

DesertNet International



DesertNet International Newsletter n. 1/2016

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 **10.04.2016**. Please send your contributions (1000 characters max, including spaces) to nrd@uniss.it and czanolla@uniss.it

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1. Information relevant to DesertNet members



The International Network of Basin Organizations (INBO) and the so-called "Paris Pact" – UNFCCC/CoP 21.

As part of the so-called "Lima-Paris Action Agenda", Peru, supported by France, organized on 2nd December 2015, the official day on « Water and Climate Change Adaptation » of the UNFCCC/COP21 in Paris, under the joint chairmanship of Mrs. Ségolène ROYAL, French Minister for Ecology, Sustainable Development and Energy, Head of the French Delegation to the COP21, and Mr. Manuel VIDAL-PULGAR, Peruvian Minister for the Environment, organizer of the COP20 - 2014 in Lima. So, for the first time in the COP history, the issues of freshwater are officially taken into account.

« The Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers » was presented at the day opening.

Carried out by the International Network of Basin Organizations (INBO), on request of the organizers, the « Paris Pact » aims at a global mobilization of the basin organizations and all other stakeholders involved, multilateral and international organizations, governmental administrations, local authorities, companies and all economic sectors, the civil society, for starting without any delay the actions needed to adapt freshwater management to the effects of climate change: all organizations involved in integrated river basin management were invited to sign the "Pact".

Source: <http://www.riob.org/eletter/COP21-Signatures-Pacte-EN.html>

Information provided by: Gerard Begni, DNI – CSFD/CAC

Policy briefs on Soil Carbon and Carbon Sequestration

In November 2015 the Science Policy Interface of the UNCCD produced a Policy Brief on the topic of Soil Carbon and the link with Climate Change. The Policy Brief titled “Pivotal Carbon Soil” is available at:

http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/2015_PolicyBrief_SPI_ENG.pdf

The establishment of the Science-Policy Interface (SPI) was decided by the Conference of the Parties at its eleventh session (decision 23/COP.11) with the goal to facilitate a two-way science-policy dialogue and ensure the delivery of policy-relevant information, knowledge and advice on desertification/land degradation and drought (DLDD). The SPI is expected to make science effective in the policy-making process of the UNCCD.

More details on the work of the SPI are available at: <http://www.unccd.int/en/programmes/Science/International-Scientific-Advice/Pages/SPI.aspx?HighlightID=282>

In December 2015, the Intergovernmental Technical Panel on Soils (ITPS) produced a Policy Brief titled “Can Carbon (SOC) offset Climate Change”. This policy brief is available at: http://www.fao.org/fileadmin/user_upload/GSP/docs/soc/carbonSOC2.pdf

Information provided by: Mariam Akhtar-Schuster, Advisory Board DNI

Carbon sequestration in soils: the 4 per 1000 initiative



The 4‰ Initiative, launched by France on Dec. 1st, 2015, sets out to bring together all willing contributors in the public and private sectors (national governments, local and regional government, companies, trade organisations, NGOs, research facilities, and others) under the framework of the Lima-Paris Action Agenda (LPAA- see above).

The aim of the Initiative is to demonstrate that agriculture, and agricultural soils in particular, can play a crucial role where food security and climate change are concerned.

Based on robust scientific evidence, the Initiative therefore invites all partners to declare or to implement practical programmes for carbon sequestration in soil and the types of farming methods used to promote it (e.g. agroecology, agroforestry, conservation agriculture, landscape management).

The target is to increase the amount of carbon in soils by 0.4% per year.

The goal of the Initiative is to engage stakeholders in a transition towards a productive, resilient agriculture, based on a sustainable soil management and generating jobs and incomes, hence ensuring sustainable development.

Source: <http://4p1000.org/>

Information provided by: Gerard Begni, DNI – CSFD/CAC

“Climate hazard and access to water in the Mediterranean” – An Euromed-France workshop with support of AFD (French Agency for development)

A workshop about ‘climate risks and access to water in the Mediterranean’ took place in Paris on Sept. 17th, 2015. It was organized by The Euromed France network in partnership with the Water Solidarity Programme (pS-Eau) and the Platform of French NGO for Palestine (derived from Oslo agreements) with the support of AFD, the French Agency for Development.

The objectives were to identify the major challenges linked to water access in relationship with climate change in the Mediterranean, and to elaborate a rationale to be carried on at the UNFCCC/ COP 21.



The resolutions of the workshop can be found at the Internet address listed hereunder. They can be divided into four main categories:

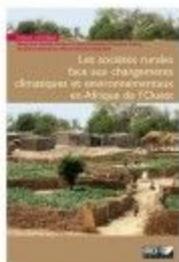
- Food security
- Water and sanitation
- Political and geostrategic challenges
- Migrations

Source (workshop): <http://www.euromed-france.org/spip.php?article992>

Source(resolutions): <http://www.partenariat-francais-eau.fr/wp-content/uploads/2015/08/ref-presentation-du-seminaire-eau-septembre-2015.pdf>

Information provided by: Gerard Begni, DNI – CSFD/CAC

Supporting UNFCCC/CoP 21: The French Research Institute on Development (IRD) issues a book addressing “Rural societies facing climate and environment change in Western Africa”

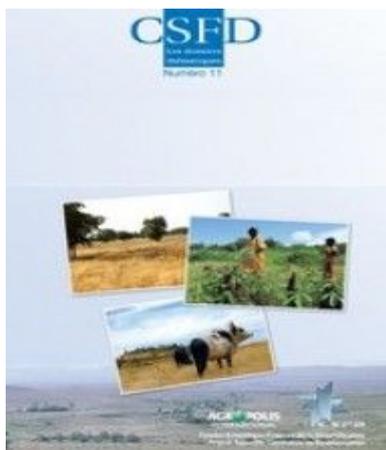


In order to support UNFCCC mitigation efforts, IRD issued this book to analyze recent trends of regional climate and environment. It studies how rural people perceive these changes and take them into proper account. Which are the related impacts and vulnerabilities, and do they bring new opportunities? How do people adapt to them, which innovations do they implement, since climate change impact interacts with ongoing societal, political, economic and technical changes? This book (in French) is a cooperative work between African and French researchers.

Source: <http://www.csf-desertification.org/actualites/item/parution-de-l-ouvrage-les-societes-rurales-face-aux-changements-climatiques-et-environnementaux-en-afrique-de-l-ouest>

Information provided by: Gerard Begni, DNI – CSFD/CAC

A thematic report of the French Scientific Committee on Desertification (CSFD) addressing “ecological engineering for a sustainable agriculture in arid and semi-arid areas of Western Africa”



In order to bring a practical support to the multiple stakeholders of desertification issues, the CSFD is currently publishing a series of bilingual ‘thematic reports’ of interest about various questions. 11 reports have been issued so far. These bilingual reports can be downloaded from the address quoted hereunder.

The most recent report addresses “ecological engineering for a sustainable agriculture in arid and semi-arid areas of Western Africa”, a set of multidisciplinary approaches aiming at leading to sustainable policies and practices in those areas prone to desertification – hence a major challenge and tool in these areas.

Right now, the report has been issued in French. The English version is to come very soon.

Source (English): <http://www.csf-desertification.eu/dossier> (The English version of the dossier will be available there very soon)

Source (French) <http://www.csf-desertification.org/dossier>

Information provided by: Gerard Begni, DNI – CSFD/CAC

Poor management policy of classified forest of Pénéssoulou, in Bassila Municipality, in Republic of Benin.

The Classified Forest of Pénéssoulou like the other forest reserves in Benin, suffered deep and multifaceted malaise. It is managed by the National Timber Office (ONAB) who has a new management plan, but has difficulty in its effective and efficient implementation. This contributes largely to continued forest degradation.

Covering an area of 5,470 hectares, the forest of Pénéssoulou is subject to several types of fraudulent and illegal logging and transhumance. Nothing control and monitoring provision is in place.

Also, the provisions of the development plan of the forest that provide for the participation of local communities in the management of their natural resources now exist only on paper. Village communities are not better involved.

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Information provided by: Fatai AINA, DNI – AMAF-BENIN

3. Researchers’ Updates

The African-Arabian Desert Microbial Ecology Network (AADMEN)

A small team of researchers who work in the field of desert soil microbial ecology will meet for the first time in Pretoria, South Africa, in April 2016. The purpose of this meeting is to formally establish AADMEN, as a vehicle for forging closer

linkages between African, Arabian and other international researchers in this field. The network will provide future opportunities for interactions between researchers, and for the development of collaborations, student exchange and mechanisms for future fund-raising.

Researchers with interests in desert soil microbiology who wish to be part of the AADMEN network should forward their names, affiliations and contact details to Don Cowan (Centre for Microbial Ecology and Genomics, University of Pretoria: www.up.ac.za/CMEG) on don.cowan@up.ac.za.

Information provided by: Don Cowan, University of Pretoria, South Africa

Understanding migration and remittances to improve forest management projects and policies. A new research project

The Center for International Forestry Research (CIFOR), Bogor, Indonesia is starting a new 3-year research project to improve understanding of migration and personal financial remittances as a basis to improve forest management projects and policies. The project, which has received funding from the German BMZ under its BEAF programme to CGIAR centers, will fill an important research gap by identifying, evaluating, and synthesizing official and existing statistics and combining that information with primary data collected on migration and remittance patterns at national and subnational levels. The goal is to develop plausible models that will illustrate how migration and remittances interact to influence forest use, forest cover and livelihood benefits derived from forest resources.

Results of research and analysis will be used by on-the-ground projects to enhance their effectiveness in promoting sustainable forest management and improved livelihoods. Research will take place in Indonesia, Peru and Tajikistan, and will be implemented in partnership with GIZ projects in these three countries. It is also designed to provide policy makers, development practitioners, and rural households with accurate information on patterns of migration and remittances and how they influence changes in livelihoods, gender roles, natural resource use, and income distribution enabling them to systematically integrate this knowledge into policies, programs and livelihood strategies.

The ultimate goal of the project is sustainable management of forests, improved livelihoods and reduced poverty in forest-dependent communities affected by migration and remittance flows.

The expected outputs of the project include

- Understanding and access to accurate and up-to-date information on migration and remittances, as well as related change in labor patterns, population composition (by gender and age) in Indonesia, Tajikistan and Peru at national and subnational scales is improved.
- Patterns of change in forest cover, forest resource management, and their relationship to migration and remittance flows are identified and documented through research in selected communities.
- Strategies to encourage and facilitate investment of remittances in sustainable forest and tree-based actions are identified and recommendations for implementation are developed.
- Lessons learned and best practices for monitoring local patterns and effects of migration and remittances are documented and disseminated to communities, project managers, and policy makers on several levels. This is knowledge that will be co-produced in close collaboration with policy and decision makers and communities throughout the project, in order to increase the relevance for policy and practice.

Contact: Dr. Christine Padoch: c.padoch@cgiar.org; Dr. Peter Cronkleton: p.cronkleton@cgiar.org; Dr. Christopher Martius: c.martius@cgiar.org;

Information provided by: Christopher Martius, CIFOR, Indonesia

Camel Manure! An Asset or a Valueless commodity?

Camel dung is beautiful in its architecture, dry and odorless, mainly use as a fuel agent in many developing countries, especially among the pastoralists. The other main usage is farm yard manure by small scaled farmers. However, there are fewer references using camel manure as neutralizing agent, carbohydrate decomposition. Unfortunately, a huge quantity of camels' manure is going waste in countries with highest camel population per unit land mass area (Gulf countries) in the world. Here common misperception is that camels' dung has no agricultural value, making it a valueless commodity. On contrary (research findings) camel dung has almost the same value as that of cow dung.

For details go to the link: <https://camel4all.wordpress.com/2016/02/02/camels-dungzfrom-waste-to-a-worthwhile-farming-agent/>

Information provided by: Abdul Raziq, Al Ain Dairy Camel Farms, UAE

Impact of Rangeland rehabilitation techniques on restoring degraded areas of Morocco



Photo Eastern of Morocco: (A) free grazing rangeland (B) rangeland resting

The arid rangelands of Morocco are generally devoted to domestic grazing, considered as a sustainable use of the rangeland resources, but the degradation has reached such an alarming level that their capacity to provide sustainable livelihoods for herders has been drastically reduced. This degradation is attributed to human factors such as overgrazing and rangeland cultivation, combined to climate variation. To restore these degraded areas, a number of rehabilitation projects have been undertaken.

The assessment of the impact of the rangeland rehabilitation techniques especially rangeland resting, forage shrub plantations and water and soil conservation techniques on the vegetation dynamics and the soil conservation show considerable and positive effects. The techniques permitted an increase of the rangeland production, plant cover, plant biodiversity and soil organic matter as compared to free grazing rangeland (photo). Despite the drought and climatic aridity, these techniques have produced a positive impact on the vegetation and may be considered as an interesting technical option and tool to face the increase of animal feeding resources costs and to mitigate drought eastern Morocco.

Information provided by: Hamid Mahyou, INRA, CRRA Oujda

4. Important upcoming events

List of links to next meetings regarding desertification, water conservation and land degradation.

2016		
13-15 Mar	RDC 2016 - Rural Development Conference http://www.rdconference.org	Bangkok, Thailand
14-17 Mar	4th World Congress of Biosphere Reserves http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/First_Announcement_WCBR2016_en.pdf	Lima, Peru
21-22 Mar	WADIS-MAR International Conference http://www.wadismar.eu/images/Conference.pdf	Tunis, Tunisia
17–22 April	European Geosciences Union General Assembly 2016 http://egu2016.eu/home.html	Vienna, Austria
8-12 May	The International Society for Ecological Modelling Global Conference http://www.isemconference.com/	Towson University, MD, USA
20 – 21 May	2nd Sahara Scientists Summit (3S) http://sunwo.eu/wp-content/uploads/2015/04/SaharaSummit_Budapest2016.pdf	Budapest, Hungary
31 May –2 Jun	International Conference on Conservation Agriculture and Sustainable Land Use http://caslu2016.mtafki.hu/venue.html	Budapest, Hungary
1–4 Jun	2nd EWaS International Conference: Efficient & Sustainable Water Systems Management toward Worth Living Development http://www.ewas2.tuc.gr/5709.html	Chania, Greece
10–14 Jul	8th International Congress on Environmental Modelling and Software (iEMSS 2016) http://www.iemss.org/sites/iemss2016/	Toulouse, France
13–15 Jul	22nd International Sustainable Development Research Society Conference http://www.isdrsconference.org/	Lisbon, Portugal
17-22 Jul	EUROSOIL 2016 Congress * http://www.eurosoil2016istanbul.org/	Istanbul, Turkey
22–26 Aug	10th European Conference on Ecological Restoration Best Practice in Restoration www.ser2016.org	Freising, Germany
29 Aug – 1 Sep	EcoSummit 2016 http://www.ecosummit2016.org/	Montpellier, France
12–15 Sep	8th International Conference on Scour and Erosion http://www.icse2016.com/topics/	Oxford, United Kingdom

Information provided by: DNI Bureau

* Highlights

A session entitled ‘Can Sustainable Land Management Mitigate Desertification In Drylands?’ will be held at the EUROSOIL 2016 Congress (Istanbul, July 2016). The session will be co-chaired by ICARDA (Claudio Zucca) and FAO (Dr. Feras Ziadat).

A Conference entitled “Jump-starting the Sustainable Development Goals in Germany: natural resources and sustainable consumption and production” will be held at the Andel’s Hotel, Landsberger Allee 106, Berlin.

The session on “Water resources - assessment, management, and allocation - in (semi-)arid regions” (HS5.2) will be held at the European Geosciences Union (Vienna, April 2016) organised by Jan Friesen, Laura Foglia and Leonor Rodriguez-Sinobas.

The session on “Hazard Risk Management in Agriculture and Agroecosystems” (NH1.5/SSS10.8) will be held at the European Geosciences Union (Vienna, April 2016) organised by Ana Maria Tarquis

The session on “Connectivity in hydrology and sediment dynamics: concepts, measuring, modelling, indices and societal implications” (SSS2.5/BG1.16/GM3.7/NH1.23) will be held at the European Geosciences Union (Vienna, April 2016) organised by Saskia Keesstra

Information provided by: DNI Bureau

WADIS-MAR International Conference Tunis, 21-22 March, 2016

The Desertification Research Centre (NRD-UNISS) in collaboration with l’Observatoire du Sahara et du Sahel (OSS) is organizing an international two-day Conference in Tunis on 21st and 22nd March 2016, on the occasion of International Water Day. DNI Bureau has agreed to provide its support and involvement in the organization of this event as it is a great opportunity to strengthen DNI activities in North Africa and the MENA region and mobilize new members within the region.

The conference aims at showing, to national and international authorities, the effective implementation of 5 SWIM DEMO projects on sustainable water management, besides other success stories carried out in arid and semi-arid environments by relevant Institutions involved in water management.

High level Tunisian, Algerian and other Authorities from neighboring Mediterranean Countries have been invited besides international stakeholders, such as representatives of focal points of Country Program, SWIM Support Mechanism, Financial bodies, local Ministries and delegate Agencies (CRSTRA-DGRE-CRDA), Water Management Institutions in SWIM countries, United Nation Convention to Combat Desertification (UNCCD), Italian Ministry of Foreign Affairs (MAE) and other associations, to strengthen and enhance south/south and SWIM program experiences and open new fruitful opportunities for future collaborations.

The first day will be dedicated to the presentation of the SWIM Demo projects and the other experiences carried out by relevant institutions involved in water management, while the second day will have a roundtable with relevant political institutions that will discuss the outcomes achieved so far by these projects in the fields of water management, within the frame of local and strategic policies dealing with environmental protection and climate and global change among Mediterranean Countries committed to implement the Mediterranean Strategy for Sustainable Development.

Information provided by: Pier Paolo Roggero, Secretary General DNI

COST Action ES1104 'Arid Lands Restoration and Combat of Desertification: Setting Up a Drylands and Desert Restoration Hub' Final Conference

This COST Action has run for four years and has brought together a multidisciplinary, multinational hub of scientists to better understand European and international knowledge regarding desertification and particularly restoration of drylands. The Action has created a forum for discussion,



collaborative papers, hosting of conferences, Training Schools and Short Term Scientific Missions.

Its final conference will be held at the University of Greenwich, London (30-31 March 2016) and will include different presentations and panel discussions, with invited eminent figures, members of the Action and Early Career Researchers. One of the aims of the conference is to deliver recommendations to effectively improve restoration in drylands to policy makers as all too often scientific results remain within the realm of academia.

More information at <http://desertrestorationhub.com/> soon

Information provided by: Maria Jose Marques. Universidad Autónoma de Madrid

International Training Course on Combating Desertification in Turkey

This training will take place from 30 May – 05 June in Konya-Mersin. It is open for participants from developing countries and least developed countries. The course has been developed for decision makers, forest engineers and NGO's involved in the management of environmental problems related to desertification, land degradation, afforestation, erosion control and forestry.



The deadline for application is 1 April 2016.

More information at <http://www.unccd.int/en/media-center/MediaNews/Pages/highlightdetail.aspx?HighlightID=431>

Information provided by: Maria Jose Marqués, Univ. Autónoma de Madrid, Spain

2nd SAHARA SCIENTISTS SUMMIT (3S) - Hungary, Budapest 20-21, May 2016

Climate change and related anomalies, such as El-Nino, extreme flooding, drought events, as well, as efforts of mitigation diplomacy became everyday topics of the news. The value of undisturbed climate became reflected also in the Paris Agreement, as a financial condition for implementation of the principle "common but differentiated responsibilities and respective capabilities" among the countries and regions along our Planet.

This specific summit is aimed at call-up scientists, institutions, politicians, business people to combine the knowledge, innovations, efforts, sources and ideas moreover unite them in the GREAT GREEN SAHARA DEAL" (GGSD, the 3rd greatest project of human history in after the „Chinese Great Wall" and the „US New Deal".

GGSD means to "Create together a global sustainable growth with more job, better food and renewable energy supply while working out and activating in the desert a brand new, progressive climate mitigation system with the unic win-win-win strategy". Blocks of the 2nd Sahara Scientists Summit are i., how the science and innovation could help the global approach moreover interfere with national security issues, ii., follow-up of 2015 Paris COP: results and programmes, iii., Sahara soil, degradation tendencies and carbon supply, complementary Africa programs to save the Lake-Chad, iii., new technologies to the „GGSD", iv., financial approach and instruments for „GGSD" realisation, v. recommendations.

Organizers of the 3S do believe that a cooperation between the scientists, individuals, inventors and institutions moreover all the interested parties in the „GGSD" could result in a better global future with a sustainable World. So that they are welcoming further initiatives, co-organisers and sponsors to make the World better!

Second time are to be present among the co-organizers of the event the Chairmen of the prestigious University Abomey Calavi (UAC) Benin and the CERED (Center for Environment Research Education and Development) Vietnam.

Information and registration: Mrs. Tünde NAGY H-1039 Budapest, Pünkösdfüüdő 48/A. E-mail: registration@africa-summit.com. Tel: +36 70 946 39 54. Book your participation also on Gala Dinner on the Danube and Budapest sightseeing. Corresponding author: Márton László Institute for Soil Sciences and Agricultural Chemistry Centre for Agricultural Research, Hungarian Academy of Sciences (ISSAC CAR HAS). 1022 H-Budapest, Herman O. u. 15. E-mail: laszlo.marton@gmail.com

Information provided by: Márton László, ISSAC CAR HAS, Hungary

5. Publications and Special Issues

1. Asfaha, T. G., A. Frankl, M. Haile, and J. Nyssen, 2016, Catchment Rehabilitation and Hydro-geomorphic Characteristics of Mountain Streams in the Western Rift Valley Escarpment of Northern Ethiopia: Land Degradation & Development, v. 27, p. 26-34.
2. Biddau, R., Cidu, R., Ghiglieri, G., Da Pelo, S., Carletti, A., Pittalis, D., 2016, Nitrate occurrence in groundwater hosted in hard-rock aquifers: estimating background values at a regional scale. Italian Journal of Geosciences.
3. Contran, N., Chessa, L., Lubino, M., Bellavite, D., Lobina, R., Sahanoon, O., Fuseini, S., Sayibu, T., Roggero, P.P, Enne, G., (2016) Potentialities and limits of *Jatropha curcas* L. as alternative energy source to traditional energy sources in Northern Ghana, Energy for Sustainable Development, Volume 31, April 2016, Pages 163-169.
4. Corral-Quintana, S., D. Legna-de la Nuez, C. Legna Verna, J. Hernandez Hernandez, and D. Romero-Manrique de Lara, 2016, How to improve strategic decision-making in complex systems when only qualitative information is available: Land Use Policy, v. 50, p. 83-101.
5. Delgado-Baquerizo, M., F. T. Maestre, A. Gallardo, D. J. Eldridge, S. Soliveres, M. A. Bowker, A. Prado-Comesana, J. Gaitan, J. L. Quero, V. Ochoa, B. Gozalo, et al. 2016, Human impacts and aridity differentially alter soil N availability in drylands worldwide: Global Ecology and Biogeography, v. 25, p. 36-45.
6. Demurtas, C. E., Seddaiu, G., Ledda, L., Cappai, C., Doro, L., Carletti, A., & Roggero, P. P. 2016, Replacing organic with mineral N fertilization does not reduce nitrate leaching in double crop forage systems under Mediterranean conditions. Agriculture, Ecosystems & Environment, 219, 83-92.
7. Ge, X., K. Dong, A. E. Luloff, L. Wang, J. Xiao, S. Wang, and Q. Wang, 2016, Correlation between landscape fragmentation and sandy desertification: a case study in Horqin Sandy Land, China: Environmental Monitoring and Assessment, v. 188.
8. Lamchin, M., J.-Y. Lee, W.-K. Lee, E. J. Lee, M. Kim, C.-H. Lim, H.-A. Choi, and S.-R. Kim, 2016, Assessment of land cover change and desertification using remote sensing technology in a local region of Mongolia: Advances in Space Research, v. 57, p. 64-77.
9. Marques, M.J., Schwilch, G., Lauterburg, N., Crittenden, S., Tesfai, M., Stolte, J., Zdruli, P., Zucca, C., Petursdottir, T., Niki Evelpidou, N. et al. 2016. Multifaceted Impacts of Sustainable Land Management in Drylands: A Review. Sustainability 2016, 8(2), 177.
10. Mussery, A., D. Helman, S. Leu, and A. Budovsky, 2016, Modeling herbaceous productivity considering tree-grass interactions in drylands savannah: The case study of Yatir farm in the Negev drylands: Journal of Arid Environments, v. 124, p. 160-164.
11. Nguyen, T. P. L., Seddaiu, G., Viridis, S. G. P., Tidore, C., Pasqui, M., & Roggero, P. P. (2016). Perceiving to learn or learning to perceive? Understanding farmers' perceptions and adaptation to climate uncertainties. Agricultural Systems, 143, 205-216.
12. Ocampo-Melgar, A., and B. J. Orr, 2016, Participatory Criteria Selection: Finding Conflictive Positions in Environmental Post assessment of Land Management and Restoration Actions: Society & Natural Resources, v. 29, p. 119-130.

13. Wan, L., J. Zhou, H. Guo, M. Cui, and Y. Liu, 2016, Trend of water resource amount, drought frequency, and agricultural exposure to water stresses in the karst regions of South China: *Natural Hazards*, v. 80, p. 23-42.
14. Zhang, Y., C. Peng, W. Li, L. Tian, Q. Zhu, H. Chen, X. Fang, G. Zhang, G. Liu, X. Mu, Z. Li, S. Li, Y. Yang, J. Wang, and X. Xiao, 2016, Multiple afforestation programs accelerate the greenness in the 'Three North' region of China from 1982 to 2013: *Ecological Indicators*, v. 61, p. 404-412.

----- Editorial Board -----

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