

**EUTRAIN**

EUropean Transport Research Area International  
Cooperation Activities



# Country report: Egypt

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# General data and info



- Egypt is going through a transition phase in which the major governmental institutions and related policies are expected to change
- Previous years ' percentage of research expenditure to GDP: approx. 0.3 %.
- Approximate split of public to private funding in research: 85 % public (government), 15 % private, (including 5 % from international sources).
- Approximate percentage of share of research expenditure per sector (as per salaries paid for research personnel in each sector): 49 % Agriculture, Medicine 17 %, Engineering 11 %, Science 7 %, Social sciences 4 %, Humanities 4 %.
- Data for research in the Transport sector are not available.
- Transport research is performed through:
  - A small number of research teams performing mainly in Engineering (civil Engineering – Mechanical Engineering) at some of the more than 50 Egyptian Universities.
  - A number of studies in the field of Transport funded by the Ministry of Transport.
- Egypt has launched in 2007 a *Science and Technology Decade* under which, each year, a *Science and Technology cooperation and networking year* is announced. In 2007 the focus was Germany, in 2008 Japan, in 2009 Italy, in 2010 France, in 2011 USA, and in 2012 the EU
- The countries with which Egypt has the most frequent and pronounced research cooperation are: USA, Germany, France, Japan, Canada, Italy, and the UK.

# *Major factors affecting international research cooperation*



## **Positive**

- Existence of some basic frameworks for cooperation i.e. bilateral or multilateral governmental or Organisation to Organisation agreements;
- Existence of tangible possibilities to attract funding (the EU FP7 is seen as the most important source for such funding so far);
- Convergence of individual researcher interests;
- Interest of all Egyptian stakeholders in increasing international research cooperation.

## **Negative: A. General**

- Meeting the co- funding requirement.
- Salaries for researchers are quite lower than those in consulting.
- Complicated reporting, and auditing procedures - too much “red tape”;
- Difficulties in networking
- Difficulties in sharing large research infrastructures with other countries (in the African context, research infrastructures are often not existent);
- Difficulties in innovation funding, and in convincing the stakeholders from industry to implement research results.
- Difficulties in securing IP rights .

# ***Major factors affecting international research cooperation***



## **Negative: B. In the Transport sector**

- Transport Research is not included in the Egyptian national research priority list (currently Health, Water and Energy).
- Senior transport researchers are interested in consulting more than research (due to low salaries)
- Lack of local exposure to state of the art subjects in transport (so difficult to compete with researchers in other countries).
- Shortage of exposure of local transport researchers to the international research institutions interested in transport research.
- Difficulty to demonstrate specific attainable objectives and applicable solutions from transport research.
- Inadequate knowledge of the local Egyptian transport research topics and needs, from the international research entities.

# *Position vis-à-vis specific factors*



## **A. Lack of properly funded (international) research programmes**

- Highly Competitive International Cooperation Programs
- Shortage on local matching funds.

## **B. Difficulties in Information and data sharing between countries/organizations**

- Administrative barriers
- Mind-set (awareness, partnership spirit, etc.)
- Data availability
- Cost of collection of certain data types
- Difficulty to unify data items definitions and collection methods between cooperating countries
- Lack of data updates
- Low accuracy in many data items
- Data transparency
- Field surveys cost.

## **C. Scarcity of “Global” (i.e. commonly useable) research infrastructures**

- Research Infrastructures scattered and sometimes obsolete
- Labs not updated due to cost
- Labs lack of maintenance and spare parts
- In some cases lab equipment is duplicated
- Lack of good cooperation between different labs in similar fields.

# *Position vis-à-vis specific factors*



- D. Problems with the interoperability and transferability of research results /pre-standardization issues.**
  - Market not interested in research results
  - Lack of follow-up dissemination of research results
  - Research topics not applicable or not suitable
  - Lack of facilitator entity between research and industry
  
- E. Differences in Institutional cultures and research governance regimes**
  - Mind-set (awareness, partnership spirit, etc.)
  - Bureaucracy constraints.
  
- F. Difficulties in exploitation of research results (transferring the results of research to market exploitation and uptake).**
  - Research topics not suitable to local application and needs
  - Lack of R&D culture and its potential impact on future expansion and more gains to the industry
  - Egyptian industry finds it easier to buy international technologies and solutions instead of sponsoring local research to reach solutions
  - Non-readiness of industry, and Infrastructure for “Research – Industry” cooperation
  - Lack of absorption capacity in industry.
  
- G. Differences in Intellectual Property Regimes**
  - No clear rules
  - Awareness among many researchers is not enough.
  
- H. Conditions of disparity in human resources (training, work conditions, ‘culture)’**
  - Non-specialized decision making on research issues
  - Lack of awareness of the need for multi-disciplinary research cooperation
  - Capacity Building and Training problems especially for young researchers.

# ***Position vis-à-vis cooperation with the EU***



- ❑ Egyptian participations in FP7 projects more than 200. Also participations in *People* and the *Erasmus Mundus*.
- ❑ **Topics of interest in the Transport field would be:**
  - improving non-paved roads with local materials;
  - Untraditional public transport financing mechanisms;
  - Efficient truck freight transport;
  - Low cost/applicable travel demand management;
  - Intermediate technologies in pavement recycling;
  - Road maintenance technology;
  - Barriers to PPP in the road sector (construction and maintenance);
  - ITS applicable to developing economies;
  - Institutional Organization.



# ***Position vis-à-vis cooperation with the EU***



- ❑ **Current Egyptian research interests (vis-a-vis current EU research):**
  - Health (Medical and Pharmacy)
  - Nanotechnology
  - Capacities (Research and Infrastructure)
  - People programme
  - Food, Agriculture. Fisheries and Biotechnology
  - Water resources
  - Energy
  - Environment (Including Climate Change)
  - Education
  - ICT
  
- ❑ **Types of research cooperative work and funding preferred**
  - Joint Research programs (e.g. Specific calls targeting Euro Mediterranean Research Priorities)
  - Creation or support of regional Centres of Excellence
  - Mobility (of researchers) Programs
  - Enhancement of Research Infrastructures.



## *Other transport related research themes of interest*

- Energy efficient truck freight transport (Urban and National level);
- Low cost vehicle maintenance technologies;
- Investigation of the barriers of PPP in the road sector;
- Improving national and urban intermodal freight transport;
- Intermediate technologies in pavement recycling;
- R & D in improving non-paved rural roads in farm lands;
- Urban mobility and modal shift to environmentally friendly modes;
- Innovative “out of the fare box” transit financing mechanisms;
- Innovative low cost travel demand management;
- Measuring emission factors of trucks in Greater Cairo;
- Transport vehicles’ greenhouse gas and emission pollutants modelling in Greater Cairo;
- Dispersion models of greenhouse gas and pollutants emissions in Greater Cairo;
- Transport Infrastructure Management;
- Energy Control of Electric Trains;
- Transport Policy Management;
- Institutional Organization.



**THANK YOU !**

