



**WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION**

# **HOT NEWS**

Issue 08, 2015



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## WASWAC HOT NEWS No. 08, August, 2015

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Cover photo: Terraces to control soil erosion in Zhengshan Village, Yongjia County, Zhejiang Province, China. The photographer is Mr Jin Jianzhou.

Editors: Ms. Mao Juan, Contributors include Prof. Li Rui, Dr. Zhang Haina, Dr Nira Gurung, Amir Kassam, and Dr. Du Pengfei.

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For ISWCR paper submission:

<http://www.journals.elsevier.com/international-soil-and-water-conservation-research/>

WASWAC Website: [www.waswac.org](http://www.waswac.org)

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**Welcome to beautiful Nanchang to participate *the International Youth Forum of Soil and Water Conservation* during October 16-18**

**LAST CALL FOR PARTICIPATION**

The International Youth Forum of Soil and Water Conservation will be held in a beautiful city – Nanchang, in this coming October 16 -18.



During this forum, WASWAC Outstanding Youth Paper Award will be issued, follow our announced notices, dozens of young researchers have been submitted their paper to apply for this award. In addition, we have also invited some famous scientists in soil and water conservation related fields to give key speeches in this forum. These scientists include *Prof. Des Walling (UK), Prof. Chi-hua Huang (USA), Prof. Jorge A Delgado (USA), Prof. Rattan Lal (USA), Prof. Mohammed H. Golabi (USA), Prof. Winfried E.H. Blum (Austria), Prof. Jose Rubio (Spain), Prof. Lidefonso Pla Sentis (Spain), Prof. Miodrag Zlatic (Serbia), Prof. James Owino (Kenya), Prof. Chinapatana Sukvibool (Thailand), Dr. Samran Sombatpanit*

*(Thailand), Prof. Moshood N.Tijani (Nigeria), and Prof. Kwong Fai Andrew Lo (Taiwen, China).*

This will be a good opportunity to communicate with them for young researchers. Hence, if you are interested in this forum, if you are look forward to communicate with famous scientists, if you are eager to know more young researchers, please feel free to contact with us, we will be very happy to make you registered to this forum. Looking forward to seeing you in beautiful Nanchang in this coming October!

If you want to attend this forum, please fill the following application form and return it to us through [IYFSWCinf@nit.edu.cn](mailto:IYFSWCinf@nit.edu.cn) or [liqin.qu@iwhr.com](mailto:liqin.qu@iwhr.com) or join our QQ group [304452930](https://www.qq.com/group/304452930), any queries please contact our staff at the time you are convenient.

Tel.: Dr. Zhang, Haina +86 15180468813

Dr Qu, Liqin +86-10-68786416

### IYFSWC Application Form

Please send back to [IYFSWCinf@nit.edu.cn](mailto:IYFSWCinf@nit.edu.cn)

<b>Given Name</b>		<b>Surname</b>	
<b>Gender</b>	<b>Female</b> <input type="checkbox"/> <b>male</b> <input type="checkbox"/>	<b>Birth of Date</b>	
<b>Country</b>		<b>Email</b>	
<b>Address</b>			
<b>Cell Phone Number</b>			
<b>Are you enrolled student?</b>	<b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>		
<b>Apply for an oral Presentation</b>	<b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>		
<b>Title of Presentation</b> <b>(If Yes for the above question)</b>			

# MEETINGS



## 24th National No-Tillage Conference

Learn How to Improve Your Own Soil with Earthworms: Severe rain during the growing season this year (especially in the Corn Belt) damaged crops that did not have good internal drainage. Soil was also damaged in areas that were “tracked up” during field operations.

How bad is it on your farm? Let Frank help you figure it out! Frank Gibbs, Certified Professional Soil Scientist with Wetland and Soil Consulting Services, will lead you through an analysis of your own soil to improve the drainage and health of your crops with earthworms.

There is an additional \$50 fee to attend the workshop, which is limited to 60 farmers..

<p><b>Registration REMINDER!</b></p> <p><b>It's not too late! SAVE \$85.00</b></p> <p><b>Register today for just \$274!</b> Save even more on additional farm/family members.</p> <p><i>Rate increases after 8-31-15.</i></p> <p><b>Register Now!</b></p>	<p><b>Sneak Peak! Conference Speakers</b></p> <div></div> <p><b>Fred Whitford</b> Learn about ways to improve herbicide performance, including the use of adjuvants and surfactants and other additives from this Purdue University botany and plant pathology professor.</p> <div></div> <p><b>Doral Kemper</b> This soil physicist is lending us his knowledge of earthworms from years of ag research at the USDA.</p> <div></div> <p><b>Dr. Daniel Olk</b> How effective are humates and other soil building products? Find out from a research soil scientist.</p>
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Register at:

[https://ntf.no-tillfarmer.com/pages/offer/2016-National-No-Tillage-Conference-\(ET0815ANTF\).php?email={EMAIL\\_ADDRESS|email}&key={USERKEY|key}](https://ntf.no-tillfarmer.com/pages/offer/2016-National-No-Tillage-Conference-(ET0815ANTF).php?email={EMAIL_ADDRESS|email}&key={USERKEY|key}) Details at:



## EGU General Assembly 2016

The General Assembly 2016 of the European Geosciences Union (EGU) is held at the Austria Center Vienna (ACV) in Vienna, Austria, from 17–22 April 2016. The assembly is open to the scientists of all nations.

Suggestion on scientific programme of the conference: Please suggest (i) new sessions with conveners and description and (ii) modifications to the skeleton programme sessions. Explore the EGU2016 Programme Groups (PGs) above, when making suggestions. Study those sessions that already exist and put your proposal into the PG that is most closely aligned with the proposed session's subject area. If the subject area of your proposal is strongly aligned with two or more PGs, co-organization is possible and encouraged between PGs. Only put your session proposal into **one** PG, and you will be able to indicate PGs that you believe should be approached for co-organization. If you have questions about the appropriateness of a specific session topic, please contact the Officers for the specific EGU2016 Programme Group.

Deadlines:

Date	Public	Conveners	Programme Committee/ Copernicus Meetings
16 Jun–10 Jul 2015			Call-for-skeleton programme to Programme Committee
13 Jul–18 Sep 2015	Public call-for-session proposals		
21 Sep–11 Oct 2015			Session programme finalization and request for cooperation between programme groups
12–21 Oct 2015			Iteration in acceptance of cooperation requests
21 Oct 2015			Email of PC chair to PG chairs
22 Oct 2015			Last issues to be solved
23–25 Oct 2015			Fall PC/Council meeting
27 Oct 2015	Start of call-for-abstracts and support application		
01 Dec 2015	Deadline for support applications		

02–06 Dec 2015		Support application assignment and rating	
07–17 Dec 2015			Support application ranking
18–22 Dec 2015			Support selection by committee
23 Dec 2015	Outcome of support selection	Outcome of support selection	
13 Jan 2016, 13:00 CET	<b>Deadline for receipt of abstracts</b>		
15–22 Jan 2016		Session Organization I <b>Abstract implementation</b> Acceptance, transfer, upload and rejection	
23–26 Jan 2016		Session Organization II <b>Session tagging</b> Requests on room size, day, back-to-back, no overlap	
26 Jan 2016	Cancellation of support applicants who did not answer		
26–31 Jan 2016			<b>PCI – Abstract Implementation &amp; Session Tagging</b> Session organization not finalized by conveners. Draft lay-out of programme
01 Feb 2016	Letter of acceptance		
01–02 Feb 2016			Time/room assignment to PGs
03–12 Feb 2016			<b>PCII – Scheduling</b> Schedule of oral, poster and PICO sessions
11–13 Feb 2016			<b>PC/Council meeting</b> Finalizing programme
15–22 Feb 2016		<b>Session Organization III</b> Presentation selection Oral/poster selection. Finalizing session draft programmes	
23–29 Feb 2016			<b>PCIII – Presentation Selection</b> Finalizing session programmes & special lectures' programme
02 Mar 2016	Letter of schedule		Uploading meeting programme on web
02–16 Mar 2016	OSP participation & eligibility		
03–09 Mar 2016			Generation of mobile apps and Information & Schedules book
09 Mar–20 Jun 2016	OSP coordinator tool		
17 Mar 2016	Deadline for letters of invitation		
17 Mar 2016	Deadline for early registration		
18 Mar–22 Apr 2016	OSP nominator tool		
11–13 Apr 2016			Generation of daily programme
06 Apr–09 May 2016	OSP judging forms		
17–22 Apr 2016	<b>European Geosciences Union – General Assembly 2016</b>		

Details please go to: <http://www.egu2016.eu/>

## 1st World Conference on Soil and Water Conservation under Global Change



# 1st WORLD CONFERENCE ON SOIL AND WATER CONSERVATION UNDER GLOBAL CHANGE

***"Sustainable Life on Earth through Soil and Water Conservation"***

A joint Conference of the "International Soil Conservation Organization" (19th ISCO Conference), the "World Association for Soil and Water Conservation" (WASWAC), the "European Society for Soil Conservation" (8th ESSC Congress), the "International Union of Soil Science (IUSS-Commission 3.2), the "International Erosion Control Association (IECA) and the World Association for Sedimentation and Erosion Research (WASER) in parallel with the VIII Simposio Nacional sobre Control de la Degradación y Restauración de Suelos (SECS)

**12-16 June 2017, Lleida (Spain)**

**Sponsors:** *Universitat de Lleida (UdL), Spanish Society of Soil Science (SECS), ICEA, IECA, WASER, ISCO, WASWAC, ESSC and IUSS*

### **Objectives:**

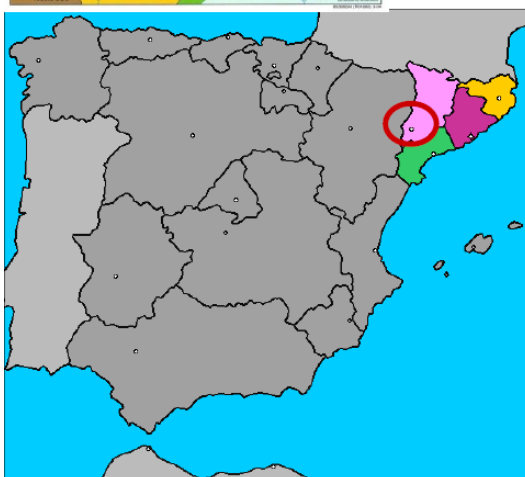
To analyze the present and previewed future situation at World-wide level of the conservation of the soil and water resources, as influenced by Global Changes, including population growth and development, changes in land use and management, and human induced climate changes. This situation would be analyzed and discussed taking into consideration the close and critical relation of the use and management of the limited soil and water resources with present and future climate changes, natural disasters, and with food and water supply for an increasing World population.

*Main aspects to be considered will be the required research, regulations and activities to be taken to prevent future degradation of soil and water resources, and to avoid or counteract the negative effects of such degradation on climate change, sustainable food production and water supply, and environmental damages. This, in view of the present decrease of support and resources for well oriented and interdisciplinary studies and research, and the lack of appropriate regulations, while the worldwide and local problems of soil and water degradation and of their negative economical and social consequences on the population are increasing.*

A further objective of this Conference will be to promote an increased collaboration, and even a full integration of their activities, to reach their goals more efficiently, of the main scientific international organizations promoting soil and water conservation research and activities at Worldwide level.



LOCATION OF THE  
CONFERENCE:  
LLEIDA (CATALONIA,  
SPAIN)



More details will be coming while available.

**ICT International Standing Wave Technology**  
Soil Moisture Measurement

MP306 MP406 MPkit

<http://www.ictinternational.com/soils.html#soilmoisture>

**Applications:**

- Volumetric soil moisture content
- Forest and catchment hydrology
- Soil columns and geo-engineering
- Landfill cover and mine closures
- Irrigation scheduling

**Solutions for soil, plant & environmental monitoring**

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# JOBS

## 1. Lecturer in Environmental Science



Open University  
Faculty of Science, Department of Environment,  
Earth & Ecosystems

### Lecturer in Environmental Science

£38,511 - £45,954 Ref: 11523

Based in Milton Keynes

Temporary contract for 24 months

You will be a broad environmental scientist who is passionate about teaching, and has a good working knowledge of soil science, biodiversity and conservation, and sustainability issues. You should also have a good understanding of basic statistical and data handling systems and experience of supporting students develop these skills from an environmental perspective.

You will work as part of several interdisciplinary teaching teams on our current Environmental Science modules, and will have an opportunity to contribute to the development of a new innovative, online Environmental Science module that will take a transdisciplinary approach.

As part of this role, you will also have an opportunity to conduct research. We would particularly welcome applications from individuals interested in research in online learning, citizen science and/or environmental teaching, or whose research fit with existing areas in the Department, which includes ecohydrology, biogeochemistry, landscape conservation and microbial ecology.

As for all roles in the Faculty, you must be committed to the principles of equality and diversity in the teaching of science.

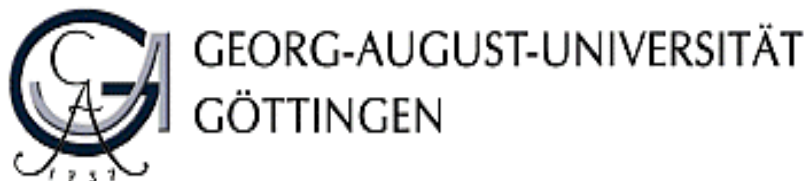
Closing date: 18 September 2015 Interview date: TBC

For detailed information on how to apply go to

<http://www3.open.ac.uk/employment/job-details.asp?id=8718> call the Recruitment Co-ordinator on +44 (0)1908 858110 or e-mail [science-recruitment@open.ac.uk](mailto:science-recruitment@open.ac.uk) quoting the reference number.

Copy from: <http://www.earthworks-jobs.com/environs/openuniv15082.html>

## 2. Research Assistant in Soil Science / Biogeochemistry



On a fixed-term public-service contract at the new Department of Physical Geography (formerly Department of Landscape Ecology). The position should be filled at the earliest date possible. The contract will be limited to 3 years with the option of extension by additional 3 years after positive evaluation.

### Your profile

- ✚ You hold a PhD in Soil Science or Geochemistry and are willing to acquaint yourself with the respective other research field,
- ✚ you are willing to set up a research group on silicon (Si) phases in rock-soil-plant systems,
- ✚ you are highly motivated to collaborate with other departments in the Faculty of Geosciences and Geography, especially with the Isotope Geology Section,
- ✚ you are proficient in English, and you either speak German or are willing to learn German,
- ✚ you have teaching experience and publications in Soil Science and/or Geochemistry.

### Your tasks

- ✧ Understanding of process chains and cycles of Si that is released from weathering silicates (prior to its arrival in groundwater and surface waters) is highly relevant because (1) Si has been proven beneficial for many crops, (2) Si is an essential element for diatoms that in turn play an important role in the global C cycle. You are thus interested in elucidating the pathways through which Si released from weathering silicates finally reaches the groundwater and surface waters, thus in assessing the Si dynamics taking place in various rock-soil-plant systems.
- ✧ You will develop project proposals and set up a research group working on the amounts and dynamics of various silicon (Si) phases in soils and associated ecosystems.
- ✧ Research projects of your group will focus on: (1) developing and improving chemical extraction methods for specific Si phases from soils as an essential prerequisite of assessing Si

dynamics in rock-soil-plant systems, (2) use of stable isotopes for tracing various pathways and pedogenic transformations of Si released from weathering minerals and for detecting and quantifying the extent of Si cycling in soil-plant systems, (3) kinetics of formation/dissolution of Si phases and implications for processes involved in Si dynamics in soils, (4) applying the newly developed methods to rock-soil-plant systems in various climates and environments in order to improve the knowledge on the amounts and dynamics of Si phases in soils and associated ecosystems.

- ✧ You will teach classes (4 lessons per week) as defined in the Higher Education Act of Lower Saxony (NHG) and advice BSc and MSc theses.

### We offer

(1) The Department of Physical Geography is equipped with all required standard laboratory devices. It is part of the Faculty of Geosciences and Geography, offering various opportunities for scientific collaboration, including use of a variety of further analytical equipment. All instruments needed for high-level research on Si dynamics in soils are available.

(2) This post is designed to serve in fostering young researchers and scientists and give the successful applicant the opportunity to pursue a post-doctoral degree. The position is also suitable for half-time work.

(3) The University of Göttingen is an equal opportunities employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply as they are underrepresented in this field. Disabled persons with equivalent aptitude will be favoured.

Please send your application with the usual documents in electronic form (all in one pdf) by 30.09.2015 to Prof. Dr. Daniela Sauer, Institute of Geography, Georg-August-University Göttingen, Goldschmidtstr. 5, D-37077 Göttingen, Germany, e-mail: [Daniela.Sauer@geo.uni-goettingen.de](mailto:Daniela.Sauer@geo.uni-goettingen.de)

If you have any questions, please contact Prof. Dr. Daniela Sauer (phone: +49 (0)551 39-8011, e-mail: [Daniela.Sauer@geo.uni-goettingen.de](mailto:Daniela.Sauer@geo.uni-goettingen.de) ).

Details at: <http://www.earthworks-jobs.com/geoscience/gott15081.html>

## Experts stress need for collaboration to protect the natural heritage of earthquake-affected areas of Nepal

Over 50 experts and conservation practitioners from the region stressed the need for greater collaboration to overcome the socio-ecological impacts from the recent Nepal Earthquake and to protect Nepal's rich biological and cultural heritage at an event held on the sidelines of IUCN's 6th Asia Regional Conservation Forum held 10–12 August 2015 in Bangkok.



The side event on 'Nepal Earthquake: Supporting a nature-based response and recovery to strengthen long-term resilience', was organized by the NNC-IUCN and the International Centre for Integrated Mountain Development (ICIMOD).

The event was opened by Yogendra Chitrakar, Chair of the NNC-IUCN, who underscored the need for a concerted effort to rebuild and protect Nepal's natural heritage. "The recent earthquake in Nepal could lead to setbacks in its progressive conservation efforts, but it has also created new avenues for collaboration among national, regional, and global players to protect Nepal's rich natural heritage."

In his keynote address, Basanta Shrestha, Director of Strategic Cooperation at ICIMOD, took account of

the magnitude of damage brought by the recent earthquake in Nepal and its more than 300 aftershocks. He highlighted the collective efforts of the Government of Nepal and other organizations that have supported the disaster relief and recovery efforts, including ICIMOD. “Recent advances in information technology have provided us with tools that supported an effective response, and can also be used to support a sustainable recovery”, he said.

With a brief introduction of the ecosystem-based conservation approach, Nakul Chettri, Coordinator of the Kangchenjunga Landscape Conservation and Development Initiative at ICIMOD, highlighted the response of NNC-IUCN members through their immediate actions with relief materials including food, temporary shelter and medications to the natural disaster.

"The NNC-IUCN's initial response to the earthquake was an important first step, but now more strategic planning and sustained collaboration among the members of the IUCN are needed", said Dr Chettri.

In closing, Arzu Deuba, IUCN Regional Councilor for South and East Asia, highlighted the need for both short-term and long-term strategies to restore the natural heritage that was lost during the Nepal earthquake.

The event concluded with a token of appreciation presented to the Zhang Xinsheng, IUCN President, for the organization's contribution to earthquake relief and recovery efforts in Nepal.



**WORLD'S LARGEST SOIL AND WATER EVENT**  
Feb. 16-19, 2016 ★ San Antonio, Texas  
[www.ieca.org/conference](http://www.ieca.org/conference)

**SAVE THE DATE**

Over 4 days, Environmental Connection provides peer-reviewed education, products and technology which address four educational tracks:

1. Erosion and Sediment Control
2. Stormwater Management
3. Surface Water Restoration
4. MS4 Management

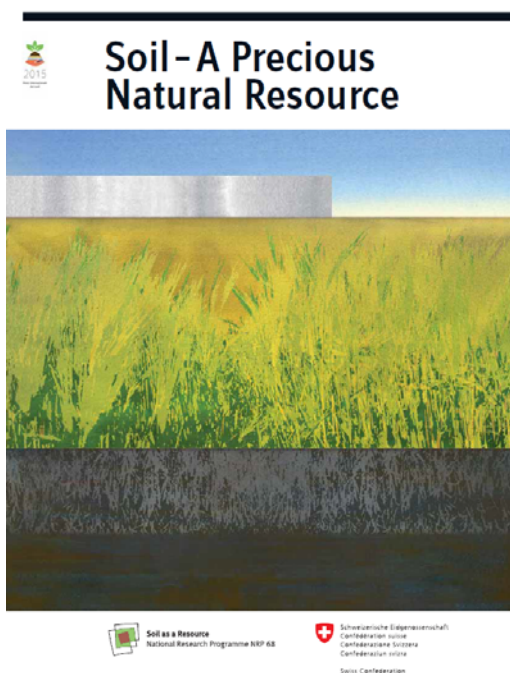
**PRESENTATION TOPICS**

- Accounting for Pollutant Sources in Watersheds/ Where Are They Coming From?
- Green Infrastructure Practices
- Rain Water Harvesting for Flood Control and Water Table Replenishment
- EPA Waters of The U.S. Rule Making
- Stormwater Compliance and Meeting Project Budgets
- Innovative Training Approaches/State and Local Certification Programs/Are They Effective?
- The Challenges & Strategies for Transportation Agency MS4s
- MS4 Compliance Strategies for Municipal Good Housekeeping
- Meeting MS4 Permit Requirements with Limited Resources
- Use of Drones for Inspections/Surveys & Associate Legal Issues
- Successful Implementations of System for Electronically Tracking Environmental Commitment

## Three Books Recommendation

Please feel free to download attached article describing the importance of soil. The Brochure is on “Soil – A precious Natural Resource” and was produced for the International Year of Soil 2015.

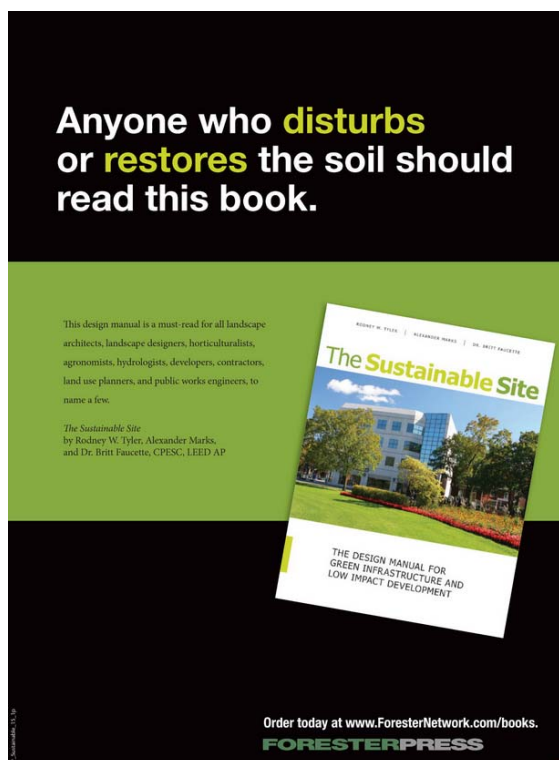
<http://www.bafu.admin.ch/publikationen/publikation/01816/index.html?lang=en>



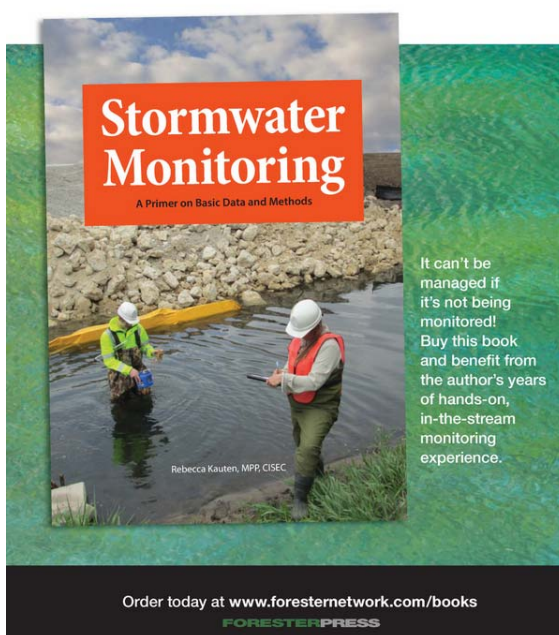
## Contents

<b>The fascination of soil</b>	<b>2</b>
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Soil protection is climate protection	16
The soil provides clean drinking water	18
The soil protects against flooding	20
The archival record in the soil	22
<b>Conserving the basis of life</b>	<b>24</b>

Other two books are as follows:



Everyone that monitors stormwater—or supervises those who do—should get this book!



## FAO soil and land legacy maps



FAO Land and Water Division (NRL) has made an effort to make Soil Legacy data and information available for their users. In that regard, FAO has just finished uploading 1228 soil and land legacy maps (mainly soil maps and also land use, geological and land cover legacy maps). FAO will continue working in this activity and will include Soil Profile Legacy data soon.

The maps are available for the following countries: Afghanistan, Algeria, Angola, Argentina, Bangladesh, Benin, Bolivia, Burundi, Botswana, Brazil, British Guiana, Burkina Faso, Cambodia, Cameroon, Central Africa Republic, Chad, Chile, China, Colombia, Comoros, Congo, Ivory Coast, Costa Rica, Cuba, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, French Guiana, Gabon, Gambia, Guatemala, Honduras, India, Indonesia, Iran, Israel, Jamaica, Japan, Korea, Lebanon, Malaysia, Mauritius, Mexico, Mozambique, Namibia, Nicaragua, Niger, Nigeria, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Rwanda, Senegal, Sierra Leone, South Africa, Sri Lanka, Sudan, Swaziland, Syria, Taiwan of China, Tanzania, Thailand, Togo, Tunisia, Uganda, Uruguay, Venezuela, Vietnam, Zambia, Zimbabwe.

**IMPORTANT :** These maps were scanned as .jpg and then uploaded with standard metadata (they are not geo-referenced as this was not our aim). Once you have selected the map of interest, you need to click to download the map (ca. 50/100 mbytes).

Download at:

<http://www.fao.org/soils-portal/soil-survey/soil-maps-and-databases/fao-soil-legacy-maps/en/>

## Five Steps for Successful No-Tilling

It's a demonstration that Steve Alspach has done dozens of times. But the results always seem convincing. The soil scientist for Oklahoma's NRCS office lined up five aluminum pans of no-tilled and conventionally tilled soils with varying levels of cover or no cover, side by side. Then an oscillating sprinkler soaked the soils with the equivalent of a 1.5-inch rain. Clear glass jugs below the pans collected both the runoff and infiltration water.



After this demonstration was over, he took the aluminum pan with clean-tilled soil, dumped it upside down onto a plastic tarp, and noted the bottom of the pan was dry, meaning little or no moisture filtered through the soil. Based on his experiment and experience, Alspach suggests five principles as follows:

- 1) Keep the Soil Covered. Keep residue on the soil surface as much as possible to protect soils from the impact of raindrops, wind, or intense heat.
- 2) Don't Disturb the Soil. Beneficial fungi are always present in healthy soils, but destroyed with tillage.
- 3) Feed Soil Biology. Many growers in the southern Plains are leaving fields fallow for 2-4 months or even longer, which means soil organisms don't have enough food to sustain themselves when crops are being raised, Alspach says.
- 4) Mimic Mother Nature. Planting a monoculture of wheat year after year just feeds soil organisms that consume wheat stubble, but not other organisms that could be beneficial to crops.
- 5) Consider Livestock. The standard method for grazing throughout the Great Plains and much of the U.S. is allowing a certain number of cattle on acreage; leaving the gates open and letting them eat what they choose.

Details at:

<http://www.no-tillfarmer.com/blogs/1-covering-no-till/post/4898-steps-for-successful-no-tilling-dnt>

## **Saving Soil, Stop the Degradation of Soils**

Saving soil – International conference calls for greater action to stop the degradation of soils so vital to food security and a stable environment

**21/08/2015 Cha Am, Thailand**

Scientists from around the world today called for greater action on the protection of soils – a complex mix of minerals, organic matter, gases, liquids, and the other organisms vital for our survival.

Researchers, government officials, UN agencies and resource partners from four continents met for four days in the Thai seaside resort of Cha Am to consider ways to improve the sustainable uses of soil in harmony with food security. Her Royal Highness Princess Maha Chakri Sirindhorn of Thailand presided over the main opening session.

The International Soil Conference was organized by Thailand's Land Development Department and co-organized and supported by a number of other institutions including the UN's Food and Agriculture Organization (FAO).

“Healthy soils constitute the foundation of agriculture, without which, life on earth is unsustainable,” said Vili Fuavao, FAO Deputy Regional Representative for Asia and the Pacific. “Yet, despite the obvious importance of soils and our dependency on them, their health is under constant and increasing threats. Soil degradation is impacting negatively on many functions that are critical for the production of food and for the provision of many ecosystem services.”

Fuavao pointed out that soil is not a renewable resource making its preservation an urgent matter. “It can take up to one thousand years to form one centimetre of soil. And this same centimetre can be destroyed in only a few minutes because of degradation,” Fuavao added.

Soils are in danger because of expanding cities, deforestation, unsustainable land use and management practices, pollution, overgrazing and climate change.

Soils support our planet's biodiversity and they host a quarter of the total. While helping to combat and adapt to climate change by playing a key role in the carbon cycle, soils also store and filter water, improving our resilience to floods and droughts.

The meeting heard that ensuring healthy and fertile soils for the production of healthier food, fodder, feed and fuel was part of the equation needed to ensure food security and adequate nutrition for today's and future generations. “Sustainable development will not be achieved if soils are not given the


consideration they deserve,” Fuavao said.

While the challenges are many, the conference heard that there are good practices at hand to better conserve soils, both established and emerging, such as sustainable land management (SLM), sustainable peatland management, integrated plant nutrient and water management, composting, organic agriculture, agroforestry, and Conservation Agriculture (CA) among many others. The conference also reviewed the emergence of new soil mapping and information systems which are necessary for assessing soil capacity and functions for various ecosystem services.

Copy from: <http://www.fao.org/asiapacific/news/detail-events/en/c/325840/>

[SOUND PRINCIPLE NO. 31]

Even grown-ups  
play with cool new toys.



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your favorite new toy too.

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M9  
S5

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profiling, bathymetric  
measurement and  
discharge calculation as  
you transect the channel

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Questions? E-mail: [inquiry@sontek.com](mailto:inquiry@sontek.com) or call +1.858.546.8327  
See the RiverSurveyor-S5 in action! [youtube.com/SonTekYSI](http://youtube.com/SonTekYSI)

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## IMMYT-China Science Week: Modern CA Systems

Jack McHugh

CIMMYT-China, the Gansu Foreign Expert Bureau and Gansu Agricultural University (GAU) in Lanzhou City sponsored an international farming systems research workshop from 30th June – 4th July 2015. Jack McHugh, CIMMYT-China Systems Agronomist, and Li Lingling, Vice Dean of the Agronomy Department at GAU, were the lead organizers of the event. CIMMYT international CA researchers and national scientists came together to build the agroecological capacity of researchers across China, discuss successes, present the science and practical agronomy that underpins CA, demonstrate and discuss farming systems research, and conduct field displays of CA benefits. Bruno Gérard, Director of CIMMYT's Global Conservation Agriculture Program (GCAP), led the workshop's opening ceremony. Experts from Australia, Bangladesh and The Netherlands joined GCAP's global team to present a diverse mix of experiences designed to inform participants, expand their research boundaries and encourage them to commit to future cross-regional collaboration on themes of sustainable intensification and natural resource management.



▲ Carl Timler, Wageningen University, assists Gansu University postgraduate students during the Farm DESIGN training activity.

### 14 Years of CA Research on Display

In 2002, ACIAR and Gansu Agricultural University initiated a rainfed conservation agriculture research project in Dingxi County, Loess Plateau, Gansu Province. Li Lingling and her team have religiously maintained this site, gathering data and training postgraduates, while quantifying the long-term impacts of CA in a very arid environment. CIMMYT-China, in close collaboration with GAU, is

developing the site into an innovation platform to demonstrate and promote sustainable farming approaches in the region, which was demonstrated through a farm walk during China Science Week.

The research station has housed and trained 100 students at a time, and is home to 10-15 postgraduates during peak sampling periods. Refurbished laboratories, a collection of field tools and Li Lingling's 14 years of research results were displayed during the farm walk.

That increased crop water use efficiency can be achieved in this arid zone was a key message from the wheat/pea rotation system under CA, whereas zero tillage with straw removal was one of the worst performing soil treatments. The farm walk effectively demonstrated soil-water interactions under CA, no till, straw removal and continuous grazing, highlighting the benefits of CA and its effectiveness in addressing local and regional resource management issues.

Activities culminated with a postgraduate research walk where the main presenters were two Ph.D. students from Ghana who are working on greenhouse gas emissions, among other subjects.



▲ Runoff in action during the rainfall simulation on tilled soil (T), tilled soil with straw cover (TS), non-agricultural soil (NA) and recently mowed lucern (L).

Details at:

[https://gallery.mailchimp.com/f5e2b90aee260789647f778e4/files/e\\_informa\\_1944.pdf?utm\\_source=CIMMYT&utm\\_campaign=03de2ddd62-&utm\\_medium=email&utm\\_term=0\\_8232f74550-03de2ddd62-207268693](https://gallery.mailchimp.com/f5e2b90aee260789647f778e4/files/e_informa_1944.pdf?utm_source=CIMMYT&utm_campaign=03de2ddd62-&utm_medium=email&utm_term=0_8232f74550-03de2ddd62-207268693)



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