



7th World Water Forum 2015
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Water Education and capacity building: powerful policy tools in addressing the water agenda

Regional Session INR 4.5 MED

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Session Outline

PART I Opening, Scope of the session (30 min)

- International initiatives on water and ESD, (e.g. Nagoya, Med Strategy on ESD, Murcia events etc), Michael SCOULLOS (MIO-ECSDE)

PART II: Good examples from the Mediterranean & other regions (MAX 12 min each)

Training professionals from water and wastewater services: Experience from OIEAU, France
Josiane MONGELLAZ (OIEAU, France)

Capacity building of water professionals: the experience of "Eaux de Marseille"
Sandrine MOTTE (Eaux De Marseille, France)

Water Education and ESD: Examples from Morocco and North Africa
Mohamed FTOUHI (CMEPE, Morocco)

Empowering Southern Mediterranean CSOs in IWRM - Change is Yours
Essam NADA (AOYE & RAED, Egypt)

Water Education status and priorities in the Americas
Javier APARICIO (ANEAS DE MEXICO, Mexico)

PART III: Key session messages for WWF07 (30 min)

Panel discussion
Conclusions, Closing

Why we need Water Education

- In order to achieve the much needed water security and address a number of related challenges, including to protect vulnerable water systems, mitigate the impacts of water-related hazards such as floods and droughts, ensure access and sanitation for all and manage water resources in an integrated and equitable manner.
- Through Education:
 - We build the rights for the non represented (environment) and the future generations
 - We enhance the responsibility to respond to demand management (water economy) and enhance the cost recovery policy
 - We train people in the dialogue, the basis for the consensus building and participation processes, needed within IWRM

What kind of Water Education we need?

- ... *“Water problems cannot be solved by quick technical solutions, solutions to water problems require the consideration of cultural, educational, communication and scientific aspects...” [UNESCO IHP]*
- Despite the fact that water is critical for life, water is presented
 - in the Primary and Secondary Education in a rather fragmentary way with little hands-on and connection to real life experiences
 - in Tertiary Education is, traditionally, dominated by sectoral approaches largely in departments of civil or hygiene engineering, hydrology, agriculture, water /environmental chemistry ,etc with little inter-connectiveness and limited interaction with ecological ,socioeconomic and governance systems or cultural, aesthetic and other aspects
 - In Vocational Education most technicians dealing with water issues have a rather limited exposure to overall management and SD issues.

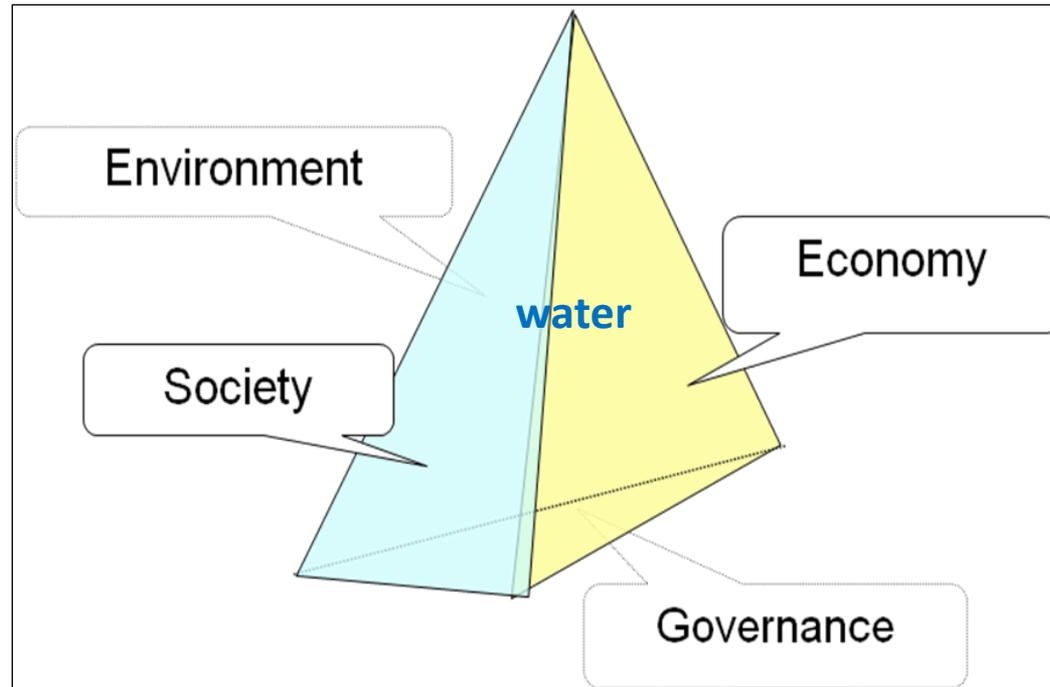
What should be the character of Education to address the abovementioned problems?

A new approach in Education is needed

- A new approach for Water at all levels of Education and Training is needed, integrating SD principles, considering water security, IWRM and the entire water cycle (including natural and non-conventional water inputs) and employing ESD teaching/learning methodologies, in accordance with the recommendations of the post DESD /GAP.

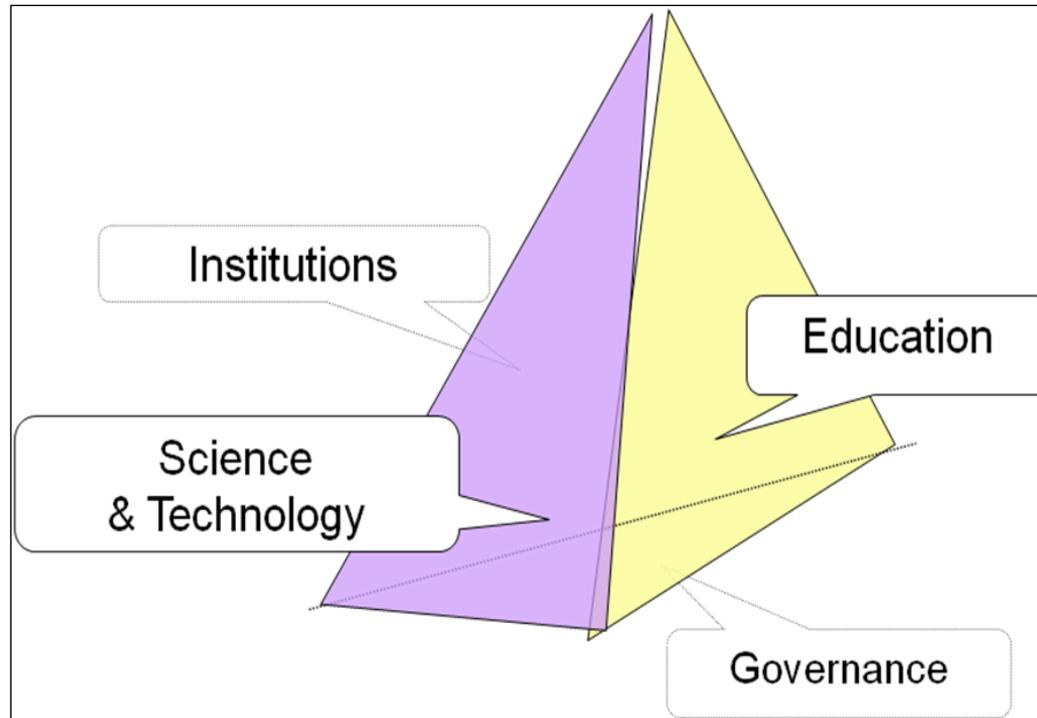
Water: fundamental within sustainable development and, therefore it needs to be properly reflected within Education for Sustainable Development.

Water within the tetrahedron of Sustainable Development



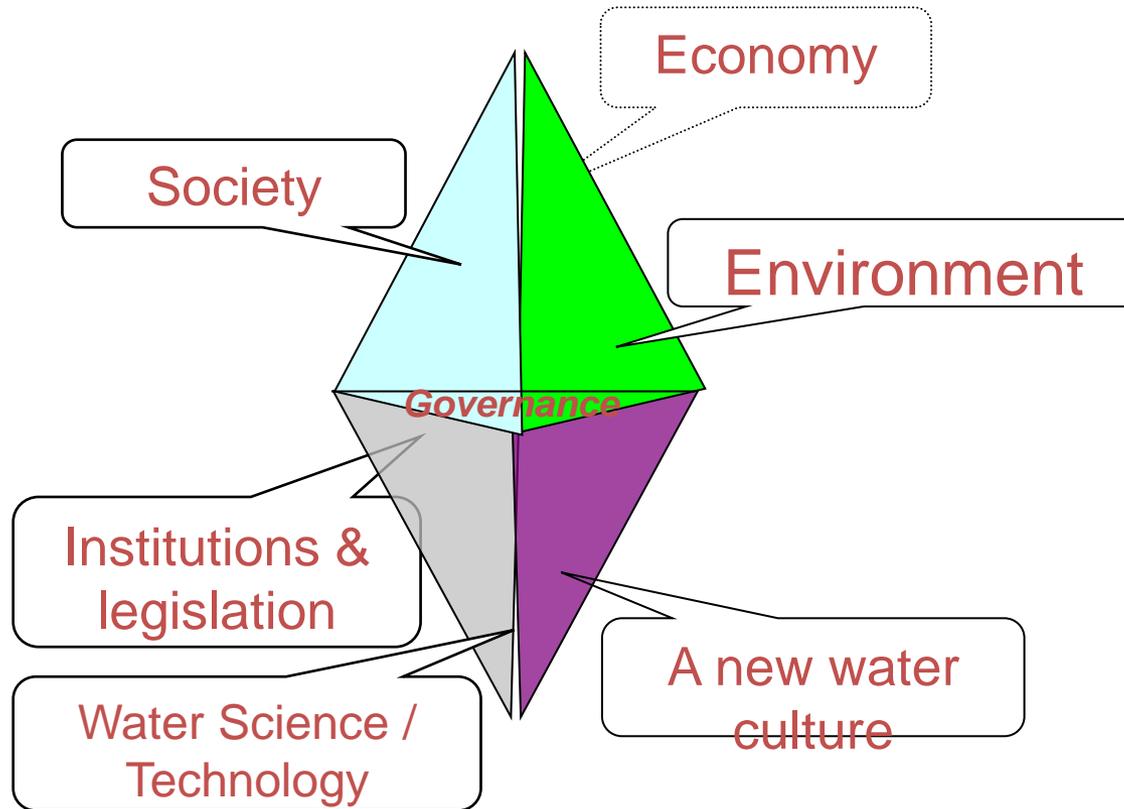
Sustainable water management should also follow these wide Sustainable Development dynamics, in which appropriate water governance is a prerequisite. Water Education needs to duly recognise the role of governance.

Analysis of Governance as a tetrahedron



Education, itself, is a major tool for Governance

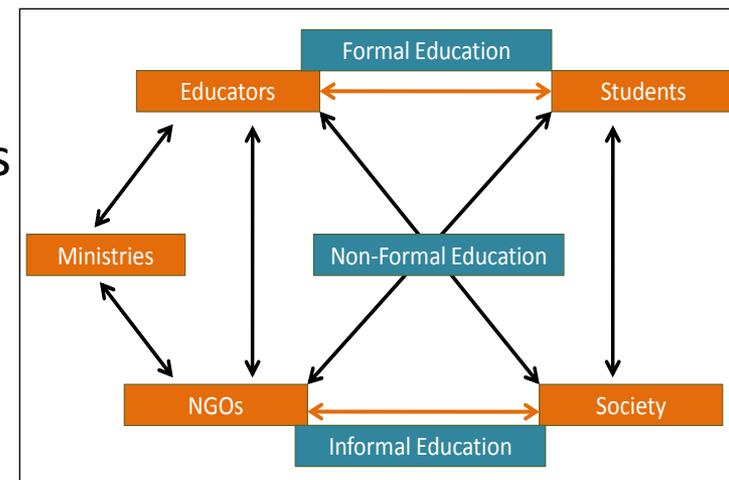
Water related ESD content as a double pyramid



Water related education is a critical factor for achieving SD and could shape not only people's behavior on water issues but also build and/or enhance the ability of water professionals.

Key-elements of water related education & capacity building (I)

- **The ESD context:** Water education needs to address holistically the environmental, economical and societal aspects of water issues. Also it should serve as an "entry point" to address multiple global sustainability challenges and opportunities.
- **Universality:** Water education applies to everyone: Even if water priorities vary from country to country, every individual needs to be equipped with the relevant basic knowledge, skills, values and behaviours to deal with water in a sustainable way.
- **Multi-leveled, multi-targeted and lifelong:** Water education should make use of all educational channels to deliver effectively its "water messages", including the *formal*, *non formal* and *informal* learning channels as well as Vocational training.

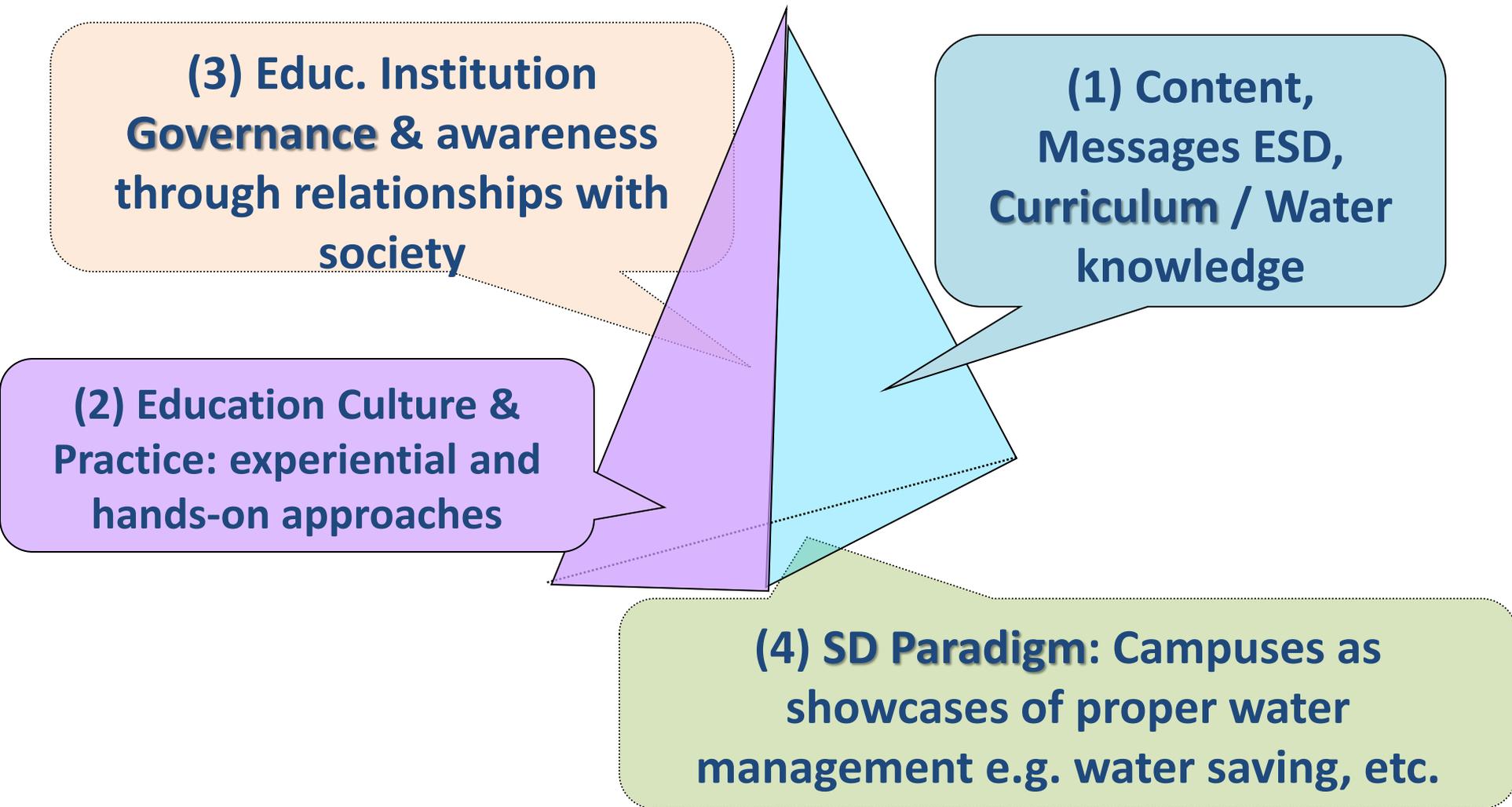


Key-elements of water related education & capacity building (II)

- **Multi-disciplinary and holistic** : Avoid traditional sectoral approaches that with water marginally. Trans-disciplinary and multi-disciplinary models are necessary. In University level water education should be expanded beyond natural sciences and engineering and embrace all disciplines. **Interlinked** with up-to-date and state-of-the art science, especially when dealing with misconceptions and prejudice (e.g. grey/waste water).
- Water education needs not to re-invent the wheel: Worldwide, there is a number of **good examples** & initiatives taking place that can be replicated.

The above are combined in the Whole Institute Approach (WIA)

*The **Whole Institute Approach (WIA):**
an entry point for effective water education*



Non formal and informal education by Universities and relevant NGOs

They could enhance involvement of local society, municipalities and other stakeholders

- (a) by addressing local/ regional water related challenges in an integrated way ,
- (b) by encouraging, assisting local authorities, enterprises etc to develop appropriate ESD courses/ trainings/capacity building and awareness activities on appropriate water management

Some Examples

- *The **Hydria project** on wise water wisdom of the past, around the Mediterranean (non formal & informal learning)*
- *The **Alter Aqua project** on Non Conventional Water Resources (for non-formal and vocational training)*
- *Other examples from the Mediterranean ...*

A valuable framework for water related education: the Mediterranean Strategy for ESD

the process followed

- **2005:** Athens, Official Launching of the UN Decade on ESD and mandates to prepare it.
- **2006:** A long participatory process, started engaging universities, ministries officials, experts and NGOs from the North and the South of the Mediterranean in several meetings.
- The **first draft** was developed by the University of Athens/UNESCO Chair on Management and Education for Sustainable Development and MEdIES.
- The **second draft** was formulated in Athens in December **2011**.
- **2012:** The second draft presented in the Med event of RIO+20 Conference.
- Series of consultations and drafts under H2020 / CB MEP: Rabat, 2013; Zagreb, 2013



Mediterranean Strategy for ESD: the process followed

- **Athens, May 2014:** The Strategy has been formally and unanimously endorsed by the 43 Ministers of Environment of the UfM including the EU and the Mediterranean non-EU countries
- **Nagoya, Nov 2014:** The Strategy has been presented on the occasion of the Conference to celebrate the end of the Decade on ESD and the post 2014-era
- **Next steps:** A **5-year Action Plan** of the Strategy will be prepared under the formal framework of the Secretariat of the UfM by MIO-ECSDE together with the UoA / UNESCO Chair.



Mediterranean Water-specific themes for the Action Plan include :

- Water
- Gender
- Solid waste (particularly litter in aquatic environments)
- climate change,
- water safety and risks, water-energy-food-ecosystems-health nexus
- capacity building & vocational training in management of water
- Enhancement of links between formal and non-formal education, especially in the South Mediterranean countries after recent political developments
- Specially designated areas and museums to be actively utilised in the implementation of ESD
- Networking
- Whole Institute Approach
- Higher education curricula and open data handling

Key Messages

for the Forum on behalf of this session:

- We need to capitalise:
 - on the **Mediterranean Strategy for ESD** which provides a valuable framework for water related education.
 - On the strength of the Mediterranean Networks and Foundations.
 - On the dynamic created by the UN DESD and GAP to speed up transformation of the Educational Systems throughout the Mediterranean.
- We need to mobilise considerable resources from public and private sources for water related education since both education and water are pillars for our future in the Mediterranean region.

- Thank you!