Venice Office
Regional Bureau for Science and Culture in Europe

United Nations Educational, Scientific and Cultural Organization

Spring Med EU FP7 Project

1° Observatory Networking Event

WP 8 – Policy, Societal Challenges and Cooperation Observatory

Mario SCALET, Head of Science Unit – Venice Office

Université de la Sorbonne

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UNESCO MISSION

UNESCO

The United Nations Educational, Scientific and Cultural Organization

A specialized agency of the United Nations

→ *construction of peace, human development, and intercultural dialogue in an era of globalization through education, the sciences, culture, communication and information*

To carry out its mission, UNESCO has:

- ❑ **Headquarters in Paris, France** (5 thematic sectors: ED, SC, CLT, SHS, CI)
- ❑ **A global network of field offices and institutes (category I centres)**
- ❑ Specialized Centres, University Chairs/Networks, Associated Schools, WHs, BRs,
- ❑ National Commissions for UNESCO further extend the impact of, and participation in the Agency's activities _ UNESCO Clubs

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UNESCO SCIENCE STRUCTURES/PROGRAMMES

- Category 1 Institutes - an integral part of UNESCO:
  - UNESCO-IHE Institute for Water Education, Delft, Netherlands
  - Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy
  - UNESCO Institute for Statistics, Montreal, Canada
- Category 2 Centres - under the auspices of UNESCO

  Nearly 30 centres in the fields of water, science policy, biotechnology, geosciences, remote sensing, renewable energy
- Around 200 Chairs in the fields of basic and engineering sciences, ecological and earth sciences, water and the ocean sciences
- International Science Programme networks – IOC, IHP, MAB (700 Biosphere Reserves), IGCP (Geoparks), IBSP
- Extensive network of scientific partners in each thematic area
- Major partners in the scientific community – International Council of Scientific Unions, etc

UNESCO Science Regional Offices & Centres

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UNESCO Science: Strategy

- Short-term (2012-13), 4 years from 2014 (37 C/5)
- Medium-term (2008-2013), 8 years from 2014 (37 C/4)
- Programme and Budget (2 years: 2012-2013)

<u>Overarching Objectives:</u>

Peace / Sustainable Development

<u>Global Priorities:</u>

Gender / Africa

<u>Strategic Objectives for Science</u>

- **Strengthening science, technology and innovation (STI) systems and policies for sustainable development, poverty eradication and a culture of peace**
- **Mobilizing science for the sustainable use of natural resources, renewable energy and energy efficiency, and for natural disaster reduction and mitigation**

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UNESCO SCIENCE PROGRAMME 2014-17

37/C5 _ Main Line of Action / Expected result (ER) _ 2014-2017	
MLA 1	**Strengthening STI policies, governance and the science-policy-society interface**
ER 1	Strengthening STI policies, the science-policy interface, and engagement with society, including vulnerable group such as SIDS and indigenous people
MLA 2	**Building institutional capacities in science and engineering**
ER 2	Capacity-building in research and education in the natural sciences enhanced, including through the use of ICTs
ER 3	Interdisciplinary engineering research and education for sustainable development advanced
MLA 3	**Promoting knowledge and capacity for protecting and sustainably managing the ocean and coasts (ER 4-5-6)**
ER 4	*Scientific understanding of ocean and coastal processes bolstered and used by Member States to improve the management of the human relationship with the ocean*
ER 5	*Risks and impacts of oceanrelated hazard reduced, climate change adaptation and mitigation measures taken, and policies for healthy ocean ecosystems developed and implemented by Member States*
ER 6	*Member States' institutional capacities reinforced to protect and sustainably manage ocean and coastal resources*

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UNESCO Science Programme 2014-17

37/C5 _ Main Line of Action / Expected result (ER) _ 2014-2017	
MLA 4	**Fostering international science collaboration for earth systems, biodiversity, and disaster risk reduction**
ER 7	Global cooperation in the ecological and geological sciences expanded
ER 8	Risk reduction improved, early warning of natural hazards strengthened and disaster preparedness and resilience enhanced
MLA 5	**Strengthening the role of ecological science and biosphere reserves**
ER 9	Use of Biosphere reserves as learning earning places for equitable and sustainable development and for climate change mitigation and adaptation strengthened
MLA 6	**Strengthening freshwater security**
ER 10	Responses to local, regional and global water security challenges strengthened
ER 11	Knowledge, innovation, policies and human and institutional capacities for water security strengthened through improved international cooperation

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UNESCO Science
Main Themes and Priorities

- **Science, Technology and Innovation (STI)**
  - STI policy & governance; assessment science systems (STIGAP)
  - Basic sciences & capacity building (IBSP)
  - Innovation, Science and Society

- **Environmental sciences**
  - Oceans (Intergovernmental Oceanographic Commission – IOC)
  - Water (IHP); Earth sciences (IGP); Environment (MAB)

- **Cross-cutting themes**
  - Engineering, Biodiversity, Natural Disasters, Science Education
  - Local and Indigenous Knowledge Systems (LINKS), Climate change, Small Island Developing States (SIDS)

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UNESCO Science
Cross-sectoral approach

ETHICS for Science & Technology (SC-SHS)

- **IGBC** - Intergovernmental Bioethics Committee (1998)_Composed by 36 representatives of the member states. It examines the advice and recommendations of the IBC, submitting its opinion to the UNESCO DG
- **COMEST** - World Commission on the Ethics of Scientific Knowledge and Technology. Composed of 18 indipendent scientists and experts_It advice UNESCO on issues concerning the ethics of S&T

Science Communication & Awareness (SC-CI)

Education in Science & Technology (SC-ED)

Technology for Cultural Heritage Protection (SC-CLT)

UNESCO Platform RENFORUS Renewable Energy Futures for UNESCO sites

- UNESCO has been entrusted by the international community in promoting education and international cooperation on renewable energy since the establishment of the World Solar Commission in 1995 and recently launched the overarching Climate Change Initiative **RENFORUS** (Renewable Energy Futures for UNESCO Sites) that aims to enhance and apply the Climate Change knowledge base to building green societies, involving the sustainable use of renewable energy sources in Biosphere Reserves and World Heritage Sites. The environmental preservation of UNESCO Sites requires an increased use of locally available renewable energy sources. RENFORUS plays a catalytic role in building a knowledge base and associated policies and disseminating related best practices on the use of environmentally sound energy technologies and their adaptation to specific contexts and needs.

Improving governance and cooperation to manage the oceans and coasts

- Intergovernmental Oceanographic Commission (IOC):

  141 Member States
- Improves governance and fosters intergovernmental cooperation to understand, manage and protect the oceans and coastal zones of the world
- Coordinates programmes in research, observations and services; builds capacity in management of the marine environment in IOC Member States

High-level objectives of the IOC

- **Marine Hazards** – establishing and coordinating tsunami and other marine hazard warning systems
- **Climate Change –** programmes help monitor the ocean's role in the climate system, its response to climate change and assist coastal nations adapt: Global Ocean Observing System (GOOS)
- **Ecosystem Heath –** ocean ecology and ecosystem health e.g. harmful algal blooms and endangered coral reefs
- **Environmental Management –** ecosystem-based management, marine spatial planning and marine information programmes

Science for Peace

- World Science Day for Peace and Development,
  10 November
- SESAME - **S**ynchrotron-light for **E**xperimental **S**cience and **A**pplications in the **M**iddle **E**ast
- Transboundary aquifers and biosphere reserves, shared river basins, etc

The International Centre for Synchrotron-light for Experimental Science and Applications for the Middle East SESAME

- UNESCO-initiated project built around the BESSY I synchrotron-light source facility which has been decommissioned in Berlin at the end of 1999 and donated by Germany
- Eleven members have joined the project: Armenia, Cyprus, Egypt, Greece, Iran, Israel, Jordan, Morocco, Oman, the Palestinian Authority and Turkey

Sesame

- The project aims to advance research in the Middle East while fostering peaceful co-operation among the region's scientific communities
- An international centre of excellence providing training and research for Middle Eastern scientists in structural biology, environmental and materials science, including medical and other applications
- In May 2002, the Executive Board of UNESCO unanimously approved the establishment of the center under the auspices of the Organization. UNESCO is the depository of the SESAME Statutes
- The value of BESSY I components is estimated at about US$30 million but a total of $50 to $60 million will have to raised to cover the cost of a building and support facilities for bringing it to modern performance levels
- The operating costs of SESAME have been estimated at US$5 million yearly
- Bilateral agreement EU-Jordan: 2 million Euro in 2010 to isolate the building of the synchrotron; 1 million Euro of EC Innovation Funds; 5 million euro recently approved
- The Council, established in 2004, is the governing body of SESAME

Gender and Science

- All UNESCO science programmes are gender-mainstreamed
- Programmes specifically targeting gender equality:
  - STI policy and gender – UNESCO Chairs for women scientists, promotion of networks of women scientists, assessments and surveys of gender and science
  - Gender and disaster risk reduction – role of women in building a culture of resilience
  - Women and local knowledge
  - For Women in Science Programme: L’Oréal-UNESCO awards, international, regional and national fellowships

UNESCO Venice Office

Starting point : the disastrous floods of 1966
UNESCO launched its international Campaign

1973: establishment of a Liaison Office

1972 _UNESCO **Scientific Co-operation Bureau for Europe** as a separate unit of Science in Paris

1983_ Agreement UNESCO-Italian CNR to move The **Regional Office for Science and Technology for Europe (ROSTE) in Venice**

1996_Agreement between Italy and UNESCO on ROSTE

2001 → Palazzo Zorzi

2002_MoU UNESCO-Italy about **cultural activity** within ROSTE

2006_ BRESCE, Regional Bureau of Science and Culture in Europe (UNESCO DG decision)

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UNESCO Venice Office - Mandate

To integrate science and culture into the development strategies of South East Europe (SEE), Caucasus and Mediterranean area

- enhancing the building of dialogue, peace, poverty alleviation and sustainable development
- promoting the cooperation among Member States in the SEE-Caucasus and Mediterranean sub-regions
- increasing cooperation and building bridges between EU countries, SEE and the Mediterranean area

UNESCO Venice Office – Science Strategic Priorities

- **Strengthening STI systems through improved national governance, regional policies and programmes**
- **Promoting and fostering science and society interface through quality communication, ethics, and diplomacy**
- **Building capacity in Science, Technology & Innovation, including science education**
- **Disaster Risk Reduction**
- **Strengthening Biosphere Reserves as Model Sites for Outreach**
- **Improving Water Resources Management**

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UNESCO Venice Office – Science Strategy
Networking

- Governance, regional policies: **Ministerial Meetings, World Science Report 2010 (next 2015), SciPolicy Reports/Books**
- Science and society interface: **Network on science media; Gender in Science Report; LOREAL prize**
- Building capacity: **SEENET.MTP Network SEE-PhytoChemNet; SESAME**
- Geo-science & Disaster Risk Reduction: **Network on Natural Disaster Risk Reduction; Astronomy & Astrophysiscs**
- Biosphere Reserves: **about 40 MAB-BRs in the SEE**
- Water Resources: **World Water Assessment Programme (WWAP Secretariat in Perugia)**

UNESCO Chairs & UNITWIN Networks
Centers/Institutes - ASPNet Schools - National Commissions