

DesertNet International



DesertNet International Newsletter n. 3/2011

This quarterly electronic newsletter is intended to inform the scientific community about dryland-relevant research matters. The **deadline** for receipt of material for the next issue is **15.03.2012** Please send your contributions (1000 characters max, including spaces) to czanolla@uniss.it

Contents:

1. DesertNet updates on the UNCCD COP10
2. Information relevant to DesertNet members
3. Researchers' updates
4. Important upcoming events
5. Publications and Special Issues
6. Other information

1. DesertNet updates on the UNCCD COP 10

DesertNet International (DNI) reports on science-policy-relevant developments at UNCCD COP10 (Changwon, Republic of Korea)

The Conference of the Parties-10 to the UNCCD was held in the Republic of Korea in October 2011. DNI was well represented at COP10, and also provided logistical support to its members to attend the conference.

The DNI Side Event entitled "At the cutting edge: channelling core scientific advances into the UNCCD process" was very well attended, and informed STCs, other members of national delegations, scientists and NGO representatives about the latest scientific advances that can inform the UNCCD process. DNI also organised a booth, which informed participants at the COP and the Public about the scientific work carried out by its members.

The COP10 decisions show that DNI's scientific ongoing work and the attended next steps are well in line with the science-relevant activities of the UNCCD. A detailed DNI report on the outcomes of DNI's work at COP10 and the COP10 decisions will be sent to all DNI members and will be downloadable at: www.desertnet-international.org

Information contributed by: Mariam Akhtar-Shuster, DNI Chair

2. Information relevant to DesertNet members

Global Soil Partnership for Food Security and Climate Change mitigation and adaptation



FAO and the Joint Research Center of the EU Commission promote the launching of a Global Soil Partnership addressing the linkages between food security, soil health and ecosystem services. The official event was hosted at FAO Headquarters in Rome, Italy on the 7-9 September 2011. The GSP should aim at facilitating the dialogue and interaction among users and stakeholders currently using soil resources at global scale. The ultimate goal of the GSP should be the sustainable and productive use of the soil resources of the world.

The GSP should address five main pillars of action: harmonizing methods and indicators; strengthening soil data and information with other disciplines; promoting soil research and environmental and social development identifying gaps, priorities and synergies; promoting global governance for soil resources protection and sustainable productivity, and encouraging investment and technical cooperation in soils. There will be two main elements in the GSP

- **A Partnership** open to governments and organizations:
 - International agencies and Projects
 - Regional and national soil science associations and Networks
 - National soil research & academic institutes
 - Representatives of civil society organizations
 - The Private Sector
- **A Panel** of 25 High-Level scientists providing scientific and technical advice to the Partnership, to FAO and to all interested International Organizations

More information at: http://www.fao.org/nr/water/landandwater_gsp.html. Recent contributions of DNI members and DNI-Task Force on Land & Soil regarding the launch of an international Land and Soil Panel are:

- Collaboration in the FAO's Technical Working Group to delineate the Terms of Reference for the establishment of a Global Soil Partnership
- Collaboration in the paper: Fertile ground? Options for a science-policy platform for land. Thomas et al., in press, *Environmental Science and Policy*

Information contributed by: Maria José Marques Perez Univ. Autonoma de Madrid, Spain

2012 Land For Life award



Seeking to promote efforts for sustainable land management, the Land for Life Award was launched at the tenth session of the Conference of the Parties to the United Nations Convention to Combat Desertification (UNCCD). The Land for Life Award will provide global recognition to individuals, teams, institutions, businesses, research institutes, public offices, political leaders, decision-makers, journalists, media, nongovernmental organizations and civil society organizations whose work and initiatives have made a significant, innovative contribution to sustainable land management. Deadline: 29 February 2012

More information at: <http://www.unccd.int/land4life/menu.php>

Information contributed by: DNI Bureau

3. Researchers Updates

Approach Paper to India 12th Five Year Plan (2012-2017)

Land degradation and sustainable use of soil, water and biodiversity resources are highlighted as critical issues in achieving required productivity growth in agriculture and transforming the rural sector in the otherwise growing economy of the country. These formed the key issues in the Approach Paper to India's 12th Five Year Plan (*Faster, Sustainable and More Inclusive Growth*) now being finalized by India's Planning Commission. Amongst others the document suggests a National Mission for Sustainable Agriculture focusing on enhancing productivity and resilience of agriculture so as to reduce vulnerabilities to extreme weather, long dry spells, flooding and variable moisture availability as a key strategy to address declining farm productivity and degrading natural resource base.

More information at: <http://planningcommission.nic.in/plans/planrel/12appdrft/12appdrft.htm>

Information contributed by: Mamta Mehra, Centre for Adv. of Sustainable Agriculture (CASA), India

Agro-ecosystem Farming and Biodiversity

Agro-ecosystem farming (AEF) not only ensures food security but also conserves biodiversity and habitats. Such a system is playing a pivotal role in providing safe and healthy food for millions of inhabitants of the world, especially the drylands. Such a system is very friendly with the nature of our mother earth. In contrast to AEF, factory farming is detrimental for nature and biodiversity. Promotion of monoculture in farming systems is one of the major threats to biodiversity. The consequences of factory farming are appearing in the form of loss of seed diversity resulting in a lowering of the resilience of local communities against drought and climate change.

More information at: <http://biodiversityandclimatechange.blogspot.com/2011/08/agroecosystem-farming-and-resilience-to.html>

Information contributed by: Abdul Raziq Kakar, Society of Animal, Vet. and Environmental Scientists (SAVES), Pakistan

Call for Papers in *Applied and Environmental Soil Science Journal*

Researchers on soil degradation are invited to contribute with original research articles as well as review articles on "Soil Degradation, Climate Change, and Sustainable Development: Data and Monitoring Gaps". Potential topics include:

- Desertification: process modeling, remote monitoring, and forecasting
- Soil degradation modeling with GIS
- Soil erosion and carbon dynamics
- Soil management and climate change adaptation
- Soil degradation patterns and identification of policy-relevant indicators of soil status

Before submission authors should carefully read over the journal's Author Guidelines, at <http://www.hindawi.com/journals/aess/guidelines/>. This is an open access journal to make the published material available for free to all interested online visitors, and requiring Article Processing Charges (\$ 600) that will be billed to the submitting author upon acceptance. Deadline for submissions: 9th December 2011.

More information at: <http://www.hindawi.com/journals/aess/si/dgrad/>

Information contributed by: H. F. Del Valle, National Council of Scientific and Technical Researches (CONICET), Argentina

DESIRE Project

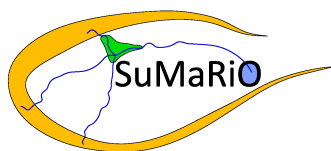
The DESIRE Project was represented at UNCCD COP10 in a side event on knowledge management. DESIRE has a keen interest in involving stakeholders in research, so that their indigenous knowledge can be used within scientifically supported recommendations for sustainable land management. In addition, a key objective is to communicate scientific results in non-scientific language to a wide-ranging audience. Four briefing documents were shared: “Achieving the UNCCD 10 year plan strategic objective 2”, “Engaging with people affected by desertification: a guide for decision-makers”, “The idea of sustainable development, and what it means for achieving zero net-growth in degradation”, “Putting knowledge into action: managing knowledge to combat desertification”. All of these can be downloaded from the DESIRE website (COP10 in Action!), see <http://tinyurl.com/5wgtmmh>, and much more can be found on the DESIRE website. More information at: <http://www.desire-his.eu/en/key-messages>

Information contributed by: Nichola Geeson, DESIRE Dissemination

LEDDRA Project

How can responses to Land and Ecosystem Degradation and Desertification (LEDD) prevent the deterioration of land resources, restore the vitality of ecosystems and enhance the services they provide? Successful responses are socially acceptable, properly implemented and supported by a well-functioning economy and an enabling institutional setting. LEDDRA focuses on how well responses to LEDD are adapted to prevailing biophysical and socio-economic realities in cropland, grazing and forest regions. In April project partners visited the soil conservation monitoring station at Zhanjachong, in the Yangtze River basin, in China. They were very impressed by the terracing built to conserve soil and water. LEDDRA has now produced the first deliverables on the theory, assessment and policy context of responses to LEDD. Material from these will become available on the LEDDRA website <http://leddra.aegean.gr/index.htm> and information system <http://leddra.aegean.gr/leddris.html>

Information contributed by: Nichola Geeson, DESIRE Dissemination

SuMaRiO Project

The Sino-German SuMaRiO project (‘Sustainable Management of River Oasis along the Tarim River’, Xinjiang, P.R. China, 2010-2015) is funded by the German Federal Ministry of Education and Research under the Research Programme “Sustainable Land Management”.

The central question of SuMaRiO is how to establish sustainable water and land management in the hyper-arid region of the northern rim of the Taklimakan desert, including the development of methods for analyzing and integrating Ecosystem Functions and Services. Stakeholder involvement assures integration of local problem perceptions into the scientific process. A decision support system serving the needs of Chinese policy makers will be jointly developed and the sustainable land and water management strategies will be tested in an implementation phase.

More information at: www.sumario.de or christian.rumbaur@unibw.de

Information contributed by: Christian Rumbaur, Universität der Bundeswehr München, Germany.

When science and policy meet: Joint G8 and science academies' statement on Water and Health.

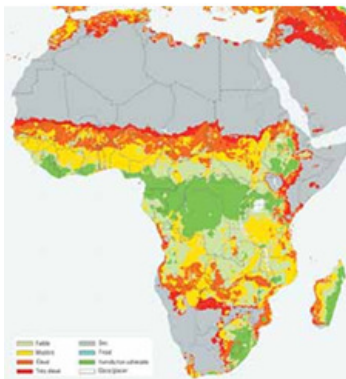
Image : Mwamanongu Village water source, Tanzania. Water most often comes from open holes dug in the sand of dry riverbeds, and it is invariably contaminated. © Bob Metca

In arid and semi-arid countries water is scarce and most often polluted by various sources (including human and animal excreta). 'Drinking' water often carries on dangerous pathogens, while other pathogen agent vectors develop in small ponds and river banks. The MDG 7C states: "Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation". Access to clean water and sanitation was declared 'a human right' by a UN Declaration on July 28th, 2010. Top level science and policy representatives joined forces to reach that goal. The G8 countries and their academies of sciences co-signed a statement on water and health analyzing the major threats due to lack of sanitation. The Academies formulated some strong recommendations to their Governments:

- Develop basic infrastructure for sanitation and maintenance
- Promote education, including training of related professionals and technicians, and public information
- Fund research and development for the identification of pathogens of human and animal origin and the development of simple, low-cost and efficient markers
- Promote capacity-building and support watershed level community-based actions
- Establish networks of competence at national, regional and global levels to improve the efficiency of water use in domestic context, as well as in agriculture and industry

More information at : www.academie-sciences.fr/activite/rapport/avis0511a_gb.pdf

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG) – Member of Inter-academic Group for Development.

The second AMESD forum urges integration of environmental data derived from remote sensing technologies into policy framework.

As highlighted in the UNCCD, desertification is a major environmental management concern in Africa. Some 46% of its territory is considered as vulnerable, 55% of which being estimated highly vulnerable.

Already introduced in the DNI newsletter, AMESD is a partnership programme between the African Union Commission and the European Union, which funds it under the 9th European Development Fund at the level of € 21 million.

The second AMESD forum (20-23 July 2011, Balaclava, Mauritius) addressed the integration of AMESD products and services mainly derived from Earth Observation technologies into decision making cycles in support of environmental management for sustainable development in Africa through the AMESD satellite reception stations network (see below).

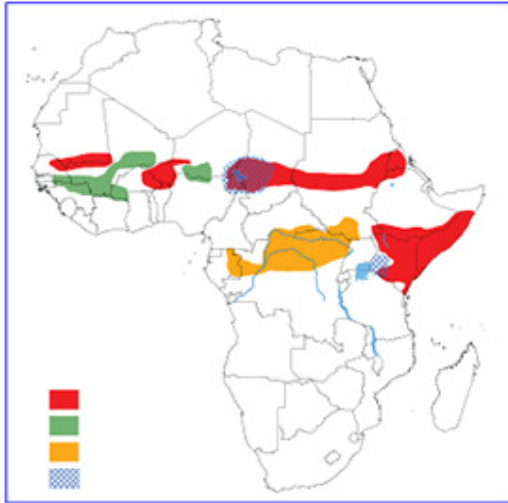
Image: Map of African territory vulnerable to desertification; © Reed et al, 2001; distributed by UNEP-GRID.

Source: AMESD/COM/11-0057

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

AMESD has drawn the African climatic picture in 2011.

The May – August 2011 AMESD environmental bulletin draws the climatic picture of Africa in 2011, highlighting some hotspots in areas of interest for DNI (see figure):



- (Red) - In Eastern Africa, severe drought conditions for two consecutive seasons – likely to be extended to 2012 – have led to critical food insecurity requiring major humanitarian assistance.
- (Red) – In the Eritrea-Chad bet and in some West Africa areas (Mali/Mauritania border, East of Burkina Faso) below average rainfall impacted negatively on the crop development and pastoral activities, probably leading to food insecurity situations.
- (Green) – In other areas of West Africa (south and central Mali, Niger/Nigeria border, good rainfall conditions led to favorable growth conditions, anticipating good harvest.
- (Dotted Blue) - In areas around Lake Chad and in Western Kenya, heavy rains in August led to flooding events and related damages.

Source: AMESD Continental Environmental Bulletin #2 – May to August 2011.

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

Cereals that fix nitrogen: a hope for semi-arid regions?

Image: Nodules sites of nitrogen-fixing bacteria © J. Mullock

Nitrogen availability is quite poor in degraded soils of semi-arid regions. Using chemical fertilizers proves efficient but has a high financial and economic cost.

So, scientists call for reinforced research on symbiosis between cereals (including wheat, maize and rice) and nitrogen-fixing bacteria, either by hosting rhizobia in root nodules, or by encouraging looser associations between cereals and bacteria to fix nitrogen even without nodules.

Cereal-root nodules need a low-oxygen environment, to protect the key enzyme, nitrogenase. Legume nodules have a physical barrier to gas diffusion, and it might not be that hard to do something similar in cereals. But rhizobial nitrogen fixation is powered by respiration, which requires high oxygen flux in addition to a low oxygen concentration. Much of this oxygen is carried by diffusion of a plant hemoglobin. In conclusion, the paper underlines that "if nitrogen supply and carbon metabolism can be closely coupled, excess nitrogen would not be lost to the environment." A highly challenging but promising field of biological research to the benefit of semi-arid regions.

Source: Perrin H. Beatty & Allen G; Good (2011), Future prospects for Cereals that fix Nitrogen, *Science*, Vol. 333, 416-417, 22 July 2011.

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

4. Important upcoming events

2011		
5-7 Dec	Water and Society 2011. 1 st . International Conference on Water and Society http://www.wessex.ac.uk/11-conferences/waterandsociety-2011.html	Las vegas, USA
15-17 Dec	Premier Congrès International sur l'Arganier http://goo.gl/9iSb6	Agadir, Morocco
2012		
30 Jan-2 Feb	4 th e-Health and Environment Conference in the Middle East http://congress.hbmeu.ac.ae/ehealth/call-paper-2012	Dubai, United Arab Emirates
26-29 Mar	Planet under pressure – New knowledge towards solutions http://www.planetunderpressure2012.net/	London, UK
12-15 Apr	Green Africa. Sustainability conference http://www.greenafricainconference.com/	Gambia, West Africa
16-20 Apr	XIX Congreso Latinoamericano y XXIII Congreso Argentino de la Ciencia del Suelo http://www.congresodesuelos.org.ar/site/info-general/bienvenida-2	Mar del Plata, Argentina
14-17 May	Second International Conference on Human Impacts on Soil Quality Attributes in Arid and Semiarid Regions http://hisqa.iut.ac.ir/	Isfahan, Iran
29-31 May	International Conference Technologies for Sustainable Development: A way to reduce poverty? http://cooperation.epfl.ch/2012Tech4Dev	Lausanne, Switzerland
4-6 Jun	Earthsummit 2012 Stakeholder Forum UN Conference on Sustainable Development http://www.earthsummit2012.org/	Rio de Janeiro, Brazil
27-29 Jun	XII International Symposium on Environmental energy and Global Sustainable Development http://www.isegnet.org/2012/	Los Angeles, CA, USA
2-6 Jul	4 th International Congress EUROSIL 2012. Soil Science for the Benefit of Mankind and Environment. Fiera del Levante. http://www.eurosoil2012.eu/	Bari Italy
2-6 Jul	4th AMMA International Conference http://www.amma-international.org/spip.php?rubrique1	Toulouse, France
29-31 Aug	3 rd . International Sustainability Conference http://www.sustainabilityconference.ch/cms/index.php	Basel, Switzerland
1-5 July	6th Conference iEMSS. Managing Resources of a Limited Planet: Pathways and Visions under Uncertainty http://www.iemss.org/iemss2012	Leipzig, Germany
2-6 July	4 th International Congress EUROSIL 2012 http://www.eurosoil2012.eu/	Bari, Italy
30 Sep- 5 Oct	EcoSummit 2012 – Ecological Sustainability http://www.ecosummit2012.org/	Columbus, Ohio, USA

GRF One Health Summit 2012 - Call for abstracts still open!

The "One Health" perspective acknowledges the systemic interconnections of human, animal and environmental health in close relation with agriculture, food safety and security. Only an integrative approach will ensure sustainable human health management in an era of climate change, land degradation, resource depletion and development challenges. The One Health Summit will address these issues and provide collaboration based solutions aiming for improved knowledge sharing, multi-disciplinary health education, improved governance, corporate responsibility and dedicated investments.

The summit will end with the approval of a "Davos One Health Action Plan", which shall pinpoint ways on how to achieve added value by multi-sectorial and multi-stakeholder cooperation.

Registration and abstract submission is on-going. Among all abstract submissions 2 free admissions to the summit will be raffled.

More information at: www.onehealth.grforum.org

Information contributed by: DNI Bureau

Oxford Interdisciplinary Desert Conference

The 2nd Oxford Interdisciplinary Desert Conference will be held on March 29-30, 2011. The event is for researchers and those interested in desert and dryland environments and societies. All fields are encouraged to participate in presentations, discussion and debate on dryland research.

The conference features a special program on 'TE Lawrence's Oxford' on March 28th in the afternoon. This event is co-sponsored by the Ashmolean Museum and the Bodleian Library and will include a private tour of their Lawrence-related collection. For more conference details, registration and abstract submittal please visit the conference website: <http://www.geog.ox.ac.uk/news/events/deserts/>

Information contributed by: Troy Sternberg, Oxford University, UK

European Geosciences Union, General Assembly 2012

Several sessions on desertification and land degradation are going to be held at the next **EGU General Assembly 2012** to be held from 22 to 27 April 2012 in Vienna, Austria:

SSS5.19- Climate and erosion in Mediterranean Ecosystems under Global Change

SSS6.3 -On the impacts of soil and water conservation measures on ecosystem services from the plot to regional scales.

SSS6.6 - Self-organization in dryland ecogeomorphology: stability and desertification

SSS6.9 - Soil degradation and desertification in arid and semi-arid environments in the context of global change,

SSS6.10 - Desertification mitigation and remediation of land – Approaches and Solutions. DESIRE project

SSS6.11- Restoring the hydrological and protection services of land to combat desertification and achieve food security.

A concrete strategy will be developed by the meeting to restore the natural and economic capital of the land and soil.

NH8.7 -Land degradation and desertification in drylands

Scientists are cordially invited to share their work and experiences and contribute to the discussions. You can visit the general EGU2012 site at <http://meetings.copernicus.org/egu2012..>

Deadlines and milestones can be found at: http://meetings.copernicus.org/egu2012/deadlines_and_milestones.html.

While registering, you can also apply for financial support from the abstract submission page.

Information contributed by: Cristina Branquinho, Universidade de Lisboa, Portugal, and Maria José Marques Perez Univ. Autonoma de Madrid, Spain,

EUROSOIL 2012

The early registration deadline for the EUROSOIL2012, Bari, Italy, 2-6 July 2012 is fast approaching: 20 January 2012. The workshop topics include, but are not limited to assessments, monitoring and modelling of soil degradation including hydropedological approaches, as well as traditional and new technologies in soil and water conservation. ESSC and JRC will provide the perspectives of the EU Thematic Strategy for Soil Protection for the Mediterranean. You can find further information for on the Congress website (<http://www.eurosoil2012.eu>).

Information contributed by: Stefano Grego, Università della Tuscia, Italy

5. Publications and Special Issues

1. Bisaro, A., Kirk, M., Zimmermann, W., and Zdruli, P., 2011. Analysing new issues in desertification: research trends and research needs. Final report of the IDEAS project to the German Federal Ministry for Research and Education (BMBF). Institute for Co-operation in Developing Countries, Marburg, Germany. <http://www.uni-marburg.de/fb02/ike/forschung/projekte/finalreport.pdf>
2. Browning, D. M. and S. R. Archer (2011). "Protection from livestock fails to deter shrub proliferation in a desert landscape with a history of heavy grazing." *Ecological Applications* 21(5): 1629-1642.
3. Conliffe, A. (2011). "Combating Ineffectiveness: Climate Change Bandwagoning and the UN Convention to Combat Desertification." *Global Environmental Politics* 11(3): 44-+.
4. Environment Management Group (EMG). 2011. Global Drylands: A United Nations system-wide response. <http://www.unemg.org/MeetingsDocuments/IssueManagementGroups/land/Drylandsreport/tabid/56306/Default.aspx>
5. Gilbert, N. 2011. Science enters desert debate – United Nations considers creating advisory panel on land degradation akin to IPCC. *Nature* 477, 262. http://www.nature.com/news/2011/110914/full/477262a.html?WT.ec_id=NATURE-20110915
6. Hein, L., N. de Ridder, et al. (2011). "Desertification in the Sahel: Towards better accounting for ecosystem dynamics in the interpretation of remote sensing images." *Journal of Arid Environments* 75(11): 1164-1172.
7. Hirche, A., M. Salamani, et al. (2011). "Landscape changes of desertification in arid areas: the case of south-west Algeria." *Environmental Monitoring and Assessment* 179(1-4): 403-420.
8. Ikazaki, K., H. Shinjo, et al. (2011). "'Fallow Band System,' a land management practice for controlling desertification and improving crop production in the Sahel, West Africa. 1. Effectiveness in desertification control and soil fertility improvement." *Soil Science and Plant Nutrition* 57(4): 573-586.
9. Keskin, M. O., B. S. Akin, et al. (2012). "Pre-service teachers' attitudes towards some environmental problems." *Energy Education Science and Technology Part B-Social and Educational Studies* 4(1): 97-104.
10. Romm, Joseph. 2011: Desertification: The dust bowl. *Nature* 478, 450-451: http://www.nature.com/nature/journal/v478/n7370/full/478450a.html?WT.ec_id=NATURE-20111027
11. Munson, S. M., R. H. Webb, et al. (2011). "A comparison of methods to assess long-term changes in Sonoran Desert vegetation." *Journal of Arid Environments* 75(11): 1228-1231.
12. Talking about - Annotated Glossary on Combating Desertification and Sustainable Land Management" (new publication in digital format prepared by the GIZ/CCD project) <http://www.gtz.de/de/dokumente/giz-2011-en-glossary-talking-about.pdf>, 1.09 MB (English, German).
13. Visser, M., N. Maughan, et al. (2011). "Stakeholder views on restoring depleted cereal fallows in arid Tunisia: Societal barriers and possible crevices." *Journal of Arid Environments* 75(11): 1191-1200.
14. Xu, D. Y., C. L. Li, et al. (2011). "Assessment of the relative role of climate change and human activities in desertification: A review." *Journal of Geographical Sciences* 21(5): 926-936.
15. Europe's environment, an Assessment of Assessments (21 Sep 2011). "A comprehensive overview of available sources of environmental information across Europe". You can download the full report as PDF, Ebook or read

online at: <http://www.eea.europa.eu/themes/regions/pan-european/europes-environment-an-assessment/europes-environment-2014-an-assessment>

16. Elisabeth Simelton, Claire H. Quinn, Philip Antwi-Agyei, Nnyaladzi Batisani, Andrew J. Dougill, Jen Dyer, Evan D.G. Fraser, David Mkwambisi, Staffan Rosell, Susannah Sallu and Lindsay C. Stringer, November 2011. [African farmers' perceptions of erratic rainfall](#). Sustainability Research Institute Working Paper No. 27: downloadable at: <http://www.see.leeds.ac.uk/research/sri/working-papers/>
17. Stavros Afionis and Lindsay C. Stringer, September 2011. [EU biofuels policy: Trade protectionism or European sustainability leadership?](#) Sustainability Research Institute Working Paper No. 26: downloadable at: <http://www.see.leeds.ac.uk/research/sri/working-papers/>

6. Other Information

A new open access interdisciplinary journal

Science Academy Publisher (<http://www.sciacademypublisher.com/>) launched a new open access interdisciplinary journal entitled "International Journal of Land Processes and Arid Environment".

(<http://www.sciacademypublisher.com/journals/index.php/IJLPAE/about>). I'm pleased to invite you to submit manuscripts to this journal.

Information contributed by: Zhen-Ting Wang, CAS, China

2012 Grant A. Harris Research Instrumentation Fellowship

The Grant A. Harris Research Instruments Fellowship provides \$30,000 worth of Decagon research instruments (6 awards for \$5,000 each) to graduate students studying any aspect of environmental science or geotechnical science. The recipient of the fellowship will not receive a monetary award, but will receive the Decagon instrumentation outlined in the proposal.

More information at: <http://goo.gl/Z31Vx>

Information contributed by: Maria José Marques Perez, Univ. Autonoma de Madrid, Spain

Land degradation and desertification 'awakening' in the MENA region

In developing countries especially countries in the Middle East and North Africa (MENA), wars, conflicts and unrests have been common throughout the history, especially in recent years. However, current conditions in these countries are more serious. In this situation, the first thing that is being ignored and overlooked is environment and agricultural setting.

Land degradation, desertification, deforestation and destruction of arable lands will be the outcomes left behind for the future young generation. Undoubtedly, these will have profound impacts on social, ecological and economical conditions in these suffering countries. These will be more complicated given inappropriate governance system, climatic conditions (drought), lack of infrastructure, rising population, etc. Overall result will be an increase in instability, out-migration, unemployment and unrests. Therefore, any research focusing on these countries will provide more opportunities and insights towards understanding the pivotal concerns and possible solutions. Let's do something before it is too late!

Information contributed by: Farshad Amiraslani and Seyed Kazem Alavipanah, University of Tehran, Iran

Chile – Fighting desertification by reducing wood domestic use.

Image: Poor bushes in the Atacama desert, Chile. © Herve Gestas

One of the sources of desertification is the use of wood as domestic energy source. Among others, trees absorb kinetic energy of wind, stop transported particles, and their encroachment prevent soil erosion and bring carbon into it. Unfortunately, wood is usually the only energy source for people living in drylands, who cut it and carry it over long distances. So, providing these people with alternate energy sources contribute to combat desertification. This is well known in inter tropical Africa, but other countries lead such actions; For instance, 63% of the Chile territory is prone to desertification, combated among others by a UNDP programme. In a pilot phase, people have been encouraged to use energy saving cookers and alternate energy sources (sun, biogas). An International workshop has been held in

Santiago del Chile on June 21 & 22 to advertise about pilot results and widely spread them all across Latin America. Spanish publications are available from UNDP.

More information at : <http://www.gtdesertification.org/article126.html>; <http://www.boliviainiti-sudsoleil.org/spip.php?article475>

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

FAO has launched an 'Africa crop tool'

Tele-learning tools are widely used by FAO. End 2010, it has launched an interactive 43-nation guide on what to plant as well as when and where to plant it. The quick reference calendar covers 43 major African countries and advises on planting according to the agriculture area. The web-based tool, developed by FAO experts, covers more than 130 crops both for humid and semi-arid African areas. The FAO crop calendar covers 283 agro-ecological zones in Africa, representing the richness and variety of the African ecology as well as the challenges of land degradation, sand encroachment and floods.

Source: <http://www.fao.org/about/en/> ('Women – key to food security' pdf document)

Image: The fifth cereal in the world: Sorghum in Africa. © Le Monde – Africamix.

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

A key technological development in Africa: the PUMA/AMESD network of satellite receiving stations.

A network of 111 satellite receiving stations is now operational in 48 African Sub-Saharan countries in the framework of AMESD programme. Built up by Telespazio-France, the 111 stations comprise 57 AMESD stations, 50 PUMA-2010 stations, and the equipment of 4 African training centres. This network constitutes an unique tool for an homogeneous monitoring the African environment and near real time environment alerts at the continental level.

Source: AMESD Newsletter #7 – May to September 2011.

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

Israel to build up the largest desalination station in the world

Sea water desalination is one of the most promising techniques to fight against desertification and to meet other water needs in regions reasonably close to the seaside. The use of this technology has dramatically grown during the previous years in many countries. Among others, the Israeli Minister of Finances decided to build up the largest desalination station in the world in Sorek. The planned figures are: cost, 400 billion USD; starting date, 2013; technology: inverse osmosis; water supply: 150 billion m³/year; water price: 0.4 €/ m³. Another station is planned in Ashod (water supply: 100 billion m³/year). When these stations will work, by desalination techniques will supply the country with about 75% of its fresh water needs.

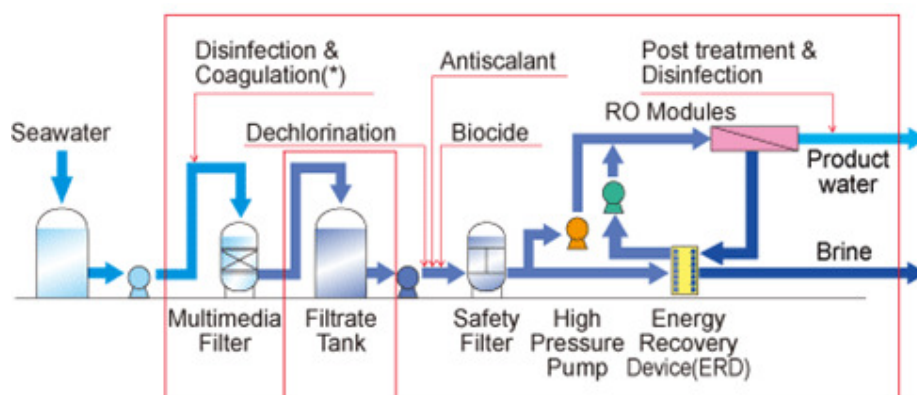


Image: How does Inverse osmosis work? An industrial diagram. Basically, high pressure is used to reverse the physical osmosis pressure existing between pure and salted water. Additive processes are needed since sea water is not just a mix of NaCl and H₂O – © KHCK Co. Ltd.

Sources: SPNI, bulletin d'information n° 4/2011 ; diagram : http://www.khckgreenfarm.hk/index_english.htm

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

Strengthening education in francophone Africa: an AUF initiative



Image: Active children involvement in a rural Niger school. © UNICEF

Education and Health are the two major pillars of development. This applies to many West Africa francophone countries prone to desertification. Improving the formation of teachers and the learning of French in parallel with local languages appears mandatory to achieve development goals.

The AUF (*Agence universitaire de la Francophonie*) and the OIF (*Organisation Internationale de la Francophonie*) joined their forces in two programmes partly supported by the AFD (*Agence Française de Développement*) and MAEE (*Foreign Affairs Ministry*).

IFADEM is an initiative to improve teachers tele-learning. An experimental phase took place in four countries (Benin, Burundi, Haiti, Madagascar) and will be extended to some 10 countries in sub-Saharan Africa.

ELAN-AFRIQUE aims at promoting high quality bilingual learning in francophone Africa, and especially meeting huge needs in rural areas. The partner countries are: Benin, Burkina Faso, Burundi, Cameroon, Democratic

Republic of Congo, Mali, Niger, Senegal. This initiative will be coordinated with national education plans. The related Convention was signed on September 13, 2011.

More Information : http://www.auf.org/communication-information/actualites/communiqu2011-6290.html?var=lettre_AUF_74 ;
http://www.afd.fr/lang/fr/home/projets_afd/education/pid/1368;<http://moteurderecherche.afd.fr/?q=IFADEM>

Information contributed by: Gerard Begni, CNES & CSFD, France (Head, Science/Policy WG)

Médiaterre portal on desertification

A useful reference for French-language announcements related to desertification, land degradation and drought (DLDD) as well as sustainable land management (SLM) events, policy developments, publications and new initiatives.

More information at: <http://www.mediatorre.org/desertification/>



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