



**Ministry of Industry**  
**Industrial Research and Consultancy**  
**Centre (IRCC)**



---

# **IRCC Annual Report 2014** **& Report Jan.-Feb. 2015**

**Dr. Widad Hassan Abdulhalium**  
**IRCC, Director-General**

**May 2015**

# Introduction

---

- ❑ IRCC was established with the help of UNIDO in 1965 as a national, non- commercial center.
- ❑ 2002 – 2010 IRCC was affiliated to the Ministry of Science & Technology (Ministry of Science and Telecommunication currently).
- ❑ Since 2010, the IRCC has affiliated to the Ministry of Industry



# Objectives

The main objectives of the centre include :

- ❑ Conducting applied research (R&D) on local raw materials for industrial exploitation .
- ❑ Design and technology transfer of Small scale industries to meet the real local needs .
- ❑ investment projects for both public and private sectors.
- ❑ Consultation services on industrial planning, production management and product design and development.



# Objective (cont.)

- ❑ Contributing as main player in setting up the national policies and strategies for industrial development
- ❑ Considered as reference laboratory for national standards corporation and some other departments.
- ❑ Raise awareness among industrialists, workers and government on industrial development issues.



# Functions

---

- ❑ Conduct R & D on the exploitation of local raw material for industry.
- ❑ Conduct techno-economic feasibility studies on industrial project for the private sector
- ❑ Provide consultancy services on industrial planning, process, engineering, production, management, costing, plant efficiency quality control systems & product development
- ❑ Participating in laying down national industrial development plans of existing industries in public & private sections
- ❑ Help identification & transfer of modern technology and adopting what is appropriate
- ❑ Disseminate industrial awareness
- ❑ Preparation and marketing of industrial information



# Functions (cont.)

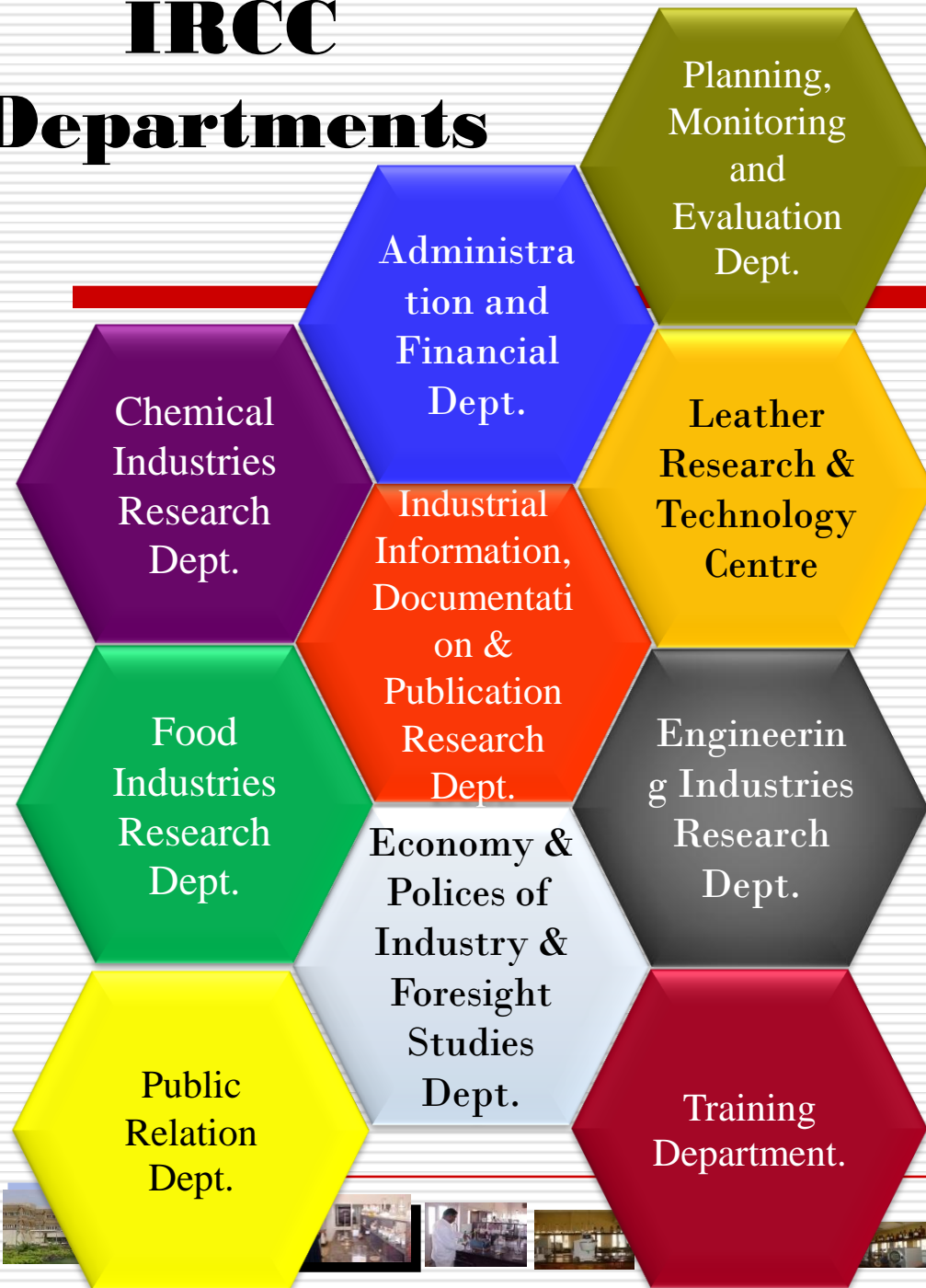
- ❑ Formulation of training programs for employees in the various specialization in industry and supervising the implementation of such programs
- ❑ Assist in the preparation of standard specification for the local industrial products

# Activities



# IRCC

## Departments



# IRCC

## Facilities

### Include:

- ✓ Fully equipped & integrated Tannery.
- ✓ Pilot plant for chemical products research.
- ✓ Electronics quality control & testing lab.
- ✓ Advanced Industrial information centre.
- ✓ Physical and Mechanical Testing Lab.
- ✓ Engineering Design Lab.





# IRCC's Researchers

---

✓ Associate Professor Researchers	26
✓ Assistant Professor Researchers	16
✓ Researchers	30
✓ Assistant Researchers	3





# IRCC & Sudan Academy of Sciences (SAS)

---

- ❑ IRCC is a member of SAS federal Union
- ❑ IRCC is a certified collage in engineering research & Industrial Technologies Studies

## MSc. by Course:

- MSc. Cleaner Production
- MSc. Mechanical engineering Design
- MSc. Refrigeration & Air- conditioning
- Mtech. Electrical Energy Production & Supply



# **IRCC Regional & States Branches**

---

- IRCC is to expand regionally;
- Agreements were signed with 4 states to establish IRCC depts.;
- Studies are in process to identify potentials in each state;
- Industrial Maps for each state

# IRCC Relations

---

- |           |          |       |
|-----------|----------|-------|
| ✓ UNIDO   | ✓ ISSCO  | ✓ ... |
| ✓ UNESCO  | ✓ WAITRO |       |
| ✓ AIDEMO  | ✓ SUST   |       |
| ✓ UNIDO   | ✓ SAS    |       |
| ✓ PCSIR   | ✓ UofK   |       |
| ✓ CSIR    |          |       |
| ✓ COMSATS |          |       |



# Publication Series

- ❑ Industrial Guidance and Booklet
- ❑ Industry & Development (Biannual news magazine)
- ❑ Industrial Research Journal (Biannual Refereed Scientific Journal)



# Major Research Activities (2014)

---

- ❑ Study of the effect of processing and storage on the properties of Sudanese fruits and vegetables.
- ❑ Utilization of antifungal lactic acid bacteria in preventing the spoilage of fruits and vegetables.
- ❑ Extraction of *Moringa oleifera* oil a natural antioxidant for edible oils.
- ❑ Production and utilization of soybean flour for manufacturing of cereal products.
- ❑ Production of magnesium chloride from magnesite.
- ❑ Production of biodegradable polymers by using starch.
- ❑ Evaluation of antimicrobial properties of some local essential oils against clinical strains of mycobacterium tuberculosis.
- ❑ Extraction of bioactive substance from *Hibiscus sabdariffa*.



# Major Research Activities (2014)

---

- ☐ Anthropometric measurements of Sudanese foot.
- ☐ Improvement of Sudanese National footwear (Markup) design and manufacturing.
- ☐ Production of sweet syrups from sugar cane
- ☐ Extraction of gold using techniques other than mercury.
- ☐ Competitive ready garment industry.
- ☐ Design of control circuit for oven 1200C°.
- ☐ Raising the efficiency of sugar boilers using electronic control technology.



# Capacity Building Activities

---

## External Short Courses:

- ☐ Training course in field of “Quality fabric test. “ (India).
- ☐ Training course in “Application of ICT<sub>s</sub> in Education health care and agriculture”. (Islamabad, Pakistan).

## Internal Short Courses:

- ☐ Training course on ICDL.
- ☐ Training course in field of "secretarial and administration executive offices".
- ☐ Training course in field of "basic computer science".
- ☐ Training course in field of "Modern trends in human resource management"





# Capacity Building Activities (cont.)

## Internal Short Courses (cont.): [View more](#)

- ❑ Training course in "field of Train the trainers".
- ❑ Training course in "field of English language".
- ❑ Training course in field of "Use of computer on electronics archiving".
- ❑ Training course in "Field of digital energy sources".

- ❑ Training course in" field of Grain technology".
- ❑ Training course in field of "Laboratory quality system.
- ❑ Training course in field of " Cleaner production.



# Activities of Jan. to Feb.2015

---

- The Industrial Research Journal, volume 2(2014) containing 12 articles is ready for publishing.
- Different training periods on different area were undertaken:
  - Training period on Internal audit.25<sup>th</sup> Jan. to 1<sup>h</sup> Feb.  
Within the frame work of the program of leather to take the accreditations. National Leather Technology Centre-Sudan.
  - 2. Cleaner production. From 4<sup>th</sup> Jan. to 13<sup>th</sup> Jan. Sudan.
  - Cleaner production. From 4<sup>th</sup> Jan. to 13<sup>th</sup> Jan. Sudan.
  - Intellectual property. From 22 to 26 Feb. Sudan.
  - Training course in the field of modern trends in liquidity and cash flow management crisis management.20<sup>th</sup> Jan. Ministry of finance – Sudan



# Activities of Jan. to Feb.2015 (cont.)

---

- Participation in the “Second Arab Forum for Research and Development”. End December, Dubai.
- Participation on workshop” Capacity building and evaluating options to raise the energy level in Sudan.23th Feb. National Centre for Energy Research –Sudan.
- Workshop in the field of environmental impact of mining. River Nile State-Sudan.
- Participation of general manager in the workshop “research and innovation in the framework of the European-Arab cooperation”.
- The program. Horizon 2020.11 to 12 Feb. Egypt.
- Participation on workshop “Soy bean- based foods”. 11<sup>th</sup> Jan. to 17 Jan. Japan.
- 10. Participation in the workshop” design of science and technology policies”.24 Feb to 26Feb. Iran.



# Activities of Jan. to Feb.2015 (cont.)

- ❑ IRRC and UNIDO meeting on 24<sup>th</sup> Feb .discussed the program Production and utilization of Moringa Oleifera in Sudan.
- ❑ Technical Committee for Science and Technology and Innovation Meeting. 24 – 26 Feb. Kenya.
- ❑ Different feasibility studies were done:
  - Industrial complexes studies. Elgadarif State.Sudan
  - Complex fruits and vegetables. River Nile State. Sudan.
  - Diary products. North Kordofan State. Sudan
  - Leather products. Nyala.
  - Fish. Kusti.
  - Study Arab Project for industrial applications of modern silica of energy, telecommunications and electronics industry



[illegible]

- ## State: Sudan



# Activities of Jan. to Feb.2015 (cont.)

---

- ❑ The IRCC as the Technical Committee of the Higher Council for Nationalization of the Engineering Industry participates greatly in developing plans and programs for the advancement of the industrial sector nationwide.
- ❑ Also amongst its highest priorities is the evolution of the highly esteemed and accredited IRCC as a center of excellence into a National Center for Innovation.
- ❑ A proposal to UNIDO for the establishment of a Cleaner Production Center with a predetermined budget.





شكراً جزيلاً

GRACIAS  
ARIGATO  
SHUKURIA  
SHUKUR  
TASHAKKUR ATU  
SUKSAMA  
EKKHMET  
THANK  
YOU  
BOLZIN  
MERCİ

