic Analysis of Agricultural Commodities(30)
- Agricultural Marketing (11)
- Economics of Soil and Water (3)
- Rural Community Development (11)
- Production Estimation by Sampling(14)
- Cost, Prices, and Labor Statistics(8)
- Regional Research Studies(32)
- Agricultural Labor and Machinery(8)
- Agricultural Policy and Project Evaluation(10)

II. Training Courses

AERI organized 5 training courses, 2 courses within the framework of the general training plan to develop the skills and knowledge of the staff:

- Scientific writing
- Economic Analysis of Agricultural Commodities

III. External Tranning courses:

- Project feasibility and evaluation studies.
- -Statistical analysis, mathematical finance and risk analysis
- Statistical analysis of data .

Seminars:

- Development and improvement of agricultural statistics and estimates
- -The impact of the global financial crisis on the agricultural economy in Egypt
- Global financial crisis and expected impacts on the Egyptian economy with a focus on agriculture sector

Studies

- Economic feasibility study for the complex project of refrigerators in Alexandria
- Economic Assessment of yellow corn.

Workshops:

- -Law of new Agricultural cooperation
- -The cooperation between AERI and general Department of agricultural extension

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Agricultural Engineering Research Institute

www.aenri.org

One of Egypt's most distinguished agricultural Engineering institutions with over 25 years of experience in research and extension activities.

Mission

The main mission of AENRI is to assist in increasing agricultural production by introducing appropriate mechanization technologies to end users with special focus on small and medium size farms.

Efforts towards achieving this objective have been concentrated in the following areas:

1. Conducting applied research to encourage mechanized farm operations.

2. Developing appropriate mechanization technologies and machines for local conditions.

3. Transferringappropriatemechanizationtechnologies to farmers.



- 4. Conducting on-farm irrigation research to optimize water use.
- 5. Providing technical advice and consultations to farmers and machinery manufacturers.

6. Conducting applied research to encourage Bio-engineering.

Vision

Played an important role in the generation of new knowledge of agricultural engineering through research and other creative work, and in the preparation of hundredth of mature scholars for Egypt.

Human Resource

1. Includes academic staff members (172) both graduated and post-graduated from virtually every major university in North America, Europe and Japan. Among the Research members are fellows of a number of the world most important academies and members of the most prestigious scientific associations.

2. Has an Employees body of 661 regular graduates and 102 graduates with (Diploma, M.Sc. & Ph.D) Normally, the AENGRI accepts a substantial proportion of students from other countries for research studies in agricultural engineering.

Facilities

- The institute headquarters covers an area of 6000 square meters which consists of housing and various research departments constituting major objectives of the institute.
- Provides a framework for engineering graduate and post-graduate studies in 8 departments, major library, fabrication shops for prototype production, a central lab for on-farm irrigation network components testing, a central lab for equipment and gadgets testing and measuring instrument.
- Also, it has seminar and conference auditorium, 4 supporting units and 4 branches distributed in different locations.

Main Accomplishments

On-Farm irrigation

- Completed twenty-four studies on hydraulics of modern irrigation systems, chemigation, use of local components of irrigation networks, use of modern irrigation systems in field crops, and evaluation of two different filters for irrigation networks.

Processing and handling of farm products

- Completed twelve studies on the physical and mechanical properties of different farm products including field crops (rice, corn, and their by-products), some fruit crops and their juices, and some animal products such as meat cutlets, poultry and fish.

Power and energy:

- Completed seventeen studies for specifying energy needs for the different mechanized farming operations. Some of those studies also covered the use

of renewable energy in agriculture and environmental management.



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Agricultural Extension and Rural Development Research Institute www.vercon.sci.eg

Mission

AERDRI aims mainly at concentrating on researches and applied studies in the areas of agricultural extension, rural community development and rural home economics. The results of these studies contribute in supporting and improvement of extension activities in order to maximize agricultural production and achieving sustainable agricultural and rural development.

Vision

The main responsibility of AERDRI is to develop the agricultural extension service, which is considered as the cornerstone for promoting agricultural productivity through the dissemination of agricultural technological innovations and helping producers to adopt them in a very short time.

Human Resource

The total employees in AERDRI amounted 287 individuals, out of them 143 researchers, 35 Coresearchers, in addition to 109 in the general cadre. Eighty percent of AERDRI staff work at research units in the specific research stations throughout Egypt.

Annual Budget

AERDRI annual budget amounted L..E. 750,000 in 2007/2008.

Facilities

1. A library includes M.Sc. and Ph.D theses, scientific magazines, text books in the areas of agricultural extension, rural sociology and home economics.

- 2. A laboratory of audio-visual aids.
- 3. A unit for Information communication technology.
- 4. Communication for development unit in the context of RADCON project.

Main Accomplishments

350 extension studies were published, out of them 45 studies in the area of field crops, 35 studies in the area of horticulture crops, 29 studies in the area of animal and fishery production, 19 studies in the area of water and soil management, 5 studies in the area of agricultural mechanization, 15 studies in the area of environmental conservation and pollution control, 7 studies in the area of extension organization, 15 studies concerning extension centers, 35 studies in the area of extension teaching methods and audio-visual aids, 29 studies in the area of extension training, 35 studies concerning rural communities development, 25 studies in the area of rural youth development and 38 studies in the area of rural women development.

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Agricultural Genetic Engineering Research Institute

The Agricultural Genetic Engineering Research Institute (AGERI) represents a vehicle within the agricultural arena for the transfer and application of the new technology.

Mission

AGERI is more concerning to increase the scientific experiences in biotechnology and genetic engineering fields. Also to train technical stuff and improve some important economic crops by genetic engineering.

Vision

AGERI is contributing in:

- The Achievement of the agricultural development via transferring and applying the advanced technology in the genetic engineering and gene transfer to increase the agricultural production and improving it to face the vast population booming and increase the marketing and exporting efficiencies.

- Affirming the cooperation with the Egyptian private sector in the field of producing genetically improved seeds

- Triggering the production of resistant plants in order to decrease the random usages of pesticides to sustain a safe environment.

- Producing plants to be cultivated under high temperature, drought and soil salinity.

Facilities

Functional Laboratories

- Molecular Plant Pathology
- Molecular Manipulation and Gene Transfer
- Plant Molecular Biology
- Molecular Genetics and Genetic Mapping
- Micro propagation Technology
- Plant Cellular and Molecular Genetics
- Immunology and Diagnosis
- Protein Nucleic acid Sequencing and Synthesis
- Gene Expression
- Bio computer and Network

Main Accomplishments

1- Producing genetically modified potato, cucurbit, cotton and tomato plants to resist the virus and insects infections which lead to significant losses in these crops.

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2- Determining the genetic polymorphism by using the nucleic acid technologies via the genetic fingerprinting program of the important economic crops such as maize, cotton, tomato and date palm.

3- Producing plant viral diagnostic units, and producing a bio-pesticide (AGERIN) at the commercial broad spectrum.

4- Producing wheat, cotton, maize plants tolerant to abiotic stresses such as drought and soil salinity.

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Animal Health Research Institute

www.ahri.gov.eg

Mission

- Protect livestock from dangerous endemic and exotic diseases via rapid and early diagnosis of animal, poultry and fish diseases
- 2. Protect public health from hazards of zoonotic diseases.
- 3. Protect the environment from pollution by causative agents of diseases
- 4. Play Monitoring role in the following areas:
- Health control of foods of animal origin.
- Health control of poultry production
- Control of feed concentrates to prove that it is free from animal pathogens.
- Control of market veterinary drugs



- 1. Close cooperation with the institutes of livestock and livestock production to develop an integrated vision for preserving the Livestock .
- 2. Attention to zoonotic diseases among humans, animals and birds by training technical and research personnel in the field of laboratory diagnosis, epidemiological studies and preventive medicine, so as to develop the necessary plans to control the spread of these diseases.
- 3. Promoting the Institute's role in preserving the environment by using proper methods for the disposal of animal waste and application of Biosafety systems in the Institute laboratories and collaborate with responsible environmental authorities.
- 4. Benefiting from scientific advances in disease diagnosis by training the competent personnels abroad and creating a scientific channels with similar institutes in the West and other countries, that are working on technology transfer in all ways.
- 5. Strengthening the cooperation with the private sector in the field of veterinary care , field problem-solving and working on the reduction of mortality rate and the use of medicines and vaccines. also creating channels of communication and cooperation with whom are interested in veterinary care of the commercial and rural herds production.

Human Resource

1571 personnels working in the institute , of whom 711 individual doctors are in a special cadre, 555 in general cadre and 305 administration staff and technicians .



R & D Annual Budget

During fiscal year 2007 - 2008 1.5 millions Egyptian pounds

Facilities

Animal Health Research Institute has 15 departments with 52 research units in various scientific disciplines that serve the areas of research and diagnosis of animals, poultry fishery diseases and hygiene of food of animal origin, in addition to 6 specialized research units. Follows the Institute 26 laboratories in various governorates. In addition to four port laboratories specializing in examinations of food. The Institute has a training centre equipped with modern explanatory vehicles. The Animal Health Institute also has Animal Services Unit (unit of a private nature) to provide laboratory diagnostic services for animals, poultry and fish diseases for farm owners, private sector and public sector.

Main Accomplishments

• Implementation of international conventions and international cooperation in scientific issues between the Arab Republic of Egypt and other nations. The programmes have been developed in the areas of visits, training , exchange of expertise, researches and projects preparation with Brazil /Tunisia / Syria / Algeria / Turkey / Kuwait and China.

• Contributed to the eradication of Rinder pest and reporting that Egypt is free of the disease in 1997 through serology comprehensive survey to identify and measure the immunity level of cows in all governorates.

• Protecting the country from the risk of exotic diseases such as Leukosis, Brucellosis in cattle and Rift Valley fever and Foot-and-Mouth by examination of all animals and imported food.

• Reduce the loses from diseases through the use of modern and rapid tests for the early detection of animal, poultry and fish diseases.

• Increased the animals and poultry productivity due to lower rates of morbidity through

- field missions
- conducting laboratory tests to diagnose diseases
- conducting field and experimental researches related to a comprehensive survey.
- Measuring the immunity level for important diseases such as Rinder pest, Rift Valley fever, Foot and Mouth and Lumpy Skin disease.

Detection of zoon otic diseases transmitted to humans, such as contagious abortion and toxoplasmosis.
Health control of food of animal origin and its products whether imported or locally produced (locally consumed or prepared for export) to its fitness for human consumption and that they are free from animal causative agents, zoon otic diseases and harmful residues (veterinary drugs, hormones, environmental pollutants and heavy metals) from 1/7/2007 to 30/6/2008.

The institute inspected 23573 imported food samples (51 samples out of them were unfit for human consumption) and inspect 2653 food samples locally produced and prepared for exportation (26 samples out of them were unfit for human consumption) and inspected 903 food samples collected from local markets by inspection and slaughter houses department (GOVS), where 81 samples out of them were unfit for human consumption.













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Animal Production Research Institute

http://apri-arc.kenanaonline.co

Mission

Increase the animal productivity through: -1-Protecting farm animals from reproductive diseases 2-Improving Productive and Reproductive potential of farm animal

Vision

• Application of accurate methods for diagnosis and control of reproductive diseases, udder infections and neonatal diseases.



• Raising the reproductive potential through solving of fertility problems and application of new technological to improve animal protectively.

• Conducting reseches to improve genetic charctstics and designing suitable program to improve the productive and reproductive potentials of farm animal

• Organizing training programs to vetrarin in the field

Research Structure

- 1. Biology of Reproduction Research Department.
- 2. Reproductive Diseases Research Department .
- 3. Udder and Neonate Diseases Research Department
- 4. Artificial Insemination Research Department.
- 5. Pathology of Reproduction Research Department
- 6. Field Investigations Research Department.
- 7. Immunopharmacology Unit.
- 8. Ultrasonography Unit.
- 9. Biotechnology Unit.

Human Resource

Research- Consultations-Training- Scientific services		
PERSONNEL STATISTICS IN 2007		
CHIEF RESEARCHERS	36	
SENIOR RESEARCHERS	25	
RESEARCHERS	30	
ASSISTANT RESEARCHERS	2	
RESEARCH ASSISTANTS	1	
VETERINARIANS	42	
EMERITUS CHIEF RESEARCHER	6	



ADMINSTRATORS	73
LABORERS	31
Temp. Vet	5
Temp. Laborers	63
TOTAL	318

R & D Annual Budget

For Research 11/2 - 2 Million L.C/year

Main Accomplishments

- 1. Main achievements of the institute in the area of research have influenced and significantly improved the reproductively of cattle, buffalo and sheep through:
- 2. Improving reproductive potentials of farm animals.
- 3. Diagnosis and control of neonatal diseases and mastitis.
- 4. Preventiation and treatment of reproductive diseases.
- 5. Expanding of A.I and embryo transfer technique applications.
- 6. Application of freezing semen technology in farms.
- 7. Reduction of inter calving intervals.
- 8. Examination of Medication Residue in Animal products.
- 9. Improving of quality & quantity of Milk.
- 10. Early Pregnancy diagnosis by using Ultrasonography.
- 11. Examination of imported frozen semen.
- 12. Vet. Companign .
- 13. Training of veterinarian on new technology.





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Animal Reproduction Research Institute

www.arc.sci.eg

Mission

Increasing the animal productivity through: -1-Protecting farm animals from reproductive diseases 2-Improving Productive and Reproductive potential of farm animals

Vision

1. Application of accurate methods for diagnosis and control of reproductive diseases , udder infections and neonatal diseases .



2. Raising the reproductive potential through solving fertility problems and applying new technology to improve animal protection.

3. Conducting researches to improve genetic characteristics and designing a suitable program to improve the productive and reproductive potentials of farm animals and training programs to the veterinarians in the field.

Human Resource

CHIEF RESEARCHERS	36
SENIOR RESEARCHERS	25
RESEARCHERS	30
ASSISTANT RESEARCHERS	2
RESEARCH ASSISTANTS	1
VETERINARIANS	42
EMERITUS CHIEF RESEARCHER	6
ADMINISTRATORS	73
LABORERS	31
Temp. Vet	15
Temp. Laborers	63
TOTAL	318

Annual Budget

For Research 1¹/₂ - 2 Million L.E./year

Facilities

- Biology of Reproduction Research Department.
- Reproductive Diseases Research Department.
- Udder and Neonate Diseases Research Department
- Artificial Insemination Research Department .
- Pathology of Reproduction Research Department
- Field Investigations Research Department.
- Immunopharmacology Unit
- Ultrasonography Unit
- Biotechnology Unit

Main Accomplishments

Main achievements of the institute in the area of research have influenced and significantly improved the reproductivity of cattle, buffalo and sheep through:

- Improving reproductive potentials of farm animals.
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- Prevention and treatment of reproductive diseases.
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- Examination of imported frozen semen.
- Vet. Companign.
- Training of veterinarians on new technology.







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Central Agricultural Pesticides Laboratory

www.capl.sci.eg

Central Agricultural Pesticides Laboratory (CAPL) is one of the research institutes acting under the umbrella of the Agricultural Research Center, the main research body of the Ministry of Agriculture. The activity of CAPL started as early as 1963 and its responsibility is to control pesticide imports and exports, and the safe use of pesticides in Egypt.

Mission

CAPL is in charge of the regulation of importing, manufacturing and trading of agricultural pesticides.

Facilities

Available Instruments For serving All Departments

- 1-GLC Instruments equipped with PPD. NPD.ECD and FID.
- 2- HPLC equipped with UVD, RID and Fluorescent detector.
- 3- Super critical Fluid Chromatography.
- 4- .Atomic absorption Spectrophotometer.
- 5- Polymerase Chain Reaction Instrument (PCR).
- 6- DNA Sequence Instrument.
- 7- Mini Agarose Gell.
- 8- UV Scanning Spectrophotometer.
- 9- Freezing Microtone.
- 10- Image pro-Analyzer.
- 11- Freeze Dryer.
- 12- Photosynthetic Analyzer.
- 13- GC-MS

Most of these instruments are equipped by computer, Chem. Station, full automated and subjected to strict quality assurance system on daily basis to achieve accurate results.

Main Accomplishments

1. Central Agricultural Pesticide Laboratory suggests the strategy of the integrated agricultural pest management through optimizing different techniques of pest control and minimizing the use of pesticides.

2. It also conducts research on pesticides to increase their effect on agricultural pests.

3. It supports pesticides inspection to ensure good and effective results (quality control).

Research Activities

In order for the CAPL to assume its responsibilities, advanced research is undertaken to provide the farmers, exporters and importers of agricultural commodities with advice and proper services. The research activities of the CAPL cover the following areas:

- The CAPL gives license for importing pesticides along with pesticide analysis certificates for their release from the customs.
- If imported pesticides are not in accordance with the specifications they may be seized or returned to the point of origin at the shippers expense.
- After the release of pesticides in the Egyptian environment the CAPL goes after the residues in edible crops, soil and water. The main purpose is to keep pesticide residues within or below the allowed international levels. This would protect human and animal health, and ensure safe exportation of agricultural commodities to foreign market.

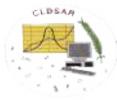
Mammalian toxicology is undertaken before the use of pesticides on large scale to distinguish between safe and detrimental pesticides.





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Central Lab for Design and Statistical Analysis Research www.arc.sci.eg

Mission and Vision

Central Lab foe Design and Statistical Analysis Researches (CLDSAR) is responsible for basic and applied research in the field of experimental design and statistical analysis at the Agricultural Research Center.

CLDSAR cooperates with other institutes in national and international projects. Staff members are consultants and trainers in Egypt and abroad.



Human Resource

Chief researchers	11
Chief researchers emirates	10
Senior researchers	2
Researchers	6
Researchers assistants	6
Assistant researchers	1
Agronomists	7
Administrators	45
Labors	7

Annual Budget

About 35000 Egyptian pounds.

Facilities

Computer Labs. And Library.

Main Accomplishments

1- Developing the infra structure of the Lab. Including renewing the Lab. building and constructing a new building attached to the old one.

2- Updating the computers in the lab as well as using the modern packages of statistical analysis.

3- Designing an expert system includes methods of designing agricultural experiments and procedures of statistical analysis and submit this system to the site of the Lab on the Internet.

4- Achieving the researches of the research plan of the Lab that includes the following main points a-Estimating parameters of efficiency of the agricultural experiments through conducting actual experiments, uniformity trials and using pervious data in old and new lands.

b-Estimating efficiency of statistical and genetical analysis through applied statistical studies in the field of agricultural research.

c-Using the techniques of economical and environmental evaluation of agricultural experiments to determine the importance of those experiments to be applied through analyzing the benefits and costs of the experiments focusing the environmental margin of using the agricultural practices.

5-Increasing the efficiency of the researchers in the Lab and the other institutes of the ARC through conducting training courses in the field of design and statistical analysis of the agricultural experiments using computer packages.



Central Lab of Organic Agriculture

www.arc.sci.eg

Mission

The aim target of central lab of organic agriculture is to increase the concepts of organic agriculture for increase the area of organic agriculture farming to cover the requirements of local and exportation marketing.

Vision

The organic agriculture is very important because its positive results for ecological and economical effects, which agreements with global agriculture policy. On the other hand, it must be enhance the organic agriculture to increase the organic products for local and exportation marketing, health and end environment.

Annual Budget

About 10.000 Egyptian Pounds

Facilities

- Infra structures for training and researches.
- Experience scientific and applied for organic farming.

Main Accomplishments.

1- for research and developments.

- 1- studies on plant growth promoting Rhizobacteria (PGPR)
- 2- studies for control microbial compost production.
- 3- how to produce the compost and biofertilizers to increase the soil fertility under organic agriculture systems.
- 4- plant nutrition and plant production under organic system.

5- How to produce your own biological control agent in suitable formula to protect different crops against different pests.

For Training and Extension

1-Training on

- Biological control	- Plant nutrition
- Soil fertility	- Composing
-Biofertilizers	- Inspection and Certification

2 - Training on Organic farming management, Other fields

- Inspection and certification body authorized to issue necessary certificates for organic farm and firm and organic product.

- supervision for field demonstration and exchangeable the experience Scientific and applied
- Produce two certified products for plant nutrition.
- The Exhibition and conference for organic agriculture every year since 2003 to 2008.

- Training for about 6000 agriculture engineering on the methods of organic agriculture through the National project for training on organic agriculture in upper Egypt governorates Photos for the facility.

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Central Laboratory for Agricultural Climate Institute www.claes.sci.eg

Mission

The study of agriculture climate is necessary for modern agriculture to maximize the use of available natural resources and alleviate or escape direct and indirect effect of climate variability and changes on agricultural crops. Therefore, the Central Laboratory for Agricultural Climate (CLAC) was established in 1996, as a research body within the Agricultural Research Center, to study the current and future impacts of climatic factors on Egyptian agriculture, and to raise the awareness of agricultural community towards different dimensions of the problem.



Vision

To facilitate the use of agro-meteorological information, by agricultural research community, for sustainable use of natural resources and maximum agriculture production under current weather conditions and future climate changes.

Human Resource : 200.

R & D Budget: 100,000 L.E.

Facilities

At Dokki, Giza

- 13 Green House.
- Complete analytical lab.
- Agro-metrology automatic weather stations network, include 25 station distributed in all over Egypt.
- GIS laboratory for agriculture mapping.
- Green roof garden, exhibition and facilities.

At El-Bosaily, Behaira Governorate

- 56 Feddans area.
- 150 Greenhouses.
- Equipped Training center, fully accommodate 40 trainers.
- Complete farm equipment for production and training.



Main Accomplishments

- Conduct research studies on the effect of agro-climatic factors on different aspects of agricultural production.
- Establishing an automated network of agro-meteorological stations directly connected to the CLAC headquarters at Dokki, Giza.
- Design several software programs: to forecast late blight in potato and powdery mildew in grape,; to determine the optimal planting date for cotton; to determine water requirements of different crops and designing of irrigation and fertigation system for grape and other crops.
- The first applied agricultural home page on the Internet.
- Design of several successful modifications of greenhouse/tunnel structures to improve ventilation and production.
- Implementing local and regional training courses on: protected agriculture, agrometeorological software use; irrigation networks and water requirement for different crops, disease forecast, roof gardening. Etc.

CLAC Software

IRRICLAC, FERTICLAC, DDU pest forecast program, CLACMAN, CLAC DESIGN, PCAST CLAC, Cotton Planting Dates, Pear fire blight forecast program, Grape downy mildew, Potato late blight, Decision Support System (ADSSAT), Geographic Information System (GIS), Agricultural Agenda.



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Central Laboratory for Agricultural Expert Systems www.claes.sci.eg

In 1987, officials at the Egyptian Ministry of Agriculture and land reclamation, recognized expert systems as an appropriate technology for speeding development in the agricultural sector. To realize this technology, in 1989, the ministry initiated the Expert Systems for Improved Crop Management Project (ESICM) in conjunction with the Food and Agriculture Organization of The United Nations (FAO) and the United Nations Development Program (UNDP). The project began in mid 1989 and CLAES joined the Agricultural Research Center (ARC) in 1991. Through the development, implementation and evaluation of knowledge based decision support systems, the Central Laboratory for Agricultural expert Systems is helping farmers through out Egypt optimize the use of resources and maximize food production.

Vision

Developing an ICT environment which can help in improvement of scientific research; technology transfer from research to growers, farmers, and extension agricultural engineers; rural development; and support decision making through better management and pathway enlightening

Mission

First: Transferring agricultural technology and research results to the farmers through agricultural guidance by using expert systems and information systems techniques.

Second: Documenting scientific publications, National projects research which are based upon and resources available to support optimal use of physical and human resources in performance the agricultural research.

Third: Helping decision makers in solving the national agricultural problems by the development of systems for decision support based on prototyping and simulation methods.

Fourth: Building information systems to contribute in the rural development and food security systems.

Human Resource

Ph.D	Masters	Diploma	B.A	Others	Total
11	15	6	25	23	80

Main Accomplishments

Accomplishments summarized as follows

First: Expert Systems

The construction of several expert systems in the field of plant- production crops: Wheat, Rice, Faba beans, Cucumber, Tomato, Citrus, Beans, Grapes, Strawberry, Mango, Melon and Artichoke).
The construction of several expert systems in the field of Animal Production developed for animal health: cows and buffaloes, and sheep and goats and poultry.

Second: Information Systems

- Information system of gene Bank
- National information system special numbering (cattle sheep goats chickens)

Third: networks

- Project of (VERCON) Vertical Research communication network
- Rural and Agricultural Development Communication Network (RADCON)
- Project of (Govs website) General organization for veterinary service
- Establishing and development a local area network for food security information center
- Establishing and development a local area network for agricultural pesticides committee.

Fourth: Information Systems Research

- National Information System on the Internet and on the status of Agricultural research (NARIMS)

Fifth: The tools of knowledge extraction

- building tools to extract knowledge
- Establishing tools for building expert systems

Sixth: Infrastructure

- Building network for the agricultural research center and its institutes and laboratories and providing a network of fiber-optic cables

- Establishing internal network for many of the departments of the General Authority for Veterinary Services at the various governorates.

- Establishment of an information network for the research station of Sakha, which includes 19 sites.

- Provide technical studies and consultations for the development of infrastructure for information systems to Ministry of Agriculture.

Seventh: Training

- 68 training courses held on expert system and how to develop it (593 Trainees)
- 15 training courses held about Use of novelty expert systems in laboratory (137 Trainees)
- 25 training courses held For the identification on Computer and Internet, use the agricultural expert system (276 Trainees)

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- 5 training courses held for training network (39 Trainees).
- 46 training courses held for training to use (VERCON & RADCON) (653 Trainees).
- 45 training courses held for training to use (NARIMS) (653 Trainees).

Eighth: guidance

- Ten expert systems distributed for 176 farmers who's working in Private sector, 20 governmental institution.
- There were held a 26 meeting for the agriculture guides in VERCON network, to identify their problems in using the network.
- There were held a 51 guidance symposiums, to identify the expert systems and its Importance to agriculture .
- We was performed with 40 visitations to the sites that were used by network VERCON .
- 8 expert systems distributed for 37 units in the privet sector, and 5 governmental units.
- Workshop made under the title of verification of regional expert system for wheat.
- There was workshop made under the title of (or) entitled verification of regional expert System for native beans.



Central Laboratory for Date Palm Research and Development

www.arc.sci.eg

Mission

Research & development of date palm.

Vision

- Using the Biotechnology and the up-date technology in In vitro vegetative multiplication of selected local and introduced varieties to be grown in the new Reclaimed areas and rehabitate old plantation.
- Introducing new high quality varieties as plant lets via tissue culture in order to avoid pest dissemination and evaluating them in most suitable regions for their adaptability and high return.
- In vitro studies on somatic embryo genesis conservation of date palm.
- Genetic finger- printing of important varieties of date palm for their genetic identification.
- Produce secondary products using plant tissue culture technique of date palm which will have future prospect in medicinal Industry.
- Survey and study the date palm diseases.
- Surveying and studying the insects which attack date palm trees.
- Mechanization research activities deal with all aspect of engineering and design of tools, equipment and machinery which help the date palm production.
- The use of advanced technology in the field of product research which includes handling, processing and marketing in order to increase the exportation.
- Use the up to date technology in the industrial development of Date Palm Products (excluding date fruits) such as: trunk, leaves, leaflets, sheath fiber, fruit stalks, leaf midrib either used traditionally or more developed products. Products such as: household, crates, ropes mats, baskets, paper, cellulose, artificial wood and Compost etc
- The use of the by-products of the processing plants to produce high quality animal feed.

Human Resource

81 employers + 25% of the totals as daily payment employers .

R&D Annual Budget: 400.000 L..E.

Facilities

all facilities and all essential preparations for the mentioned achievements and the aim of the Center Laboratory for Date Palm Research & Development are exist .



Main Accomplishments

- 1- In vitro vegetative multiplication of selected local and introduced high quality varieties to be grown in the new Reclaimed areas and rehabitate old plantation.
- 2- Develop new plant tissue culture protocol using immature flowers to propagate old trees from the new and rare varieties for their maintenance.
 - 3-Produce secondary products using plant tissue culture technique of Date Palm which will have future prospect in medicinal Industry

4-The use of bio-Agriculture system in order to produce natural-semi dry dates in the new valley governorate for high value marketability.

5-The use of hi-technology in the field of product research which includes handling processing and marketing in order to increase the exportation.

6-Genetic finger- printing of important varieties of Date Palm and establish their relationship.

7-Establish date palm Gene Bank.

8-Establish a new branch of the CLDPRD in the Date palm growing areas as North Seni, Aswan, Bahria Osise (Giza Governorate) and the new valley Governorate to rehabilitate and improve Date Palm production.





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Central Laboratory of Residue Analysis of Pesticides and Heavy Metals in Food

www.qcap-egypt.com

QCAP Lab was established in 1995 according to the Ministerial Decree no. 680/1995 and has been affiliated to the Agricultural Research Center (ARC) under the Ministry of Agriculture and Land Reclamation of Egypt (MALR).

• The lab is the main output of the collaboration between Egyptian Ministry of Agriculture and the Finnish government through the Quality Control on Agriculture Products Project (QCAP).



QCAP Laboratory is a modern accredited laboratory offering a wide range of services in the field of chemical and biological analyses with wide experiences that cover food and environment
Our works are based on detailed knowledge of local and international legislations and technical standards

Mission

QCAP Lab is focusing on food safety under three major activities;

- 1. Egyptian Consumer protection against chemical and biological contaminants in food and environment.
- 2. Promoting exports from agricultural products through guaranteed safety standards and measurements that comply with the requirements of the importing countries.
- 3. Monitoring status of chemical and biological contamination in food and agriculture product (pesticides residues, heavy metals, mycotoxins, POPs, Microorganisms ...) in the local markets.

Human Resource

Professional and highly caliber chemical analysts and microbiologists all had extensive in-house training courses in sampling, chemical analyses, quality control and quality assurance according to ISO 17025:2005.

Facilities

OTHER LAB SERVICES & LOGISTICS

- 1. Food sampling service.
- 2. Designing of monitoring programs food and environment quality (consultancy services).
- 3. Training courses providing.
- 4. Validation and accreditation of customer's required methods.
- 5. On-line access to the results for all analyses.

LAB ACCREDITED ACTIVITIES

- QCAP lab analytical list contains more than 550 food contaminants and residues beside detection of more than 16 food pathogens.
- Technical Profile & Scope of Accreditation is covering more than 41 analytical and examination methods.

The laboratory analyzed more than 300,000 samples since 1995.

I. PESTICIDE RESIDUES ANALYSIS LAB

Analysis of residues of more than 400 pesticide types

- Wide Choice International Range fulfilling required international ranges of detection.
- Lab list is covering all of pesticides registered for use in Egypt.

II. HEAVY METALS ANALYSIS LAB

Residue Analysis of:

Mercury Hg Cadmium Cd Copper Cu Lead Pb Tin Sn Iron Fe Zinc Zn Manganese Mn Chromium Cr Aluminum Al

III. MYCOTOXINS ANALYSIS LAB

Analysis of Mycotoxins like

Aflatoxins (AFB1/AFB2, AFG1/AFG2), Ochratoxins A, Patulin

QCAP mycotoxin lab is the Egyptian authorized lab to examine all Egyptian peanut exports to control their compliance with the EU and other importing countries permitted levels of Aflatoxins.

IV. PERSISTENT ORGANIC POLLUTANTS (POPs)

AN Analysis of Persistent Organic Pollutants (POPs) like Polychlorinated dibenzo-dioxins (PCDDs), Polychlorinated dibenzo-furans (PCDFs), Dioxin-like Polychlorinated Biphenyls (PCBs) (17 coplanar congeners).

• The seventeen CDDs/CDFs designated as toxic by the World Health Organization (WHO) are determined.

• The lab analyzes this group of compounds in food stuffs, environmental and emission from factories.

V. MICROBIOLOGY LAB

More than 16 types of food-borne microorganisms are detected:

Salmonella, Listeria monocytogen, Clostridium perfringens, Thermotolerant coliforms (faecal coliforms), Enterococci (faecal streptococci), Escherichia coli, Bacillus cereus, Enterobacter,

Campylobacter, Legionella sp, Shigella sp., Staphylococcus aureus, Vibrio cholerae, Detection of Yeasts, Detection of Moulds, and Total Fungi, Aerobic Total Plate Count.

Microbiological hand swabs, surface swabs.

Microbiological quality of air.



VI. OTHER ANALYSES ACTIVITIES

- Analysis of Nitrate.
- Analysis of residues of Veterinary Drugs and Antibiotics.
- Analysis of Methyl Bromide (Fumigants).
- Analysis of Melamine.
- Analysis of PAHs contaminants (Benzo(a)pyrene).
- Analysis of Histamine.
- Analysis of Sudan dyes contaminants[Sudan I, Sudan II, Sudan III, Sudan IV, Sudan Red 7B, and Sudan Orange G].
- Analysis of Food Additives.







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Cotton Research Institute

www.arc.sci.eg

Mission

1. Continue to develop new Cotton varieties for better yield quality so as to meet the domestic and international textile industry standards and replace the grown varieties.

2. Develop early maturing, pest- resistant and stresstolerant varieties, especially for high heat (southern valley) and salinity (North Delta).



3. Maintain genetic purity, yield potentials and

fiber qualities through annual renovation of the existing varieties and their multiplication for the production of foundation seeds to this end CRI collaborates with the competetent seed administrations to ensure that the already grown stains are only handled in no more than 3 years.

4. Specify the most suitable agro – climate zones for each variety with a view to draw the best varietal map.

5. identify the most adequate agronomic package for each variety and zone to maximize yield potentials under the diverse environmental conditions.

6. improve quality assessment techniques to enhance the efficiency of the cotton breeding and technology programs .

7. Develop cotton sorting and grading techniques to better serve the domestic and export market operations; and improve ginning techniques to maintain the high quality of the Egyptian cotton .

Human Resource

Number of research staff about 1199 researches and technicians.

Annual Budget 2 million L.E

Facilities

Cotton Research institute has many Departments

- **1.Cotton Breeding Research**
- 2. Cotton Maintenance Research
- **3.Regional Evaluation Research**
- 4. Cotton Agronomy Research
- 5. Cotton Physiology Research
- **6.Ginning Research**
- 7.Cotton Grading Research
- 8.Fiber Research

- 9. Cotton Spinning Research
- 10. Chemistry Research of Cotton and Textile Fibers .

Main Accomplishments

- The continuous renewal of the strains of the commercial Egyptian Cotton varietied has had a tangible contribution to the maintenance of the genetic purity of those varieties
- 2. The consequence is preservation of the high quality level of Egyptian varieties.
- 3. Optimization of cultural practices applied to the Egyptian Cotton varieties and new promising hybrids ,which resulted in an obvious reduction in plant density and nitrogen fertilizer rate . Development of adequate agricultural practices



including appropriate phosphate and potassium fertilization, appropriate water requirements of Cotton plants, timely thinning of seedlings, timely defoliation etc....

- 4. Updating and upgrading of research facilities at the laboratories of the Cotton technology research sections . The direct consequence is adopting new concepts of research which would enable those sections to handle new research studies not considered previously in the routine work of the Cotton technology research sections.
- 5. Introduction of the open end spinning system together with the conventional ring spinning system .
- 6. Anew research section was founded in 2000 at the Cotton Research institute to conduct research studies on cotton fiber chemistry in addition to studies on chemical modifications of cotton yarns and fabrics such as mercerizing, bleaching, crease resistance and fire resistance.





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Field Crops Research Institute

www.fcri.gov.eg

The Field Crops Research Institute (FCRI) was established through the activities which were initially included in the Plant Breeding Section (1903–1910), the Agriculture Department (1910–1958), the Crop research Department (1958–1972) and later in the Field Crops Research Institute (FCRI), Agricultural Research Center (ARC) (1973 until the present). In 1980s, efforts were directed towards intensified research and extension activities and a shift towards privatization, close cooperation with International agricultural communities, and active participation with a number



of development agencies in particular USAID, which cosponsored with two large projects; EMCIP (Egyptian Major Cereal Improvement Project) and NARP (National agricultural Research Program). In the course of the Institute's history, more than five-hundred field crops cultivates have been released and introduced to the Egyptian agriculture.

Mission

Since its inauguration in 1973, Field Crops Research Institute (FCRI) has played a revolutionary responsibility in the poverty alleviation through productivity and quality improvement and development of field crops in order to bridge the gap between continuous increasing population demand and food production. This role is considered one of the most imperative mandates of FCRI among many other tasks.

Vision

• Develop, release and maintain high-yielding cultivates and/or hybrids of various field crops that are tolerant/resistant to biotic and abiotic stresses.

• Produce and maintain breeder and foundation seed of the new improved and recommended cultivates to secure enough seed to the Central Authority for Seed Propagation and to private seed companies.

• Provide and disseminate suitable recommendation packages for agronomic practices to extensionists and farmers.

• Explore various means of crop intensification and extend activities to newly reclaimed and refined areas.

• Adopt extension and training programs that help in transferring new technologies to farmers' fields across the country.

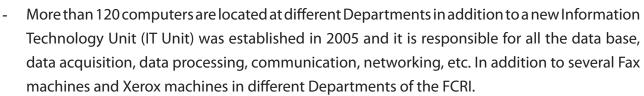
Human Resource

Admin.	453
Specialist	235
Research Assistant	50
Assistant Researcher	65
Researcher	148
Senior Researcher	120
Head Researcher	90
Emeritus	61
Total	1222

Facilities

Several laboratories equipped with highly sophisticated equipment and apparatus are mostly located at Giza and several Research Stations. The analyses conducted at these labs are related to the breeding and agronomy programs.

- Seed Technology Lab. (Seed testing)
- Cell Research Studies lab including cytology, cell culture, and molecular biology.
- Tissue culture lab.
- Seed Germination lab.
- Rice Research and Technology lab.
- Maize Research lab.
- Oil quality and analysis lab.
- Forage quality lab.
- Four seed screening and processing plants



Main Accomplishments

Due to the marked efforts of FCRI with the cooperation of various national and international research organizations substantial achievements have been realized for the benefit of Egypt and several neighbor countries.

These Major Achievements are summarized as follow:

- The characterized cultivates and breeding entries as early maturing for major food crops have become available.
- Significant increase in productivity of most field crops during the past 25 years reached in 2007 about 85, 88, 76, 53, 162, 70, 63 and 60% for wheat, maize, rice, sorghum, onion, peanut, faba bean and Egyptian clover respectively compared with 1982.

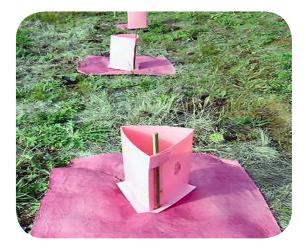


- Increase total production of cereals from 8.5 mil. t in 1982 to more than 20 mil. t in 2007.
- Increase total production of wheat from 2 mil. t in 1982 to 7.4 mil. t in 2007, which increased self sufficiency of wheat to about 50%.
 - Increase total production of maize from 3.6 mil. t in 1982 to 6.1 mil. t in 2007.
 - Increase total production of rice from 2.4 mil. t in 1982 to 6.9 mil. t in 2007.
 - -Increase onion exports to 271,000 t and peanut to about 30,000 t in 2006.
 - Continuation of research activities in Toshki and East of Oweunat.
 - The implementation of inter cropping systems has been intensified and the productivity per unit area and cropping intensify reached up to 180%.
 - Growing cereals in the newly reclaimed desert areas under sprinkler irrigation and/or under rain fed conditions has been possible due to the availability of drought tolerant cultivates that have been developed by the Institute research efforts.









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Horticulture Research Institute

www.hortinst.com

Mission

Horticulture Research Institute (HRI) is one of the biggest Institute in Agriculture Research Center that belong to Ministry of Agriculture and land reclamation (MALR). It has been founded in 1911 as independent Horticulture department before being transferred to horticulture research institute in 1971.

HRI has a great deal of basic research projects especially those concerned with producing new high yielding



varieties of vegetable and fruit crops as well as medicinal and aromatic plants, ornamental plants and wood trees. In this regard HRI has pioneer research in horticultural crop production, seed technology, biotechnology and tissue culture.

Vision

The main goal of HRI is to adopt new and environmental friendly techniques to increase productivity and improve quality of horticultural crops for either local consumption or export.

Human Resource

Emeritus	153	Assistant research	36
Chief researcher	79	Agricultural specialist	282
Senior researcher	135	Interim agricultural	1778
Researcher	219	Administration	280
Research assistant	73	Labor	795

Facilities

Horticulture Research Institute consists of 19 research departments, 3 central laboratories, 3 research farms and a special unit that includes 21 production activities in horticultural crops field of specialization, this in addition to 6 botanical gardens distributed in Cairo, Alexandria and Aswan provinces. The research activities of HRI are carried out in 6 main horticultural research stations and 3 main research farms.



Main Accomplishments

- Producing high yielding new varieties of vegetable crops with superior quality.
- Introducing new varieties and of fruit crops to the Egyptian agriculture.

Evaluating and testing the new imported varieties of vegetable crops and medicinal plants for local adaptation and recommending introducing the best of them to the local agriculture.

- Producing foundation and registered seeds of vegetable crops to provide farmers with high quality seeds.
- Producing certified seedlings of fruit trees, vegetables, ornamentals and woody trees.
- Preserving the genetic resources of horticultural crops.
- Applying new technologies of cultural practices for production of horticultural crops.
- Identify and overcome the production constraints and problems that may face farmers.
- Conducting applied research to minimize losse in horticultural crops during pre and post harvest processes and to enhance fruit quality.
- Organizing extension workshops and training programs to upgrade human resources in the field of horticultural crops.
- Participation in the national and international scientific meetings, conferences and exhibitions.
- Surveying and classification of the different Egyptian flora (wild and cultivated)





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Plant Pathology Research Institute

Mission

Developing the human and technical resources focusing on the biotechnological tools for accurate and effective detection and management of the plant pathogens.

The Strategy:

Using all the possible methods and techniques to control plant diseases, especially the safe chemical and bio-pesticides and developing disease-resistant plants.

Vision

Optimization of the healthy agricultural production that is free of the plant pathogens or any toxic contaminants.

Human Resource

Research Staff and associates 329: members Technicians and Clerks) different levels 301: (Technicians and Clerks) on contract basis.

Annual Budget

For research and studies (1,000, 000 L.E.)

Facilities

Seventeen research departments, a tissue culture unit and a central laboratory for biotechnology, all of them are well equipped and directed by well experienced research teams.

Some of the equipment in the central laboratory for biotechnology are PCR machines, Real-time PCR, DNA-Sequencer, Electrophoresis units, Gel Photo Documentation system, HPLC, GC-mass and several types of the advanced microscopes.

Main Accomplishments

- 1. Controlling plant disease problems that threaten the economic crops.
- 2. Traditional and molecular diagnosis and identification of the plant pathogens (viruses, fungi, bacteria and nematodes).
- 3. Developing some biological fungicides that are registered, commercially produced and distributed as a safe alternative to the harmful chemical fungicides.
- 4. Production and propagation of several elite and disease-free plant varieties using the tissue culture techniques
- 5. Serving many universities, research institutes and the private sector companies through making DNA-fingerprints, DNA-sequencing and different chemical analyses.
- 6. A well designed type culture collection facility.

7. Continuous training courses and workshops for agricultural extension specialists and cooperation with some big farms in adoption and spread of the biological control approach through on-farm-trials programs.

Cooperation with Others

The institute is having a solid cooperation with:

- 1- The Central Directorate of Agricultural Quarantine.
- 2- The Plant Protection Research Institute.
- 3- The Field Crop Research Institute.
- 4- The Horticulture Research Institute.
- 5- Faculties of agriculture and Science.

6- A cooperation with some European countries and the United States of America through several research projects.









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Plant Protection Research Institute

www.arc.sci.eg

Mission

- Setup National strategies for Agricultural Integrated Pest Management (IPM).
- Identification, classification, and survey of various crop pests of economic importance.
- Collection information for utilizing in the designing and implementation of IPM.
- Identification of critical economic margin of major agricultural insects and animal pests.
- Setup strategies for IPM research and apply programs for major economic crops under different environmental conditions of Egyptian Governorates.
- Evaluation the role of natural enemies in reducing the number of agricultural pests, while using the bio-control methods in order to minimize the amount of used pesticides and reduces environmental pollution.
- Mass production of insect pathogens for utilization as a control method.

Vision

- 1. Conducting ecological studies with the purpose of forecasting and assessment of pest population on different crops before reaching the point of economic damage.
- 2. Identification of the heat requirement needed for development of different pest species in order to set the economic threshold of each pest.
- 3. Evaluation of the efficiency of pheromones and other biological agents (fungi, bacteria and nematodes) involved in IPM programs.
- 4. Assessment of pre and post-harvest losses as a result of pest attacks.
- 5. Studying susceptibility of different crop varieties to pest infestation.
- 6. Studying new methods to replace the use of methyl bromide gas against storage pests.
- 7. Studying the use of inter-cropping systems as a means of reducing cotton pest infestation.
- 8. Improvement of spray equipment and techniques.

Human Resource

- Chief Researcher : 220
- Senior Researcher : 120
- Researcher : 181
- Researcher Assistant : 60
- Assistant Researcher : 40
- Plant Protection Specialists : 315
- Technicians: 257
- Temporary Labors : 1700
- Other:99

FACILITIES

The PPRI includes 22 research departments dealing with different aspects of Integrated Pest Management (IPM), as well as 13 special units.

Departments

- 1- Piercing &Sucking Pests
- 2- Cutworm & Mole Cricket
- 3- Cotton Leafworm
- 4- Biological Control
- 5-Bollworms
- 6- Sericulture
- 7-Pest Physiology
- 8- Tree & Wood Product Borers and Termites
- 9-Spry Technology
- 10- Scale Insects & Mealy Bugs
- 11-Beekeeping
- 12- Field Crops Pests
- 13- Horticulture Pests
- 14- Fruit Tree Mites
- 15-Locust & Grasshopper
- 16-Animal Pests
- 17- Cotton Pesticides Evaluation
- 18-Cotton & Field Crops Mites
- 19-Cereal & Stored Products Pests
- 20- Vegetables & Aromatic Plant Pests
- 21-Insect Identification & Survey
- 22-Vegetables & Aromatic Plant Mites.

Cooperated Organizations

- Faculties of Agricultural
- Nation Research Center
- Research institutes of ARC
- Central Administration of Pest Control
- Central Administration of Extension
- Central Administration of Training
- Local Agricultural Administrations in Governorates

Special units

- 1. Tree & Wood Product Borers
- 2. Horticulture Pests

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- 3. Insect Classification
- 4. Harmful Animal Pests
- 5. Sex Attractants Sericulture
- 6. Medical & Aromatic Plants Pests
- 7. Bio-insecticides
- 8. Beekeeping
- 9. Biological Agents Production
- 10. Chemical Analysis
- 11. Pheromone, Chemical Analysis
- 12. Termites
- 13. Horticulture Pests

Main Accomplishments

- 1. Establishment of applied pest management programs for major economic pests e.g. Cotton pests, sugarcane pests, termites, citrus pests, potato pests, rodent and bird pests and snail pests.
- 2. Development of new Biological control products (bacterial and virus) which are being used successfully against potato tuber moth in the field and storage.
- 3. Successful production and release of Trichogramma insect Parasite in sugar cane fields (more than 120,000 feddans / year) to control sugar cane borers. The same parasite was successfully used against date palm pests.
- 4. Participating in the national pest control campaigns i.e. Wheat, Rice, maize as well as rodent control.
- 5. Identification and classification of all insect pest species as well other related species.
- 6. Preparation and publishing of the "Technical Recommendations for the Control of Agricultural Pests" book, as well as various scientific publications, pamphlets, and training materials.
- 7. Distribution of paper and water traps for cotton leafworm & pink and spiny bollworms control in cotton fields.
- 8. Control of cotton leafworm on clover (berseem) by means of biological control agents (bacteria).

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Regional Center for Food and Feed

www.arc.sci.eg

The Central Laboratory for Food & Feed (CLFF) was established in 1980 with the cooperation of the government of Denmark under the authority of the Egyptian Agricultural Organization within the Ministry of Agriculture.

CLFF started to be involved in proficiency tests with both BIPEA in France and FAPAS in UK, since year 2002.

During the last 3 years CLFF has been busy implementing the ISO system 17025. The Lab. Applied in June 2003 to get the accreditation.

Mission

CLFF is engaged, since its establishment in 1981, in guality control services and research to achieve the following objectives:

1- Improve and develop the quality of animal feed and human food.

2- Develop the quality control systems with respect to feed stuffs and feed additives to reach the international standards.

3- Conduct training courses for the staff responsible for laboratory work and those responsible for quality control to elevate them technically to the international level.

4- Improving the nutritional status of different sectors of the population in Egypt.

Main Accomplishments

1-Modern systems were established for quality control of feed

stuffs, and feed additives through the use of up-to-date analytical technique. CLFF, according to its founding Ministerial Decree, is the sole authority responsible for quality control of feedstuffs, and feed additives whether locally produced or imported.

2- Capability building through training the technical staff whether in Egypt or abroad.

3- Implementation of the quality control system led to improving the quality of imported feedstuffs, concentrates and feed additives.

4- The use of advanced analytical techniques enabled CLFF to screen-out cases of adulteration.

5- Services were given to breeders, importing companies, feed mills, universities and research centers.

6- Establishing the first training center in the Middle East for quality of feed and feed additives.

7- Conducting seminars, scientific conferences and hosting experts and lecturers from abroad for the enrichment of research work.

8- Training agricultural extension agents in some governorates on safe nutrition, and qualify them to carry out nutrition education and train rural women to improve the nutritional status of their families.

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Soil, Water and Environment Research Institute www.sweri-eg.com

Mission

1- Maximize the return from the unit of soil water and/ or fertilizer used in the agricultural production taking in consideration the environment.

- 2- Establishment of databases from the available soil resources.
- 3- Prepare the recommendations for the optimum use and manager of soils, their conservation and improving their productivity.



- 4- Dissemination of the recommended technologies of the integrated soil and water management in cooperation with the extension sector.
- 5- Registration of the fertilizers either locally produced or imported as well as market inspection.
- 6- Improving production systems of bio-and organic fertilizers and their used in agricultural production.
- 7- Cooperation with local, regional and international institutions in the areas of applied research.
- 8- The Institute is a consulting from to carry out studies and to give recommendations (for farmers and arrestors) on the local and regional (Arabic and African) levels.

Human Resources

It includes a group of elite Scientists, about 623 researchers, 55 assistant researchers, 93 specialists , 215 Administrative and 376 permanents.

Facilities

Major Fields

Environment – Water Requirements & Field Irrigation-Plant Nutrition and Soil Fertility- Soil Chemistry and Physics- Soil Survey – Remote Sensing & GIS – Sandy, Calcareous, Saline and alkaline Soils – Agricultural Microbiology – Field Drains – Soil Improvement and Conservation.



Main Accomplishments

1-Producing soil classification maps including soil productivity.

- 2- Using remote sensing techniques in estimating urbanization and sand encroachment on cultivated soils, sea shore erosion and yearly census of cultivated crops.
 - 3- Irrigation water management through laser leveling, long furrows and gated pipes.
 - 4- Evaluation of the re-use of marginal water in agriculture.
 - 5- Environmental impact assessment of some agricultural projects.
 - 6- Evaluation of the use of slow release fertilizers as well as rock phosphate in agriculture.
 - 7- Recycling of agricultural residues to produce organic fertilizers.

8- Producing bio-fertilizers for crops, bio-pesticides to control nematodes (nemaless) as well as bio –soil conditioners for the newly reclaimed soils.





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Weed Research Central Laboratory

www.arc.sci.eg

Mission

Increasing the activities of weed sciences in increasing the agriculture production and decreasing yield losses due to weed interference.

Vision

Planning strategies for improving weed control options which depending on cultural, mechanical, chemical and biological control methods to be applied in 14 million feddans. This will be through conducting basic and



adaptive research in field of weed science to increase agriculture production through minimizing weed/crop competition. This will save hundreds million of Egyptian pounds annually.

Main Responsibility

Weed Research Central Laboratory was founded according to the Ministerial decree No. 224 in 2002 to increase the role of weed science disciplines in improving agricultural production.

Human Resource

Chief researchers	2
Emeritus professors	11
Senior researchers	4
Researchers	11
Researcher assistants	4
Assistant researchers	2
Total	34

Annual Budget

¹/₂ Million pounds annually.



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Facilities

- 1. Carrying out basic and applied research for different weed control methods include cultural, chemical, biological and mechanical methods for each crops from field, horticulture. Vegetable and medical crops and weeds along road sides and ditch banks of sub canals and drain.
- 2. Conducting studies on yield losses due to weeds infestation of these crops (field crops, horticultural, vegetables, medical plants) in order to plan the suitable weed control strategies for each crop.

3. Publishing first colored manual for identifying wild oat surveying areas attacked by wild oat in wheat, drawing maps for wheat fields attacked by wild oat and designing policy to weed control using all weed control methods (chemical, mechanical and agricultural control).

4. Preparing expert systems on weeds and parasitic weeds and weed control methods.

5. Conducting studies about the effect of natural chemical products from roots, stems and seeds of some weeds and crops on planting and growing some common weeds.

6. Writing and presenting Scientific Research.

Physical Resources

1. Weed survey, ecology and physiology laboratory including (6 unit incubators for germination testing of seed weeds, deep freezers – microscopes – Autoclave – GLC – Computers units).

- 2. Laboratory of testing imported wheat for seed weed contamination.
- 3. Weed survey and identification of weeds laboratory including herbaria at Giza Sakha Sids.

4. Laboratories for the evaluation of the efficacy of herbicides at different Regional on Stations including (Scales – Flame photometer – Soxhelet).

5. Weed Research Library included 1000 book thesis and periodical in the field of weed science.

Main Accomplishments

1. Conducting 150 – 300 experiments annually funded from 12 projects.

- 2. Preparing 64 technical recommendations in weed control for the Ministry of Agriculture.
- 3. Wild oat survey in wheat field at different governorates of Egypt.

4. Applying chemical wild oat control in 131744 feddan and mechanical control in 95166 feddan at 20 governorates as well as chemical control for broad – leaved in 313092 feddan and mechanical control in 248267 feddan.

5. Testing about 300 to 500 samples annually of imported wheat for human consumption and those coming from the agricultural quarantine and assessing the relative contamination toxic weed seeds in grain wheat.

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Ministry of communication

Research Landscape in Egypt 2010



National Telecommunication Institute

www.nti.sci.eg

Mission

The National Telecommunications Institute (NTI) was founded in 1984 to be a center for telecommunication systems, technologies, policies and management.

Vision

NTI as a scientific, training and research institution has the following objectives

- 1. To provide high quality, advanced postgraduate engineering education and training in the field of telecommunications.
- 2. To conduct and sponsor research in the field of tele communications with the aim of solving technical problems which confront tele communication companies.
- 3. To provide technical and policy expertise in the form of consultation services, feasibility studies, network planning, standardization, technology, assessment studies and field measurements and testing.
- 4. To cooperate with regional and international organizations working on information and communications technology field.

Human Resource

Employees	Total
Professors	4
Associate Professors	3
Assistant Professors	15
Assistant Lecturers	26
Teaching Assistants	5
Engineers	29
Technicians	19
Administrators	12
Other Bachelor Specialities	111
Administrative & Financial Affairs	79
Service Employment	9
Total Number of Employees	312



Facilities

NTI comprises five scientific departments : Network Planning Department, Transmission Department, Switching and Traffic Department, Electronics Department, Computers

and Systems Department.

Research and Training Labs

Network Planning Department.

- Third generation (3G) mobile communications network laboratory, based on code division multiple access (CDMA) technology.



- Network performance evaluation and simulation laboratory.
- Power density measurement laboratory of electro magnetic radiations.
- Network planning and management laboratory.
- Wireless local area network (WLAN) laboratory.

Transmission Department.

- Optical fiber communications laboratory.
- Digital microwave laboratory.
- Satellite reception laboratory.
- Microwave engineering laboratory.
- Optical fiber systems measurement laboratory.

Switching and Traffic Department.

- Digital switching systems laboratory.
- Private automatic branch exchange (PABX) laboratory.
- ATM Switching laboratory.
- Laboratory for transmission of video and voice over Internet protocol (VOIP).
- Signaling systems laboratory.
- Integrated service digital network (ISDN) laboratory.

Electronics Department.

- Design center.
- Printed circuit boards (PCBs) laboratory.
- Measurements laboratory.
- Opto-elelectronics laboratory.









Computers and Systems Department

- Multimedia and image processing laboratory.
- Computer networks laboratory.
- Computers maintenance laboratory.
- Dream lab.

Main Accomplishments

- 1- Research programs in the field of networks, wireless communications, communication electronics, security and privacy of data and computers.
- 2- Consultancy services in the field of communications and information technology for several institutions (e.g.: National Telecommunication Regulatory Authority, Petroleum Pipes Company and other local and regional companies).
- 3- NTI academic staff published more than 200 researches in international periodicals and conferences.
- 4- NTI grants a 2-year post graduate diploma in information and communications engineering, accredited by the supreme council of Egyptian universities
- 5- More than 25 specialized training program in various telecommunication systems and technologies.
- 6- CISCO regional academy program where NTI is certified as a regional CISCO academy and a CISCO academy training center (CATC).





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Ministry of Economic Development

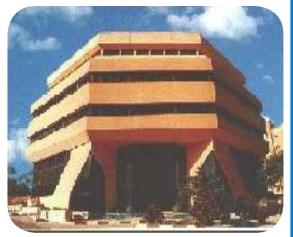
Research Landscape in Egypt 2010



Cairo Demographic Center www.cdc-egypt.org

Mission

Through rigorous training and research opportunities, the Cairo Demographic Center (CDC) nurtures a new generation of specialists in demography in the developing world, who are concerned with the study and analysis of critical population issues. It fosters innovative interdisciplinary approaches to population studies and helps policy-makers design and implement appropriate population and development policies. The CDC maintains strong relations and cooperation with national, regional andn international population organizations.



Vision

Developing CDC activities and strengthening and fostering the regional role, to expand the geographical scope and working towards awarding the Ph.D. degree in collaboration with the Egyptian Universities.

Objectives

The main objectives of the CDC are to:

- Provide training in demography, population and development to individuals in the field.
- Undertake research studies and surveys in population and related fields.
- Provide technical assistance and consultancy services to governments and organizations.
- Organize national and regional seminars on population and development issues to disseminate research findings to a wide range of audience.
- Plan and conduct educational programs in the field of population and development.
- Assist governments and organizations in assessing and evaluating population programs and projects.

Staff Capacity Building

In recent years, CDC has diligently thought to enhance its competitiveness in the regional and global market be improving the quality of its training and research services, and maximizing the utilization of research findings.

Recognizing the importance of continued education and skill upgrading in achieving these goals, CDC leadership has paid special attention to the enhancement of its own staff capacities. Research and teaching staff members are encouraged to upgrade their academic skills and develop

peer-reviewed papers for publication in international journals and presentation in international meetings. Similarly, resources and facilities are made available to administrative staff in order to enhance their administrative and managerial skills. Moreover, major steps are the underway curricula of CDC's degree programs, reinvigorate the website and render it more interactively and upgrade the e-mail system and computer facilities.

The Organization of CDC

CDC has seven full-time and 17 part-time staff members with different disciplinary backgrounds, including demography, statistics, sociology, computer science, health planning and management, mathematics, planning and labour force, biostatistics, economics, and population statistics. It is headed by a Director, assisted by program coordinators who administer the CDC's academic, research and training divisions.

Resources

Library

The CDC library, located on the first floor of the Moqattam premises, is one of the richest libraries in the field of demographic studies in the Middle East. It contains more than 36,000 volumes and 110 international periodicals, 30 of which are in Arabic. In addition to that the CDC library is a repository of recent reports and up-to-date demographic data on the states it serves, including census, vital registration and survey data.

Computer Lab

CDC computer labs are equipped with about 50 personal computers supplied with the most recent hardware and relevant software needed for data entry and demographic and statistical analysis. Available statistical and demographic software packages include the PC-EDIT, SPSS, MORTPAK, and SPECTRUM.

The CDC is connected to the World Wide Web and provides internet services to researchers. In addition to, up-to-date equipment needed for high quality presentations, including data show projectors and scanners which are readily available at the CDC.

Language Lab

Among the CDC resources is a well-equipped laboratory to help improve the students' English language abilities.

The CDC also offers non-Arab students the opportunity to learn Arabic

Physician/Clinic

CDC has a clinic, and a physician available to provide medical care or advice to the CDC students and staff. Students are strongly advised to refer to the medical consultant as soon as they arrive in the CDC for orientation.

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Ministry of Education

Research Landscape in Egypt 2010



National Center for Educational Research and Development

www.ncerd.org

The National Center for Educational Research and Development has been established under the Presidential Decree No. 881 in 1972 as being a public organization undertaking scientific research. Its Board of Directors is presided by the Minister of Education. In 1980, the Presidential Decree No. 96 was issued considering the Center as one of the scientific institutions. The executive regulations for the National Center for Educational Research and Development (NCERD) were issued under the Presidential Decree No. 53 in 1989.

Mission

The mission of the National Center of Educational Research and Development is to conduct educational researches and studies that can contribute to achieving the total quality in the educational process and making the positive change in the learning environment and humans (school management – teachers – learners) to bring authenticity and innovation together. This requires a comprehensive and integrated vision of the weaknesses and strengths in the educational system that keeps pace with the requirements and characteristics of the modern age and the prediction of the developments of the current conditions crystallize a vision on which the future of education in Egypt will be based with continuous review of aims, strategies and actual practices.

VISION

1-conduct distinguished educational researches and studies to tackle the educational problems facing the educational system and to develop distinguished educational thought to upgrade the educational process.

2- apply the educational scientific research to develop education programs and to establish learning and teaching community.

3- make close co-operation in the educational scientific research with the local and international educational research institutions (universities – faculties of education-research centers) and to promote the principles of dialogue, understanding and mutual co-operation with positive trends based on our values and constants.

4 - attach a great importance to future researches and studies focusing on future educational needs and devising plans to meet them. Successfully.

5- conduct comparative studies locally, regionally and internationally to enhance competitiveness in the labor markets. (qualitative development in all aspects of the educational process).

6- include the national identity in the researches, of which a part cannot be dealt with in isolation of its community context and its relations with social ,economic , cultural and political environment.



7- make school a nucleus of educational institution and a field of educational experimentation and renovation.

8- maximize technology component in education, train students on using and mastering high technology (notably computer, satellite broadcast of the educational channels and E- learning) and benefit from knowledge



Human Resource

resources.

The total number of the research staff and civil servants is (297) The number of research staff according to the last meeting of the Board of Directors in 12/3/2009

- Total number is (140)
- (20) researcher professors
- (24) assistant researcher professors
- (83) researchers
- (13) assistant researchers
- The number of civil servants is (157).

Annual Budget

- 9 million Egyptian pounds including the research budget (420 000) for the year 2008/2009.

Facilities

- 50 computers
- 6 photocopiers.
- 2 plotters.
- -Scanners: 3 (color), 2 laser and live presentation
- Display screen : 2s







Main Accomplishments

1. The average number of field researches carried out by the Center is 30 annually.

2. The Center publishes "The Educational Research" Journal, a semi annual scientific. It contains the educational researches and studies related to the educational planning and policy, the curricula and teaching methodology and educational activities and evaluation. The researches published in the Journal are submitted to scientific Judgment panel.

3. It publishes "the Education" journal .It is a quarterly publication and distributed to school libraries at primary and secondary stages to generalize the scientific and media benefit and enlighten the public opinion of the education development It contains educational studies, researches, conferences and ministerial decrees. In addition. it contains a review of new books in the educational area and summaries of the researches undertaken by the National Center for Educational Research and Development

4. It has made worldwide comparative studies and benefited from the experiences of countries to support the educational process at all stages.

5. Cooperation with the Ministry of Education (MOE) in training teachers, supervisors, School leadership and middle leadership through Video Conference (V.C.).

6. Cooperation with some foreign institutions like "the French Cultural Center" in some projects concerning the scientific activities at the primary stage.

7. Cooperation with the Japanese JICA Project in creative activities concerning science and mathematics at the primary stage.



Ministry of Electricity and Energy

Research Landscape in Egypt 2010

Central Chemical Laboratories www.egelec.com

Central Chemical Laboratories (CCL) activity comes under the Mother Company Egyptian Electricity Holding Company (EEHC) through the Egyptian Electricity Transmission Company (EETC).

The Egyptian Electricity Holding Company (EEHC) is the responsible authority for the generation, transmission and distribution of electricity power energy in Egypt, and it's one of the biggest authorities in the Ministry of Electricity & Energy.



The Central Chemical Laboratory (CCL) was established in 1970 to chase the huge global development in the field of chemical analysis services. CCL services cover all of the Electricity Sector related units and all the different public and private sectors inside and out side Egypt.

Mission

CCL provide its services in the area of chemical analysis, consulting and scientific studies according to the latest local and international standard technical specifications using the most advanced equipment, tools and techniques to meet the customer needs. In addition, CCL top management is committed to compliance with the international standard ISO 9001:2000 and continual improvement of quality system.

Vision

CCL planing to be one of the leadership in the field of chemical analysis, consulting and scientific study services and to increase its share in the domestic and abroad markets.

CCL Main Activities

CCL presents its services through its various Labs in order to serve the electricity sector, research centers, universities and industrial companies. **The main CCL activities are:**

1) Chemical Analysis Field

- Water Analysis
- Industrial Waste Water & Sewage Analysis.
- Fuels Analysis



- Transformer, lubricating and hydraulic oil Analysis.
- Dissolved Gases in Transformer Oils.
- furnans compounds in transformer oils.
- Scale deposits, Ores, metals and Alloys Analysis.
 - X-ray Diffraction for material Analysis.
 - Emissions Measurements and Combustion Gases Analysis.
 - corrosion rate mesurments using various and latest corrosion monitoring techniques.



2) Chemical Studies & Research Field:

- Evaluation of materials used for treatment of domestic and industrial water.
- -Chemical consultation for domestic and industrial water
- -Water treatment studies and related technical problems.
- -Consulting and auditing of technical properties of water treatment units.
- Drinking and Waste water treatment consultants.
- Chemical Cleaning Studies of Boiler & Auxiliaries.
- -Corrosion Problems Studies.
- -Metallurgical investigations and failure Analysis Studies.
- Fuel treatment and Fuel Additives studies.
- -Non-distructive studies using poroscope.
- -consulting of metalic alloys protection aganist failure.

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National Center for Nuclear Safety and Radiation

The NCNSRC is established within the framework of the Egyptian atomic Authority to assist and give advice to the government with its licensing and regulatory functions.

Mission

The NCNSRC is established within the framework of the Egyptian Atomic Energy Authority to assist and give advice to the government with its licensing and regulatory functions.



Regulations and licensing of nuclear facilities in Egypt is based on the provisions of the Atomic Energy Act and its enforcement decree and regulations, 288 year 1957 and 59 year 1960.

Vision

The national center for nuclear safety and radiation control performs the following duties and is conducting responsibilities for the relevant research.

ORGANIZAATION AND FUNCTION

The NCNSRC is composed of nine technical and research departments within three divisions, it is responsible for the administration of the national network for radiation monitoring and the administration activities related to radioisotopes utilization and safety assessment and inspection of the transportation of radioactive material.

The departments are responsible for developing various technical Standards, which are applied to nuclear regulation in Egypt. The departments carry out complementary safety research programs, and develop or adopt the necessary computer codes.

SAFETY OF NUCLEAR INSTALLATIONS DIVISION

The main functions of the division are to review and confirm the safety and the integrity of nuclear installations, in design and operational phases. It has three departments: Engineering Safety Department Operation and Human factor Department and Nuclear Materials and Fuel cycle Department.



Radiation Control Division

the main function of radiation control division are safety review, inspection and technical standards development in the area of radiological safety evaluation and conducting the relevant research through the following departmental dept. and health physics dept.

REGULATIONS AND NUCLEAR EMERGENCIES DIVISION

This division is responsible, through its three departments for developing regulation and assessment programmers on radiological emergency planning and response, quality assurance, nuclear material safeguards requirements. Through the following departments: Nuclear low and licensing Dept., Nuclear Material Safeguards and Physical Protection Dept. and Quality Assurance Dept.

Responsibilities

The national center for nuclear safety and radiation control performs the following duties and is conducting responsibilities for the relevant research.

- (1) Safety Review and Evaluation
- (2) Safety Inspection
- (3) Technical Standards Development
- (4) Radioisotopes and Radiation Generators Regulation
- (5) Operator Examination
- (6) Environmental Radiation Monitoring
- (7) Safety Assessment and Inspection of the Transportation of Radioactive Materials.

National Center for Research and Technology Radiation www.eaea.org.eg

Mission

NCRRT's mission is to advance scientific and research programs, with a vision to be a national leader in doing so, and to create opportunities for collaboration with the academic community and industry. This mission will be accomplished by :

 Conducting research to develop ionizing radiation applications in the fields of industry, agriculture, health and environment ...etc.



- 2. Enhancing the radiation processing applications e.g. Sterilization of medical products, polymer modification and food irradiation.
- 3. Demonstrating the feasibility of industrial application of radiation technology in Egypt.
- 4. Encouraging and supporting the development of radiation research and technical staff in the pursuit of excellence in science.
- 5. Providing innovative solutions to potentially beneficial problems.
- 6. Providing expert scientific and technical advice in the radiation processing application.
- 7. Extension of the market capacity for radiation-processed products.
- 8. Intensifying the collaboration with the industrial companies.

Human Resource

About 1154 workers are belonging to NCRRT among them about 400 scientific staff (Prof., Ass. Prof., Lecturers etc.).

R&D Annual Budget

- 2 Million L.E. for research finance.

Facilities

- 1. Industrial Gamma Irradiation Facility (Egypt's Mega Gamma I type J-6600 radiator)
- 2. Industrial Electron Beam accelerator (Energy: 1.5 MeV, Max. Current: 25 mA, Max. Power: 37.5 kW).
- 3. Three gamma cells for research covering different dose rates (low, medium and high).
- 4. Quality control laboratories e.g. High-Dose Reference Dosimetry Lab, Routine Dosimetry Lab., and Microbiology Lab.
- 5. Well equipped research laboratories to assist accomplishment of the NCRRT mission.
- 6. Central Laboratory including main equipment such as: NMR, ESR, Thermal Analysis (DTA, TGA, TMA and DSC), Scanning and Transmission Electron Microscopes, XRD, GC-Mass Spectrometer, HPLC, GPC, Atomic Absorption, ICP, Mechanical testing apparatus....etc.

Main Accomplishments

- 1. Installation of Egypt's Mega I irradiation Facility.
- 2. Installation of Electron beam accelerator.
- 3. A new gamma irradiation facility is under installation at Alexandria City (near the seaport) for the export of sterilized medical products as well as irradiated fresh and dried foods.

4. Production facility for radiation-sensitive indicators is already installed to meet the demand for export worldwide.

- 5. Production of wound-dressing and agricultural hydro gels.
- 6. Establishment of the High-dose Reference Laboratory.
- 7. Production of Human Amniotic Membrane.









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New and Renewable Energy Authority

www.nrea.gov.eg

Mission

In early 1980s, a renewable energy strategy was formulated as an integral part of the national energy planning in Egypt. Such strategy has been revised in view of the projections for possible RE technologies/ application options, available financing sources and investment opportunities in the field.

Currently, the strategy targets to satisfy 20% of the generated electricity renewable by energy by 2020, including a 12% contribution from wind energy, beside the additional contributions of other RE applications.



In 1986, New & Renewable Energy Authority (NREA) was established to act as the national focal point for expanding efforts to develop and introduce renewable energy technologies to Egypt on a commercial scale together with implementation of related energy conservation programs

NREA is entrusted to plan and implement renewable energy programs in coordination with other concerned national and international institutions within the framework of its mandate which includes:-

Vision

- 1. Renewable energy resource assessment.
- 2. Research, development, demonstration, testing and evaluation of the different RE technologies focusing on solar, wind and biomass.
- 3. Implementation of renewable energy projects.
- 4. Proposing the Egyptian standard specifications for renewable energy equipment & systems, and conducting tests to evaluate their performance, under the Egyptian prevailing conditions, hence issuing respective licensing certificates to that effect.
- 5. Rendering of consultancy services in the field of renewable energy.
- 6. Technology transfer and development of local manufacturing of Renewable Energy equipment.
- 7. Education, training and information dissemination.



Human Resource

Staff no.	996
Engineers	171
Technicians	222
Accountants	14
Administrators	294
Physicians & Lawyers	294
Others	170

Main Accomplishments

1. Wind Atlas for Egypt: More than (30) wind masts were erected in several sites. The collected data, over a period from 1991-2005, have been analyzed using Wind Atlas Analysis & Application Program (WAsP).

- 2. Zafarana 305 MW Wind Farms on Suez Gulf.
- 3. Kuraymat Solar Thermal Power Plant (140 MW).
- 4. PV system to light one of NREA' remote sites.

5. Developing a Clean Small Carbonization System, in cooperation with US-Egypt Joint Science & Technology Board affiliated to Academy of Scientific Research & Technology

NREA's Activities in the Field of Renewable Energy

1-The issuance of wind atlas for egypt in Dec, 2005, in cooperation with the Danish RISO labs and Meoterlogy Authority, The Wind Atlas for Egypt confirms the existence of a widespread and particularly high wind energy resource along the Gulf of Suez. With mean wind speeds and mean power densities of 7-0.5 meter per second and 350-900 Wm-2, respectively, estimated for a height of 50 m over roughness class 1 (roughness length of 0.03 m), the wind resources are comparable to those of the most favorable regions in NW-Europe. The Wind Atlas further indicates that the wind energy resource in large regions of the. Western and Eastern Desert - in particular west and east of the Nile valley between 270 N and 290 N, are much higher than hitherto assumed. The mean wind speeds predicted are between 7 and 8 ms-1 and the power densities range between 300 and 400 Wm-2• Parts of the Sinai Peninsula also feature relatively high wind energy resources, in particular along the coast of the Gulf of Aqaba and along the mountain ridge to the West of the Ajmah Mountain (Gebel El Tih), The North-Western part of the Mediterranean coast, from Sallum to Alexandria, seems to be a region of somewhat lower wind resource than was previously assumed.

2- Large scale grid connected wind farms on suez gulf, the capacity of the wind farms was extended to reach 370 MegaWatt(MW) at the begining of 2009. The farm is being extended to reach 425 MW by the mid of 2009 and planned to reach 545 MW by mid of2010.

3- The National Strategy aims to reach 20% of the generated energy from renewable resources by 2020 (12% from wind energy & 8% from hydropower), The action plan to achieve such strategy targets to implement wind farms of capacity 7200 MW, based on participation of the private sector.

4- The solar thermal power plant (140) MW based on parabolic trough technology at Alkorimat site (90 KM south cairo). Currently the solar island is being constructed where 570 solar collector units were installed. The gas unit was installed in March 2009, it is planned to operate the project in October 2010.

5- Utilization of PV systems to electrify one of remote sites of NREA. Moreover, NREA signed a protocol for cooperation with the Italian Ministry of Environment to electrify 2 remote settlements in Matrouh Governorate (50 houses, 2 medical clinic units, a school, 3 masjeds and 40 street lighting units), The project will include PV systems of about 43 kW. It is planned to finalize the project by the end of 2009.







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Nuclear Materials Authority

Mission

The Nuclear Materials Authority is mainly concerned with research, and exploration of the radioactive raw materials as well as organizing their handling. This purpose is achieved through several geological, geophysical, geochemical, and mineralogical studies.

Vision

- Suggesting the general policies and planning for researches and studies aiming at discovering and exploring nuclear raw materials and their handling disciplines.

- Full survey operations to define areas of nuclear ore capabilities.

- Full coordination with the International Atomic Energy Agency (IAEA) and the Egyptian Atomic Energy Authority (EAEA) about subjects related and relevant to NMA's activities.

- Contribution into enhancing the national awareness about the peaceful uses of atomic energy in different fields.

- Training and preparation of human and scientific cadres, specialized into NMA working fields.

- Delegating training scholarship grants and missions in coordination with Higher Education Ministry Missions Dept. and the Academy of Scientific Research and Technology along with relevant concerned bodies.

- Working on applying the state policies of the necessity of making use of the scientific researches in applied fields to serve for developmental targets and the national research and environmental projects

Human Resource

- More than 216 staff members having M.Sc. and Ph.D in the sciences related to the fields of NMA (geology, geophysics, geochemistry, mineralogy, radioactivity Etc).

- More than 530 Work members specialized in the different scientific fields.

R&D Annual Budget

Depends on types of scientific research activities related to NMA fields and according to the annual programs and the available support.

SCIENTIFIC & TEC. CAPABILITIES

- There are many scientific and technical capabilities in different exploration fields (e.g. geology, geochemistry, airborn and ground geophysical fields).

- Different specialized laboratories in the mineralogical, Chemical, enviromental and geotechnical studies.

Main Accomplishments

- Evaluation of black sands.
- Purification of phosphoric acid.
- Environmental Radiation studies on ores and raw materials.
- Air born geophysical survey for radioactive raw materials.
- Drilling and development of ground water wells.
- Ground geophysical survey for exploration of raw materials.

COOPERATED ORGANIZATIONS

-International Atomic Energy Agency (IAEA). -Different Organization, Universities and Research Centers.

GENERAL SERVICES

- -Geological, geophysical and geochemical studies.
- -Chemical analyses.
- Mineralogical studies .
- Ore dressing .
- Geotechnical studies.
- Environmental radiometric studies.









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Nuclear Research Center

www.eaea.org.eg

The Egyptian Atomic Energy Authority (EAEA) has four research centers .The largest is the Nuclear Research Centre (NRC) which is located in Inshas. Since its establishment 50 years ago, developed to be the major national scientific institution devoted for R&D in the peaceful applications of Atomic Energy.

Mission

1. Conducting research to develop nuclear technology applications in the fields of physics, engineering, reactors, accelerators, environment, agriculture, industry, health, radiation protection, material sciences, etc.

2. Technology Transfer and development of qualified manpower to cope with the international progress in the peaceful applications of nuclear technology.

Vision

The Nuclear Research Centre as a part of the Egyptian Atomic Energy Authority is an institution of excellence devoted for the development and utilization of nuclear science and technology for peace and welfare of the Egyptian society.

Human Resource

Number of research staff are 1830

R&D Annual Budget

10.7 million in 2008

Facilities

The NRC has several unique science and technology facilities which are efficiently used by the national scientific staff, universities and research institutes through joint research activities or through contracted services such as:

Two research reactors, two accelerators namely: cyclotron and tandem accelerators, advanced nuclear analytical equipment for element and isotope analysis, plasma units, ion sources ,nuclear detectors ,hole body counter ,etc

Main Accomplishments

• The reactors (2 MW and 22 MW) are multi purpose reactors for various research and applications where several experimental and production facilities are installed to meet the requirements of various utilization groups including universities, research institutes, industry, and medical organizations.



- The cyclotron accelerator accelerates protons, deuteron, helim-3 and –4. The accelerator is equipped with channels for short lived radioisotope production for medical applications such as; (Ga 67, In-111, I-123), for fast neutron production (>4MeV) and for material science industrial applications.
- The central laboratory for element and isotope analysis has advanced nuclear techniques capable to detect trace and ultra trace element and isotope concentrations (down to femto gram /gram) such as inductively coupled plasma mass spectrometer, electron microscope with energy dispersive X-ray unit, ion chromatograph, atomic absorption spectrometer ,X-ray fluorescence unit, etc





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Ministry of Health

Research Landscape in Egypt 2010

Center for Field and Applied Research

www.mohp.gov.eg

Mission

Research - training - laboratory analysis - quality assurance and biostatistics

Vision

Training and field research of health

Human Resource 2 M.Sc. And 10 B.Sc.

Facilities

Epidemiology - clinical pathology - tropical medicine - chest

Main Accomplishments

- Control of schistosomiasis and intestinal parasites.
- Control of diarrheal diseases and its complications in children
- Control of tuberculosis and chest diseases.
- Control of hepatitis C virus.
- Control of diabetic diseases.
- Control of heart diseases
- Health system research

Future plan

Establishing a center for disease control in Egypt

Priorities : According to the majority of the health problem

Cooperated organization

- 1. All Egyptian universities
- 2. C.D.C USA
- 3. Maryland UNIV. USA

General Services : Research and Training

Other Services

Chest unit for chest diseases and tuberculosis control

The responsibilities of the unit can be summarized into the management of all chest patients attending from south qualybia region through out patient Qualyub chest clinic. The management starts by clinical examination and includes laboratory investigation and radiological examination. The unit supply all specific anti tuberculous and non specific drugs free to the attending patient



Research

- 1. The rule of the center is to make good communication with all citizen in the place of research, and ones coming to the center for consultation, clinical examination or / and abdominal ultrasonoagraphy will be examined for free.
 - 2. To limit the spread of the disease, many symposiums were regulated for health education among all people.
 - 3. All steps of our project are subjected to quality assurance
 - 4. Tulane Univ.
 - 5. Gorge Washington Univ.

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Environmental Monitoring and Occupational Health Studies www.mohp.gov.eg

Mission

Helping In Developing and Controlling Health in Egypt by Monitoring Env. Pollutants in different media allover the year according to the Egyptian standards.

Vision

Covering all governorates by Env. Monitoring nets.

Human Resource

In Cairo Labs about 101 high qualified personnels (physicians – pharmacists – chemists – And Technicians). In labs of 11 governorates and more than 100 chemists and technicians)

R&D Annual Budget

- 250.000 L.E. In the year 2004
- 100.000 L.E. in 2005
- 100.000 L.E. in 2006
- 150.000 L.E. in 2007

Facilities

- Modern accurate instruments for qualitative and quantitative determination of pollutants Such as :-
 - Gas chromatograph.
 - Gas chromatograph with Ms units.
 - HPLC.
 - Ion chromatograph.
 - Atomic absorption .
 - PM) -High volume Semi automatic- Air pollution monitoring instruments







Main accomplishments

Managing of:

A-National net For monitoring of pollutants in River Nile and its Branches.

B- National net For monitoring of air pollutants in Egypt .

Applying many Env. Studies in many hot points and Zones such as :

- Al-Salam canal .
- Safaga Resort.
- New vally governorates .
- Marriot lake .
- Bardaweel lake .
- South Cairo industrial Zone in Helwan and impact on Hawmdia,ect

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Giza Memorial Institute of Ophthalimiic Research www.mohp.gov.eg

Mission

Combat sighted and various eye diseases

Vision

Development and modernization of remedies for various eye diseases and in particular that lead to visual disability and contribute with the fight against blindness and raise the productivity of the individual and society

Human Resource : 262 workers

R& D Annual Budget

300000 (three hundred thousand pounds of whiting)

Setting priorities

- The development and modernization of remedies for various eye diseases, particularly that lead to visual disability to contribute to the fight against blindness and raise the productivity of the individual and society.
- By cooperating with the research Institute: There is cooperation with all interested parties eye diseases.
- Also other institutes offering their services e.g. (Accurate analyses, measurements, Etc.)
- There is also pathology institute unique plant rarely found in any views on eye diseases, except for University Hospitals.

RESEARCH PROJECTS

Research years 2004 - 2007 Allankotaih diagnosis and treatment before and after the removal of cataract ultrasound, 2007-2008 survey of the region's central network and optical nerves of diabetics more than ten years using the OCT, Also a comparative study on different cataract cases.



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Hearing and Speech Institute www.mohp.gov.eg

Mission

- 1. high quality health care in the scope of ENT, Audiology & phoniatrics.
- 2. Training in our health scope of others (e.g.) Egyptian followship doctors.
- 3. Training of our medical staff.
- 4. Medical researches in our health care scope .

Vision

1. ENT surgery

Initiation of Head & Neck surgery To be a fully implemented service within the next 5 years.

2. Audiology

Initiation and full implementation of the service of early detection & ntervention of hearing loss potential within the next 5 years .

3. Phoniatrics

Initiation and full implementation of the service of early detection & intervention of communication and swallowing disorders and service of swallowing station within the next 5 years

Human Resource

Medical Consultants	7
Medical Assistant consultants	5
Medical Colleagues	8
Specialists	15
Assistant specialists	11
Residents	39

Annual Budget

- 1-State Budget (mainly)
- 2-local income by economy care.
- 3-Donations.



Current Interest

National survey for hearing & speech disabilities

Facilities

- 1. Outpatient clinics.
- 2. Diagnostic Endoscopic unit.
- 3. Audiological clinical units.
- 4. Four operating rooms .
- 5. Phoniatric clinics & Speech therapy classes .
- 6. Laboratory services .
- 7. Library.







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National Institution for Diabetes Egypt

www.mohp.gov.eg

Mission

• Delivery of full medical service (of the tertiary health care level) to diabetic patients and endocrine patients in general .

• Transfer of experience health care professionals on a national level to help minimize incidence and onset of complications.

• Making use of the enormous potential of scientific research to achieve a better understanding, more effective treatment and prevention of diabetes and complications.



• Increasing awareness & education among diabetic patients.

Vision

Improving the health status of diabetic patients and patients of endocrine diseases as a whole, as well as minimizing incidence and effect of related complications on a national scope.

Human Resource: 390

R&D annual Budget : 400,000 L.E.

Facilities

NIDE has huge diagnostic, therapeutic and educational capabilities offer to the diabetic patients in Egypt through its different sectors.

- 1-Reception unit
- 2-ICU
- 3-Outpatients clinics
- 4-Specialized clinics
- 5-Ophthalmology clinic
- 6-Internal department
- 7- dental departments
- 8-Radiological department
- 9- Vascular department
- 10- General surgery
- 11-Lab section





Main Accomplishments

- Improving the E.R development and processing it with brand new equipment to deal with initial cases.
- Improving the intensive and critical care unit not only with new equipment and techniques but also with trained medical personal that can manage critical cases.
- •

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- Improving both operating and recovery rooms, supplying it with all its needs (advanced operating beds, advanced apathetic equipment, sterilizing equipment, lighting, recovery tools, etc....
- •
- Preparing the vascular surgery department with simulator to train the medical personnels (physicians, technicians, nurses) on vascular surgical techniques.
- •
- Preparing the diabetic foot department with full equipment needed for surgical interference according to the patients needs.

National Organization for Drug Control and Research

www.nodcar.eg.net

Mission

The National Organization for Drug Control and Research being the national quality control authority in Egypt plays a unique role in assuring the good quality safety & effectiveness of the marketed products and performs its responsibilities in accordance with the presidential decree issued in 1976. Scientific research and development are also integral parts of NODCAR activities.



This is performed through the following functions

1. Quality control of pharmaceutical products, biologics,

cosmetics, medical devices, raw materials, veterinary products, household insecticides, medicinal plants and natural products.

2. Development of new analytical methods and products standards.

3. Active contribution in the scientific activities, committees, conferences and seminars relevant to NODCAR's specialization.

4. Conduct scientific research and development aiming at constant refining of the testing methodology and researching ways to improve them.

5. Continuous upgrading of the scientific capabilities of NODCAR's personal through training programs and guidance provided by scientific advisors and consultants.

6. Extend its services within the context of its specialization to other Arab and Regional countries subject to approval of the Ministry of Health and concerned authorities

Vision

Development and upgrade to be the regulatory control laboratories of the FDA – Egypt it concerned with improving the quality of work and the performance of the staff at all levels.

Human Resource

Total number of employees: 1041 The number of workers cadre of university: 282

R&D Annual Budget

950000 L.E

Facilities

A) NODCAR has two main sectors: both sectors work in a complementary & collaborative manner :

• Pharmaceutical Quality control & Research Sector as well as biological Q.C.& Research sector

• Pharmaceutical QC& Research Sector

Pharmaceutical Analysis, Physicochemical Analysis, Chemical Analysis, Instrumental Analysis Chromatography, Analytical& methodology Development, -Physical Properties, Raw Materials Stability, Insecticides, Residual Insecticides, Veterinary products, Cosmetics, Medical Devices Packaging & Filling Materials, Medicinal Plants & Natural Products.

• Biological Q.C.& Research Sector

Pharmacology, Biochemistry, Microbiology, Biological Control, Toxicology, Pyrogen, Parasitology Pathology & Histochemistry, Molecular biology & Tissue culture and Animal house facility.

B) NODCAR has four specialized centers and seven specific unites

I- specialized Centers II-Specific Unit



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Research Institute of Medical Entomology www.mohp.gov.eg

The Research Institute of Medical Entomology (RIME) is one of the units of The General Organization for Teaching Hospitals & Institutes (GOTHI) of the Ministry of Health and Population in Egypt.

Mission

Conducting scientific researches in the field of vector born of diseases and their insect vectors.

Vision

Studying vector born diseases and surveying, identifying and studying insect vectors of diseases around Egypt and various methods and new techniques for their control, also evaluating insecticides and rodenticides for registration in public health and household use in the country as well as monitoring the susceptibility status of vectors to pesticides in use.

Human Resource

Professors (consultants)	4
Ph. D (Researchers)	5
Physicians	4
Chemists	9
Agriculture engineers	7
Technicians	14

R&D Annual Budget: (200,000 L..E.)

Facilities

• The Institute is keeping laboratory colonies for important insect disease vectors to be used for various

entomological studies and biological evaluation tests of pesticides submitted to the Ministry of Health for registration for public health or household use an animal house for rats and mice.

- Entomological Museum for keeping specimens of various insect vectors in various stages.
- Molecular biology laboratory
- Poisons Analytical laboratory
- Clinical laboratory
- Library & Three lecture halls

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Departments

- 1. Epidemiology Research dept.
- 2. Mosquito Research dept.
- 3. Household insects Research dept.
- 4. Pesticides Research Dept.
- 5. Rodents Research dept.
- 6. Out patients clinic
- 7. Poisons Laboratory
- 8. Molecular biology laboratory

Main Accomplishments

Some of the research projects include (An Integrated Field Trial on the Control of Filariasis in an Endemic Area in Huseenia village in Qalubia and Azizia Village, Giza Governorates, Egypt.), (Field Trial on the Use of Insecticide Impregnated Bed Nets on the Control of Mosquito Vector of Filariasis in an Endemic Area.), (Bio-Gas Technology in Relation to Flies Control.), (National plan for rodent control.), (Vector-borne diseases in the vicinity of Greater Cairo and new cities around it.), (Using geographic information system techniques to evaluate the risk of vector-born diseases in Cairo, Fayium, Giza and Qualyubia Governorates.)







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Ministry of Housing, Utilities and Urban Development

Research Landscape in Egypt 2010



General Organization for Physical Planning www.gopp.gov.eg

GOPP was established according to presidential decree no. 1093 year 1973. GOPP is setting basics of urban planning policy and is preparing urban development programs and plans for the state and is coordinating with program of production and general services to meet the present needs, establish future basis and follow up the implementation of these plans.



Mission

- GOPP is the state's responsible organization for

formulating the planning and sustainable urban development general policy, preparing plans and programs for this development on the national, regional and governmental levels. also it is responsible for obtaining revising and approval on the urban plans on the local level according to national, regional and local objectives and policies for planning sustainable urban development.

- GOPP is responsible for following up of the implementation of these plans and programs according to the stated objectives and policies. GOPP presents its reports to the concerned minister to be presented to the supreme council for planning and urban development.

Vision

- GOPP adopts the strategic planning method to formulate an integrated future vision for development. It basically aims to achieve sustainable development, reaches a practical applicable strategy prepared by all concerned organizations and stakeholders, guaranties the protection of natural resources and determines the necessary funding resources for the implementation process.

- The general frame for GOPP's vision is represented in establishing the strategic urban development in Egypt. This development is the ministry's responsibility that depends on previous mechanisms that matches current international trends for activating the partnership between governmental and nongovernmental sectors and achieving conformity between the residents' location and the geographical location of its resources.

Aims

1- Enabling local communities to determine urban priorities and agree on the development strategies

- 2- Creating new job opportunities therefore developing the local economy
- 3- Enabling communities to manage changes and have a better future vision

4- Increasing the broad participation of stakeholders in the planning process

5-Developing work plans that include objectives, results, time schedules, distributing roles, responsibilities, budgets and encouraging partnership between the government and the private sectors

Human Resource

There are 440 workers in GOPP in fields of engineering, legal, administration and financial affairs in addition to technicians and maintenance workers

Annual budget

Budget (in thousands)	Year
64736	2005/ 2006
78790	2006/ 2007
84090	2007/ 2008
82780	2008/ 2009

Facilities

• GOPP established a center for regional planning and associated urban development in each region of the seven economic regions of the republic. Each center is responsible for implementing GOPP's mission including most importantly, providing technical support for general administrations of planning and urban development in the region governorates and following up the preparation and implementation of the governorates villages and cities.

• GOPP consists of offices, work units, rooms for meetings, seminars, workshops, information center for recording and preserving all information, books library, electronic library for keeping research, reports that have been achieved and copies for all received projects

Main Accomplishments

The first axe: re-planning and developing the current constructions

1- Slums and deteriorated areas upgrading aims to developing the current areas in parallel with limiting the growth of new slums

2- The national project for developing Egyptian villages (preparing strategic plans setting new urban boundaries for 4671 villages) to absorb the population increase in these villages till year 2022 which is estimated to be 5 millions

- 3- Preparing strategic plans and new urban boundaries for 222 cities
- 4- Preparing comprehensive strategic plans for the governorates.
- 5- Preparing strategic plan for greater Cairo region.

The second axe: planning and developing desert areas

1- Accelerating the development rates in the current new cities and establishing other new cities to absorb about 6 millions

2- The project of establishing 400 villages in desert hinterland and the agricultural expansion in 6 years



in which these villages can absorb about 5 millions along with providing adequate job opportunities 3- Preparing strategic plans on regional corridors to develop the regional axes outside the valley

Great projects achieved through those axes

- Housing projects in Egypt
- Infrastructure projects
- Long term strategic plan for greater Cairo

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Housing and Building National Research Center www.hbrc.edu.eg

HBRC is an independent governmental research establishment which has a board of directors and a Chairman working under the supervision of the Minister of Housing, Utilities and Urban Development.

Mission

- Coordination between the research efforts in the field of building industry.
- Deploying of knowledge in the field of housing and building.
- Satisfying more effective and economical buildings.
- Developing the methods of construction.
- Assisting in the development of the engineering field.
- Applying construction codes and regulations.

Human Resource

There is 131 research staff, including 81 assistant staff that has Ph.D. degrees in civil engineering, architecture, urban planning, geology, chemistry, electrical engineering, and building physics, and experienced in working across a range of disciplines and professions of a total of 649 working persons in HBRC

R&D Annual Budget

The organization is highly financed through the annual governmental fund and substantial resources are also drawn from the construction industry for work done at the organization. Another source of finance is the joint research work done with foreign agencies such as UNESCO, and domestic research agencies such as the Egyptian Academy for Scientific Research and Technology.

Facilities

Research is conducted through 11 scientific institutes

- 1. Building materials and quality control research institute
- 2. Concrete construction research institute
- 3. Structures and metallic construction research institute
- 4. Soil mechanics and geo-technical engineering research institute
- 5. Sanitary and environmental engineering research institute
- 6. Construction engineering and construction research institute
- 7. Architectural and housing research institute Raw materials and technological processing research institute



- 8. Building Physics and environment research institute
- 9. Training and urban studies institute
- 10. Electromechanical acts in buildings research institute

Information Center

The aim of the information center is to support the building sector, its organizations, companies and manufactures, by providing them, updated data and analysis, with scientific basis for decision making.

The information center is intended to link the HBRC with other local and international information networks.

Besides its database function, the computer facilities of the information center are used for advanced analysis by HBRC staff, and to process HBRC publications

Main Accomplishments

Egyptian Codes

- 1. Design criteria and construction specifications for preventing structures from fire (Part 1).
- 2. Requirements for the system of building services to limit the fire risk (Part 2).
- 3. Systems for detection and fire alarm (Part 3).
- 4. Design and construction of reinforced concrete structures.
- 5. Steel construction.

Specifications of Work Items

The following specifications of work items are prepared by HBRC

- 1- Specifications of work items of architectural carpentry.
- 2- Specifications of work items of aluminum.
- 3- Specifications of work items of sewage works.
- 4- Specifications of work items of flooring, covering and marble works.

5- Specifications of work items of moisture and water insulation

Unified Arabic Codes for Design and Construction of Buildings

- 1. Soil mechanics, design and construction of foundations (10 parts).
- 2. Design and construction of reinforced concrete structures.
- 3. Prevention from fire and fire alarm (3 parts).
- 4. construction work, for example: bearing and non-bearing walls, arches, domes and vaults.
- 5. Sewage installations for buildings









g and urban studies institute mechanical acts in buildings research institut

Research Plans & National Studies

- 1. Technical properties of high-strength beams.
- 2. Removal of chlorides from reinforced concrete.
- 3. System development for quality administration of construction management in Egypt.
- 4. Applying chemical prestressing for reinforced concrete.
 - 5. Behavior of round columns manufactured from high-strength concrete in the presence/absence of fibers.
 - 6. Studies of behavior of structural elements made of new composite materials.
 - 7. Applied studies on some surface precipitates in the western region of the Northern desert, and using it as building materials.
 - 8. Climatic standards for curing and casting of concrete in arid regions.







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Ministry of Investment

Research Landscape in Egypt 2010

Egyptian Fertilizer Development Center (EFDC)

Mission

- Supporting Studies for the new production of different formulas of NPK + fertilizers through the pilot plant.
- Anticaking Slow Release Urea.
- Developing Solid NPK, NP Fertilizers, Liquid NPK and Fertilizers App.



Human Resource : 7 Ph. D. – 22 B.Sc.

Annual Budget

El-Delta fertilizer co. Responsible for the center since 1999, the center produced the fertilizer compounds NPK and executing agriculture researches.

Facilities

Information Center – Statistical Unit – Library – Pilot plant Unit – Nitrogen Research Unit – Physical and Chemical Lab.–Agriculture Research Unit.

Main Specializations: Chemistry – Engineering – Agriculture.

Major Fields: Chemistry – Engineering – Agriculture – Marketing – Feasibility studies

Future Plants

After achieving the center's main objectives, will represent a source of experience which then would be available to other countries in the region to cover both technical & economic, marketing aspects.

Foreign relations

- 1. International Fertilizer Development Center (IFDC), USA for technical assistance and training.
- 2. National Fertilizer Development Center (NFDC) Pakistan for economic and marketing assistance.
- 3. Arab Fertilizer association (AFA) &International Fertilizer Association (IFA) for data Exchange.
- 4. Communication channels with International fertilizer companies such as: Norsk Hydro, Udhe, Topose, M.W. Kellogg.

Main Expertise

1. Executing feasibility studies for fertilizer projects depending on the data available about fertilizers on the domestic level and the international level through the specific weekly and

monthly periodic table around fertilizer production consumption, prices and new projects.

- 2. The Center is equipped to develop NP, NPK plus micro nutrients in liquid and solid states reasonable for the future needs, suitable for fertigation Systems and Modern agriculture techniques.
- 3. Executing physical and chemical analysis for liquid and solid fertilizers according to the international standard specifications.
 - 4. Evaluating anti- caking material before being applied on a commercial scale.

5. The center is capable of editing a fertilizer situation monthly report around production, distribution, EX – Factory and Local market places, prices and international prices. When the net consumption and inventory is available the center can monthly correct the yearly supply/demand balance.

6. The center used to test of the fertilizing value of new developed compounds through experimental work carried out in its green house, Lizimeters and in the field in Egypt retarding different soils and crops.

7. They study the evaluates of many fertilizers such as: MAP, DAP, UAN, Delta fert, Sina fert1, and Sina fert2.

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Ministry of Petroleum

Research Landscape in Egypt 2010



Egypt Gas www.egyptgas.com.eg

Mission

Egypt gas has a clear mission focused on using cuttingedge technologies in assisting customers to achieve their business goals on time at the required level of quality along with prime consideration to QHSE issues in common theme of managing risk throughout all stages of contracted activities.



Vision

Egypt gas will enhance its position as a leading gas

company by developing its core business to a new horizon as a competent provider for natural gas and Petroleum project services in the region of Middle East and Africa.

Human Resources

The real investment of Egypt Gas lies in its qualified labors who receive intensive training on the professional level, both locally & internationally.

Persons working force	3880
Top Management	75
Engineers	80
Administration	43
Acc. & Finance	55
Skilled Technicians	3614
Public Relations	13

Annual Budget

The following figures are significant finance indicators that represent the company's financial position.

Total Long Term Assets: 315,260 million L.E Total Current Assets: 1,276,358 million L.E working capital : 580,076 million L.E issued capital : 120,000 million L.E shareholders rights: 589,336 million L.E

Facilities

Egypt gas, established since 1983 as a joint venture between the Egyptian Petroleum Corporation (80%) and other shareholder (20%), has gained the experience, capability and skills to undertake any kind of project in the field of Natural Gas.



Main Accomplishments

1. Steel Pipelines & PRS

Steel Lines (Total Length of pipe lines executed 600 Km)

- Gas Pressure Reduction Stations (77 stations during last 7 years)
- 2. Domestic Domestic Customers 2,313,000 Customers
- 3. Appliances Converted 3,303,000 Appliances
- 4. Commercial Customers 15,100 Customers
- 5. Distribution networks length 12,500 Km
- 6. lenghth of internal and external Installation 35,000 Km
- 7. CNG Stations (Constructed CNG stations: 102 stations)
- 8. industrial Areas (Factories : 635 Factories)

9. LPG Construction Projects

On a turn key basis, the company has constructed several LPG storage tanks for petroleum and petrochemicals sectors and several LPG bottles filling stations.

10. Cooling Projects using natural gas

Smart Village Project a leading district cooling / Heating natural gas driven project in Africa and the Middle East (12000 m² Project Plant area) with Budget of 130 millions EP and project duration of one year). In addition , the execytion of the natural gas driven cooling system of the new American university compound in New Cairo with Abudget of 4.25 million EP and project duration of 8 months.

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Egyptian Mineral Resources Authority

www.egsma.gov.eg

Mission

- Mineral resource is one of the most important sectors in social and economic development.
- Environmental impact and safety of mining and related industries in extraction processes for mineral ores and quarries.
- Mineralogical-geological exploration for Egypt regions is the base for integrated development for inhabited societies of South Valley.



Vision

- Best exploitation for mineral resources in Egypt.
- Increasing the current development for mineral resources (especially South Valley).
- Saving the maximum allowable number for needed supplies of the manufactured ores (agricultural and industrial)
- Improving human resources and forming administrative and scientific researchers and specialists.
- Formation of big groups of economic structures for working on economic basis.
- Saving the maximum allowable number for employments chances, especially in the south Valley.

Human Resource

Number of workers in the organization are 2029 employees (27 high administration staff, 576 specialists, 350 technician, 667 workers, 148 assist service laborers , 261 officials & Official unqualified).

R&D Annual Budget

Plan varied between 29 – 30 million pounds per year, but (2007 / 2012) plan started with 13 million pounds for (2007 /2008), then 10 million pounds for (2008 /02009).

SERVICES OFFERED BY EMRA

EMRA organization offers the following services for, individuals and other companies concerned with scientific research. These include geoenvironmal studies as a product of geological digital maps when requested, satellite image production, assessment of the environmental hazard and means of its reduction. Mining dump disposal. Geotectonic studies for new settlement, and Environmental impact of mining and related industries.

GEOLOGICAL MAPPING

- The geological map is the base for development.
- Preparation, publication and continuous upgrading of geological and tectonic maps are the main tasks of the Geological Survey all around in the world.

MINERAL EXPLORATION

The role played by the Egyptian Mineral Resources

Authority in mineral exploration cannot be over-emphasized. Detailed studies and geologicgeochemical exploration for hard rocks, mineral aureoles and ore deposits that added billions of pounds to the national economy.

GEOPHYSICAL STUDIES

• It had a modest start, but in the last few years it was supplied by the most up to date instruments.

- Via magnetic, electromagnetic and radiometric survey with field confirmation studies for mineral region using modern technologies.
- Seismic studies, geotechnical research studies and studies for monuments when requested.
- All field measurements are recorded, treated, analyzed and plotted by computer.

ORE EVALUATION

EGSMA carries out detailed studies and evaluation of the geologic reserves for mineral ores and quarries in hard rocks and valley deposits to determine their specifications and to detect the harmful elements to avoid them in industry.

ENVIRONMENT SERVICES

Preparation of geo-environmental studies, digitalizing different geological maps, and studying the natural hazard localities and production of land use maps.

INFORMATION & DOCUMENTATION CENTER

- One of the major achievements of the Survey.
- It hosts : The first specialized geosciences library, with more than 100000 textbooks, journals and periodicals. It exchanges publications with more than 150 scientific institutions abroad.
- A documentation section for all unpublished original documents and reports.
- A data-base with all information concerning Earth Sciences in Egypt.

THE GEOLOGICAL MUSEUM

- Includes two main sections:
- 1-A section for research in paleontology and mineralogy.
- 2-A section responsible for the proper display of the collections.
- Hosts a world famous collection of vertebrate fauna from Fayum.





The Museum displays

- -Collection of all Egyptian minerals and rocks.
- -A complete fossil record of the Egyptian stratigraphy.
- -A collection of the famous meteorites in Egypt: Nakhla, Esna and others.

THE CENTRAL LABORATORIES

- Recently, upgraded, reorganized and equipped with modern automated and sophisticated equipment, those include:
 - Induced coupled plasma.
 - Atomic absorption spectrometers.
 - Spectroscopic electron microscope.
 - X-ray diffraction, computerized.
 - X-ray fluorescence spectroscope dressing equipment, and instruments for the determination and measurement of physical properties.
- The Central Laboratories enjoy the reputation of being the best of their kind in the country.





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Egyptian Natural Gas Company

www.gasco.com

GASCO was established on March 16, 1997 by virtue of investment law no. 230 of 1989 amended by law no. 8 of 1997. Since then the company started its operation in the field of natural gas transmission, distribution and processing activities.

Mission

- Management, Operation and maintenance of the National Gas Grid and its facilities.
- Enhancing the capacity of the national gas grid.
- Providing the best service to GASCO's customers (producers & Consumers).

- Realizing optimum natural gas utilization through gas processing and the extraction of gas valuable components in accordance with the highest international standards

Vision

Taking the lead as a pioneer company in Egypt in the field of natural gas transmission, distribution, processing, marketing, competing & standing on equal footing with its international counterparts.



Human Resource

Gasco has 3361 employees till march 2008 .

Facilities

- Operation, maintenance and development of the Natural Gas Grid with total length 16800 KM and capacity 160 MMSCMD.

- Serve a wide spectrum of customers (Power generation, Industrial cities, etc ...) providing gas from the wellhead to burner's Tip via the National Gas Grid

- Manage and operate the own Western Desert Gas Complex which treats up to 550 MMSCFD to produce 460 MT/Y of Ethane/Propane mixture (C2C3) to be used in petrochemical industry, 220 MT/Y of Commercial Propane to be exported, 280 MT/Y of LPG for local market & 465 MBBLS/Y of Condensate to be used in refineries

- Manage and operate the Amereya LPG Recovery which treats 300 MMSCFD to produce 180 MT /Y of LPG for local market & 250 MBBLS/Y of Condensate to be used in refineries.

- As the first of its kind in the Middle East, Pipeline Integrity Management Center Of Excellence (PIMCOE) has been established with partnership between (GASCO & GE PII) for oil & gas pipelines Inspections and Rehabilitations operations.

Main Accomplishments

- 1. Development the length of Main National Grid by 207 % (2800 km in 1997 to 5800 km in 2007).
- 2. Development the capacity of Main National Grid by 432 % (37 MMSCMD in 1997 to 160 MMSCMD in 2007).
- 3. Development of the number of customers by 376 % (94 customers in 1997 to 354 customers in 2007)
- 4. Establishment of the National Advanced Control Center (NATA) to provide control over the Nature Gas Grid.
- 5. Constructing and Operating the Western Desert Gas Complex to treat 550 MMSCFD of natural gas produced at western desert and produce valuable products (LPG, C2/C3, propane & condensate).
- 6. Supervising the operation of Amerya LPG recovery plant which treats up to 300 MMSCFD of natural gas produced at western desert to produce LPG & Condensate.
- Revamping the national gas grid facilities (Metering & Pressure Reduction Stations, Valve rooms) according to the International Standards..
- 8. Participating in the Smart Village project Through the design, procurement and installation of the gas-powered refrigeration unit and all required facilities.
- 9. Securing the needs of damietta liquefaction plant of gas to be exported to Europe and USA by the planned quantities of natural gas .
- 10. Establishing the Pipeline Integrity Management Center Of Excellence (PIMCOE) for Inspection, repair & maintenance and Rehabilitations operations of oil and gas pipeline.





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Engineering for the Petroleum & Process Industries www.enppi.com

Mission

"Execute projects in the fields of oil & gas, petrochemicals and process industries in the Middle East and Africa, and support the national economy, primarily through providing state of the art technologies, leadership and standards of excellence, while striving to exceed our customers' expectations. This is achieved through Enppi's most valuable asset; its employees who are confident, competent, and caring".



Vision

"Attain a leading position among the top ten EPC / Lump sum turnkey contractors for oil & gas, petrochemicals and process industries, executing projects in the Middle East and Africa by the year 2010".

Human Resources

Enppi staff has grown steadily to reach its present level of about 1700 employees.

Capital

Authorized: \$150 Million

Paid: \$75 Million

Financial Indicators (Year 2008)

- Total Revenues 4,300 Million Egyptian Pound (60% International & 40% Egypt)

- Net profit after Tax 500 Million Egyptian Pound

Scope of Services

- EPC Main Contractor
- Feasibility / Techno-economic Studies
- FEED, Basic & Detailed Engineering
- Procurement Services
- Construction Management & Supervision
- E&I Installation Works
- Project Management & Control Services
- Commissioning & Start-Up





Activities

- Process Engineering
- Mechanical Engineering
- Electrical Engineering
- Instruments and Control Systems
- Architectural Design and Civil/Structural Engineering Piping Engineering
- piping Engineering
- Pipelines Engineering
- Offshore Structures Design
- Loss Prevention, Safety & Environmental Engineering
- Procurement & Materials Management
- Project Management
- Project Controls
- Construction Management
- E&I Installations
- Commissioning & Start-up
- Quality, Environmental and Health & Safety Management Systems
- Information Technology
- Human Resources Development

Major recent Achievements

- Projects Inside Egypt

- Rehabilitation Project for GUPCO (BP Egypt)
- Linear Alkyl Benzene Project for the Egyptian Linear Alkyl Benzene (ELAB)
- Methanol Project for E-Methanex Co.
- Polystyrene Plant for the Egyptian Styrenics Production Co. (E-Styrenics)
- Obayied Pre-Compression Project for Badr ElDin Petroleum Co. (Bapetco Shell Egypt)
- Booster Compression Project for Burullus Gas Co.(BG Egypt)

- Projects Outside Egypt

KSA

- Yanbu Gas Plant Expansion for Saudi Aramco
- Safaniya Water Disposal System Upgrade for Saudi Aramco
- Khursaniyah Gas Plant for Saudi Aramco KSA / Kuwait
- Al-Khafji Field Development Phase I for Al-Khafji Joint Operations(KJO)
- Expansion of Hout Crude Onshore Production Facility for Al-Khafji Joint Operations(KJO)

Qatar

Global Re-assessment of Offshore Structures for Qatar Petroleum

Jordan

• Development of the Jordanian Gas Transmission Pipeline for the Jordanian Egyptian Fajr Company

Syria

- Provision Of Engineering Design And Construction Support for AlFurat Petroleum Co. (AFPC Shell Syria)
- Tanak/Omar Vapor Recovery / Tanak Water Injection for AlFurat Petroleum Co. (AFPC Shell Syria)
- Saban/Jarnof Azrak/Maleh Project for AlFurat Petroleum Co. (AFPC Shell Syria)
- Engineering and Design Services Project for TOTAL E&P/ Deir Ezzor

Libya

• Sharara Mellitah Pipeline for Agip Oil Company Ltd.

Sudan

Neem Export Pipeline for GNPOC

Yemen

- Kharir Developemnt Project for TOTAL E&P
- Venezuela Projects for PDVSA Gas S.A.
- IV Train San Joaquin Jose 250 Project
- PAGMI Project Phase I
- Fractionation Capacity Increase at Jose (ACFJ)
- Ethane Recovery Project at San Joaquin







Petroleum Projects and Technical Consultations Company www.petrojet.com.eg

PETROJET was established in 1975 as one of the Egyptian petroleum sector companies to provide integrated multidisciplinary services to the oil, gas, petrochemical, chemical and industrial sector in the Middle East and North Africa.

Company's line of business covers a variety of Engineering, Procurement and Construction services for Integrated



Plants (Oil/Gas Field Developments, Process Plants, LNG Terminals, Oil Refineries), Trunk Pipelines, Tank Farms, Static Equipment Fabrication, Offshore Structures Fabrication and finally Pipe Coating for onshore and Subsea piplines.

Mission

To enhance our position as an International construction leader providing quality construction services for the petroleum, gas, petrochemical and Industrial sectors.

Vision

To be recognized as an International Contractor of Choice in the Oil, Gas, Petrochemical & Industrial Sectors

core value

- Safety comes First and Enviromental protection.
- Commitment to total Quality
- Commitment to our Clients
- Commitment to time schedules.
- Continuous Improvement
- Effectiveness.
- HR Development.

Human resources

PETROJET employs over 27500 high caliber staff.

Facilities

PETROJET owns a large fleet of modern construction equipment (over 5000 equipment) serving its diversified range of activities likes:

- Earth moving equipment like bulldozers, excavators, loaders, graders,Etc.
- Lifting equipment like mobile & crawler cranes, side booms, tower cranes, forklifts, vacuum lift



units, ... etc. The company owns a new 1250 ton capacity crane.

- Welding equipment like generators, welding sets, automatic welding machines, saw welding machines,Etc.
- Other equipment like horizontal directional drilling automatic machine, dredgers, structural steel built-up section machine, compressors, generators, transportation equipment, vehicles, ...etc.

Main Accomplishments

Since its inception in 1975, PETROJET has significantly contributed to building the Egyptian Petroleum Industry.

Today, most of the Oil, Gas, Chemical and Petrochemical projects running in Egypt have been executed by PETROJET.

some of milestone projects executed by PETROJET are the two Gas liquification Projects at Ldku (7.2 million TPY) and Damietta (5 million TPY), middle east oil refinery, various stages of the arab gas pipeline (1000 lm - 24" to 36"), various Stages of the Arab Gas pipeline (900 Km), sharara mellitah crude oil pipline in Libya (725 Km - 30"), Yemn LNG project, Ras Lafan Olefins project at Qatar, Yanbu Gas Plant expansion and expansion Hout Crude onshore facilities at K.S.A., in addition to the Khafji field development phase i Offshore and over 1500 other projects along the company's history.







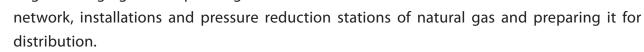
Town gas www.towngas.com.eg

Mission

Town gas has a clear mission focused on using cuttingedge technologies to achieve their business goals on time at the required level of quality and consideration to QHSE issues.

Vision

• Town gas has a clear mission focused on using cuttingedge Managing and operating the distribution



- Maintenance of the distribution network for domestic, commercial and industrial customers which are supplied from the domestic network, using latest safety technologies. The company established a leadership in transporting, distributing and marketing of natural gas for domestic, commercial, industrial customers, electric power stations and brick kilns which increase over 1.65 million customers in Cairo, Giza, Alexandria, Port Said and Ismaillia.
- Town gas enhancing its position as a leading gas company by developing its core business to increase its domestic, commercial and industrial customers in its concession areas in Cairo, Giza, Alexandria, Port Said and Ismaillia and also a new horizon as a competent provider for natural gas in the region of Middle East and Africa.

Human Resources

total number of employees at 17th of may 2009 are (3770) employees.

Facilities

- 1. 15-Operation centers working 24 hours /7 days working distributed throughout the concession areas standby for any emergency call to 129.
- 2. Equipped with a modern communication network Coordination with other utilities for quick response.
- 3. Equipped with emergency vehicles for instant action.
- 4. Equipped vehicles with state of the art gas leak detection equipments.
- 5. Equipped with monitoring and control for main pressure reduction station and pipelines(SCADA)
- 6. Coordination with other utilities and organizations.
- 7. Customer service through the hot line 19129
- 8. Calibrating of natural gas meters.
- 9. updating as-built drawing for distribution networks.





Ministry of Trade and Industry

Research Landscape in Egypt 2010



Technology and Innovation Centers

www.tic.gov.eg

a chain of specified technology centers established by the Ministry of Trade and Industry to work as multifunctional service provider centers affiliated to the Technology Development Sector. The main target of TIC is to reinforce knowledge, experience, capacity, knowhow, and technology transfer between those who have them and those who need them.



Mission

Work as a catalyst, to

- Meet the Technological needs of the Egyptian industry and export sectors to become sustainable and competitive.
- Bridge the gap between Egypt industrial needs in technology, emerging market demands and the national and international technology base.
- Stimulate, transfer and diffuse new technologies and innovations.

Vision

Long-run growth is due to technological innovation; therefore, the vision of Egyptian Technology Transfer and Innovation Centers is to transform the Egyptian Industry and Export sectors to become knowledge based, high value added, sustainable and competitive sectors.

Centers

The following Technology Centers have been established to provide their services vertically to various industrial sectors:

- 1. Fashion And Design Center
- 2. Marble And Quarries Technology Center
- 3. Ceramics Technology Center
- 4. Plastic Technology Center
- 5. Food Technology Center
- 6. Finished Leather Products Technology Center
- 7. Leather Tanning Technology Centre
- 8. Furniture Technology Center



- 9. Jewelry Technology Center
- 10. Engineering Industries Technology Center
- 11. Textile And Clothing Business Cente

Adiditionally, two horizontal centers were established for the transfere of crosscutting technologies, having broad applications in the industrial sector:

- Cleaner Production Center
- Total Productivity and Quality Enhanement Center

Human Resource: 400 employees

Annual Budget: 51 million Egyptian Pound

Main Accomplishments (July 2007 – May 2008)

- 4663 companies receiving TIC services
- 15604 Trainees
- 5237 product quality tests carried out
- 418 established contracts for the transfer of technology or Know-how

Services Provided by TIC

- Technology Or Know-How
- Technical Assistance
- Quality Mangement
- Advanced Human Resource Development
- Enviroment And Social Mangement







Egyptian Organization for Standardization and Quality www.eos.gov.eg

Mission

• Elaborating the Egyptian standards for raw materials, services and systems, industrial products, testing and measuring equipment along with methods of testing, inspection, quality control, calibration and measurement.

• Testing and inspection activities to ensure the conformity of the product with relevant standards.



 Granting the Egyptian quality and conformity marks along with issuing certificates for industrial products and calibration certificates for measuring and testing instruments.

• Providing training on all activities related to standards and quality.

• Offering technical consultation and training services for industrial companies in the fields of standardization, quality, testing and calibration.

• Representing the country in the international and regional corresponding organizations in all matters related to standardization activities.

• Assisting the industrial and service establishments to set up and implement various management systems i.e. ISO 9001, ISO 14001, ISO 22000 and OHSAS 18001.

Vision

• Coping with global systems through harmonization with international standards and implementation of the international reference of conformity assessment systems in the fields of quality, testing and metrology.

- Revising all Egyptian Standards every five years according to the international reference.
- Restricting the items related to safety and environment in Egyptian Standards to be obligatory.
- Complying with WTO/TBT and SPS Agreements requirements.

• Activating the role of quality mark and conformity certificates to fulfill consumers' needs and increase confidence in the Egyptian product.

• Updating EOS infrastructure and work methods continuously so as to promote EOS activities and services in the fields of standards, quality testing and industrial metrology to cope with corresponding international and regional organizations.

Human Resource

Total no. is 944 employees (724 permanent and 220 temporary).

R&D Annual Budget

11.000.000 Egyptian Pounds for "2007 – 2008" financial year

Main Accomplishment

- Harmonizing all Egyptian standards with international standards through Industrial Modernization Program.
- Publishing Egyptian standards in new fields including communication, medical instruments, railway, traffic, maritime transportation, tourism, organic foods, consumer protection, services and systems.
- Availability of all Egyptian standards on the internet. Increasing the average number of companies granted quality mark to 40% annually.
- Developing quality systems of 70 small and medium industrial enterprises established in 12 random districts to improve the quality of their products and to be incorporated in the formal economy.
- Increasing the average number of ISO 9000 and 14000 certified companies to 30% annually.
- Qualifying testing and examination labs to be accredited and recognized internationally to facilitate trade and promote Egyptian exports.
- Registration and obtaining conformity certificate according to the requirements of ISO 9001/2000 for Quality Management Systems.
- Activating bilateral cooperation agreements with Arab countries to facilitate Arab trade.
- Appointing EOS President as the Regional Liaison Officer for the Arab and Mediterranean region for 3 terms.
- Electing EOS as ISO Council member for 7 terms.
- Appointing EOS President as the Codex Regional Coordinator for the Near East.

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Tebeen Institute of Mineral Studies

www.tims-eg.com

Mission

The mission of the institute was stated clearly as follows:

- 1-Focused Education.
- 2-Specialized Training.
- 3-Applied Research.
- 4-Knowledge Management.
- 5-Technology Development.
- 6-Community Relations.

Vision

TIMS will be the momentum for development of the Egyptian metallurgical, mining, and related industries to world-class standards through technology development and knowledge transfer.

Human Resource

Public (305)	Peculiar (21)
Interim (65)	Daily Wages (12)
Transferred (16)	UN Transferred (2)

Main Accomplishments

- 1- Diploma.
- 2- Master.
- 3-Training Course.
- 4- Consultative Services from three Centers:
 - Energy and Environment Research Center.
 - Industrialization and Technological development Center.
 - The Center of Human Resources and Small Industries.
- 5- Laboratories:
 - Laboratory For Industrial Pollution Studies.
 - Laboratory For Gas Analysis.
 - Laboratory of Electronics.

Also The library, Information Center, Seminars, Conferences as well as technological Incubators.

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Ministry of Transport

Research Landscape in Egypt 2010



Egyptian National Institute of Transport

Main activities

1- Graduated Studies

ENIT offers 3 Diploma degrees for full- time students:

- Transportation Planning.
- Logistics.
- Transport Economics.

2- Research & Development



ENIT is concerned with R & D projects in the transport sector (public & private). ENIT has conducted 40 projects in the different transport activities. Projects range rom feasibility studies, traffic impact studies, transportation planning as well as development of human resources.

3- Short Courses (3-5 days)

The objective of the short courses is to deliver unique, high quality learning experiences and be fully responsive to the needs and desires of the transport sector. The current course categories include Transport Planning, Traffic Engineering, Construction and Maintenance, Finance, Management, Logistics, and Environment.

Finance

- Feasibility Studies for Transport Projects
- Systems for Construction and Operation of Transport Projects
- Project Budget: Estimation and Analysis

Management

- Dry Ports and Container Terminals
- Privatization and Deregulation in the Transport Sector
- Role of Transport in Developing Exports

Logistics

- Logistics Management
- Multi-model Transport Economics
- Insurance in Transportation
- Logistics Information Systems

Facilities

ENIT has the biggest library of transportation and transport-related aspects. A total of some 5000 books, reports, research magazines exist in Arabic and English. An effort is underway to upload the library database onto the institute website.

As for computer facilities, ENIT has two computer labs comprising some 40 PCs loaded with the latest software in office work as well as transport software

Transport Planning

- Transport Planning at the Strategic level
- Transport Planning at the Organization level
- Cost and Pricing of Transport Services
- Transport Economics
- Application of GIS in Transportation
- Travel Demand Surveys
- Intelligent Transport Systems

Traffic Engineering

- Highway Capacity and levels of service
- Computerized Traffic Signal System
- Traffic Control Software and Signalization
- High Occupancy Vehicle (HOV) Facilities
- Freeway Traffic Operations
- Design and Operation of Work Zone Traffic Control
- Railroad- Highway Grade Coursing Improvement Program
- Road Safety Audits
- CORSIM Traffic Simulation Model





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Transport Planning Authority

Mission

Planning projects of inland transport on economical and technical bases to provide technical and economical efficiency for these projects.

Vision :

Preparing necessary studies and researches to develop transport sector on technical and economical bases.

Facilities

includes :

- Technical Capabilities :
 - 1. 26 Personal Computers.
 - 2. 13 Personal Computers connected together through (LAN).
 - 3. 14 Laser printers, 2 Dot matrix printers, 4 desk jet printers.
 - 4. 4 Personal Computers connected with router to ASDL line (256 K.b/s).
- Staff Number : 104 persons.
- R&D Annul Budget : about Million Egyptian bounds.

Main Accomplishments

Date	Study Name	No.	
1977	National Transport (first stage)	1	
1981	National Transport (second stage)	2	
1984	National Transport (third stage)	3	
1987	Coordinating Between Region Metro Line & Surface Transport Means	4	
1990	Transportation on Egyptian Roads Networks	5	
1993	Master Plan of Transport on Roads	6	
1996	Master Plan of Transport on Railways	7	
1999	Effects of (GATS) on Inland Transport in Egypt	8	
2001	Development of Container Transport Role to Support foreign Trade in Egypt	9	



No.	Study Name	Date
10	Reorganizing of Egyptian Ports (Development of Egyptian Ports & Efficiency Rising)	2002
11	Transport Economics According to New Policies & Variables	2002
12	Enlargement of River Transport Role of Freights Transport in Egypt	2002
13	Passengers Transport Policies Between Cities Via Public Transport Means	2002
14	Future Demand of Transport in Sina	2002
15	Planning of Transport Demand of South Valley Development Project in «Toshkey»	2003
16	Safety of Public Transport on Roads	2003
17	Safety of Passengers Transport on Railways & Metro Lines	2003
18	Formulating of Notional Association Frame for Organizing The Inland Transport in Egypt	2004
19	Preparing of Master Plan for Organizing Freights Transport on National Level	2005
20	Proposed Commitments from Egypt to (GATS)	2006
21	Container Flow of Egyptian Containers Station and Its Affect on The International Containers Industry and Its Trends	2007
22	Plan Formulate of Public Passengers Transport on National Level	2008

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Ministry of Water Resources and Irrigation

Research Landscape in Egypt 2010



National Water Research Center

www.nwrc-egypt.org

Mission

The National Water Research Center is a pioneer institution for various water research activities in Egypt. It was established in 1975 as a research entity within the Ministry of Water Resources and Irrigation (MWRI).

Vision

Playing actively; not only a national role but also

an international one; on the local scale, the center- from its inception - has worked to strengthen the research programs of its research institutes. Creating linkages with relevant Egyptian Universities and other research centers such as the Agricultural Research Center, the National Research Center and the Egyptian Academy of Scientific Research and Technology.

Accomplishing its goals locally through:

- Planning and evaluating research programs.
- Publishing research results nationally and internationally.
- Strengthening and upgrading staff capabilities.
- Providing proper space and facilities.
- Arranging and organizing seminars, workshops, and conferences.

Objectives of NWRC

- Study, outline and propose long-term policies for managing water resources in Egypt.
- Solve the technical and applied problems associated with general polices for irrigation, drainage and water resources.
- Carry out investigations and research work connected with the extension of agricultural lands.
- Find the means for utilizing the water resources of the country in the most efficient and mosteffective way.
- Propose measures for environmentally should development of the irrigation and drainage systems.



Number of Staff		Tashuisiana	Technicians		
Ph.D.	MS.c	Bs.c	Total	Technicians	Admin.
267	150	600	1017	230	950

R & D Annual Budget

NWRC estimated budget allocated for scientific research is approximately 31 million Egyptian pounds for the fiscal year 2007/2008.

Facilities

The variety of water-related problems in Egypt requires specialization in many different fields. The Center has therefore established twelve research institutes that read like a list of problems facing Egypt's water sector. **These are:**

• Water management and Irrigation Systems Research Institute (WMRI)

- Drainage Research Institute (DRI)
- Water Resources Research Institute (WRRI)
- Nile Research Institute (NRI)
- Hydraulics Research Institute (HRI)
- Channel Maintenance Research Institute (CMRI)
- Research Institute for Groundwater (RIGW)
- Construction Research Institute (CRI)
- Mechanical and Electrical Research Institute (MERI)
- Survey Research Institute (SRI)
- Coastal Research Institute (CORI)
- Environmental and Climate Research Institute (ECRI)

Based on the following special units:

- Strategic Research Unit (SRU)
- Central Laboratory for Environmental Quality Monitoring (CLEQM)
- Water Studies and Research Complex Toshka
- Central Library
- Information/ Documentation Center
- GIS Unit
- Gender Equality Unit
- Printing and Publishing Facility





Main Accomplishments

- Established the water quality monitoring network and issuing annual report on water quality status in Egypt.
- Used GIS for identification of hot water pollution and provide appropriate solutions through LAN & WAN to decision makers and stakeholders.
- Implemented environmental management of groundwater in Egypt to preserve it from pollution
- Prepared the agricultural drainage water reuse guidelines.
- Conducted studies for developing the South Valley "Toshka".
- Conducted studies on El-Salam Canal to reclaim west and east of the Suez Canal and develop the northern Sinai.
- Established topographic maps of the River Nile.
- Capacity building and joint research with Nile Basin countries.

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Fax:+20244447846-0244446761

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Central Laboratory for Environmental Quality Monitoring www.nwrc-egypt.org

CLEQM is a multidisciplinary organization dedicated to finding solutions to environmental problems. Our expertise cover environmental chemistry and microbiology, aquatic toxicology, water quality modeling, and risk assessment.



CLEQM is an advanced analytical facility supports the expansion of research activities in the Nile

basin in addition to the new challenges of the national problems. CLEQM houses a full line of sophisticated analytical equipment operated by a team of expert researchers, specialists and technicians.

Mission

• Accommodates all analytical requirements of the Ministry of Water Resources and Irrigation (MWRI) and the National Water Research Center (NWRC) on Physical, Chemical, Organic, Inorganic, Microbiological, and / or contents of water, soil, and plant tissues.

• Provides timely, high quality, analytical services.

• Generates and publishes basic information, which can be used by decision-makers and houses a data bank that is accessible to decision makers.

• Assists with the development of water quality protection guidelines, regulations and standards based on specific monitoring research tasks.

Human Resource

The Number of professionals work at the central laboratory for environmental quality monitoring is about 150 personnel filling all grades from researcher to professor researcher.

Annual budget for research

The annual budget for research exceed one million Egyptian pounds through the government budget, as well as foreign projects and contracts to others

Facilities

State–of the–art and fully equipped Lecture rooms, computer center, conference center, a specialized library, meeting rooms and study rooms.

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Training Center

Trainees attending courses offered by CLEQM get exposed to all types of analytical techniques related to water quality. Themes covered by CLEQM allow trainees to participate on solving wide variety of environmentalproblems and accumulate expertise. Participants will make use of all labs' housed instruments. On-hand training during daily operations supported by lectures offered by specialized experts will insure professional satisfaction.

Research

CLEQM research covers a wide spectrum of analytical techniques and water quality issues. The center runs special research on the chemistry of solid wastes and risk assessment as related to water quality using various techniques such as geochemical models.

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Coastal Research Institute

www.nwrc-egypt.org

Coastal Research Institute (CORI), was established in 1972 as an urgent need for monitoring and protecting the Egyptian coasts.

Mission

CORI is concerned with research and investigation activities to protect and to develop the coastal zones of Egypt through the following objectives:

1. Monitoring the evolution of the Mediterranean coast in order to determine the near shore zone changes of the Nile delta and its neighborhood.

2. Collecting and analyzing Dynamically, coastal and marine data for the determination of the erosion and accretion pattern and their driving forces.

3. Conducting numerical models to predict future changes in the coastal zone, and select the most economical and effective protective measures and to find out their best alignment.

4. Studying and design the most efficient, low cost and high effective control works to protect the heavily populated areas with its valuable agricultural land, industrial establishments and infrastructure from the sea attacks and carrying out their EIA.

5. Providing expert advice to the Egyptian Government on problems associated with coastal instability.

Vision

As the coastal zones of Egypt hosts many natural resources, CORI emphasizes on Integrated Management Plans (IMP) for sustainable protection and development of the coastal zones.

Human Resource

The technical staff of CORI are specialized in coastal engineering, hydrodynamics, oceanography, marine geology, The total staff constitutes of 13 PhD, 7 M.Sc., and 19 B.Sc. The staff is divided in four departments: they are hydrodynamic, coastal engineering, marine geology and physical oceanography.

Facilities

The institute has six research stations at Abu Quir, Rosetta, Ras El Bar, Burg El-Burullus, El-Arish, and Hurgadda.

The institute hosts 5 well equipped laboratories for sedimentation, oceanography, water quality , GIS and computer center.

The equipment include :Directional wave gauges recorders (S4DW), Tide gauges recorders (Green span) current meters recorders (valeport), wind station (Meta one), Vibro-corer, Rubber boats equipped with marine computer loaded by professional navigation software attached with DGPS and Echo-Sounder.

Joint activities and international cooperation

The Institute had carried out many joint projects with international bodies as follows:

- 1. Searching and evaluating of borrow coarse sand to nourish Baltim sea resort beach, Nile Delta coast with Delft Hydraulics Holland.
- 2. Study vulnerability assessment to accelerated sea level rise on the development of the lower Nile Delta, with Delft Hydraulics Holland.
- 3. MED-Non Point Sources of Pollution, case study west of Alexandria with European Communities.
- 4. Development of a plan for the integrated coastal zone management of the coastal area between Mersa Matrouh and El Sallum, Egypt (EEAA and Cantabria University Spain , 2007).
- 5. Coastal Vulnerability to Climate Changes and Adaptation Assessment for Coastal Zones of Egypt (with UNDP 2008)
- 6. Projects achieved by CORI

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Construction Research Institute

www.nwrc-egypt.org

The Construction Research Institute (CRI) was established in 1975 as one of the twelve research institutes within the National Water Research Center (NWRC) of the Ministry of Water Resources and Irrigation (MWRI) and is located at Delta Barrage.

Mission

CRI mission is to upgrade and enhance the capabilities of the MWRI to cope with the international innovations in



construction technology by adapting and developing new design and construction methodologies.

This mission is achieved through upgrading and/or developing the design and maintenance procedures of irrigation structures and specifying the most suitable construction methods and materials, applying quality assurance and quality control systems and specifying the required levels of safety for the different irrigation structures, developing and/or upgrading the design and construction methods of the different types of foundations and earth structures, and evaluating the effect of dynamic forces on irrigation and drainage structures and means of mitigation.

Vision

Establishment of a group of specialized researchers capable of conducting basic and applied scientific research in the area of geotechnical engineering, construction material, structural dynamics, and irrigation structures with the aim of establishing modern scientific and technological base in Egypt.

Human Resource

CRI has a staff of approximately 140 people. The staff includes a research team of 30 Ph.D. and M.Sc. Civil engineers, 3 geologists while the rest are administrative, laboratory technicians and supporting staff members.

Annual Budget

Annual budget for research in the fiscal year 2007 – 2008 is one million and three hundred thousands Egyptian pounds.

Facilities

CRI has seven technical laboratories to help in conducting a wide range of research programs. These labs are soil mechanics and foundation engineering lab., construction modeling lab., properties of materials lab., structural dynamics lab., geosynthetics testing lab., chemical lab, and computer lab.

Main Accomplishments

CRI has performed several basic and applied research program and studies according to the five year research plan 2002-2007 which includes (9) research projects in the fields of evaluation of the use of waste material as a replacement of cement or gravel in concrete, upgrade of the concrete efficiency by using different types of fibers, maintenance and rehabilitation of hydraulic structures using new materials, adapting new technologies in the area of geotechnical engineering such as soil nailing and soil reinforcement, strengthening of embankments made of very weak soil using deep foundation technique, geotechnical studies of embankment passing through problematic soils, study of the behavior of weak rocks under different loading conditions, and evaluating the structure condition by monitoring its straining actions under loading.

CRI has also been involved in most of the national mega irrigation projects with distinguished effort and studies such as South of Egypt development project (Tushka project), development of North Sinai project (Elsalam canal and Elsheikh Gaber canal), and control structures to upgrade the efficiency of Tushka depressions (Tushka spillway barrage and Tushka depression dam). Furthermore, CRI conducts other studies such as rehabilitation of some barrages along the Nile river such as Matay, Elbagoria, Gmagara, and Mansoria barrages, design of main canals and drains (E.g. main Qota canal, new Elsaff canal), design of hydraulic structures along canals (e.g. Barrages, bridges, weirs), and studies made for the High dam and rehabilitation of Wady Karkar dam at Aswan.





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Environment and Climate Research Institute

www.nwrc-egypt.org

Mission

The institute mission is focused on the assessment of the environmental impacts of water resources development projects, irrigation and drainage projects on the study of water quality pollution sources, and on the aspects of treatment technology. This is an addition to evaluation of the impact of climatic changes on water resources and environment.

Also the institute is responsible for environmental awareness on water pollution and its effect on national economy, environmental awareness on the importance of water resources availability.



Vision

1. To Study the environmental impact assessment on water resources and other water development projects.

2. To investigate short and long-term effects of climatic fluctuations on the environment and on water resources.

3. To develop effective means and methodologies for optimal use and management of water resources to maintain its sustainability under serious climatic changes.

4. To provide information and technical assistance on the environmental issues like health, aquatic life, decertification, .. etc.

5. To strengthen the role of the Ministry towards the effectiveness of the environmental and climate change acts.

Human Resource

ECRI has more than 80 persons working in different fields to achieve its mission actively.

R & D Annual Budget 900.000 L.E

Facilities

1. The climate Change Department has EUMET Cast DVB receiving system, which receive all data by means of the DVB Acquisition PC, HRIT/ LRIT processing and visualization workstation. While the MSG is responsible for the compression of data. The workstation is Capable to perform multispectra

2. Composites, animation, looping, etc... Further, it manages the dispatch and distribution of MSG data to destinations via FTP using existing LAN/ WAN capabilities.



- 3. The institute maintains a small, specialized libreray which has More than 120 references, journals, scientific reports and periodicals in different aspects; climate change, water resources, water quality project management and other topics which could help in scientific research.
- 4. ECRI has a lecture and training room equipped with the most up to date display and commutation facilities.

Main Accomplishment

- 1. The EIA study of New Naga Hamadi Barrage Project.
- 2. The EIA study of Toshka Project.
- 3. The EIA study of Nubaria canal and Alexandria Port area.
- 4. The EIA study of Bolin area
- 5. The EIA study of El-Shohada Drain in Sinai.
- 6. The EIA of human activities along the shoreline of Lake Nasser.
- 7. The EIA of small hydro power installation on the Delta Barrages (Damietta Branch).
- 8. The effect of Climate change on sand dunes movement on Lake Nasser.
- 9. The effect of climate changes on sand dunes movement on El salaam channel in Sinai.
- 10. Climate impact on water resources and dry land agriculture.
- 11. Cloud seeding and Fog collection Study.







Hydraulics Research Institute

www.nwrc-egypt.org

Mission

• HRI was established in 1975 to take over and extend the work of the Hydraulic Research Experimental Station founded in 1949. The Institute is one of the oldest institutes in the Middle East and Africa.

• The mission of the Hydraulics Research Institute as one of the twelve institutes of the National Water Research Center is to link between the applied research and capacity building activities in the field of river engineering and hydraulics to satisfy the research and



technical needs of the National Water Research Center and the Ministry of Water Resources and Irrigation in the research and studies related to water resources development.

Vision

The strategy and future vision of the Hydraulics Research Institute is based on the overall strategy of the National Water Research Centre.

Objectives

The main objectives of the Institute are

- To provide the technical and scientific experience and advice to decision makers and water managers in the Ministry of Water Resources and Irrigation in the fields of; hydraulic engineering, river morphology, hydraulic structures, river training and protection.
- To conduct research programs in the different fields of water related topics; water hammer problems, pump stations intakes, power plants cooling systems, coastal zone management, water resources management, ...etc.
- To transfer the knowledge and technical experience available to water professionals from the region through the training and capacity building activities organized at its Regional Training Centre.
- To use the available knowledge and experience in the institute and the communication and information

Technology facilities in conducting collaborative and joint research with other institutes in the region.

Facilities

Physical Modelling

• Physical modelling studies are one of the main research and consultancy activities conducting



at the institute.

- There are three experimental halls for physical modelling construction.
 - The first hall occupies an area of about 2.5 acres.
 - The second hall has an area of about one acre.

- The third hall is the coastal engineering studies hall, it has an area of 0.8 acres and is equipped with a wave generator for production of identified spectra of irregular waves, linked to necessary instruments and computer facilities.

Experimental Flumes

• Flume studies can be carried out in three flumes.

- The first flume is a recirculating flume of 45.0 M. long, 0.4 M. wide and 0.6 M. deep with glass sides.

- The second one is 26.0 M. long, 1.0 M. wide and 1.0 M. deep with glass sides.

- The third one is 25.0 M. long, 0.75m wide and 1.00 M. deep with partial glass sides.

Survey Department

The survey department is responsible for all hydrographic field work requested prior to any research study. The department is equipped with all needed survey facilities and instruments.

GIS Unit

The GIS Unit serves the departments of Survey, physical and mathematical modelling.

Sediment laboratory

The institut samples. Sie



tory for the analysis of bed and suspended sediment for determining grain size distribution for sediments.



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Mechanical and Electrical Research Institute

www.nwrc-egypt.org

Mission

1. Optimize operation and maintenance of mechanical, hydro-mechanical, and electrical equipment used in irrigation and drainage systems.

2. Develop new methods and techniques to evaluate performance and control of irrigation and drainage schemes.

3. Investigate non traditional utilization of energy sources for pumping stations and water distribution systems.



4. Increase efficiency, maximize performance and decrease maintenance operations of pumping stations.

5. Develop and design devices used in irrigation and drainage water lifting systems.

Vision

The vision of MERI depends on the achievement of research plan objectives and it consists of seven research projects related to the five-year research plan of the Ministry of Water Resources and Irrigation (MWRI) and they are as follows:

1-Evaluation of operation performance for irrigation and drainage pumping stations project.

- 2-The automatic control management of irrigation and drainage pumping station project.
- 3- Application of quality control in irrigation and drainage systems.

4- Studying of dynamic behavior and designing of maintenance prediction programs for irrigation and drainage systems.

- 5- Application of traditional and nontraditional energy for lifting water.
- 6- Evaluation and development of cathodic protection systems.
- 7-Training and development of engineers and technicians staff.

Human Resource

The institute has (11) researchers, (7) Engineers and (79) Technicians, employees and services staff.

Facilities

The institute contains four departments:

- 1- Mechanical & Fluid Mechanics Department
- 2- Electrical Department
- 3- Automatic Control Department
- 4- Instrumentation and Calibration Department



Researches Annual Budget

ltem	Budget in thousands of Egyptian pound
Instrumentation, equipment and	280
Studies and researches	770
Construction	50
Total	1100

Laboratories

The research laboratories have the advanced and calibrated instrumentation for measuring and analyzing pressure, R.P.M., flow, power, vibration, noise and PH level indicators, pressure transducers, vibration accelerometers, PLC, SCADA system, Variable speed drives, Electronic soft starter, logic circuits and control devices are used and calibrated to meet the required measurements.

Main Accomplishments

- MERI contributed in solving the century project for water lifting from Naser lake to Shiekh Zayid canal by studying the strategic water movement in Naser lake by using a fixed (Mubarak pumping station), submersible, immersed or floating pumping station to achieve the continues flow of water at the Lake.
- Evaluation the technical condition for the water pumping stations belongs to the Mechanical and Electrical Department.
- Supervision of the requalification project for the injection factory of the Aswan High Dam.
- Designing, submitting and participating in automatic control projects for Bahr Tanah and Meet Yazied canal (w10).
- Design, revision and supervision of mechanical works for bridge, navigation canal of Bahr Hadoos.
- Designing and participating in the execution of cathodic protection for Sahara Elsero, Balozah, Bahr Elbaqar, Hadoos and Wadi Elnokra pumping station.
- Evaluation of hydraulic performance of irrigation and drainage pumping stations for Mechanical and Electrical Department.
- Studying of dynamic behavior and designing of predictive maintenance programs for irrigation and drainage pumping systems.
- Studying the effect of vehicles motion on barrages and reservoirs.
- Automatic control management and development of irrigation and drainage systems.
- Studying the effect of the water hammer phenomena in pipelines.
- Evaluation the use of solar and wind energy for lifting water.
- Studying the effect of harmonics on Mubarak pumping station.

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Nile Research Institute www.nwrc-egypt.org

Mission

Protect and develop sustainable the Nile River and Lake Nasser in a scientific manner.

Vision



1. Promote and enhance the scientific research on the rational protection and sustainable development of the Nile River and Lake.

2. Create a mechanism for the exchange and improve of scientific and technical information among experts and organizations having similar interest in Egypt and other countries.

3. Provide and coordinate cooperative research, consultancy services, facilities and field investigations for the interested agencies.

4. Organize and undertake national projects related to river engineering and morphology.

Human Resource

The strength and distinction of the Nile Research Institute can be attributed to the high standard and dedication of its people. The institute has 38 professional staff members, 23 with Ph.D. Currently, 5 are studying for their Ph.D. degree, and 10 are studying for their M.Sc. Degree, and the rest with postgraduate training.

R&D Annual Budget

Governmental funds finance research funds annually. NRI has generals 1.8 Million L.E.

Facilities

NRI endeavors to use the most modern techniques and technologies to accomplish its objectives. It can now claim unprecedented capabilities and diversified know-how; this is manifested in many ways summarized as:

HYDROGRAPHIC SURVEY

The Institute has a very powerful survey system for hydrographic and land surveys in global and local coordinates. Modern survey techniques using DGPS in conjunction with Dual frequency single beam echo-sounder.

Sedimentation Laboratory

The Institute operates sedimentation laboratory available for analysis of bed and suspended sediment samples. Dry and wet analysis for determining grain size distribution for the samples and sediment finer than $62 \ \mu m$.



Water quality laboratory

The institute operates a modern water quality testing laboratory to handle its analytical needs to monitor the quality of the Nile and Lake Nasser water as well as all point sources of pollution (industrial agriculture, municipal; etc.). The laboratory is mainly to prepare the field requirements to monitor the quality of the Nile and Lake Nasser water

Technical Library

The institute maintains a small, specialized library containing more than 1500 texts related to river engineering, sedimentation, water resources development, computer sciences, water quality, project management, Geographic Positioning System (GPS), Geographic Information System (GIS), hydrographic survey, and the Nile volumes, and as well, it subscribes to scores of scientific journals and periodicals. The available references range from a recent copy of the Encyclopedia Brittanica, to a complete set of the Nile volumes, to both historic and current texts on all aspects of hydraulic and hydrologic engineering. The Institute owns a complete set of Audio visual equipment as well photography workshop.

Computer Facilities

The institute operates a personal computer-based (PC-based) Management Information System (MIS).

Main Accomplishments

The Institute has received various formats of assistance and technology transfer from several international organizations such as US-aid, CIDA, KFW, SFD, Dutch consortium, JICA, UNESCO, and SWECO. From Egypt the institute has cooperative research activities with Academic of scientific research and Technology, Cairo University, Ain shams University, Menoufia University, Menia University, many Institutes belongs to the National Water Research Center, Nile Basin Initiative, River Transport Authority and Egyptian Survey Authority

- "The Sediment Transport and Watershed Management Component" River Nile
- Protection and Development Project (STWMC) sing Authority.
- National Water Quality & Availability Management Project Component 100
- Relation between Assiut and Cairo project
- "Flood Preparedness and Early Warning Project"
- Studies related to passing petrol lines, gas lines, electric lines and telephone lines along the Nile- harbors and wharfs - bridges crossing the Nile- Water intakes (domestic and irrigation)-Bank protection and waterfront- the intake of Sheikh Zayed Canal (Toshka)- Crossing of greater Cairo metro no. 2

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Groundwater Research Institute

www.nwrc-egypt.org

Mission

Groundwater development and management is generally carried out in the framework of the national overall water development and management. The policy indicates the water allocation from water resources to users, in space and time Assessment of groundwater potential for the various users is made by the RIGW, based on available information is updated periodically according to the availability of the information

RIGW has the principal responsibility within The National Water Research Center to formulate and conduct applied research programs responsive to the national requirements to support integrated development and management of groundwater resources in Egypt.

To accomplish this mission RIGW activities encompass:

- Exploratory research and appraisals describing the occurrence and characteristics of groundwater resources.
- Systematic data collection and analyses to monitor the state of quantity, quality and use of groundwater resources.
- Basic and problem-oriented research to assess the potential of groundwater system and their response to natural and man made stress.
- Studies that aids in providing solutions and alleviating problems related to groundwater system.
- Scientific and technical assistance in groundwater related fields to other state and private agencies.

Human Resource

Degree	Doctor	Masters	Bachelor
Civil Engineering	15	5	12
Petroleum Engineering	—	—	2
Chemical engineering	_	_	2
Electric Engineering	2	1	1
Science geology and chemistry	11	2	12
Cultivation	3	_	7
Overall	31	8	36



Annual Budget

Proposed annual budget for the Institute to implement the Five-Year Plan (2007-2012) for Studies and Research 5300000 L.E.

RIGW Activities

1- Role of the Institute in Groundwater Development

Preparation and Updating of the Hydrogeological Maps

- Aims at the evaluation of the groundwater potential of the different aquifers.
- Maps are available in different scales (2000,000;500,000; 100,000)

2- Role of the Institute in Sustainable Groundwater Management

- Groundwater Potential Atlas : To protect the aquifers from the qualitative and quantitative deterioration.
- To support the decision making at the new settlements.
- To Control the well licensing system.
- To protect the existing investments and ensure sustainability.

3- Role of the Institute in Groundwater Exploration and Supervision of well Implementation

- Detect the water bearing layers using the highest technology techniques (Radar, Geophysical, electromagnetic and seismic).
- Supervision of deep and shallow wells in different regions.

4- Role of the Institute in Protection of Groundwater Resources

- Groundwater Quality Monitoring Aims at supporting groundwater protection decisions
- More than 200 monitoring points
- Periodical sampling and analysis of more than 50 parameters.

Preparation of Groundwater Vulnerability maps

- Seven groundwater vulnerability maps were prepared for the Nile Valley and Delta regions (scale 1:250,000)
- These maps are used in the preparation of groundwater management plans and identification of the priority areas for groundwater monitoring.





Maintenance Channels Research Institute

www.nwrc-egypt.org

Mission

Maintenance of irrigation and drainage networks and controlling aquatic weeds.

Vision

1. Upgrading and / or developing the design and maintenance procedures of open channels and specifying the best technical, economically feasible and environmentally safe methods.

2. Identifying and monitoring different types of aquatic weeds by using the remote sensing and geographical information system.

3. Quantifying the mechanical, manual and biological aquatic weeds controlling methods.

4. Evaluating the effects of aquatic weeds infestation on the hydraulic efficiency and nearby environment.

5. Providing several training courses for Arab and African Engineers in the field of maintenance of open channels, canal lining, design of open channels, and weed control management.

Facilities

The institute has five laboratories and two Breeding stations for conducting the required researches, these are: (Hydraulic lap, Fish hatchery laboratories, Soil lab, Computer lab, Delta breeding station, Bahtim station).

Main Accomplishments

1. Alternatives for canals rehabilitation to cover water shortage and irrigation improvements at

the end of the canals with participatory.

2. Application of biological control of aquatic weeds using grass carp in different reaches of the River Nile.

3. Evaluation of aquatic weeds and fish pollution in the North Nubian Lake inside Sudan.

4. Setting up a strategy for sand dunes movements, aquatic weeds and alegoe in North Sinai development project and South Valley development project.

5. Using GIS/Remote sensing technology for surveying and classifying of aquatic weeds in lake Nasser.

6. Training programs in the field of aquatic weeds management and design and maintenance of canals.



- 7. Alternatives for canals rehabilitation to cover water shortage and irrigation improvements at the end of the canals with participatory.
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Survey Research Institute

www.nwrc-egypt.org

Mission

• The main strategy of the Survey Research Institute (SRI) is to keep abreast of the state of modern technology of various areas of survey engineering and applied researches which lead to improve the methodology and increase the accuracy and reliability of the surveys performed in Egypt.

• Adapt, develop, and incorporate modern methods of computer-aided field surveying, date processing with the aim of accelerating the production and the updating of different types of maps.

• Serve as a central organization in developing and applying all modern aspect of geodesy, photogrammetry, remote sensing, physical geodesy and geographic information system.

• SRI within its capacity serves as a specialized research unit that provides direct consulting, research, technical and material support to decision makers in WRC, ESA MPWWR as well as other organization.

Institute Activities : Current

Among the different activities of the institute , high priority was given to the following projects due to its importance on the national level

A – Determination of the GEOID

In recent years , a quantum jump has been observed in the continuing efforts to improve and expand the knowledge of the key surface of the Earth , the GEOID is essential for an accurate positioning of the first order framework of control points on which the different types of country maps are based .

The SRI has started the first major project which performs the following:

- Establish national gravity network in Egypt using most accurate gravimeters.
- Develop and use the most modern software which is designed specially for processing , computation and analysis of the gravity anomalies.
- Study of the applicability of computer graphics technology for representing the behavior of the gravitational anomalies field and the GEOID in Egypt.

• Behavior of gravity anomalies fields (Bougeuer , free air . And isostatic anomalies) will be incorporated into the fields of crustal movement investigations , especially in regions around geological faults.

B – Construction of a Calibration Base Line

The overall purpose of the project is to construct and determine the first reliable calibration base line in Egypt.

This base line will be used for calibrating Electronic Distance Measurement Equipment (EDM) for all surveying agencies , the major activities of this project are

- Site selection and preparation.
- Precise measurements of the base line using different techniques.
- Construction of the base line.
- Least square adjustment of the segments of the base line.
- Calibration of different electronic distance measurement equipment.



Water Management Research Institute

www.nwrc-egypt.org

The Water Management Research Institute was established by the presidential decree number 830/1975 under the title of Research Institute for water distribution and irrigation methods. Then, the name title was changed to the current one by the presidential decree number 316/1994 addressing the restructuring of the national water research center

Mission

• Determination of crop water requirements for different regions of the country at different climatic conditions in order to achieve highest agricultural productivity.

• Increasing water use efficiency including the management techniques and on-farm irrigation techniques.

• Improving the irrigation networks in order to decrease water losses while studying its economics and its social impacts.

- Developing new irrigation techniques to use non-conventional water in irrigation while considering environmental, social, and economical effects.
- Suggesting agricultural policies for increasing the efficiency of water use and their impact on water distribution and management.
- Exploring the effects of using new technologies of low water quality in irrigation on agriculture

Facilities

- 1. Department of water requirements.
- 2. Department of field water management.
- 3. Department of field irrigation improvement.
- 4. Department of land, water and their economics.

Main Accomplishments

Previous studies

- Egypt Water Use and Management Project (EWUP)
- Monitoring and Evaluation of Irrigation Improvement Project
- Monitoring and Evaluation of Irrigation Improvement Project
- Rainfall Forecast and Water Management Planning
- Study of the New Saff Canal Project
- Supplementary Irrigation in the North Coast of Egypt

On going studies

- Monitoring and evaluation of Irrigation Improvement project.
- Matching the water supply with various demand in Egypt.
- Sustainable agricultural and water Resources project of (Toshka).

• Soil classification KOUFFA valley region in Aswan.

•

- Studying the efficiency of Youth pumping station and pipe lines to cultivate the new land in El-Salhia in eastern region.
- Studying best irrigation practices at (Sahel El Tena) North Sinai











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Water Resources Research Institute

www.nwrc-egypt.org

Mission

1. Performing studies of development, evaluation, and management of water resources for development projects

2. Design of water resources projects concerning usage and protection

3. Performing consultation of the project implementation for national & international funded projects.

4. The contribution in the studies of evaluation and feasibility of Nile Basin projects to maximize Egypt's Share of Nile water

5. Performing strategies and policies for sustainable use of water resources for integrated development

Vision

The Water Resources Research Institute (WRRI) is one of twelve research institutes at the National Water Resources Centre (NWRC) and is under direct control of the Egyptian Ministry of Water Resources and Irrigation (MWRI). The WRRI is responsible for the sustainable development and conservation of the water resources extremes.

Human Resource

Permanent	117	
Temporary	90	
Hired	5	
Total	212	







R&D Annual Budget

One Million seven hundred thousand Egyptian pounds.

Facilities

- 1. Meteorological, Hydrological, and hydro geological network.
- 2. Representative catchments for rainfall and flood studies
- 3. Survey and Geophysical instruments.
- 4. Topographic maps, GIS, areal photo and satellite images.
- 5. Branched offices and field camps in Sinai, Hurghada and Upper Egypt with complete technical staff and laboratories
- 6. A set of professional hydrological and hydro geological soft wares .

Main Accomplishments

First : In the area of protection from the dangers of floods

- 1 The protection of national projects (Protection of economic zones and phosphate railway)
- 2 Protection of infrastructure projects (roads and protection of power plants, natural gas pipelines)
- 3 Protection of towns and villages
- 4 Protection of agricultural expansion projects (63 thousands feddans in Aswan governorate)
- 5 Protecting installations and tourist cities (Sharm El-Sheikh Dahab Nuweiba El-Tor)

Second: the exploitation and development

6 – Construct storage, protection, detention, and rechargeable dams and underground tanks and drilling wells.

Third: in the water policies

- 7 Implement Flood risk indexes
- 8 Construct the risky maps and long-term and short-term water resources development maps.



Suez Canal Authority

Research Landscape in Egypt 2010



Suez Canal Authority

www.suezcanal.gov.eg

Mission

- To ascertain that the vital role of the SC in service of the world economy and trade is achieved.
- To manage and run the SC in an efficient and a competitive manner that maximizes benefits from its geographical position and capabilities.
- To realize our customer anticipation through continuous improvement of the entire and all- level operation system.



- To keep consultations with our customers and offer them any assistance, whenever required, in the field of sea transport, logistics, shipbuilding industry or any other field of mutual interest.

Vision

- To become the world leader in providing excellent, quality, safe, secure and uninterrupted service to the maritime industry.
- To keep the Suez Canal as the first choice for customers.

Human Resources

The SCA has a total number of 13,000 employees who constitute the human resource that the SCA management is always keen to promote, develop and upgrade to the required standards so as optimum performance can be achieved.

Facilities

a- The navigable channel

A developed navigable channel that is equipped with most up to date technology and capable to accommodate world fleet vessels of all types and tonnages. The characteristics of which are as follows:

- Overall length: 192.25km.

- Permissible draught is up to 62ft for vessels up to 220,000 tons. (It is being deepened to be 66ft to accommodate vessels up to 240,000 tons)

b- Machinery and equipment

• The SCA owns a fleet of dredgers that comprises 12 units of different types of dredgers of the total capacity of 156,000hp. This fleet includes dredger Mash'hour and Dredger Mecca that are among the world biggest dredgers. The SCA dredgers are used for the widening and deepening projects of the Canal. They are also used for maintenance and dredging operations on both the local and national levels.

- The SCA has a fleet of tugboats that comprises 86 units.37 tugboats have total capacity of 1.6 million hp, and a bollard pull that varies from 16 to 160 tons. The tugboats are used for escorting, towing, salvage and fire fighting operations along the Canal as well as overseas.
- The two SCA shipyards are involved in shipbuilding, ship repair, overhaul and maintenance for the SCA units as well as for third party.

The Shipyards have the following facilities

- 1. Floating docks with the total lifting capacity of 11400 tons (from 5000 to 55,000 tons each).
- 2. Floating cranes with the total lifting capacity of 1465 tons, varying between 25 to 500 tons.
- 3. A total of 3400m of repair quays.
- 4. Yard cranes with the total lifting capacity of 340tons.

5. Workshop machines and equipment that comprise the CNC machine centre which is capable of dealing with works up to 40 tons and CNC horizontal lathe which performs works up to 15m, and the plasma cutting machine for steel and aluminum sheets.

C-Safety of Suez Canal navigation

The SCA adopts safety system that comprises the following items:

1. Electronic management and follow up of Suez Canal navigation through the vessel traffic management system (VTMS).

- 2. A highly efficient communication system and a maritime communication centre.
- 3. A state- of- the- art simulator for the training of SCA pilots and ship masters.
- 4. Life buoys all along the water way.
- 5. 14 signal stations that provide visual follow up of transiting vessels.

D-The Suez Canal Research Centre

It is one of the most prominent Egyptian centers specialized in research and studies related to the development of navigable water way. It conducts in –depth studies on ports ,shore protection, soil and offshore installations.

Main Accomplishments

• The SCA has established an integrated system for the growth and the development of the waterway, the navigation safety system, the workshops and equipment. It has also adopted various marketing policies in order to maximize the Canal revenues.

• A total number of 21,000 ships (890.4 million net tons) was represented in the Canal traffic for the fiscal year 2007/2008. Those ships carried 726 million tons, representing 10% of the total world seaborne trade.

• The SCA has achieved a remarkable increase in the Canal revenues which came up to US\$ 5110 M. during the fiscal year 2007/2008, with an increase equal to 22.9% as compared with the previous year.

• The SCA participates in the development of the Canal zone through the following projects:

1. Providing potable water through management of the water plants at the three Canal cities. The SCA develops and upgrades the drinking water facilities to let them cope with the urban expansion and the investment activities up to the year 2017. The output of the potable water plants now



stands at 1.1 million cubic meters/day.

- 2. The SCA participates in the urban development of Sinai as it owns and operates 36 ferryboats that work at different locations between the two banks of the Suez Canal, transporting around 8.2 million vehicles/year, thus linking Sinai with the Nile Valley.
- 3. The SCA participates in the development of Upper Egypt through the setting up of a shipyard for the building, repair and maintenance of Nile cruisers. Overall cost of the shipyard, which covers an area of 35 Feddans, came up to L.E. 150 millions.











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Private Sector

Research Landscape in Egypt 2010

AMOUN Pharmaceutical Company

www.amoun.com

Amoun was first established in 1976 and soon. Built its first factory, ABI (Advanced Biochemical Industries) since 1981 and through 1985. This factory was sold in 1989 to Glaxo, The second factory; APIC (Amoun Pharmaceutical Industries Co.) started in 1991, and was similarly acquired by GlaxoWellcome Egypt end of 1998.



Mission

To best serve our customers and satisfy their needs, wants and expectations efficiently and effectively, meanwhile increase the company's sales volume and market share.

Vision

To be the leading producer and supplier of internationally acknowledged quality pharmaceuticals both in the local and foreign markets, creating benefits for its customers and society, meanwhile increasing the value of the company and the return on investment.

Human Resource 2000 person

R &D Annual Budget 2 million and 133000 pounds



(Amoun Pharmaceutical Co.) its third state-of-the-art factory - designed by John Brown Co. in Chicago according to FDA specifications .

Amoun has five branches scattered all over the country: Two branches in Cairo, one branch in Mansoura, one branch in Alexandria and one branch in Assuit .

Amoun was accredited several certificates over the years:

ISO 9001 "Quality Management Systems": April 1996
ISO 14001 "Environmental Management System": May 1997
BS-7799 "Information Security Management System": April 2000.
OHSAS-18001 "Occupational Health & Safety Systems": May 2000
UNIDO : October 1997

Products under licence from International Pharmaceutical companies, e.g. Merck Serono (Germany), Rowa Wagner (Germany), Leurquin (France), as well as Guerbet (France)

Amoun export

- Total registration product forms were 358 In 26 countries
- Total export sales during 2007 were \$1,743,495 (L.E. 9,877,152)

Products 358 products





Address : Oabor City - Cairo Tel: +2 024614 0100 E-mail: email@amoun.com

Fax: +2 024614 0198

Arab Drug Company for Pharmaceuticals Chemical Industries

Mission

ARAB DRUG COMPANY is a leading Egyptian Pharmaceutical Company in manufacturing, marketing and exporting of different Pharmaceutical products.

Arab Drug Company is specialized in Aerosol production which improves patient health and add value to our community.

Vision

The vision of the Arab Drug Company is to be one of the most successful Pharmaceutical Companies which applied the Current G.M.P. While being the Holding Company. That is done in terms of Market Share, reputation and profitability within the coming 5 years.

Human resource

STAFF : 1400 Persons STAFF OF R&D : 30 Persons

R&D annual Budget

3 Million Egyptian pounds

ACTIVITIES OF THE COMPANY

- Manufacturing pharmaceutical products in different forms e.g. Syrups, tablets ,Suspensions, capsules, creams , ointments, aerosols, ampoules, Lotions, Mouth washes, Effervescent granules, Powders for topical use... etc.
- Manufacturing different groups of veterinary products in different forms and feed additives .
- Designing and formulating new products, & improving the existing products to meet the market demands.
- Marketing pharmaceutical and veterinary products.
- Exporting our pharmaceutical products to different countries World wide .

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RESEARCH LANDSCAPE OF EGYPT 2010







TEAM WORK

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وزارة الدولة للبحث العلمى Ministry of scientific Research