

EMWIS Flash - February 2013

Euro-Mediterranean Information System on the know-how in the Water Sector

EMWIS is a program of the Union for the Mediterranean.

For further information: www.emwis.net

Monthly Flash produced by the EMWIS Technical Unit-
[OIEAU](#), [CEDEX](#), [SOGESID](#)-

It is available in [English](#), [French](#) & [Arabic](#).

(French & Arabic versions are available few days later)

[Mediterranean Water Information Mechanism](#) / [Geo-Catalogue](#) / [UfM-Water](#)



=====

In this issue N°107 (www.emwis.net/thematicdirs/eflash/flash107)

=====

HEADLINE

1- Water balances at river basin level to support drought management, results from Jucar pilot basin

IN BRIEF

- 2- Slogan for World Day to Combat Desertification Selected
- 3- UN High-Level Meeting on National Drought Policy
- 4- Conclusions of Zaragoza International UN-Water Conference on Water Cooperation
- 5- European Council highlights the need to promote synergies with the Union for the Mediterranean
- 6- Mediterranean local and regional authorities (ARLEM) in favour of a Mediterranean water strategy
- 7- A ENPI CBCMed project targets reduction of water losses in distribution networks
- 8- EU: Nearly 5000 litres of water a day consumed per capita
- 9- One million signatures for Water as a Human Right
- 10- Red Dead Conduit Project: Comments of EcoPeace/ FoEME to WB Public Hearing
- 11- Jordan: EIB conference to look at future potential of Public-Private Partnerships in the water sector
- 12- Lebanon, Jordan & Egypt: Adaptation to Climate Change in the Water Sector in the MENA Region (ACCWaM)
- 13- Morocco: Arab Fund for Economic and Social Development supporting drinking water supply in Tetouan
- 14- Morocco: The Islamic Development Bank support for the implementation of hydropower and water drinking projects
- 15- Mauritania: AfDB Supports Improved Access to Water and Sanitation

- 16- Saudi Arabia: Wastewater treatment plants contracts in Mecca
- 17- Adaptation to a changing climate in the Arab countries
- 18- Call to action for Water, Energy, and Food Security
- 19- How scientists are making water desalination 50% greener
- 20- Urgent need to focus on wetlands as natural solutions to global water crisis
- 21- Monitoring Wetlands for sustainable water management
- 22- SMOS: The global success story continues
- 23- ESA: Miniature satellite to map global vegetation
- 24- NASA: Will Water Shortages Unleash Instability in the Middle East?
- 25- SIWI: Wise Up To Water Risks
- 26- Fog-catching fabric could improve water collection in deserts
- 27- Billboard converts desert air into drinking water

[NOMINATIONS and VACANCIES](#)

[PUBLICATIONS](#)

[CALL FOR TENDERS and PROPOSALS](#)

[CALL FOR PAPERS](#)

[TRAINING](#)

[EVENTS](#)

[PROJECTS](#)

[BRIEF EMWIS SITE MAP](#)

[CONTACT US / COMMENTS](#)

=====

HEADLINE

=====

1- Halting Desertification in the Júcar River Basin (HALT-JÚCAR-DES) project organized its international technical workshop on water balances in Madrid on 27/02/2013 at the premises of the CEDEX Centre for Hydrographic Studies (CEH). This project is funded by the EC (DG Environment) and started with the signing of an agreement on 21 December 2011 and will end by next March 21, 2013. It is coordinated by the Spanish Consulting Firm (EVREN) in partnership with EMWIS and collaboration with the Júcar River Basin Authority (CHJ). This action aims at obtaining and assessing socio-economic, environmental and climatic data, develop updated water accounts according to water availability and existing demands in the Júcar River Basin district, all which would allow assessing existing desertification risks. The workshop was inaugurated by the Director of CEH, Frederico Estrada, and chaired by Javier Obartí, the coordinator of EVREN and the HALT-JÚCAR-DES project, with the presence of Teodoro Estrela (CHJ), and Jauad El Kharraz (EMWIS). The representatives of the European Commission (EC) and the European Environmental Agency (EEA) have given insights on the Blueprint Communication and the description of Water Balances works

developed by the EEA at the EU level and developments on WISE. HALT-JÚCAR-DES project results on water balances were presented as well as similar experiences from the Guadiana River Basin (Spain), Morocco and Tunisia. Around 30 participants attended, among them: representatives from the Spanish Ministry of Agriculture, Food and Environment, the Spanish Center for Public Works Research and Studies (CEDEX), the Mediterranean Network of Basin Organisations (MENBO), Guadiana River Basin Authority, University "Politécnica" of Valencia (UPV); University "Complutense" of Madrid (UCM) and the Water Observatory; University "Politécnica" of Madrid (UPM), University "Politécnica" of Cartagena (UPCT), the Euro-Mediterranean irrigators community (EIC); and representatives from Morocco and Tunisia who are developing water balances under the European Neighbourhood Policy Instrument-Shared Environment Information System (ENPI-SEIS) group. Interesting discussions took place on how the data are collected (environmental and economic ones as well as the indicators such as WEI+, the use of remote sensing imagery and water information systems), the problems of uncertainties and data consistency, the accuracy of models used such as PATRICAL & SIMPA, spatial and temporal disaggregation of data at river basin or sub-river basin levels and at annual or monthly basis, ECRINS (European catchments and Rivers network system) possible improvements that should be taken into account by the EEA, as well as the way to transfer such good practices to Southern Mediterranean countries and other river basins. The EC representative announced a launch of a new call for proposals in the upcoming weeks on building water accounts at local level, as well as the publication of a guidance document on water accounts (and ecological flow) by 2014 . Further information on [EMWIS website](#).

=====

IN BRIEF ([Full news](#))

=====

2- The slogan for the 2013 World Day to Combat Desertification, which is celebrated annually on 17 June, will be "Don't let our future dry up." Events to mark the Day will focus on themes related to drought and water scarcity. The theme was selected to coordinate with the 2013 International Year of Water Cooperation. Recognition of the Day is organized by the Secretariat of the UN Convention to Combat Desertification (UNCCD). The UNCCD reports that the goal of the 2013 World Day to Combat Desertification will be to "create awareness about the risks of drought and water scarcity in the dry lands and beyond," and related activities will seek to call attention to the importance of sustaining healthy soils as part of the post Rio+20 agenda and the post-2015 development agenda. Activities to mark the Day will begin during the High-level Meeting on National Drought Policies, which will convene from 11-15 March 2013, in Geneva, Switzerland. This event is being organized by the UNCCD, World Meteorological Organization (WMO), and Food and Agriculture Organization of the UN

(FAO), among others. Further information on [EMWIS website](#).

3- Without a coordinated, national drought policy that includes effective monitoring and early warning systems to deliver timely information to decision makers, effective impact assessment procedures, pro-active risk management measures, preparedness plans aimed at increasing the coping capacity, and effective emergency response programmes directed at reducing the impacts of drought, nations will continue to respond to drought in a reactive, crisis management mode. To provide this preventive support mechanism to drought-affected societies, the World Meteorological Organization (WMO) launched the Integrated Drought Management Programme (IDMP). Moreover, in order to address the issue of national drought policy, WMO Congress at its Sixteenth Session held in Geneva in 2011 recommended the organization of a "High-level Meeting on National Drought Policy (HMNDP)." Accordingly, WMO, the Secretariat of the United Nations Convention to Combat Desertification (UNCCD) and the Food and Agriculture Organization of the United Nations (FAO), in collaboration with a number of UN agencies, international and regional organizations and key national agencies, plan to organize the HMNDP in Geneva in March 2013. In the framework of IDMP activities, the HMNDP will provide practical insight into useful, science-based actions to address the key drought issues being considered by governments and the private sector under the UNCCD and the various strategies to cope with drought. National governments must adopt policies that engender cooperation and coordination at all levels of government in order to increase their capacity to cope with extended periods of water scarcity in the event of a drought. The ultimate goal is to create more drought resilient societies. Further information on [EMWIS website](#)

4- Mutual trust and understanding the real needs of communities are key factors for successful water cooperation, according to the participants of the International UN-Water Conference on water cooperation which took place from 8 to 10 January 2013 in Zaragoza, Spain. The participants shared a wide range of initiatives, including experiences in rural and urban areas, and cases at country and basin level, to identify lessons learned and key success factors. The need for cooperation was highlighted as critical for sustainable water management. While financing is important and water user associations are often created through development cooperation funds, it should be complemented by cooperation and mutual support between sectors and users to become sustainable. "Achieving water cooperation is the result of a long term process which requires time, patience and mutual trust", summarized Josefina Maestu, director of the UN Office to support the International Decade for Action 'Water for Life' 2005-2015 when closing the Conference. Further information on [EMWIS website](#)

5- The European Council discussed on 7-8 February a number of questions including issues related to the Southern Mediterranean partners, and stressed on the full

engagement of the EU to establish a common area of shared prosperity, closer political association and progressive economic integration. "It is also necessary to explore further ways to enhance the political dialogue, including dialogue at the highest level, with those countries in transition towards democracy, and to promote synergies with regional initiatives such as the Union for the Mediterranean and the 5+5 Dialogue. The EU will also support efforts towards more regional integration. The European Council welcomes the communication on supporting closer cooperation and regional integration in the Maghreb". The Council conclusions also underlined that the reinforcement of the partnership between the EU and the Southern Mediterranean countries requires the long term commitment of both sides. Further information on [EMWIS website](#)

6- Boosting regional cooperation, consolidating decentralisation and strengthening institutional capacity at local level are essential to ensure the success of the current period of transition facing the Southern Mediterranean. These priorities will guide the work of the Euro-Mediterranean Regional and Local Assembly (ARLEM) to help facilitate the reform processes in the region. This was the commitment made by local and regional politicians, supported by the Union for the Mediterranean, the European Investment Bank (EIB) and the European Commission, who gathered on 18 February in Brussels for the ARLEM's 4th plenary session. The topics of water and desertification were addressed in reports from ARLEM's Commission for Sustainable Development, which mapped out a common political path and strategy for the region, taking into account the role of LRAs in identifying and implementing measures to deal with desertification. The problems related to water demand and desertification and water shortage in semiarid areas of the Mediterranean were also tackled, with particular emphasis on the Murcia Declaration, which was the result of a meeting held in November 2011. The local and regional authorities on all three shores of the Mediterranean basin represented in ARLEM are strongly in favour of a water strategy for the Mediterranean, involving all levels of governance (global, national, regional and local) and undertake to introduce innovative measures and Decentralised Solidarity Mechanisms to ensure universal access to drinking water and sanitation in the Mediterranean and to develop and reproduce them on a larger scale. ARLEM's interaction with the various European institutions offer a promising path for gradually encouraging the involvement of LRAs in the UfM's operational strategy and funding. Further information on [EMWIS website](#)

7- Aqua knowledge and innovation transfer for water saving in the Mediterranean basin (AQUAKNIGHT), a project funded under the ENPI CBC Mediterranean Sea Basin Programme 2007/2013 (CBC-Med) and aiming to address the issue of so-called Non-Revenue Water - water that is 'lost' before it reaches the customer - has released the second edition of its newsletter outlining the activities carried out in the project's first year. AQUAKNIGHT seeks to develop five parallel pilot projects in the cities of Limassol (Cyprus), Genoa (Italy), Alexandria (Egypt), Tunis (Tunisia) and Aqaba (Jordan)

and to carry out capacity-building activities for water companies and public institutions concerned with water management. It provides an overview of the training initiatives carried out so far and of the current status of the five pilot projects. The newsletter also announces the AQUAKNIGHT conference, which will take place on 15 May 2013 in Alexandria (Egypt) in order to promote the project results and best practices. Coordinated by the Institute of Communication and Computer Systems (Greece, Sterea Ellada), the partnership gathers nine public institutions, water utilities and private companies from Italy, Cyprus, Tunisia, Egypt and Jordan. The total budget of AQUAKNIGHT is €1,999,129 of which €1,799,216 as ENPI grant (90%). Further information on [EMWIS website](#)

8- A new study has shown that agricultural products make the largest contribution to the water footprint of the EU and recommends reducing food waste, changes in diet and increased agricultural efficiencies. On average, each EU citizen consumes 4,815 litres of water per day, when the water used to produce all goods and services, including those imported into the EU, is accounted for. Water-use efficiency is becoming increasingly important in light of rising demand on water supplies. This issue has prompted the 2012 Blueprint to Safeguard Europe's Water which outlines policy actions aiming to meet this challenge in Europe. The 'water footprint' is a measure of water use which accounts for both direct and indirect use by a region, business or individual and has been developed to aid decision makers by quantifying water use in terms of direct uses (e.g. drinking water) and indirect uses, which originate from the production process of industrial or agricultural goods. Comparing imports and exports showed that the EU28 is a net importer of 'virtual' water, using 2,364 litres per capita per day (lcd) in the form of imports, but exporting only 645 lcd. The production water footprint in the EU28 is on average 3,420 lcd. Agricultural products contribute the majority of water use across both measures of water footprint; 89% of the consumption water footprint and 91% of the production water footprint. In total, animal products represent more than half the total value and the consumption of milk, beef and pork is associated with particularly high water footprint values. The focus of water-use policy and awareness campaigns has often been on reducing direct use. However, these results demonstrate that reduction of food waste, changes in diet (particularly reduction of animal products) and increased efficiencies in agriculture could be particularly effective methods of reducing the water footprint. Further information on [EMWIS website](#).

9- Last February 10th, the first up and running European Citizens Initiative (ECI) 'Water is a Human Right' made history as also being the first ECI in the history of the European Union to have collected over 1 million signatures. Anne-Marie Perret, President of the Citizens Committee says "Reaching this important milestone, with one Million EU citizens agreeing that water and sanitation are human rights, is a great success. We appreciate the support of so many and will continue campaigning to pass a strong

message to the European Commission. We have also managed to overcome the start up problems, as well as the legal and technical barriers forced upon us by the European Commission and Member States. It has contributed to creating a space for a European debate in which many citizens are engaging. The ECI will continue to collect signatures to ensure that the voices of as many people in as many different countries as possible are heard. On March 22nd we will celebrate World Water Day with well over a million voices against liberalization of water, and for the implementation of the human right to water and sanitation in the EU. Further information on [EMWIS website](#)

10- EcoPeace / Friends of the Earth Middle East (FoEME), a regional organization that brings together Israeli, Jordanian, Palestinian environmentalists has prepared independent civil society comments to the World Bank hearings scheduled for February 2013. They build on the 14 earlier reports and comments published and submitted by FoEME. The governments of our region (Israeli, Jordanian and Palestinian) have been discussing the possibility of linking the Red Sea with the Dead Sea since 2002. In the more than 10 years that have passed, the World Bank, at the request of our governments, and at a cost of US\$16.5 million, has undertaken studies to answer 3 declared objectives of the project. • Save the Dead Sea from environmental degradation • Desalinate water and/or generate hydro-electricity at affordable prices in Jordan, Israel and the PA • Build a symbol of peace and cooperation in the Middle East. The key studies undertaken are summarized in two main reports; a Draft Feasibility Study (FS) dated July 2012 and a Study of Alternatives (SA) (preliminary draft report) dated September 2012. The feasibility study was the key document requested by our governments encompassing several sub studies (Dead Sea, Red Sea) and an Environmental and Social Assessment (ESA). In addition the World Bank, under civil society pressure, commissioned a Study of Alternatives that compare the Red Dead options with other alternatives that either fully, partially, or in combination might advance the declared objectives. FoEME believes that the two main World Bank commissioned studies when considered together reveal that the Red Dead Conveyance option is the least affordable and least desirable from an environmental and economic perspective in reaching the three stated objectives of the project. Further information on [EMWIS website](#)

11- The European Investment Bank (EIB) is organising a conference under the theme 'Upgrading Jordan's Water Sector: Future Potential of Public-Private Partnerships' on Wednesday 20 March in Amman. The conference, organised in collaboration with Jordan's Ministry of Water and Irrigation and the Arab Financing Facility for Infrastructure (AFFI), will include a presentation of the EIB's study on a Water Sector Public-Private Partnerships (PPP) project in Northern Jordan and related water sector considerations, and look at technical legal, financial and institutional conditions necessary for this PPP project and its successors to work. The event will also present success

stories, lessons learnt from water-sector PPP projects in Jordan and other countries and provide insight into EPEC's PPP network and advisory work and the opportunity to develop country-specific institutional strengthening activities in Jordan. Further information on [EMWIS website](#)

12- The MENA region already has one of the lowest water availabilities per capita world-wide, and at the same time its water sectors is projected to become most severely affected by climate change from lower precipitation - further reducing water availability - from higher temperatures - increasing agricultural water demand - and from increasing variability - compromising reliability of water systems. So far, other pressures on water resources, in particular population and economic development have been stronger than those from climate change. Accordingly, there is a widespread perception of climate change to materialize only in the distant future in combination with climate scenarios perceived as still being very uncertain, which is unfounded in view of already high climate risks today and the large agreement among climate models about the decrease of precipitation in the MENA region (on top of general warming). Even in cases where climate adaptation has been addressed in water strategies or plans, implementation of measures and enforcement of regulations is often lacking. So awareness-raising about climate change and its impact (e.g. with the help of new regional climate scenarios being made available by UN-ESCWA) and about win-win opportunities through technical, economic and institutional adaptation, many of which at the same time are IWRM objectives, is important. The German programme on Adaptation to Climate Change in the Water Sector in the MENA Region (ACCWaM) will support three pilot countries, Lebanon, Jordan and Egypt that can benefit from and at the same time contribute to the implementation of the Arab Strategy for Water Security through sharing of (water-related) adaptation and (energy-related) mitigation experience, and through a joint approach on tapping financial support e.g. from new climate adaptation funds. Further information on [EMWIS website](#).

13- The Arab Fund for Economic and Social Development (FADES) granted on January 31, 2013 in Rabat, a loan of more than 205 million dirhams (MAD) to Morocco to fund a project to supply drinking water in the province of Tetouan. The loan, guaranteed by the National Electricity and Drinking Water Authority (ONEE), for the establishment of infrastructure that would ensure the sustainability of the drinking water services in the province of Tetouan up to 2030. The said project is the realization of a water treatment station with a production capacity of about 500 liters / second over the dam Martil, a pumping station, reservoirs and water supply pipes for a linear 15 km. Further information on [EMWIS website](#)

14- The Islamic Development Bank (IDB) granted two loans to Morocco for a global amount of 284.79 million USD (2.4 billion dirhams), for the implementation of

hydropower and water drinking projects. The first loan, amounting to 200 million USD (1.7 MMDH), aims to implement the hydroelectric complex M'dez El Menzel with a capacity of 170 MW. This complex consists of two hydroelectric dams associated with M'dez and Ain Timedrine in Sefrou region that are part of the High Sebou equipment program. The implementation of this complex, which is part of the national energy strategy for the enhancement of national resources and the development of renewable energy, will contribute to strengthening the country's electricity supply in the best conditions of reliability. The second loan, amounting to 84.79 million USD (730 MDH), concerns the project to supply eight provinces in Morocco with drinking water, namely Marrakech, Essaouira, Al Haouz, Kalaat Sraghna, Chichaoua, Meknes, Zagora and Fahs Anjra. This project is part of widespread access to drinking water program in rural areas and securing drinking water supply in urban areas. It aims to improve the living conditions of populations and secure environment, through supplying drinking water to a rural population of about 427,000 inhabitants and strengthening supply systems for an urban population of 261,000 inhabitants in 2030. Further information on [EMWIS website](#)

15- The African Development Bank (AfDB) and the Government of Mauritania have signed various agreements that aim to contribute to poverty reduction through investments in the water sector. The grants, amounting to approximately €10 million, relate to the national integrated project in the water sector in rural areas (PNISER). Located in the South-East region of the country, PNISER will benefit 34% of the total rural population of Mauritania. The grants will finance, *inter alia*: the installation of 120 latrines within infrastructures, such as markets, schools, and health centres; the construction of 50 new drills for drinking water, pastoral hydraulic, and small-scale irrigation; 22 new solar energy systems for the supply of drinking water; and other equipment aimed at improving agriculture and farming. Apart from these infrastructure projects, the grants will support the development of a national strategy for the mobilization and integrated management of water for 2030. The strategy will aim to support the Government in its efforts to reform and improve water management, as well as contribute to achieving the Millennium Development Goals (MDGs). Further information on [EMWIS website](#).

16- Spanish company Acciona has made further progress in the Saudi operations market by winning a €14 million contract to operate and maintain two wastewater treatment plants in Mecca. The company will operate the Hadda 1 and Arana 1 plants, which have capacities of 125,000m³/d and 250,000m³/d, respectively, for a period of two years. It won the contract as part of a joint-venture with local company Miahona. Acciona Agua Middle East director Jesús Sancho told GWI: "The last few months have been extremely successful for our Company in the GCC. We believe that Acciona Agua has a lot to offer to the Middle East and we are delighted to have the chance to prove it and

to best serve our customers." The client on the new O&M, Saudi Arabia's National Water Company, has been looking to get involved with as many foreign operators as possible ahead of a long-awaited move towards privatisation in key cities. Further information on [EMWIS website](#)

17- Adapting to climate change is not a new phenomenon for the Arab world. For thousands of years, the people in Arab countries have coped with the challenges of climate variability by adapting their survival strategies to changes in rainfall and temperature. Their experience has contributed significantly to the global knowledge on climate change and adaptation. But over the next century global climatic variability is predicted to increase, and Arab countries may well experience unprecedented extremes in climate. A new World Bank report, prepared through a consultative process with Government and other stakeholders in the Arab world, assesses the potential effects of climate change on the Arab region and outlines possible approaches and measures to prepare for its consequences. It offers ideas and suggestions for Arab policy makers as to what mitigating actions may be needed in rural and urban settings to safeguard key areas such as health, water, agriculture, and tourism. The report suggests that countries and households will need to diversify their production and income generation, integrate adaptation into all policy making and activities, and ensure a sustained national commitment to address the social, economic, and environmental consequences of climate variability. With these coordinated efforts, the Arab world can, as it has for centuries, successfully adapt and adjust to the challenges of a changing climate. Further information on [EMWIS website](#).

18- IUCN and the International Water Association (IWA) launched recently the Nexus Dialogue on Water Infrastructure Solutions. The goal is to building partnerships for innovation in water, food, and energy security. The Dialogue recognises how the close interaction between water, energy and food - the nexus - has led to new demands for water infrastructure and technology solutions. Water, energy and food security all rely on water infrastructure, such as wetlands, watersheds, rivers and floodplains. Projections show that in 2050 global population will have increased to 9 billion people and 70% more food will be needed. Over 70% of global water availability is used for agricultural production. Electricity generated from water, hydropower, provides 20% of the world's electricity and is the main energy source for more than 30 countries. Considering such statistics, the Nexus Dialogue or the integrated approach on Water-Energy-Food security is a call to action to those leading transformations in water infrastructure planning, financing and operation. Innovative professionals in farming, energy-production, natural resource management, and engineering have the experience and hold practical knowledge to address this challenge, however it may not be shared or be accessible. Working across sectors, the Nexus Dialogue will provide the unique opportunity to share the experiences available and solutions emerging around the world.

Further information on [EMWIS website](#)

19- New challenges need new technologies to tackle them. The World Economic Forum's Global Agenda Council on Emerging Technologies identifies the top 10 most promising technology trends that can help to deliver sustainable growth in decades to come as global population and material demands on the environment continue to grow rapidly. These are technologies that the Council considers have made development breakthroughs and are nearing large-scale deployment. One of them concern: Energy-efficient water purification. Where freshwater systems are over-used or exhausted, desalination from the sea offers near-unlimited water but a considerable use of energy - mostly from fossil fuels - to drive evaporation or reverse-osmosis systems. Emerging technologies offer the potential for significantly higher energy efficiency in desalination or purification of wastewater, potentially reducing energy consumption by 50% or more. Techniques such as forward-osmosis can additionally improve efficiency by utilizing low-grade heat from thermal power production or renewable heat produced by solar-thermal geothermal installations. Further information on [EMWIS website](#).

20- A report on the Economics of Ecosystems and Biodiversity for Water and Wetlands urges a major shift in our attitudes to wetlands, to recognise their value in delivering water, raw materials and food, essential for life, and crucial for maintaining people's livelihoods and the sustainability of the world's economies. The report launched 1 February presents insights on critical water-related ecosystem services in order to encourage additional policy momentum, business commitment, and investment in the conservation, restoration, and wise use of wetlands. For example, improved water management practices allowed the restoration of Lake Ichkeul in Tunisia, resulting in the doubling of the number of tourists since 2005. The promotion of the lake as a tourist destination helped raise awareness of the value of the lake ecosystems and the importance of the wise use of wetlands. It also generated new sources of income for the Park management and conservation and allowed establishment of basic training and credit schemes to increase the involvement of local communities in tourism activities. An estimated 50% of wetlands were lost during the 20th century due to factors such as intensive agricultural production, water extraction for domestic and industrial use, urbanization, infrastructure and industrial development and pollution. Further information on [EMWIS website](#)

21- Wetlands play a major role in the availability and quality of water, containing most of the water used to meet human needs. ESA's GlobWetland II project is helping Mediterranean countries to monitor these precious resources. Located within the Nile River Delta, Egypt's Lake Burullus has undergone major changes in the past 40 years. Urban settlements have flourished around the lake, and from 1973 to 1990 the area saw a sharp increase in aquaculture. As a result of increased waste water in the lake (largely

due to aquaculture), there has been an overall decrease of salt marsh vegetation in the lake itself, in some parts replaced by reed beds. From 1990 onwards, however, a decrease in fishponds in the western part of the main lake was observed through ESA's GlobWetland II project. The mapping results, prepared in the framework of this project, reveal that although, in general, wetland extents have gradually decreased mainly due to agriculture and urbanisation pressures, there are still unaffected areas where changes are not large or even sometimes where wetlands' extent has increased. Along Libya's North-Eastern coast, about 30 km north of Benghazi, the Sebkhah Al Kuz wetland is one of these areas. The GlobWetland II toolbox indicated that, between 1978 and 1990, the wetland area increased by about a square kilometre. In the following 15 years, the wetland area was maintained despite a significant increase in agricultural development and urbanisation in the surrounding area. Further information on [EMWIS website](#)

22- ESA's water mission is shedding new light on the meandering Gulf Stream, just one of the SMOS satellite's numerous achievements. Launched in 2009, ESA's Soil Moisture and Ocean Salinity satellite has been helping to understand the water cycle. Over the past three years it has been providing more accurate information on global soil moisture and ocean salinity. New results unveiled recently in Spain show that SMOS is now providing new insights into the movement of the Gulf Stream - one of the most intensely studied current systems. SMOS can distinguish between and follow the resulting eddies that are 'pinched off' from the current and form little parcels of warm and salty water in the Labrador Current, and the colder, fresher water in the Gulf Stream. This is giving scientists a new view of how salt is exchanged across current boundaries - a key to understanding the 'conveyor belt' of global oceanic circulation. These and other scientific achievements from three years of the SMOS mission were presented at a conference held today at ESA's European Space Astronomy Centre in Villanueva de la Cañada, near Madrid, Spain. Further information on [EMWIS website](#)

23- The French Spot satellites have been charting the world's vegetation since 1998. This important task soon falls to ESA's Proba-V, which, despite being only a little larger than a washing machine, will provide sharp views of Earth's plant life every two days. Keeping a close check on the health of vegetation is not only essential for monitoring environmental change, but also for numerous practical applications - importantly, those related to agriculture and food security. Over the past 10 years, more than 8000 registered users around the world have relied on data from the Vegetation instruments on Spot-4 and Spot-5. Since the sensor on Spot-4 stopped supplying data last year and Spot-5 is expected to come to an end in the middle of 2014, the upcoming Proba-V mission has been designed to continue the supply of this much-needed imagery. Thanks to its range of spectral bands, Proba-V can distinguish between different types of land cover and plant species, including crops. It will provide a clear picture of the plants so

their health can be easily monitored. This microsatellite is therefore especially relevant for improving agricultural practices, tracking desertification and vegetation burn scars. Further information on [EMWIS website](#).

24- A NASA study, released this month, indicates that water shortages could affect millions in the Middle East. Images, captured by NASA's twin Gravity Recovery and Climate Experiment (GRACE) satellites, reveal significant water loss, in a period of six years, in the Tigris and Euphrates river basins—a region that includes parts of Turkey, Syria, Iraq, and Iran. The rise and fall in water reserves alters the Earth's mass, which influences local gravitational attraction. GRACE measures gravity, and thereby, tells how much a region's water reserves change over time. "GRACE data show an alarming rate of decrease in total water storage in the Tigris and Euphrates river basins, which currently have the second fastest rate of groundwater storage loss on Earth, after India," says Jay Famiglietti, the principal investigator of the study from the University of California, Irvine, quoted by NASA. According to the study, the majority of the water lost — approximately 73 million acre feet — was caused by reductions in groundwater. Famiglietti also said that irrigators turn to groundwater when drought reduces surface water. The Iraqi government drilled about 1,000 wells in response to the 2007 drought. According to a 2012 Yale study, the drought stunted agriculture in the Tigris and Euphrates river basins, causing thousands of people to flee Iran, eastern Syria, and northern Iraq. The NASA study shows just one part of the water crisis that the Middle East is undergoing. A study conducted by Maplecroft finds that of the top 20 countries suffering extreme or high water stress, 19 are in the Middle East and North Africa (MENA) region. Further information on [EMWIS website](#).

25- Hydrologists like to call water the "bloodstream of the planet." But it is more than that. Water is essential to almost all human activities - including those you invest your money in. Today, 20 percent of global GDP is at risk due to water stress. A new report released by The World Economic Forum this year identified water supply crises as one of the most likely and potentially highest impact risks that the world of 2013 faces. In the CDP Water Disclosure Report of 2012, which surveyed financial institutions with assets of USD 50 trillion, a majority of businesses stated that they face water-related risk presently, and over one-third already suffered impacts with associated costs as high as USD 200 million. Two in three surveyed responded that they predict potential setbacks and risks within the next five years. Clearly, water is a big issue for businesses today and it goes far beyond Corporate Social Responsibility obligations. Reputational risks are a primary concern for most companies in their water management. Public campaigns exposing heavy pollution and poor environmental performance of suppliers, have hit big name companies across industries. Of course, it is also considerably more difficult to monitor and regulate performance and risk in the supply chain than it is to do for activities that fall under a company's direct operations. The

survey also showed that many more companies have now begun to require their key suppliers to report on water use and management plans. Further information on [EMWIS website](#).

26- A novel and affordable fabric may improve the efficiency of water collection from fog, helping to provide freshwater in desert areas. Researchers from the Eindhoven University of Technology (EUT), in the Netherlands, and Hong Kong Polytechnic University, China, turned a cotton fabric into a water-collecting material by coating it with a polymer called PNIPAAm. The fabric switches between absorbing moisture directly from the air when it is foggy and cold, and releasing it as water at warmer temperatures, according to a paper to be published in *Advanced Materials*. Every kilogramme of the sponge-like fabric can absorb around 3.4 litres of water from the air. The temperature range within which the fabric collects, and then releases, water is similar to the typical daytime highs and night-time lows seen in deserts. The researchers plan to fine-tune the fabric to increase the amount of water that is collected and also to change the air temperatures at which it absorbs and releases water, so it can be used in a wider range of environments. Further information on [EMWIS website](#).

27- An advertising agency has created what it's calling the world's first billboard that converts air into drinking water. The billboard—a collaboration between agency Mayo DraftFCB and Peru's University of Engineering and Technology—was placed in Peru's rain-starved desert capital, Lima. Lima gets less than an inch of rain per year on average, but since the city's humidity hovers around 98 percent, generators attached to the structure are able to capture atmospheric moisture, filter it and produce potable water. The harvested water is then stored in 20-liter tanks and can be retrieved from taps at the base of the billboard. "Agua aqui," a neon display near the base reads. According to the university, the billboard produced 9 450 liters of drinking water in three months—enough to sustain hundreds of Peruvian families per month. Further information on [EMWIS website](#).

=====

NOMINATIONS and VACANCIES

=====

28- The TWAS-ARO (The World Academy of Sciences for the advancement of science in developing countries - Arab Regional Office) has just announced that TWAS-ARO Young Arab Scientist (YAS) Prize 2012 with the topic "Sustainable Management of Water Resources in the Arab Region", has been awarded jointly to **Dr. Aly Derbalah**, Associate Professor, Pesticides Department, Faculty of Agriculture, Kafr-El-Shiekh University (Egypt) and ArabWAYS board member: **Dr. Nadjib Drouiche**, Researcher,

Silicon Technology Development Unit, Division of Raw Materials and Crystal Growth (Algeria). Further information on [EMWIS website](#)

29- Seed Fund Fall Round 2012 Gala Honors Winning Teams: Four winning teams were selected from a pool of thirty-five applicants. This round's successful teams count among their ranks one faculty member, two graduate students, four researchers, one postdoctoral researcher, and two staff members. They will now receive advisory services and incubation support to develop their products from the prototype stage to commercialization and, ultimately, into a new business. The four winning projects were: **Osmo H2O, Hybrid Osmosis Process for Water Desalination and Reuse; MSMD, Multi-Stage Membrane Distillation Desalination Unit; Manufacturing of Nanoparticles Using Flames; Makkah Window.** Further information on [EMWIS website](#)

30- Dr. **Ghani Chehbouni** has been nominated new director of the French Institute of Research for Development (IRD) in Chili and started his new functions since January 2013. Dr. Ghani Chehbouni occupied several positions in the past, among others IRD director in Egypt. Further information on [EMWIS website](#).

31- France: **Stephanie Thiébault** was appointed director of the Institute of Ecology and Environment (CNRS) replacing Françoise Gaill called to other duties. Stephanie Thiébault was previously deputy director of this institute. Further information on [EMWIS website](#)

32- Call for entries open for 2014 Nestlé Prize in Creating Shared Value: Nominate innovative initiatives in nutrition, water or rural development. The Nestlé Prize in Creating Shared Value is awarded every other year to an innovative, commercially viable and high-impact initiative. The winning entry is given financial support to achieve social scale and financial sustainability. The call is open until **31st March 2013**. Further information on [EMWIS website](#).

33- Two appointments in Water Engineering, Manchester, UK: 1. Chair, Reader, Senior Lecturer, Lecturer Level & 2. Reader, Senior Lecturer, Lecturer Level. This may cover hydrology, water resources, supply, treatment, waste management, flood protection, hydraulic structures and infrastructure. **Closing date: March 18, 2013.** Further information on [EMWIS website](#)

=====

PUBLICATIONS

=====

34- The News "Les Nouvelles" of the International Office for Water (OIEAU) issue no. 23 just appeared with many articles about water projects and developments in the

world, and the Mediterranean. In page 33, an article titled: "EMWIS: Towards Better water knowledge management in the Mediterranean." It summarizes some of the main activities carried out by EMWIS during last year. Further information on [EMWIS website](#)

35- PhD book "To cooperate or not to cooperate...? Collective action for rehabilitation of traditional water tunnel systems (qanats) in Syria" by Joshka Wessels: The main purpose of this project is to evaluate the sustainability of the use and re-use of traditional groundwater extraction systems called qanats. Further information on [EMWIS website](#).

36- Book release: "Shared Borders Shared Waters - Israeli-Palestinian and Colorado River Basin Water Challenges". The volume focuses on the role that 'science diplomacy' can play in resolving water challenges and compiles the expertise of a distinguished and diverse group of researchers. Further information on [EMWIS website](#)

37- The Global Water Partnership (GWP), with the UN Environment Programme (UNEP) DHI Centre for Water and Environment and the Stockholm International Water Institute (SIWI), has published a technical focus paper titled "The Role of Decision Support Systems (DSS) and Models in Integrated River Basin Management (IWRM)." Further information on [EMWIS website](#)

38- 'Water in Focus': The news brings us daily reminders of the importance of sustainable water management; from drought and dangerously low river levels, to record rainfall and flash flooding. In light of these issues effecting nearly all countries of the world, Routledge brings two ground breaking journals International Journal of Water Resources Development and Water International to your attention. Further information on [EMWIS website](#)

39- Milestones in Water Reuse: Illustrates the benefits of water reuse in integrated water resources management and its role for water cycle management, climate change adaptation and water in the cities of the future. Further information on [EMWIS website](#)

40- GWF Guest Article Calls for Transboundary Cooperation on Blue Nile: The article highlights concerns with unilateral decision making for water resource management in a transboundary basin. Further information on [EMWIS website](#)

41- "Ecosystem resilience despite large-scale altered hydroclimatic conditions": this paper compares the functional response of above-ground net primary production to contrasting hydroclimatic periods in the late twentieth century (1975-1998), and drier, warmer conditions in the early twenty-first century (2000-2009) in the Northern and Southern Hemispheres. Further information on [EMWIS website](#)

- 42- "Green growth and alternative water allocation mechanisms": The need to reform water allocation, policies and mechanisms is becoming more and more pertinent to the policy-making agenda. During a two-day workshop on Water Allocation and Green Growth, 22-23 November 2012 in Wageningen, the Netherlands, almost 50 participants underlined the importance of raising awareness that water allocations are going to be reduced and to approach it in an organized way. All the presentations are available online. Further information on [EMWIS website](#)
- 43- Summary of the Sixth International Workshop on Hydro-Hegemony which took place 12-13 January 2013, at UEA London. Further information on [EMWIS website](#)
- 44- Salt Water Intrusion Meetings proceedings now available online: The Salt Water Intrusion Meetings (SWIMs) have been organized since 1968 and have become an important platform for the exchange of knowledge and ideas about saltwater intrusion and coastal hydrogeology. Further information on [EMWIS website](#)
- 45- "Impact of sea level rise on groundwater flow regimes: A sensitivity analysis for the Netherlands": In this thesis (1996), G.H.P. Oude Essink investigates the possible impact of sea-level rise and human activities on vulnerable coastal groundwater flow regimes in the Netherlands for the next millennium. Further information on [EMWIS website](#).
- 46- A global risk assessment of river and coastal flooding: A new study provides the first global estimates of river and coastal flooding, highlighting past and future trends, and indicates that Asia and Europe are two of the regions that are worst affected. Further information on [EMWIS website](#)
- 47- "The Final Frontier of Water and Wastewater Treatment: Sludge Management Equipment Market Set to Reach \$9.9 Billion by 2017": A new report from Global Water Intelligence (GWI). Further information on [EMWIS website](#).
- 48- ICARDA Newsletter Focuses on Water Productivity, Drought-Resistant Fodder and Improved Seed Varieties: The February issue of the newsletter of the International Center for Agricultural Research in the Dry Areas. Further information on [EMWIS website](#).
- 49- "The legal protection of watercourses" By Aude Farinetti (lawyer in French). Further information on [EMWIS website](#).
- 50- "Theory and practice of water law", by Alan Saout (in French). Further information on [EMWIS website](#)
- 51- "A legal view on the dual nature of water" (in French): Further information

on [EMWIS website](#)

52- "About the transboundary aquifer of Geneva" (in French): This publication comes out is about the unique experience of joint management of transboundary aquifer of Geneva. Further information on [EMWIS website](#)

53- Back to the 14th Carrefour on local water management: Presentations are available online. Further information on [EMWIS website](#)

=====

CALL FOR TENDERS and PROPOSALS

=====

54- Call for proposals: ICT-2013.6.3 - ICT for water resources management. ICT offers an untapped potential to improve the management of water resources by integrating real-time knowledge about water consumption at domestic, corporate and city level, and by enabling subsequently the implementation of efficient resource and demand management strategies and pricing schemes. This objective brings together the ICT and water stakeholders in joint research, in order to document the ICT potential via lessons learned from real-life testing and demonstration experiments. The aim is to pilot and demonstrate innovative ICT systems and services for efficient water use and reuse, in order to improve household, business and societal awareness, to induce changes in consumer behaviour and to enable the introduction of innovative resource and demand management schemes and adaptive pricing incentives. Deadline: **16 April 2013**, at 17:00.00 Brussels local time. Further information on [EMWIS website](#).

55- Call for proposals: FP7-ENV-2013-WATER-INNO-DEMO. This call aims at promoting sustainable management of the natural and human environment and its resources by advancing our knowledge on the interactions between the biosphere, ecosystems and human activities, and developing new technologies, tools and services, in order to address in an integrated way global environmental issues. Emphasis will be put on prediction of climate, ecological, earth and ocean system changes, on tools and on technologies for monitoring, prevention and mitigation of environmental pressures and risks including on health and for the sustainability of the natural and man-made environment. Under Challenge 6.3. Improving resource efficiency, there are two kind of projects: ENV.2013.WATER INNO&DEMO-1: Water innovation demonstration projects. One or more proposals can be selected; and ENV.2013.WATER INNO&DEMO-2 Ensuring the integration of water and innovation demonstration projects and support to trans-national networks of procurers. Deadline: **4 April 2013** at 17.00.00, Brussels local time. Further information on [EMWIS website](#).

56- The seventh LIFE+ call for proposals was published on 19 February, 2013, with up to

€278 million available for co-financing of projects under three headings: Nature and Biodiversity (NAT); Environment Policy and Governance (ENV); and Information and Communication (INF). Project proposals should be submitted to the relevant national authority using the eProposal tool no later than 16:00 hours (Brussels time) on **25 June, 2013**.

Member States will forward proposals to the European Commission by 5 July, 2013. The earliest possible starting date for 2013 projects is 1 June, 2014. Further information on [EMWIS website](#)

57- **CARIAA Call for Concept Notes:** CARIAA is a seven-year research program launched in 2012 and jointly funded by the UK's Department for International Development (DFID) and Canada's International Development Research Centre (IDRC). A call for concept notes on collaborative adaptation research in the three hot spots is now open **until April 4, 2013**. The selected consortia would be expected to lead innovative programs of research into the impacts of climate change on vulnerable populations in the hot spots from 2013 to 2019. CARIAA encourages strong southern participation and innovative collaborations among various types of institutions in both Africa and Asia. Note that each application must involve a proposed consortium of three to five institutions. Further information on [EMWIS website](#).

58- **From ENPI CBC to ENI CBC:** official start of 2014-2020 programming exercise. The Joint Programming Committee (JPC), body responsible for the preparation of the new ENI (European Neighbourhood Instrument) CBC Mediterranean Sea Basin Programme, was established on 6th December 2012 in Lisbon (Portugal): this event marked the official launch of the 2014-2020 programming exercise. The 13 countries which participate at the moment in the JPC - namely Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestinian National Authority, Portugal, Spain and Tunisia - discussed about a wide range of issues in view of the elaboration of the next ENI CBC Med Joint Operational Programme (JOP). The second Joint Programming Committee is provisionally scheduled at the end of February in Jordan. The meeting will focus on draft ENI CBC Implementing Rules/Programming document, first exchange of ideas on thematic orientations as well as format and timing of stakeholders' national consultations. Further information on [EMWIS website](#)

=====

CALL FOR PAPERS

=====

59- **Call for abstracts for the 3rd International Conference on Water (CI.EAU 2013):** This conference to be held in Algiers (Algeria) on 18-20 November 2013; is a new opportunity to dialogue and share different experiences and research results, as well in

science than management. One of the main objectives of this conference is to initiate regional and Mediterranean cooperation initiatives. Reconciliation between the rarity, quality and sustainability of water resources is an ongoing objective to achieve. The technical and managerial institutions managing water, good management and good governance of water resources is the key to development of any country. Water desalination, treatment and recovery of waste, delegated management, proving to be a necessity. Deadline for abstract submission: **20/04/2013**. Further information on [EMWIS website](#)

60- Call for abstracts for the 17th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region to be held in Istanbul/Turkey from September 28th to October 1st in 2013. This year's symposium will focus on Impact of climate change in the Mediterranean region. For oral and poster contributions, a one-page abstract should be submitted not later than **April 30, 2013**. Further information on [EMWIS website](#)

61- CIGR (International Commission of Agricultural and Biosystems Engineering) and CIHEAM - Mediterranean Agronomic Institute of Bari are organizing 1st Inter-regional Conference on Land and Water Challenges entitled "Water, environment and agriculture: challenges for sustainable development". The Conference will be held in Bari (Italy), from 10 to 14 September 2013. The deadline for the submission of abstracts is **March 31, 2013**. Further information on [EMWIS website](#).

62- Call for abstracts for the CMTDE 2013: The 4th Maghreb Conference on Desalination and Water Treatment to be held in Hammamet (Tunisia) from 15 to 18 December 2013. Deadline for abstracts: **30 June 2013**. Further information on [EMWIS website](#).

=====

TRAINING

=====

63- Water Security for Policy Makers and Practitioners Short Course 10-14 June 2013: The course is designed for entry and mid-level water and development policy-makers and professionals in government, donor, NGO or implementing agencies, environmental journalists, consultants and activists wishing to take their knowledge of water resources further. This course will be held at the University of East Anglia, Norwich, UK from the 10-14 June 2013 for a fee of £1,500 (inc. of accommodation). Further information on [EMWIS website](#).

64- [2013/03/11 - 2013/03/13] Membrane Technology, Process and System Design, Genova, Italy

Further information on [EMWIS website](#)

=====

EVENTS ([Full Agenda](#))

=====

[2013/03/29 - 2013/03/29] Forum: PhD / Doctors vectors of Business Development of Water & Environment, Aix-en-Provence, France.

Further information on [EMWIS website](#)

[2013/03/22 - 2013/03/22] Thirsting for Justice Campaign Teach-in for Palestinian water rights World Water Day, Gaza, Palestine

Further information on [EMWIS website](#).

[2013/03/20 - 2013/03/20] Upgrading Jordan's Water Sector: Future Potential of Public-Private Partnerships, Amman, Jordan

Further information on [EMWIS website](#)

[2013/03/19 - 2013/03/21] Benchmark meeting on groundwater governance marks road to World Water Day and UN International Year of Water Cooperation, The Hague, Netherlands

Further information on [EMWIS website](#)

[2013/03/18 - 2013/03/20] European Climate Change Adaptation Conference 2013, Hambourg, Germany.

Further information on [EMWIS website](#)

[2013/03/15 - 2013/03/16] Training workshop on water & energy, Marseille, France.

Further information on [EMWIS website](#)

[2013/03/15 - 2013/03/15] Technical Morning on Eco-innovation & waste "Eco-innovation & Waste: Projects and good practices in the Provence-Alpes-Côte d'Azur on management and recovery", Arbois, France

Further information on [EMWIS website](#).

[2013/03/11 - 2013/03/15] High-Level Meeting on National Drought Policy: HMNDP 2013, Geneva, Switzerland.

Further information on [EMWIS website](#).

[2013/03/10 - 2013/03/15] SWUP-MED Project Final Conference: "Sustainable water use for securing food production in the Mediterranean region under changing climate",

Agadir, Morocco

Further information on [EMWIS website](#)

[2013/03/07 - 2013/03/07] Brokerage Event on "Innovative technologies for water management in industry and agriculture", Marrakech, Morocco

Further information on [EMWIS website](#)

[2013/03/05 - 2013/03/05] Gender, Climate Change and Food Security, Bonn, Germany

Further information on [EMWIS website](#)

[2013/03/04 - 2013/03/08] EU Science: Global Challenges, Global Collaboration (ES:GC2), Brussels, Belgium

Further information on [EMWIS website](#)

[2013/03/01 - 2013/03/01] IPEMED - Mediterranean Breakfast "Decentralized cooperation in the Mediterranean", Paris, France

Further information on [EMWIS website](#)

=====

PROJECTS ([Projects database](#))

=====

[WATER PROJECTS DATABASE](#) (MEDA-NIPs, MEDA-Water, LIFE, SMAP, INCO-MED, FP4-FP7, INTERREG, etc.)

Halting Desertification in the Jucar River Basin (HALT-JÚCAR-DES). Further information on [EMWIS website](#).

=====

BRIEF EMWIS SITE MAP

=====

[ABOUT EMWIS](#) ([Priorities](#), [Activities](#), [Objectives](#), [Structure](#), [Funding](#), [Team](#))

[WATER in the EURO-MED PARTNERSHIP](#) ([MEDA programme](#), [Key dates](#), [European Neighbourhood Policy](#))

[EMWIS NATIONAL WEBSITES](#): [Algeria](#), [Egypt](#), [Israel](#), [Jordan](#), [Lebanon](#), [Morocco](#), [Palestine](#), [Syria](#), [Tunisia](#), [Turkey](#), [Cyprus](#), [Malta](#), [Spain](#), [France](#), [Italy](#), [Portugal](#), [Austria](#), [Greece](#), [Belgium](#), [Luxembourg](#)

[EMWIS WATER MULTILINGUAL THESAURUS](#) (Available in English, French, Arabic, Spanish & Italian)- [Water glossaries](#)

[DOCUMENTATION](#) ([EMWIS meetings](#), [Documentary database](#), [Funding for water](#), [Key emwis-flash-ndeg100-may-2012-1uments](#), [Water Legislation](#))

[WHO DOES WHAT IN THE WATER SECTOR](#) (By contacts, organisations &

information sources)

PARTNERS & SPONSORS ([OIEau](#), [CEDEX](#), [SOGESID](#), [EC](#), [INBO](#), [IME](#), [GWP-Med](#), [MED-EUWI](#), [SMAP-RMSU](#))

MEDA-WATER PROJECTS ([ADIRA](#), [EMPOWERS](#), [EMWater](#), [IrWA](#), [ISIIMM](#), [MEDAWARE](#), [MEDROPLAN](#), [MEDWA](#), [Zer0-M](#))

WATER INITIATIVES ([MED-EUWI](#), [WFD](#), [INCO-MED](#), [LIFE](#), [MEDSTAT](#), [SMAP](#), [EXACT](#), [UNEP-MAP](#), [MSSD](#), [HORIZON 2020](#), [Union for the Mediterranean](#)) & **Mediterranean Water Information Mechanism**

FORUM ; FAQ ; TOPICS ([MedWIP](#), [Water scarcity](#), [groundwater](#), [wastewater reuse](#), [desalination](#), [satellite data](#), etc)

SEARCH EMWIS WEBSITE

EMWIS SITEMAP

=====

CONTACT US

=====

- This is a monthly Flash provided by the EMWIS Technical Unit (sent to: **20145** subscribers), to which you can get a free subscription, [click here](#) for an open subscription.
- The EMWIS Flash gives you regular and quality information on the water sector in the Euro-Mediterranean area. The main headlines are: Institutions, Documentation, Training, Research and Development, Data Administration. You will also find updates on: international events, relevant web sites, the Euro-Med Water programme of the European Commission, and much more ...
- This Flash exists also in French and Arabic, you can view it and also the previous issues in [our website](#).
- This Flash is also yours, please give us your comments and information to improve it Contact [the EMWIS Technical Unit](#).

=====