

SOWAEUMED

NETWORK IN SOLID WASTE AND WATER TREATMENT
BETWEEN EUROPE AND MEDITERRANEAN
COUNTRIES

Are you ready to
discover?



**Nanotecnología. Eje importante para el futuro
de la cooperación CELAC-UE
International Seminar. ICHEC. 28/2/13. Brussels.
Belgium**



THE CONTEXT

threatened by
pollution

African countries of the Mediterranean river basin located in a climatic zone with high intra-and interannual variations in precipitation are those ranked among the most threatened by the consequences of global warming. A deficient management of scarce water resources, threatened by pollution of increasing concern from various sources, contributes to aggravating the situation. Four major problems affecting water, its quality and treatment

1. Proper research on the issues of climate change, water shortages and the development of new technologies for desalination, reuse of waste, water flows and transfers of water between areas
2. Gaps in regulations in the sectors of water and its treatment

3. Establish good practices in decentralization of the management of water and recycling, involving the private sector
4. Peoples' right to access to water in terms of quantity and quality



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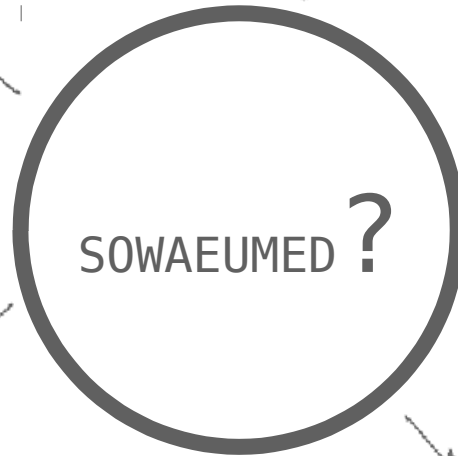
NEEDS

Strengthening the

of partner institutions promoting the synergic work of participants of various scientific profiles improving their relationships



Strengthening MED in education and training



MED Strengthening *operational capacities* in their environment based on implementation of new waste treatment technologies



Institutional Strengthening of MED centres through *mobility* between partners and training in new technologies and methodologies in MS of Ph.D. students and/or post-doctoral researchers



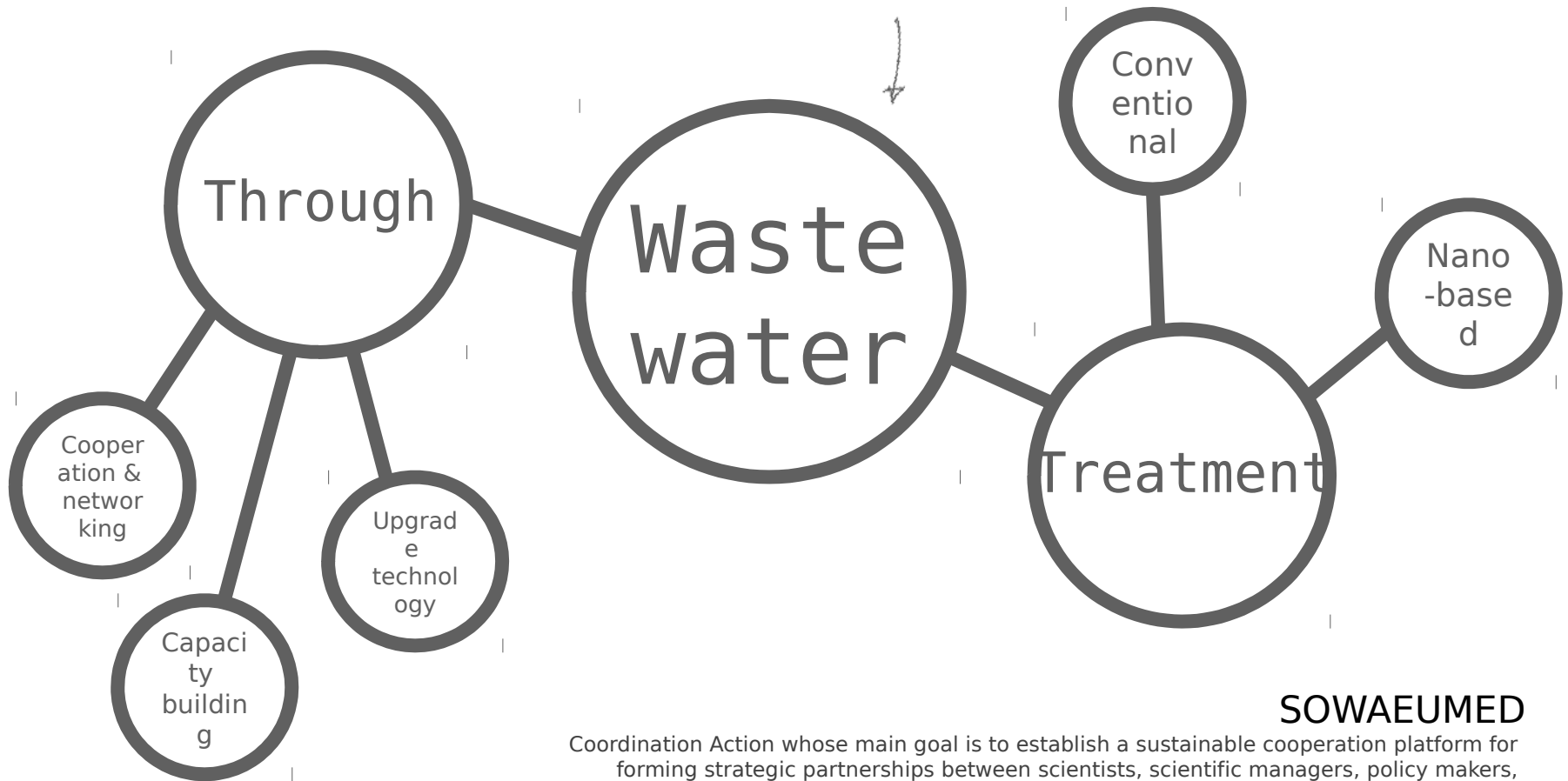
Strengthening MED through

and experience between the participating centres (Case Studies) and advanced legislation on environmental control and prevention



MINDMAP

How to treat?



SOWAEUMED

Coordination Action whose main goal is to establish a sustainable cooperation platform for forming strategic partnerships between scientists, scientific managers, policy makers, technology transfer and industrial experts between EU Member States (MS), Associated States (AS) and the Mediterranean Region States (MED), concerning the development and implementation of solid waste and water treatment technologies.



OUR AIMS

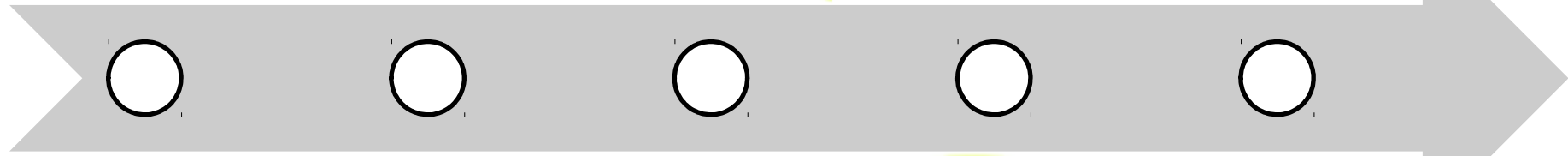
Contributing to
problems

wastewater derived

Sustainable
permanent
dialogue,
specific
cooperation
activities

Identification of
eventual
difficulties,
needs,
term priorities

Enhance
human
through
training and
teaching
activities

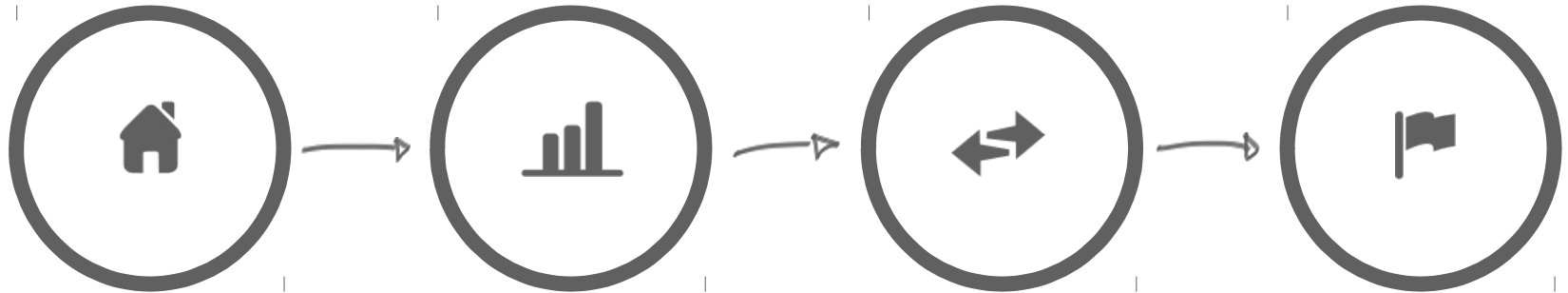


Inter-intraregio
n
key actions

participation of
MED region
research
stakeholders in
future joint
proposals at
national &
international
level



WORKFLOW



Fostering relationships

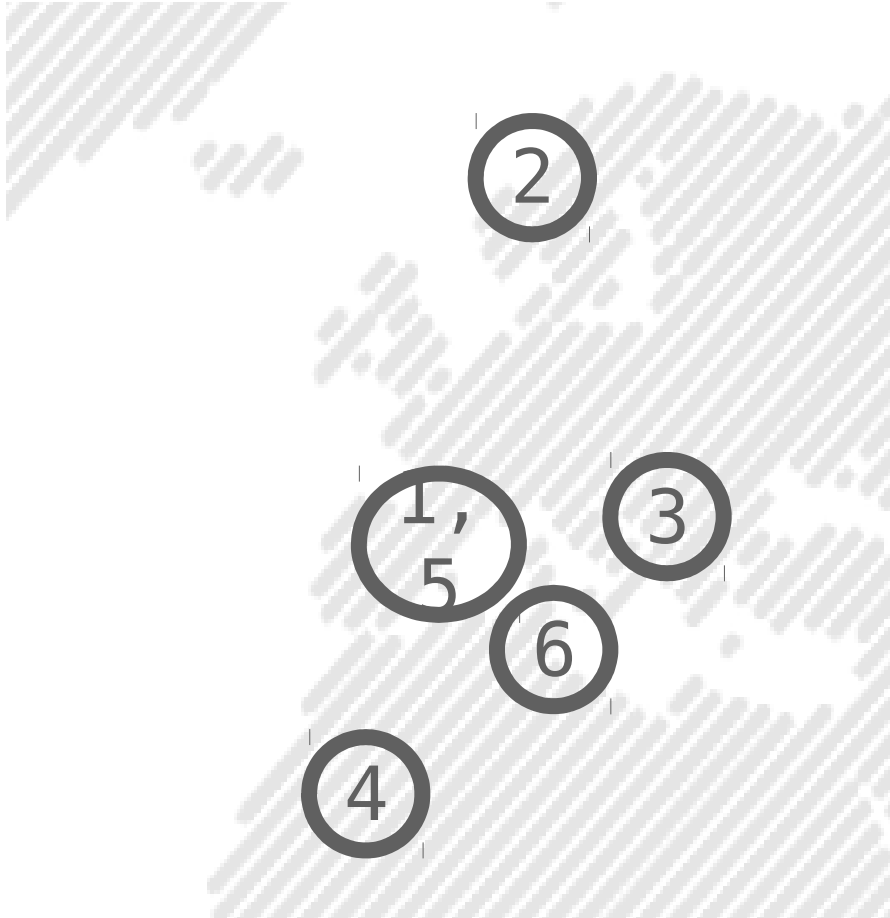
Equipment upgrading/acquisition

Education, training & exchanges

Dissemination & interactions



THE PARTNERS



UAB



MEET THE EU TEAM

Qualified



**Manuel
Valiente**

Analytical Chem. Prof. (UAB)
Coordinator of several EU
FP5-7 projects. 165 papers,
30 thesis, 9 patents



**Mamoun
Muhammed**

Chair Professor of Materials
Chemistry (KTH). >200
papers, 20 patents.
Coordinator of several EU FP
projects



**Bogomil
Obelic**

Senior scientist at RBI. > 50
papers. Participant in several
EU FP projects.



**Marco
Arredondo**

Industrial Engineer. Director
of Renewable Energy,
responsible for carrying out
industrial projects both in
production plants for
biomass energy



MEET THE MED

Qualified TEAM



**Laila
Mandi**

Environmental Sciences Prof.
at UCAM. Director of the
National Centre of Studies
and Research on Water and
Energy,



**Seffen
Mongi**

Professor in Inorganic and
Applied Chemistry (SOU).



ACTIVITIES



To provide



To consolidate



R+D
infrastructure by
upgrading or acquisition
of selected equipment



Research priorities, road
maps and collaborative
models to future
S&T collaborative
policies



CASE STUDIES

To provide



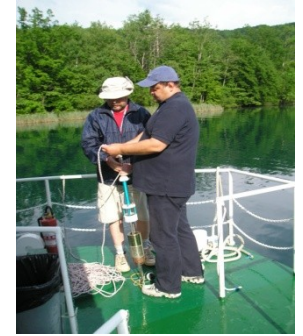
To provide training on the latest scientific and technological advances, to provide a forum for researchers to present their own work (talks and posters) and to establish connections between researchers. It was planned to seek support from local universities and governments and to ask for national resources to help the organization of the case studies. Interested **local industries and Chambers of Commerce** and Industry have been invited to attend and to sponsor some of the events.

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CASE STUDIES



Lectures and demonstrations in the **conventional and advanced waste treatment technologies** will deal with actual **on site cost effective applications** such as reverse osmosis (portable, large-scale) and advanced adsorbent filter media (ion exchange resins, activated alumina, ferric oxide and zeolites)

I Case Study

May, 2011



CASE STUDIES



Demonstration of good practices implemented along the project, to populated areas in MED region affected by an intensive tourism and urbanism activity and waste pollution, especially small villages.

II Case Study

November 2011



WORKSHOPS

To consolidate



Between **the researchers** and other important players in the development, application and implementation of emerging technologies for waste treatment, from the research development of processes **on one** hand and public policy issues related to research and also start-up companies on the other. Furthermore, these activities were performed in **order to build contacts and confidence between the researchers and economic and social actors.**

Representatives from interested industrial companies and from government agencies were invited to actively participate in these workshops. The workshops were structured on: plenary sessions, specific seminars, round tables, practical sessions and visits to companies and institutions involved.

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I WORKSHOP



The poster features a central image of water dripping from a tap into a pool of water below. At the top left, there are logos for the University of Sousse, the Ministry of Higher Education and Scientific Research, and ESST. The text on the poster includes the title 'HADRUMETUM ECO-INDUSTRIES', the dates '10-11-12 November 2011', and the location 'Tej Marhaba Hotel (Sousse)'. It also mentions 'Sousse University : SOWAEUMED PROJECT Call for Abstracts' and a list of 'SCOPE & TOPICS' such as 'Solid Waste and Water Treatment policy and legislation' and 'Innovative Technologies (Nanotechnology)'. A 'TIME SCHEDULE' section provides key dates for registration and abstract submission. A 'CONTACTS' section lists the organizers. At the bottom, there is a 'Scientific Committee' list and several logos of participating institutions.

UNIVERSITY OF SOUSSE ORGANIZE :
INTERNATIONAL WORKSHOP

HADRUMETUM ECO-INDUSTRIES

10-11-12 November 2011
Tej Marhaba Hotel (Sousse)

Sousse University :
SOWAEUMED PROJECT
Call for Abstracts

SCOPE & TOPICS

Solid Waste and Water Treatment policy and legislation
Innovative Technologies (Nanotechnology)
Pollution monitoring and control
Industrial waste water and reuse
Urban Wastewater Treatment and Reuse
Solid Waste Management and Reuse
Cleaner Production

TIME SCHEDULE

Find and fill the registration form at www.en.rou.su.tn
and send it with a summary of about 300 words to hadrumeum@fsc@univ.sousse.tn

Abstracts should be received not later than **15th September 2011**
Final selection and invitation of participants: **20th September 2011**
Receipt full ready e-papers: **20th October 2011**

CONTACTS

Pr. Mongi Sefien : mongisefien@yahoo.fr - GSM : (+216) 23 502 211
Dr. Bechir Ben Tiba : btiba@yahooh.tn - GSM : (+216) 98 988 987

Scientific Committee

Pr. Mohammad Mansour (RTI) Sweden
Pr. Mongi Sefien (ISA-CE) Sousse, Tunisia
Pr. Saeed Hameed (IAB) Barcelona, Spain
Pr. Ahmed Noureddine Hela (Exp. Pharmacol) Tun
Pr. Mounir Ben Achour (ISM) Tunisia
Dr. L. Bouassila (CEITE - Ecovark Bay) Tunisia
Pr. Laha Mounir (CINTEC) (IEM) Morocco
Pr. E. Ghaoui (IM Ecovark Bay) Tunisia Tunisia
Pr. Bechir Ben Tiba (ISA-CE) Sousse, Tunisia
Dr. Bechir Ben Tiba (ISA-CE) Sousse, Tunisia
Pr. Farouk M. Hameed (IAB) - Morocco Tunisia
Pr. Sami Sayadi (CIS-Stein) Tunisia

The objectives of this workshop were the innovative aspects of water treatment and waste management, introducing new technologies, describing the state of the art and case studies related, discuss key controversial issues, sharing of experiences among different countries. More than 80 participants (researchers, engineers; specialists...) from 6 countries (Tunisia, Spain, Morocco, Egypt, Croatia, Sweden) attended in Hadrumetum Eco-Industries. The topics addressed include, Biological wastewater treatment , Textile wastewater treatment, Innovative technology Adsorption and biosorption techniques, Monitoring and control session.

The event was noticed and highly commented in the local press, on the one hand because of the momentum it has communicated and also the quality of researchers and public companies present.

I Workshop

November, 2011



II WORKSHOP



I Workshop
May, 2012



Part 1: “Waste and water treatment technologies of social, economic and political interest”, addressed issues such as: public policies of R&D. More than 80 participants discussed about the economic and social development; impact on the environment and impact on the health of the industry in general and in particular for the conventional, advanced and nano-based waste treatment industry



II WORKSHOP



Part 2: "Starting-up and managing companies in the field of Nano-based waste treatment technologies" was focused on innovative forms of promoting the creation of startup companies; evaluation of experiences in both regions, benchmarking of best practices,

I Workshop
May, 2012



III WORKSHOP



Focus on **innovative aspects of Water Treatment and Waste Management**, presenting new technologies, **describing the state of the art and** related case studies, discussing the main controversial subjects, sharing experiences among different countries, valuating social and economical balances and launching a new projects

- International clusters. Waste Cluster Initiative
- Regional cluster (Tunisia Water Cluster)
- Brokerage event

II Workshop

November, 2012



CAPACITY BUILDING

R+D infrastructure by upgrading or acquisition of selected equipment



Improve the S&T research capacities of MED centres to allow their promising activity to reach a good level in both scientific and technological results **facilitating international** collaboration on an equal-footing basis.

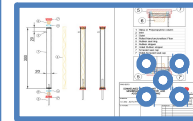
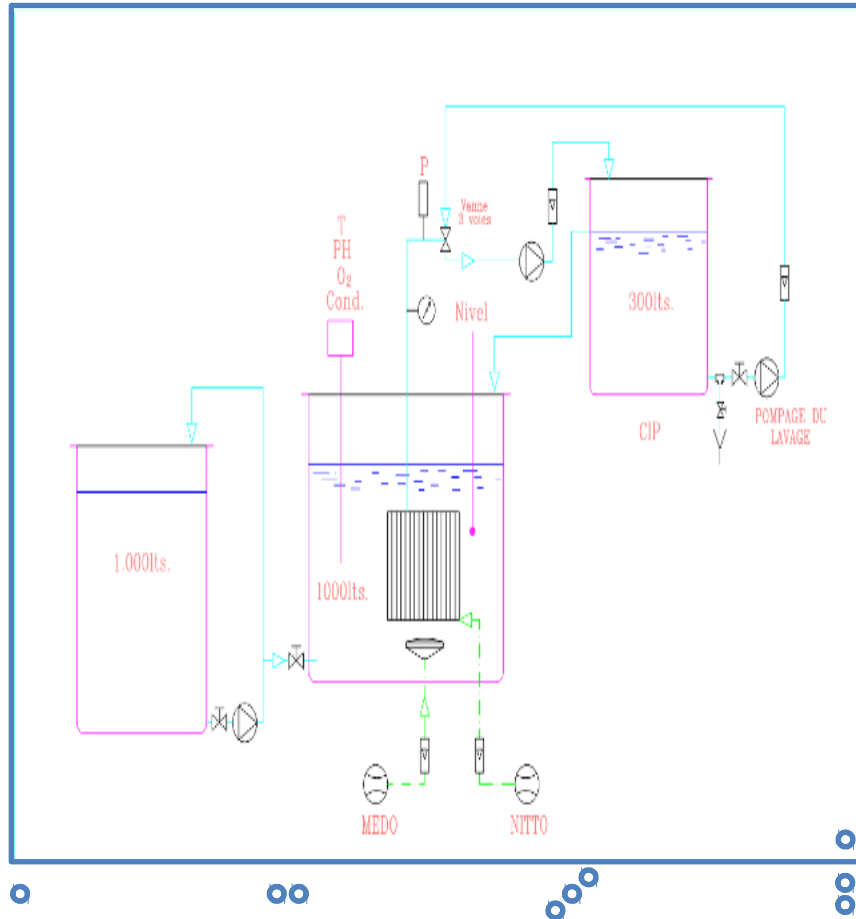
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CAPACITY BUILDING

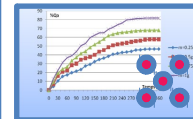
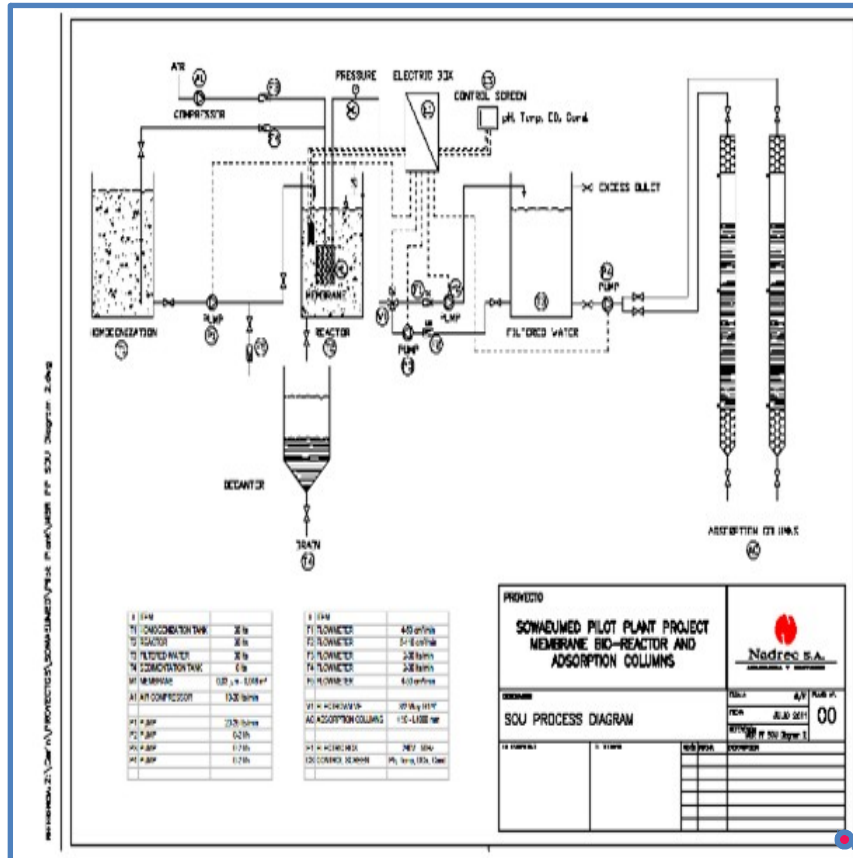
R+D infrastructure by upgrading or acquisition of selected

equipment



CAPACITY BUILDING

Sousse, Tunisia R+D infrastructure by upgrading or acquisition of selected equipment



TRAINING

Enhance human resources through training and teaching activities



Specialised trainings of several PhD students and postdoc researchers from MED countries in EU laboratories; hosting experts; **scientific visits of senior** research staff. Participants, especially young researchers, were acquainted with EU norms on waste treatment technologies. Explore options for future research collaboration.

To learn more please visit our website:
www.sowaeumed.eu



E-LEARNING

Enhance human resources through training and teaching activities



A variety of learning activities and possibility to communicate through different tools like, **chats, lectures, online discussions (Forum), instant messaging, case studies, practical exercises, also offers multimedia sources** and interactive content that support learning progress, like photos, video and audio streaming.

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E-LEARNING

46 participants from *Morocco, Tunisia, Egypt, Jordan*



SOWAEUMED E-Learning COURSE

on

**Nanotechnology from research to
applications in water treatment**

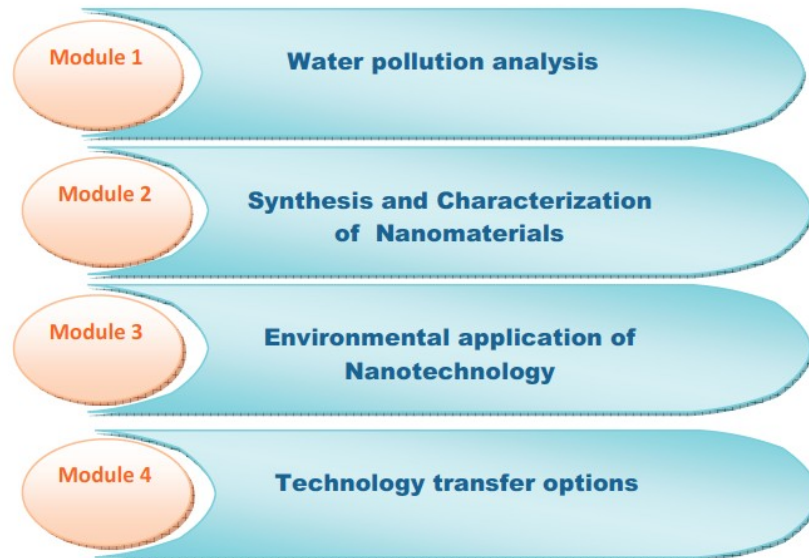
From 8th October to 7th November 2012

Organized by

National Centre for Studies and Research on Water and Energy (CNEREE),
Cadi Ayyad University



SOWAEUMED E-learning modules



DISSEMINATION

Research priorities, road maps and collaborative models to *impact* future S&T collaborative policies



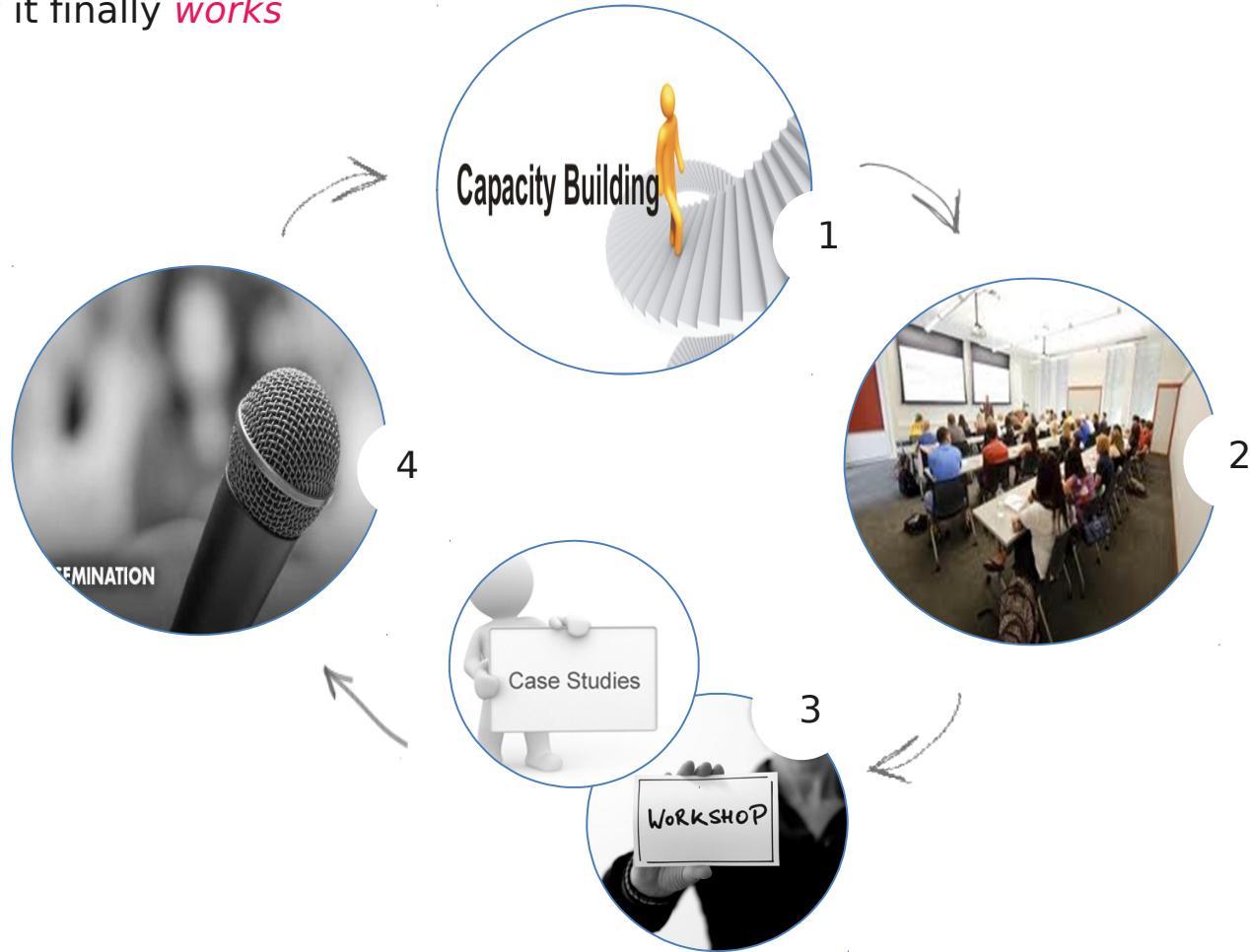
- Promotional kit (logo, banner, poster, brochure)
- Periodic NL
- Own website and redistribution through others (ARABINNOVA)
- Cluster events (WCI, MIRA, SWEEP-NET , ANIMA, CITEC, ECO-TECH, CB-WR-MED etc..), assistance to workshops, conferences
- Press releases
- TV and radio interviews
- Continuous NCPs and policymakers contact

To learn more please visit our website:
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SOWAEUMED CYCLE

This is how it finally *works*



ANY QUESTIONS?

If you would like to learn more, *get in touch*



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Email: *gustavo.perez@uab.cat*



THANKS FOR
WATCHING

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