

# UNESCO and the Basic Sciences from MIRCEN to IBSP

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# What does UNESCO do....?

UNESCO cooperates with member state governments and affiliated institutions towards:

- Catalyzing and promoting regional and international action
- Policy development, review and evaluation
- Capacity building
- Promoting sustainable development (through science)
- Pursuing an important ethical mission - Universal Declaration on Bioethics and Human Rights (19 October 2005)

**This cooperation takes different forms over time, depending on UNESCO's overall priorities as established by its member states**

# MIRCEN: UNESCO Microbial Resources Centres



Source:  
**BIOTECHNOLOGY  
MIRCEN, Iranian  
Research  
Organization for  
Science and  
Technology,  
Tehran, IRAN**

# MIRCEN

**...a worldwide programme established to:**

- **Provide a global infrastructure incorporating national, regional, and international co-operating laboratories geared to the management, distribution, and utilization of the microbial gene pool;**
- **Foster the development of new inexpensive technologies native to specific regions;**
- **Promote the economic and environmental applications of microbiology; and**
- **Serve as focal centres for training.**

# MIRCEN

- Initiated in the 1970s
- 34 centres established world-wide
- At one time, nine centres in Asia-Pacific actively operating (India, Australia, China, Iran and Japan)
- One example is the Marine Biotechnology MIRCEN at the Department of Microbiology, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore, India

*...however, UNESCO has only been able to provide limited financial and institutional support provided in recent years to the network in its current form.*

# UNESCO *today*: the International Basic Sciences Programme (IBSP)

- Builds national capacities for basic research, training, science education and popularization of science
- Implemented with the Academy of Sciences for the Developing World (TWAS), the scientific unions of the International Council for Science (ICSU), the European Organization for Nuclear Research (CERN);
- Supports the transfer and sharing of scientific information and excellence in science through North-South and South-South co-operation;
- Provides scientific expertise for - and advice to - policy- and decision-makers, and increases public awareness of science and related ethical issues;
- Since the beginning of IBSP in 2005, more than 40 projects have been carried out.

# UNESCO's role and contributions today 1

- Facilitates access to global research networks for a large number of institutes in developing countries and LDCs
- Facilitates exchange of information and mobility of scientists through collaboration
- Links NGOs, academic/ research institutions in industrialized countries and resource-poor countries
- Supports networking – build up of national/ regional capacity
- Provides technical assistance as and when required – for example for the establishment and operation of Centres, including assistance in formulation of short, medium and long-term programmes.
- Encourages international governmental and non-governmental financial entities, as well as Member States of UNESCO, to provide financial and technical assistance

# UNESCO's role and contribution today 2

- Provides partners with UNESCO publications and other materials
- Disseminates information on the activities of the partners via the UNESCO website, newsletters, publications and other mechanisms
- Promotes scientific exchange, knowledge sharing and development of open access resources
- Builds regional and national capacity to carry out advanced research and training in the basic and applied sciences
- Builds a critical mass of scientists in these fields at the regional and national level
- Promotes networking, regional collaboration and international partnerships
- Promotes excellence in science
- Increases scientific awareness and interest in sciences among youth
- Undertakes information dissemination.



## An example - biotechnology

- Links Centres of Excellence like MIRCEN and the five Biotechnology Education and Training Centres (BETCENS), one in each region;
- Provides research and training opportunities for scientists, especially from developing countries. Areas include environmental biotechnology, the inventorization and management of microbial repositories and appropriate use of this diversity;
- Category II Centres which strengthen human and institutional capacity at the national and regional levels (e.g. the Regional Centre for Biotechnology Training and Education in India);
- UNESCO Chairs and university networks (UNITWIN) established in the field of biotechnology also provide platforms for research and training;
- facilitating access to peer reviewed journals.



# Capacity building

- Capacity-building is an integral part of UNESCO's programmes in science and includes:
  - Knowledge and technology transfer
  - Fellowships and intensive training workshops and schools (graduate, post-graduate, other)
  - *Establishment of Category 2 Centres and UNESCO chairs and UNITWIN networks*
  - *Now over 200 Science Chairs promoting science, the environment, sustainable development and capacity-building in science and technology*
  - Assistance to and capacity-building in Member States in formulating national science policies and related action plans

## Next steps...

- The MIRCEN network has been and can continue to be a valuable UNESCO partner in the life sciences and biotechnology programmes.
- However, the modality of the partnership will need to change given the changing guidelines and criteria.
- An MoU could be a way to stimulate and formalize a partnership with CAS, UNESCO, WDCM, WFCC and TWAS in this domain.
- Such an agreement could include collaboration in the context of IPBES, perhaps ethics for S&T regional initiatives.
- Modalities such as UNESCO's Category 2 Centres and UNITWIN networks offer other possibilities

I look forward to discussing further with you!



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**Thank you**