

## WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION

## **HOT NEWS**

Issue 01, 2018



## WASWAC HOT NEWS No. 01, January, 2018

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For ISWCR paper submission:

http://www.keaipublishing.com/en/journals/international-soil-

and-water-conservation-research/

WASWAC Website: www.waswac.org



# The Second International Youth Forum on Soil and Water Conservation (2<sup>nd</sup> IYFSWC)

# 10 days left to submit your abstract for attending 2<sup>nd</sup> IYFSWC loscow, Russia, 27-31, August, 2018









#### Outstanding Youth Paper Award:

To encourage early-career scientists to contribute to soil and water conservation in the world, the WASWAC has launched the WASWAC Youth Outstanding Paper Award (DATUM) 2018. The application for the award is open from now.

#### Key dates of the Forum:

Abstract submission deadline has been extended to April 01, 2018

On line registration system here

http://www.eng.geogr.msu.ru/IYFSWC/registration/

#### News - side event

Short excursions to the Earth Science Museum, as the side event, will be arranged during the conference. The Museum is located in main campus of MSU and to MSU Botanical Garden nearby the main campus. You can sign up for them at registration desk.



the Earth Science Museum

#### Plan for the Conference scientific tour

Conference scientific tour will be held on August 29<sup>th</sup>. Klinsko-Dmitrovskaya moraine ridge and the Moscow water supply system will be arranged as the sites of scientific tour.

#### Klinsko-Dmitrovskaya moraine ridge





Forest zone of the central part of European Russia to the north from Moscow is area with long agricultural activity on the relatively steep slopes of Klinsko-Dmitrovskaya moraine ridge. Different types of soil erosion (sheet, rill, ephemeral gully etc.) are observed on the cultivated lands in this part of the Central Russia. Erosion processes are observed during spring snow-melting in the end of March – beginning of April and after heavy rain-storms during warm part of year (May – September). However, since the 1991 proportion of cultivated lands had considerably reduced in the forest zone of the Russian Plain mainly due to economical reason. It is lead to the serious reduction of the total soil losses and to increasing forested area. Results of long-term monitoring of soil erosion, quantitative assessment of the soil erosion rates and consequences of the cultivated land reduction will be discussed during field excursion.

#### The Moscow water supply system

Almost 80 years passed from the termination of construction Moskva-Volga canal. Then and now this artificial waterway is the biggest in Russia, linking Moscow to the Volga River at Ivankovo, north of Moscow. Built between 1932 and 1937, the canal replaced the canalized Moskva River, which can take only small craft, as the main water access to Moscow. Along the Moscow Canal's length of 80 miles (128 km) there are 11 locks. Thanks to the Canal, Moscow has access to five seas: the White Sea, Baltic Sea, Caspian Sea, Sea of Azov, and the Black Sea. This is why Moscow is the "port of the five seas" just as New York is a "big apple".





During this excursion, you'll be able to visit hydropower installations and river terminals which are the architectural monuments of Soviet Period.



#### **Training course**

- Open source datasets in hydrology
- Catchment-scale modeling tools in water and water quality: ECOMAG
- Quantitative assessment of soil and gully erosion rates
- Soil erosion and sediment redistribution on the global scale: problems and decisions

Tuition fee for the participants of IYFSWC/ICCE conference: 90 EUR

#### Visa application

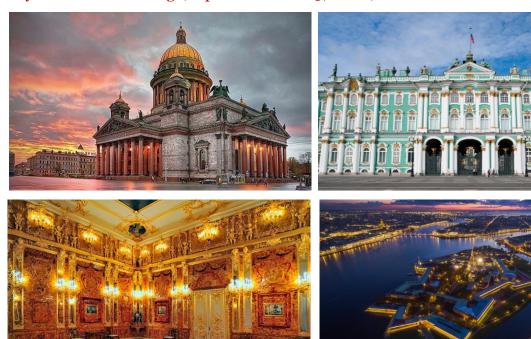
We accept visa applications for invitation letters for Shengen countries until August 1st. Application for visa invitation submitted by participants from Finland, Sweden, Norway, Iceland, Denmark, Germany, France, Netherlands, Italy, China etc. will be proceed by Moscow State University international office (within 1-2 weeks). Applications for visa invitation submitted by participants from most of non-Shengen countries (including USA, Canada, UK etc.) will be transferred to Russian Migration Service who prepare an invitation letter (within the expected period of 1 month after submission the application). Please submit your applications in time For the participants from some of non-Shengen countries including USA, Canada, UK according to the requirements of the Russian Federal Migration Service, to proceed with your invitation LOC will have to pay tax (state duty) which costs 800 Rubles (approximately 12 EUR) (IMPORTANT: obtaining invitation for citizens of China is free of charge). As far as these expenses are not included into registration fee, we kindly ask you to get ready to reimburse us this cost in Moscow. You can do it on the registration desk by cash in Rubles (you will get the receipt of payment). After submitting your application for visa invitation please guarantee this reimbursement by short e-mail to iyfswc-2018@geogr.msu.ru. Application for visa invitation will be processed after receiving registration fee payment via http://www.eng.geogr.msu.ru/IYFSWC/payment/

Visa application form available here:

http://www.eng.geogr.msu.ru/IYFSWC/visa/



Post-conference tours details available <a href="http://www.eng.geogr.msu.ru/IYFSWC/post\_tour/">http://www.eng.geogr.msu.ru/IYFSWC/post\_tour/</a> 3 days in St. Petersburg (September 01 -03, 2018)



3 days in Kazan (September 01 -03, 2018)









PLEASE DO NOT FORGET TO SUBMIT YOUR ABSTRACT AND FINISH THE REGISTRATION BEFORE APRIL 01, 2018 !!!



## **WASWAC World Conference IV will be held in 2019**

Managing Soil and Water Resources for Climate-Smart

Agriculture Toward Global Food and Livelihood Security

At New Delhi, India, November 5th-9th, 2019















The conference will focus on the protection and conservation of land and natural resources for sustainable use and development. The target groups include scientists, researchers and academicians with multidisciplinary expertise, outreach and extension professionals, engineers, land users including farmers, planners and policy makers, students, NGO's, and other stakeholders who are active or interested in the states of art and science of natural resources management. We feel proud in inviting your active participation and valued deliberations to make this international conference a successful event.

Welcome to be New Delhi to attend
The WASWAC World Conference IV
in November 2019



## Soil and Water Security challenges for the next 30 years



Imola (Italy) 6-8 June 2018

# Soil and Water Security challenges for the next 30 years!

Distinguished Colleagues and Dear Friends,

On behalf of the ESSC (European Society for Soil Conservation) and the Organizing Committee, we are pleased to invite you to attend the next ESSC International Conference on 'Soil and Water Security: challenges for the next 30 years!'

The Conference will be hosted in Imola (Italy) from 6 to 8 June 2018. The objective is to stimulate reflections on the importance of environmental resources for humankind, paying special attention to the new challenges and opportunities concerning Soil and Water Security and Conservation for the next 30 years. The Conference is open to soil scientists, educators and policy-makers. It will consist of invited lectures, scientific sessions with oral and poster presentations, and will be subdivided into four main topics.

Further information on the Conference (registration, logistics, accommodation), will be distributed soon.

We look forward to meeting you in Imola!

Carmelo Dazzi
President of ESSC

Livia Vittori Antisari
President of the Organizing Committee

Luis lettor tutos



#### The 2018 ESSC International Conference is hosted by the:







http://www.comune.imola.bo.it/

http://www.unife.it/

http://www.comune.comacchio.fe.it/







http://www.fondazionecrimola.it/

http://geolab-onlus.org/

http://www.regione.emilia-romagna.it/

#### Sponsored by:



International Union of Soil Sciences



**European Commission** 



World Association of Soil and Water Conservation







Italian Society of Soil Science



World Agricultural Heritage Foundation



Italian Society of Pedology



Global Soil Partnership



National Academy of Agriculture

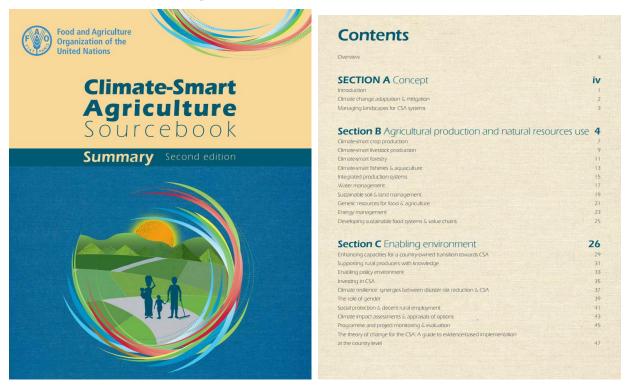
#### Conference address:

Web: https://events.unibo.it/sowase - essc - conference - imola2018

E - mail: SoWaSe.secretariat@unibo.it



## **Agriculture Sourcebook**



This summary provides an overview of the second, digital edition of the Climate-Smart Agriculture Sourcebook. The new edition includes new findings, case studies and lessons learned. It also takes into account the changes in the landscape of international climate action since the original edition was published in 2013. The 2030 Agenda for Sustainable Development – which encompasses the Paris Agreement on Climate Change, the Sustainable Development Goals and the Addis Ababa Action Agenda – provides an international framework for strong national actions and collective efforts to achieve sustainable development. Climate-smart agriculture, as an approach to achieve sustainable food and agriculture has a vital role to play.

#### Download here:

http://www.conservationagriculturedatabase.eu/database/assets/book/1.pdf





# Call for experts to serve on the ITPS Intergovernmental Technical Panel on Soils



The Global Soil Partnership (GSP) invites its Partners to nominate experts from their regions as candidates for appointment to the Intergovernmental Technical Panel on Soils (ITPS).

The main function of the ITPS is to provide scientific and technical advice and guidance to the GSP on global soil issues in the first instance and in relation to specific requests submitted by global or regional institutions.

The ITPS is composed of twenty-seven recognized soil experts. Its membership should ensure proper regional balance, optimal coverage of the range of scientific and practical areas of expertise required by the wide GSP mandate, as well as gender balance.

The ITPS has the following regional distribution of experts:

- Five from Africa
- Five from Asia
- Five from Europe
- **♣** Five from Latin America and the Caribbean
- Three from Near East
- Two from North America
- **♣** Two from South West Pacific

Members of the ITPS should act in their personal capacity and provide neutral advice to the GSP and GSP Partners on matters relating to their recognized field of expertise. Potential candidates will be assessed against the following qualifications and criteria:



- ♦ a recognized academic profile (postgraduate level);
- experience at international and national level in different soil-related activities,
   ranging from research to development;
- ♦ expertise in key topics, especially: sustainable soil management, soil organic carbon, soil pollution, soil fertility, provision of ecosystem services by soils, soil biodiversity, soil restoration, soil mapping and information systems, economics of soils.
- → record of sound publications subjected to peer reviews;
- position that would not preclude the provision of advice independently from their employment status and nationality.

Nominations should be sent by GSP Partners to GSP-Secretariat@fao.org on or before 30 March 2018. They should include the name of the candidate, contact address, the candidate's CV with a list of peer-reviewed publications and other relevant publications, and a letter of recommendation from the nominating partner. The GSP Secretariat will screen the received nominations and consolidate a final list of candidates on the basis of the above criteria, which will be submitted to FAO Members by 16 April 2018. Members will then examine them according to their procedures bearing in mind regional distribution and gender balance, and will submit to the GSP Secretariat the list of selected regional experts by 7 May 2018. Once selected, the experts will be appointed by the Sixth GSP Plenary Assembly (11-13 June 2018) to serve for a three-year term as members of the ITPS.



http://fao.msgfocus.com/q/1maaTHJOxso9pj9f05tF/wv





# 'Three Sisters in Soil' wins global soil painting competition

Soil, it turns out, can be a work of art — and a team of Cornell artists and scientists proved just that. A painting they created with soil captured first prize in the university division of the global soil painting competition sponsored by the Food and Agriculture Organization of the United Nations (FAO).



Three Sisters in Soil

Kirsten Kurtz, manager of the Cornell Soil Health Lab and a graduate student in the field of natural resources, organized the public event Dec. 5, 2017 in the lobby of Mann Library as part of World Soil Day. There, supporting artists and members of the Cornell community created two large canvases from more than 50 paints formulated from soils from around the world.



Supporting artists Patty Chan (Plant Sciences major) Fatma Rekik (Soil and Crop Sciences graduate student), Emily Detrick (Cornell Botanic Gardens) and Shujie Li (Scanlon Lab technician) work on Three Sisters with Kurtz

"It's amazing the range of colors you can get from soil," says Kurtz, who started using the technique four years ago. "Of course you have the usual browns and tans, some tinged with yellow and red. But some yield pigments from jet black to light gray and even green." In addition, soil particles in the paint from gritty sands to fine clays give the works a unique texture not possible with other media.

Her recipe includes pulverizing dried soil and mixing it with water and a gesso binder. Kurtz also led a similar event in 2015 that inspired FAO to take the idea worldwide.

On the main canvas, Kurtz and supporting artists affiliated with the School of Integrative Plant Science used soil paints to honor the Three Sisters of agriculture — corn, beans and squash — used by Native American communities. The scene they painted was based on Ringelreihen, a 1910 work by the German artist Franz von Stuck, which shows three women spinning arm-in-arm.

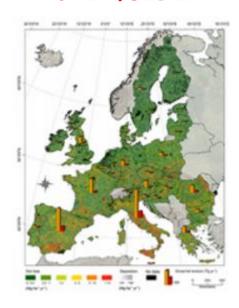
"We added three baskets filled with corn, beans and squash," says Kurtz. "These are the crops used in the traditional 'Three Sisters' polyculture used by the Haudenosaunee here in the Finger Lakes for centuries, a technique that is a model of sustainable farming."

Other members of the Cornell community tried their hand at soil painting on the second canvas, completing a mosaic-like design. Plans are to hang the works in the entrance of Bradfield Hall. "My main goal for these events is to inspire people to think about soil," says Kurtz. "It is as an essential natural resource — as important as clean water and air. We depend on healthy soil to provide us with food and fiber, and we can use soil to help fight climate change. "We've got lots of great reasons to celebrate soil," she adds.

http://blogs.cornell.edu/hort/2018/01/12/three-sisters-in-soil-wins-global-soil-painting-competition/



# Net erosion and sediment transport using WaTEM/SEDEM



The JRC in collaboration with the University of Basel and the Universite Catholique de Louvain have quantified the potential spatial displacement and transport of soil sediments due to water erosion at European scale. Long-term averages of annual soil loss and deposition rates were computed by means of the extensively tested spatially distributed WaTEM/SEDEM model. According to a recent research study in Europe, the estimated sediment yield totals about  $164 \pm 13$  Tg yr<sup>-1</sup>. The Sedi-ment Delivery Ratio (SDR) i.e., the ratio between sediment yield (SY) and gross erosion, indicates that the sediment routed down the hillslopes to the riverine system accounts for 15.3% of the total eroded soil. Further improvement of the calibration scheme in the model transport parameter is foreseen to better reconcile the good agreement between predicted and measured sediment yield. The net erosion and sediment transport data are available (100m resolution) in ESDAC

#### Metadata:

#### Title: Sediment transport using WaTEM/SEDEM

Description: JRC in collaboration with University of Basel and Universite Cathilique de Louvain quantify the potential spatial displacement and transport of soil sediments due to water erosion at European scale. We computed long-term averages of annual soil loss and deposition rates by means of the extensively tested spatially distributed WaTEM/SEDEM



model. Our findings indicate that soil loss from Europe in the riverine systems is about 15% of the estimated gross on-site erosion.

Spatial Coverage: European Union 28 Member States

Resolution: 100m (Available also at 25m; request a specific area to the authors)

Time Reference: 2010

Format: Raster (Grid)

Projection: ETRS89 Lambert Azimuthal Equal Area

Input data: RUSLE2015 soil erosion estimates, Digital Elevation Model (DEM) at 25m.

More Information: Sediment transport using WaTEM/SEDEM

Release Date: 15/2/2018

#### Notification:

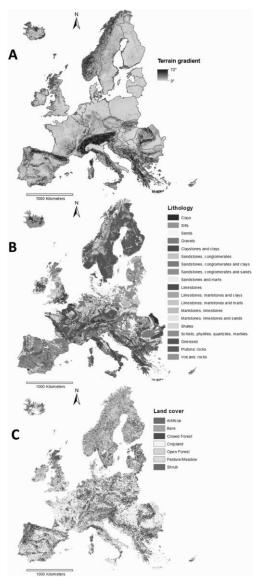
- ♦ The data provided has been prepared for use by internal research activities in European Soil Data Centre (Sustainable Resources Directorate, JRC Ispra) in the context of developing the new Soil Loss Map by water erosion of Europe.
- ♦ The data were developed for research purposes of the JRC (European Commission). The JRC does not accept any liability whatsoever for any error, missing data or omission in the data, or for any loss or damage arising from its use. The JRC agrees to provide the data free of charge but is not bound to justify the content and values contained in the databases.
- ♦ The permission to use the data specified above is granted on condition that, under NO CIRCUMSTANCES are these data passed to third parties. They can be used for any purpose, including commercial gain.
- ♦ The user agrees to:
- a) Make proper reference to the source of the data when disseminating the results to which this agreement relates;
- b) Participate in the verification of the data (e.g. by noting and reporting any errors or omissions discovered to the JRC).

https://esdac.jrc.ec.europa.eu/content/estimate-net-erosion-and-sediment-transportusing-watemsedem-european-union



# European Landslide Susceptibility Map version 2 (ELSUS v2)

ELSUS v2 shows levels of spatial probability of generic landslide occurrence at continental scale. It covers all European Union and several neighbouring countries. The map has been produced by regionalizing the study area based on elevation and climatic conditions, followed by spatial multi-criteria evaluation modelling using pan-European slope gradient, shallow sub-surface lithology, and land cover spatial datasets as the main landslide conditioning factors. In addition, the location of over 149,000 landslides across Europe, provided by various national organizations or collected by the authors, has been used for model calibration and map validation.





Compared with the previous version ELSUS1000 v1, ELSUS v2 provides larger geographical coverage, higher spatial resolution and higher prediction model performance.

The map has been produced jointly by Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) at Hannover, Germany, Istituto di Ricerca per la Protezione Idrogeologica (CNR-IRPI) at Perugia, Italy, Institut de Physique du Globe de Strasbourg (CNRS-EOST) at Strasbourg, France, and the Joint Research Centre (JRC) at Ispra, Italy, as part of the collaborative work of the European Landslide Expert Group and the European Centre on Geomorphological Hazards (CERG) in support of the EU Thematic Strategy for Soil Protection.

The landslide susceptibility map is available to download together with the confidence level map of the classified landslide susceptibility. ELSUS v2 is to be viewed at scales up to 1:200,000 and should not be used to deduce local information on landslide susceptibility.

#### Metadata for the two datasets:

#### Title: European Landslide Susceptibility Map version 2 (ELSUS v2)

Description: The map shows landslide susceptibility levels at continental scale, derived from heuristic-statistical modelling of main landslide conditioning factors using also landslide location data

Spatial coverage: All European Union member states except Malta, in addition to Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Iceland, Kosovo, Montenegro, Norway, Serbia, and Switzerland

Cell size: 200 m x 200 m Format: Esri ASCII Grid

Landslide susceptibility coding: o = no data; 1 = very low; 2 = low; 3 = moderate; 4 = high; 5 = very high

Ancillary datasets: Confidence Level Map of ELSUS v2

Release date: 12 February 2018

#### Title: Confidence Level Map of the European Landslide Susceptibility Map ELSUS v2

Description: The map shows confidence levels of the classified landslide susceptibility on EUROSTAT NUTS 3 regions. The levels have been calculated either statistically or by expert evaluation



Spatial coverage: All or most of Albania, Austria, Bulgaria, Czech Republic, Cyprus, France, Greece, Hungary, Ireland, Italy, Norway, Portugal, Romania, Slovakia, Slovenia, Spain,

Sweden, Switzerland, and UK, and part of Belgium, Denmark, and Germany

Format: Esri Shapefile

Map datum, projection: ETRS89, Lambert Azimuthal Equal Area

Confidence (reliability) values: good, moderate, poor, no information

Files: confidence.shp and ancillary files

Ancillary datasets: European Landslide Susceptibility Map version 2 (ELSUS v2)

Release date: 12 February 2018

#### Notification:

❖ The data provided have been produced for research purposes jointly by Bundesanstalt für Geowissenschaften und Rohstoffe (BGR, Hannover), Istituto di Ricerca per la Protezione Idrogeologica (CNR-IRPI, Perugia), Institut de Physique du Globe de Strasbourg (CNRS-EOST, Strasbourg), and Joint Research Centre (JRC, Ispra). The data produced are made available for research and development purposes.

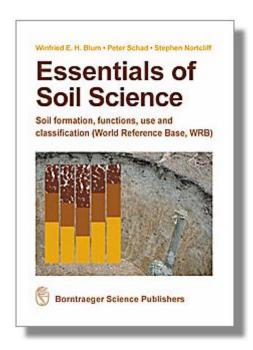
- ❖ None of these organizations, including the authors, accept any liability whatsoever for any error, missing data or omission in the data, or for any loss or damage arising from its use. The JRC agrees to provide the data free of charge but is not bound to justify the content and values contained in the databases.
- ♦ The permission to use the data specified above is granted on condition that, under NO CIRCUMSTANCES are these data passed to third parties. They can be used for any purpose, including commercial gain.
- ♦ The user agrees to: a) Make proper reference to the source of the data when disseminating the results to which this agreement relates. b) Participate in the verification of the data (e.g. by noting and reporting any errors or omissions discovered to the JRC).

#### Details here:

https://esdac.jrc.ec.europa.eu/content/european-landslide-susceptibility-map-elsus-v2#tabs-o-description=o



## **Essentials of Soil Science**



This book is an introduction to soil science and describes the development of soils, their characteristics and their material composition as well as their functions in terrestrial and aquatic environments. Soil functions include the delivery of goods and services for the human society, such as food, clean water, and the maintenance of biodiversity.

The book is profusely illustrated with many coloured figures and tables to accompany the text and ease its understanding. Particularly, the chapter on soil classification, based on the World Reference Base for Soil Resources (WRB), includes numerous coloured pictures to facilitate understanding the characteristics of particular soil types. Chapters on soil protection and remediation as well as on soil monitoring and the history of soil sciences conclude the book together with a very comprehensive alphabetical index, allowing for a quick and easy orientation about the most important terms in soil sciences.

The book addresses all those, who want to orient themselves about soils, their functions, their importance in terrestrial and aquatic environments and their contribution to the actual and future development of the human society, such as teachers, practitioners and students in the fields of agriculture, forestry, gardening, terrestrial and aquatic ecology and environmental engineering, and of course, beginning students of soil science.

Book ISBN 978-3-443-01090-4



#### WASWAC MEMBERSHIP APPLICATION/RENEWAL FORM (Issued 120501)

(For applicants from all countries)

Name: (Ms./Mrs./Mr./Prof./Dr	Gender: □F □M		
Institution:			
Postal address:			
State/Province:			
Phone:	Fax:		
Emails (Please give at least 2 addresses to	ensure uninterrupted contact):	(1)	
(2)	(3)		
My specialized field(s):			
Please sign me up for the WASWAC r	nembership in category*:	1(IM)□2(L	M)□3(OM)□4(SM&GM)
Membership for the year(s)	@US\$	=	US\$
Donation for developing country	y membership, etc.		US\$
Donation to the Moldenhauer F	und		US\$
		Total	US\$

\*Membership categories & rates from July 18, 2005, amended March 3, 2007 and March 4, 2010.

- 1. IM (Individual membership): US\$20 for 5 years for developing countries (In China, members pay 130 yuan RMB); US\$40 for 5 years for developed countries and persons working in international organizations worldwide.
- **2.** LM (Life membership): US\$80 for developing countries (In China, members pay 520 yuan RMB); US\$160 for developed countries and persons working in international organizations worldwide. Persons who have passed their 60<sup>th</sup> birthday pay only half of these LM rates.
- **3.** OM (Organization membership): For universities, research and implemental institutions, government agencies, NGOs, societies, associations and international organizations, etc. Persons belonging to an Organization member will receive the same online products and services as the other two above categories: \$100/year for an organization with up to 150 persons; \$150/year for an organization with up to 300 persons: \$200/year for an organization with up to 500 persons; and \$10/year for an additional 100 persons or part thereof.
- **4.** SM&GM (Student membership & Gift membership): US\$5/year worldwide, to be purchased to give to colleagues, friends, students, etc.

For sending money by foreign wires through a bank, please give the following information to your bank:

Name of Receiver (A/C Holder's Name): World Association of Soil and Water Conservation

**Bank Name and Address:** China Construction Bank, Shoutinanlu Branch, Beijing, China, No. 9 Shoutinanlu Street, Haidian District, Beijing, P R China

A/C NO.: 1100 1042 7000 5301 6996

Message to write on the Bank Sheet: WASWAC Membership due for Ms./Mrs./Mr./Prof./Dr. ......, Country .......

**NOTE: 1.** Do not deduct the bank fee from the amount of money to send. **2.** For sending money by wire/bank transfer or check please add US\$7 per transaction to compensate for the charge at the receiving bank in Beijing. This additional charge does not apply for **WESTERN UNION** or any payment of US\$50 or more.