

DesertNet International



DesertNet International Newsletter n. 2/2018

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 **15.09.2018**. Please send your contributions (1000 characters max, including spaces) to nrd@uniss.it

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1. Information relevant to DesertNet members

World Day to Combat Desertification (WDCD) - "Land has true value. Invest in it"

This year the [World Day to Combat Desertification \(WDCD\)](#) with the slogan "Land has true value. Invest in it" will focus on consumers making smart decisions and investments in sustainable land management. The UNCCD secretariat launched a [campaign #2018WDCD](#) from 1 to 30 June to raise public awareness that everyday decisions we make – what we eat, drink, wear, live and travel - have an impact on land resources. We invite you to lend your support to the campaign by spreading the WDCD messages, social media cards, GIFs through your networks and partners. We welcome civil society organizations, national focal points, UNCCD partners and individuals to organize events marking the World Day. Send your event details to wcdcd2018@unccd.int. Let's combat desertification and celebrate the World Day together!

More about the campaign in other UN languages: <https://trello.com/b/0IJX5vil/world-day-to-combat-desertification-2018wcdcd>

Participants who support the campaign will receive an E-Certificate after sending the materials that confirm participation. For further inquiries, please email Jenny Choo: jchoo@unccd.int

Information provided by the UNCCD Secretariat

Global Soil Partnership 6th General Assembly

Celebrated in the FAO headquarters, Rome between 11 and 13 June 2018, the decision making body of the Global Soil Partnership has established financial assessments, nominated the next members of the Intergovernmental Technical Panel on Soils, and made recommendations related to sustainable soil management for boosting land productivity and food security in a transition towards a sustainable agriculture.

Following reports from the five pillars (<http://www.fao.org/global-soil-partnership/pillars-action/en/>) the main conclusions established the need for increasing the area under sustainable soil management practices. There was also agreement on the urgent need to know the economic benefits of such management practices for land users as well as the economic evaluation of inaction. This information will help to improve its implementation. During the meeting important documents were highlighted as delivered during the past year on “Voluntary Guidelines for Sustainable Soil Management” and addressed the “International Code of Conduct for the Use and Management of Fertilizers”.



An outstanding effort has been made to coordinate national soil information agencies to feed a global soil information system (GloSIS), of which first product was the global soil organic carbon map in December 2017. There is a will to produce fresh and open data for different users from the academia or the civil society.

Soil research gaps and priorities were addressed. The knowledge of potential for soil organic carbon sequestration has been considered as an important gap to be studied for different regional scenarios.

The use of indicators to monitor changes implies the harmonization of soil sampling and analysis globally in order to make results comparable. During the General Assembly updated information on national and global reference laboratories was established through the development of the GLOSOLAN programme. Finally, the Afrisoils programme has been launched to increase land productivity in African countries, at the same time reducing soil degradation.

More information at:

<http://www.fao.org/global-soil-partnership/about/plenary-assembly/sixth-session-2018/en/>

Information provided by: María José Marqués. Universidad Autónoma de Madrid, Spain

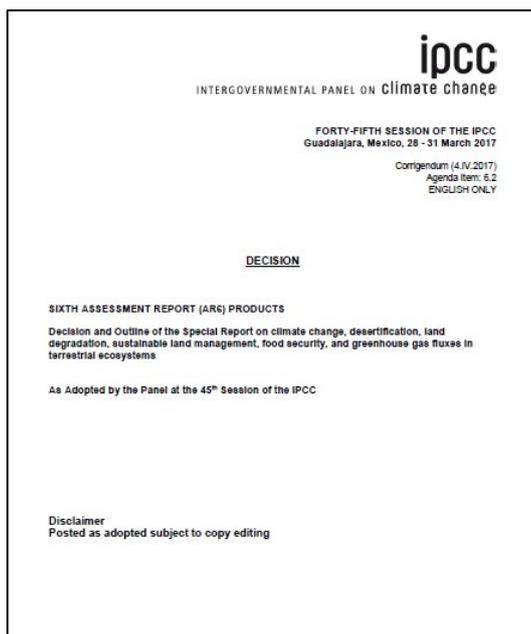
Mr. Noel Oettle (EMG) is the new alternate member of the CSO to the UNCCD SPI

In May 2018, the United Nation Conference to Combat Desertification, communicated that Mr. Noel Oettle, from the Environment Monitoring Group, in South Africa (<http://emg.org.za/about/staff/59-noel-oettle>), was elected alternate member of the CSO to the UNCCD SPI.

Mr. Noel is now alternate to the current member, Ms. Marioldy Sanchez from AIDER, Peru.

Information provided by the DNI Bureau

IPCC invites experts to review the *First Order Draft* for the Special Report on *Climate Change and Land* (SRCCL)



The review process started on 11 June 2018 and will end on 5 August 2018. The Expert Review is a central part in the development of an IPCC report and is strictly subject to IPCC's code of conduct for confidentiality: all IPCC *drafts* are confidential and should not be cited, quoted or distributed. For more information on IPCC's procedures see: <http://ipcc.ch/pdf/ipcc-principles/ipcc-principles-appendix-a-final.pdf>

Experts interested in participating in the review process of the SRCCL have to complete IPCC's registration process. Please check the following website that provides further information on the review and a link to register for this review process: http://www.ipcc.ch/news_and_events/pr_srccl_fod.shtml After registration experts will receive the login details which will be personal and non-transferable. The IPCC informs us that when draft chapters and figures are downloaded the files are personalised with a traceable bar code that is associated to the expert's login details.

Before registering you may wish to analyse the approved outline for the report which is available on the IPCC website at: https://www.ipcc.ch/meetings/session45/Decision_Outline_SR_LandUse.pdf

If you have queries on the review process, please contact the Working Group III TSU directly at tsu@ipcc-wg3.ac.uk.

Information provided by Mariam Akhtar-Schuster, DNI Advisory Board

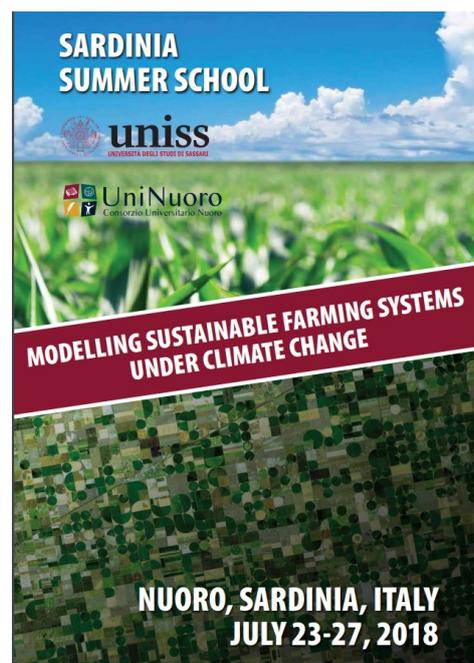
Sardinia Summer School on "Modelling sustainable farming systems under climate change"

The University of Sassari and the University Consortium of Nuoro, in partnership with DesertNet international (DNI) and the Consortium of Science and Knowledge Networks on Sustainable Land Management (ICoN SLM), are glad to announce the SARDINIA SUMMER SCHOOL- *Modelling Sustainable Farming Systems under Climate Change*, which will be held in Nuoro, Sardinia, Italy, on 23-27 July 2018.

The summer school is designed to enhance the capacities of students to design resilient and sustainable cropping systems through different modelling approaches at field and landscape scale. A central focus of the school is on the application of modelling tools such as EPIC, APEX and DSSAT to case studies on climate change risk assessment and sustainable intensification, through precision agriculture. A special focus will be given to the management of long-term soil fertility, hydrology, greenhouse gas emission mitigation and adaptive responses to climatic pressures. Exercises will be based on specific case studies, to improve the participants' ability to critically understand the complex interactions between biophysical and social processes that characterize sustainable development in a context of climate change.

The School is targeted to graduates, doctoral and post-doctoral students in environmental disciplines, agronomy, soil science, applied biology, natural resource management, landscape planning, environmental sciences from all over the world.

The number of participants is limited to 30.



All information about lecturers, activities, fees, benefits, accommodation and application form are reported in the flyer of the event available at the following link: <http://bit.ly/SSSardinia2018>

The deadline for applications has been extended until the **30th June 2018**.
For further information please contact:

Pier Paolo ROGGERO, Department of Agricultural Sciences University of Sassari, Summer School Director: pproggero@uniss.it
Gian Franco CAPRA, Department of Architecture, Design and Urban Planning (DADU) University of Sassari, Summer School Secretariat: pedolnu@uniss.it

Information provided by Pier Paolo Roggero, Desertification Research Centre - University of Sassari, Italy

The IPBES thematic assessment on land degradation and restoration and the associated Summary for Policymakers have been successfully finalized



The full technical report of the IPBES assessment on land degradation and restoration with almost 900 pages was accepted by the IPBES member countries at the sixth Plenary of IPBES, which took place from 18 to 24 March 2018 in Medellin, Colombia. The associated over 30 page summary for policymakers (SPM) was subject to a line-by-line negotiation at the Plenary before it was approved. The approved advance English version of the SPM has been posted on line and can be downloaded at: https://www.ipbes.net/sites/default/files/downloads/ipbes-6-15-add-5_spm_ldr_advance.pdf

The SPM will be translated into all UN languages.

Members of DNI were part of the three-year assessment phase of this IPBES document in their personal capacity as authors or reviewers.

By Decision 21/Cop.13 the UNCCD requested its *Science-Policy Interface* to review the IPBES assessment and analyse its key messages relevant for the UNCCD for presentation at UNCCD COP.14.

Information and photo by Mariam Akhtar-Schuster, DNI Advisory Board

Training Course Funds

The Indian Technical and Economic Cooperation (ITEC) Programme invites international candidates from developing countries to apply for training courses scheduled during October-December 2018 in India. Topics for this period include courses in the themes of power, renewable & alternative energy; agriculture and rural development; environment & climate change; and others. Officials in Government, Public and Private Sectors, Universities, Chambers of Commerce and Industry, with adequate work experience can apply.

The program covers transportation and visa costs, course fees and accommodation.

More information at: https://www.itecgoi.in/how_to_apply.php

Information provided by: María José Marqués. Universidad Autónoma de Madrid, Spain

UNCCD-CBM Photo Competition to Civil Society Organizations (Deadline 22 June)

The UNCCD-Capacity Building Marketplace is pleased to inform you about the ongoing 2018 Photo Competition. With the objective to raise awareness on land degradation, desertification, drought and other land related issues, the UNCCD-Capacity Building Marketplace (CBM) recently initiated its 2018 Photo Competition. The CBM Team kindly encourages you to participate in and spread the word about this Competition. You are invited to submit your best shots related to the theme of the contest, which is the following:

“Have you been affected by land degradation? Show us how!”

Everyone is welcome to take part in this contest that is free of charge. By signing up to the competition, you have the great opportunity to win one of the following prizes:

- First place- 150 EUR;
- Second place - 100EUR;
- Third place - 75 EUR.

Additionally, the photographers of the 10 best pictures will get a splendid UNCCD package including CBM brochures and other promotional materials (CBM T-shirt, a CBM bag plus an USB flash-drive containing all the UNCCD publications).

Further information on the Photo Competition, the rules of competition and the registration form is available at the link below:

<https://knowledge.unccd.int/cbm/photo-competition-2018>

The deadline for the submissions is **22nd of June 2018** at 00:00 Bonn time (GMT +2).

The voting period will be from 26th of June- 10th of July 2018, from the short-list of 20 photos pre-chosen by the Capacity Building Marketplace.

For further information please contact:

Telephone Number: +49 228 8152859

E-mail Address: cbm@unccd.int

Facebook: UNCCD Capacity Building Marketplace

Twitter: UNCCD Marketplace

Linkedin: Capacity Building Marketplace (CBM)

YouTube: UNCCD Capacity Building Marketplace

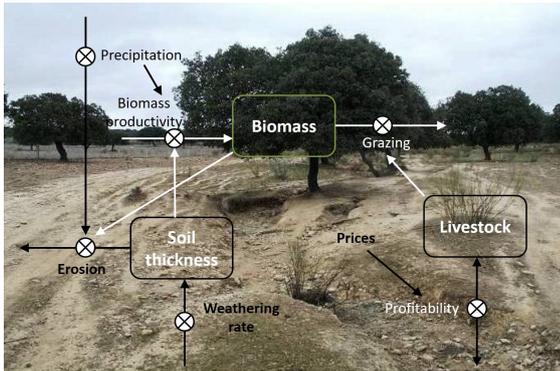
Information provided by the UNCCD Secretariat

2. Researchers' updates

A deep insight in desertification causes: Global Sensitivity Analysis.

Simulation models are powerful tools to gain insights into complex systems through the implementation of scenarios that yield temporal trends of variables. In this context, sensitivity analyses (SA) are used to test their behavior in extreme conditions and spot those parameters to which the modeler should pay special attention. Also, SA can be coupled to models in order to perform thousands of simulations and evaluate the impact of factors on a system.

Specifically, Global SA allows the assessment of differences between opportunistic and conservative strategies in rangelands. What we find is that a widespread opportunism proved optimal only from an economic viewpoint. By contrast, a widespread conservatism, which in principle is perfectly feasible, proved optimal from economic, social, and ecological perspectives. Notably, it was found that the presence of a relatively small number of opportunistic farmers would suffice to considerably reduce the economic results of widespread conservatism.



See the complete work in:

Ibáñez, J.; Martínez-Valderrama, J. 2018. The global effectiveness of a range of group decision-making strategies in coping with forage and price variabilities in commercial rangelands - A modelling assessment. *Journal of Environmental Management*. 217: 531 - 541.

Figure caption:

Some relationships considered in the system under study, a peculiar rangeland created from former oak forests, called *Dehesas*, that can be found in the central and south-western Iberian Peninsula.

Information Provided by: Jaime Martínez-Valderrama, Estación Experimental Zonas Áridas, CSIC. Spain.

3. Important upcoming events

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

2018		
20–22 Jun	Environmental Impact 2018 http://www.wessex.ac.uk/conferences/2018/environmental-impact-2018	Naples, Italy
4-5 Jul	1st Global Land Degradation Neutrality Forum https://www.unccd.int/news-events/first-global-land-degradation-neutrality-forum	Seoul, Korea
16 Jul	UNGA High-level Dialogue on Sand and Dust Storms https://www.un.org/pga/72/wp-content/uploads/sites/51/2018/04/Sand-and-Dust-storms-25-April.pdf	New York City, US
12-13 Sep	6 th International Conference on Sustainable Development 2018 http://www.ecsdev.org/	Rome, Italy
4–9 Sep	United Nations Climate Change Conference - Additional sessions of the subsidiary bodies * https://unfccc.int/index.php/process-and-meetings/conferences/bangkok-climate-change-conference-resumed-sb-48-september-2018	Bangkok, Thailand
22-27 Sep	Global Land Forum 2018 https://www.globallandforum.org/	
3–14 Dec	United Nations Climate Change Conference - 24th Conference of the Parties (COP24) http://cop24.katowice.eu/ http://cop24.gov.pl/	Katowice, Poland
2019		
25-30 Jan	UNCCD CRIC 17 https://www.unccd.int/convention/committee-review-implementation-convention-cric	Georgetown, Guyana

*** The online registration for NGOs to nominate their representatives for the UNFCCC- Additional sessions of the subsidiary bodies is open from 6 June 2018, at midnight Central European Time (CET) until Monday, 2 July at midnight CET.** The DNI Operational Secretariat (nrd@uniss.it) is the Designated Contact Point authorized to nominate the members of the DNI Delegation within the UNFCCC on-line registration system. If you wish to take part in the conference within the DNI delegation, you should first inform the DNI Chair, Mélanie Requier-Dejardins (requier@iamm.fr) and the DNI Bureau (nrd@uniss.it), and ask for your nomination by sending the details listed below to the DNI Operational Secretariat (nrd@uniss.it) by 1st July 2018:

- Salutation
- First Name
- Last Name
- Country of Nationality
- Date of Birth
- Official Identification Document Number
- Email Address

Information provided by the DNI Bureau

4. Publications and Special Issues

1. Pulina, A., b, Lai, R., Seddaiu, G., Bertora, C., Rizzu, M., Grignani, C., Roggero, P.P. (2018) Global warming potential of a Mediterranean irrigated forage system: Implications for designing the fertilization strategy, *European Journal of Agronomy*, Volume 98, pp. 25-36. <https://doi.org/10.1016/j.eja.2018.05.002>
2. Rodrigues Nogueira, T. A., Hamilton Abreu-Junior, C., Ferracciú Alleoni, L. R., He, Z., Soares, M. R., Dos Santos Vieira, C., Frediani Lessaf, L. G., Capra, G.F. (2018) Background concentrations and quality reference values for some potentially toxic elements in soils of São Paulo State, Brazil, *Journal of Environmental Management*, Volume 221, pp. 10-19. <https://doi.org/10.1016/j.jenvman.2018.05.048>
3. Aguilera, E., G. I. Guzman, J. Alvaro-Fuentes, J. Infante-Amate, R. Garcia-Ruiz, G. Carranza-Gallego, D. Soto & M. Gonzalez de Molina (2018) A historical perspective on soil organic carbon in Mediterranean cropland (Spain, 1900-2008). *Science of the Total Environment*, 621, 634-648.
4. Cheng, L., Q. Lu, B. Wu, C. Yin, Y. Bao & L. Gong (2018) Estimation of the Costs of Desertification in China: A Critical Review. *Land Degradation & Development*, 29, 975-983.
5. Gizicki, Z. S., V. Tamez, A. P. Galanopoulou, P. Avramidis & J. Foufopoulos (2018) Long-term effects of feral goats (*Capra hircus*) on Mediterranean island communities: results from whole island manipulations. *Biological Invasions*, 20, 1537-1552.
6. Hobley, E., N. Garcia-Franco, R. Huebner & M. Wiesmeier (2018) Reviewing our options: Managing water-limited soils for conservation and restoration. *Land Degradation & Development*, 29, 1041-1053.
7. Li, B., Z. Li, X. Sun, Q. Wang, E. Xiao & W. Sun (2018a) DNA-SIP Reveals the Diversity of Chemolithoautotrophic Bacteria Inhabiting Three Different Soil Types in Typical Karst Rocky Desertification Ecosystems in Southwest China. *Microbial ecology*.
8. Mbarki, S., A. Cerda, M. Ziucak, M. Brestic, M. Rabhi, M. Mezni, N. Jedidi, C. Abdelly & J. A. Pascual (2018) Alfalfa crops amended with MSW compost can compensate the effect of salty water irrigation depending on the soil texture. *Process Safety and Environmental Protection*, 115, 8-16.
9. Poitras, T. B., M. L. Villarreal, E. K. Waller, T. W. Nauman, M. E. Miller & M. C. Duniway (2018) Identifying optimal remotely-sensed variables for ecosystem monitoring in Colorado Plateau drylands. *Journal of Arid Environments*, 153, 76-87.
10. Qi, D., X. Wieneke, J. Tao, X. Zhou & U. Desilya (2018) Soil pH Is the Primary Factor Correlating With Soil Microbiome in Karst Rocky Desertification Regions in the Wushan County, Chongqing, China. *Frontiers in Microbiology*, 9.

11. Rubio, C., M. C. Rubio & E. Abraham (2018) Poverty Assessment in Degraded Rural Drylands in the Monte Desert, Argentina. An Evaluation Using GIS and Multi-criteria Decision Analysis. *Social Indicators Research*, 137, 579-603.
12. Xu, Z., R. Hu, K. Wang, J. A. Mason, S.-Y. Wu & H. Lu (2018) Recent greening (1981-2013) in the Mu Us dune field, north-central China, and its potential causes. *Land Degradation & Development*, 29, 1509-1520.
13. Cao Y; Dallimer M; Stringer LC; Bai Z; Siu YL (2018) Land expropriation compensation among multiple stakeholders in a mining area: Explaining “skeleton house” compensation, *Land Use Policy*, **74**, pp.97-110. [doi: 10.1016/j.landusepol.2017.09.003](https://doi.org/10.1016/j.landusepol.2017.09.003)
14. Lopez Porras G; Stringer LC; Quinn CH (2018) Unravelling Stakeholder Perceptions to Enable Adaptive Water Governance in Dryland Systems, *Water Resources Management*, pp.1-17. [doi: 10.1007/s11269-018-1991-8](https://doi.org/10.1007/s11269-018-1991-8)
15. Thomas AD; Elliott DR; Dougill AJ; Stringer LC; Hoon SR; Sen R (2018) The influence of trees, shrubs, and grasses on microclimate, soil carbon, nitrogen, and CO₂ efflux: Potential implications of shrub encroachment for Kalahari rangelands, *Land Degradation and Development*, . [doi: 10.1002/ldr.2918](https://doi.org/10.1002/ldr.2918)
16. Dallimer M; Stringer LC; Orchard SE; Osano P; Njoroge G; Wen C; Gicheru P (2018 – in press and open access, available on early view) Who uses sustainable land management practices and what are the costs and benefits? Insights from Kenya, *Land Degradation and Development*, [doi: 10.1002/ldr.3001](https://doi.org/10.1002/ldr.3001)

Information provided by the DNI Bureau

Climate change and adaptive land management in southern Africa - assessments, changes, challenges, and solutions.

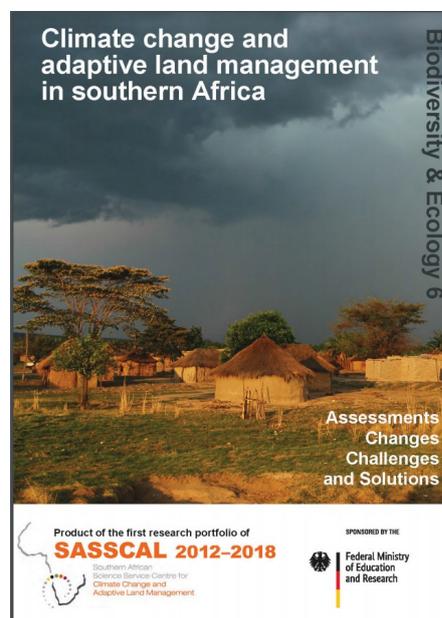
A book edited by Rasmus Revermann, Kristin M. Krewenka, Ute Schmiedel, Jane M. Olwoch, Jörg Helmschrot & Norbert Jürgens; 497 pages. Klaus Hess Publishers, Göttingen & Windhoek, published in April 2018

Abstract:

Global change puts increasing pressure on social-ecological systems. This book features research outcomes from Angola, Botswana, Namibia, South Africa, and Zambia and aims to draw the attention of a broad readership. The presented studies provide assessments of the values of resources, analyse long term environmental changes, identify risks and challenges involved and offer solutions and pathways towards climate change adaptation and sustainable land management in southern Africa.

The book is a product of the first research portfolio of the regional initiative SASSCAL (Southern African Science service Centre for Climate Change and Adaptive Land Management, www.sasscal.org), sponsored by the German Federal Ministry of Education and Research.

To access the electronic versions of the articles and the order form for the printed version of the book, go to http://www.biodiversity-plants.de/biodivers_ecol/vol6.php



Information provided by Ute Schmiedel, University of Hamburg

Ecosystem Services and Poverty Alleviation (OPEN ACCESS)

Trade-offs and Governance

Edited by Kate Schreckenber, Georgina Mace and Mahesh Poudyal

Understanding how to sustain the services that ecosystems provide in support of human wellbeing is an active and growing research area. This book provides a state-of-the-art review of current thinking on the links between ecosystem services and poverty alleviation. In part it showcases the key findings of the Ecosystem Services for Poverty Alleviation (ESPA) programme, which has funded over 120 research projects in more than 50 countries since 2010. ESPA's goal is to ensure that ecosystems are being sustainably managed in a way that contributes to poverty alleviation as well as to inclusive and sustainable growth. As governments across the world map how they will achieve the 17 ambitious Sustainable Development Goals, most of which have poverty alleviation, wellbeing and sustainable environmental management at their heart, ESPA's findings have never been more timely and relevant.

For details see: <https://www.routledge.com/Ecosystem-Services-and-Poverty-Alleviation-OPEN-ACCESS-Trade-offs-and/Schreckenber-Mace-Poudyal/p/book/9781138580848>

Information provided by Mariam Akhtar-Schuster, DNI Advisory Board

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

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