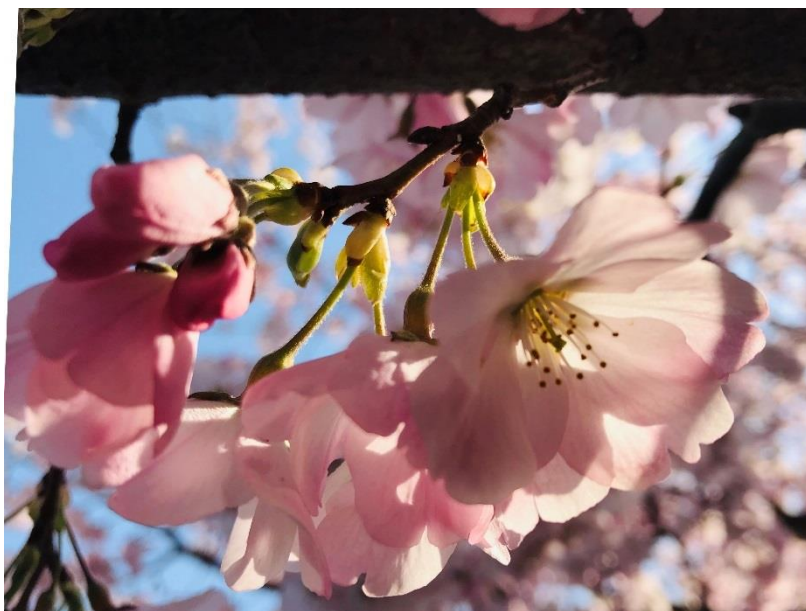




WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION

HOT NEWS

Issue 01, 2019



WASWAC HOT NEWS No. 01, January, 2019

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Editor: Dr. DU Pengfei. Contributors include Prafulla Kumar Mandal, Prof. LIU Cheng, and Dr. PANAGOS Panos.



IRTCES Building

(Where the Secretariat of WASWAC is located)

The Secretariat of WASWAC

No. 20 Chegongzhuang Road West, Beijing 100048, P. R. China

Tel: +86-10-68786579

Fax: +86-10-68411174

Email: waswac@vip.163.com

For ISWCR paper submission:

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

WASWAC Website: www.waswac.org

New deadline of abstract submission for WASWAC World Conference IV

**Soil and Water Resources Management for Climate Smart Agriculture
and Global Food and Livelihood Security**

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



The abstract submission deadline has been postponed to **May 15, 2019**, and all the following important dates have also been changed as follows:

Intimation of acceptance of abstracts: **June 15, 2019**

Submission of full length papers: **July 30, 2019**

Last date for registration without late fees: **September 1, 2019**

Any topics related Soil Degradation, Water Resources Conservation and Management, Sustainable Farming Systems vis-a-vis Climate Change, Land Use Planning and Management under Changing Soil and Water Scenario, Biodiversity Conservation for Mitigating Climate change, Socio-economic and Gender issues in Natural Resource Management, Policy Interventions in Soil and Water Management for Global Food security and Bio-Industrial approaches to Watershed for Food and Livelihood Security, are welcomed to be submitted to our conference.

The abstracts should not exceed 500 words, should be typed in double space leaving 2.5 cm margin on all sides on A-4 paper. Three to five key words should be given below the abstract in italics. The font should be Times New Roman in 12 pt. size. The full papers of accepted abstracts shall be evaluated, edited and may be in the conference proceeding book. The full papers must be restricted to 10-12 pages typed in double space, 12 pt size

A-4 paper in Times New Roman font including tables and illustrations. The abstract should be sent through e-mail aticscsi2019@gmail.com (WASWAC members please also send to waswac@foxmail.com) in MS word format.

A committee will review the abstracts and decide about the nature of presentation (oral/poster). Author(s) will be intimated regarding the acceptance of the papers by June 15, 2019. Awards will be given for the best paper and poster presentation in each thematic area.

ABOUT VISA APPLICATION

All foreign nationals visiting India are required to possess a valid International travel document in the form of a National Passport with a valid visa. All individual visa seekers are advised to apply for the Indian visa, through online application link. For details please visit <https://indianvisaonline.gov.in>. However, a letter from organizers for visa shall be issued on request from individual after acceptance of abstract or confirmation of participant intending to participate in conference. The participant should provide complete address with proof and copy of passport/passport number etc.

CONFERENCE UPDATES

Information contained in the circular and all updates are available at the website of SCSi <http://scsi.org.in> , Conference Website: <http://soilconservation.org>, and WASWAC official website: www.waswac.org

CONTACTS

Prof (Dr). Suraj Bhan President Soil Conservation Society of India National Societies Block G-4/A, National Agricultural Science Centre Complex, Dev Prakash Shastri Marg, Pusa, New Delhi – 110 012 Mobile: +91-9868808980/+91-11-21520082 Email: bhan_suraj1945@yahoo.com , soilcsi@gmail.com	Sh. Jagat Vir Singh Secretary General Soil Conservation Society of India National Societies Block G-4/A, National Agricultural Science Centre Complex, Dev Prakash Shastri Marg, Pusa, New Delhi – 110 012 Mobile: +91-9868822627 Email: jagat53@yahoo.co.in	Dr. Sanjay Arora Convenor & Org. Secretary Soil Conservation Society of India National Societies Block G-4/A, National Agricultural Science Centre Complex, Dev Prakash Shastri Marg, Pusa, New Delhi – 110 012 Mobile: +91-7376277190 Email: aroraicar@gmail.com
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First issue of ISWCR in 2019

The first issue ISWCR in 2019 has been published, totally 11 papers were included in this issue. The content is shown as follows picture:

INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH (ISWCR)	
Volume 7, No. 1, March 2019	
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Z. Liang, Z. Wu, W. Yao, M. Noori, C. Yang, P. Xiao, Y. Leng, L. Deng Pisha sandstone: Causes, processes and erosion options for its control and prospects	1
D. Uwizeyimana, S.M. Mureithi, S.M. Mvuyekure, G. Karuku, G. Kironchi Modelling surface runoff using the soil conservation service-curve number method in a drought prone agro-ecological zone in Rwanda	9
G. Issahaku, A. Abdul-Rahaman Sustainable land management practices, off-farm work participation and vulnerability among farmers in Ghana: Is there a nexus?	18
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O. Arefleva, A.V. Nazarkina, N.V. Gruschakova, J.E. Skurikhina, V.B. Kolycheva Impact of mine waters on chemical composition of soil in the Partizansk Coal Basin, Russia	57
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C. Dazzi, W. Cornelis, E.A.C. Costantini, M. Dumitru, M.A. Fullen, D. Gabriels, R. Kasparinskis, A. Kertész, G. Lo Papa, G. Pérès, J. Rickson, J.L. Rubio, T. Sholten, S. Theocharopoulos, I. Vasenev The contribution of the European Society for Soil Conservation (ESSC) to scientific knowledge, education and sustainability.	102

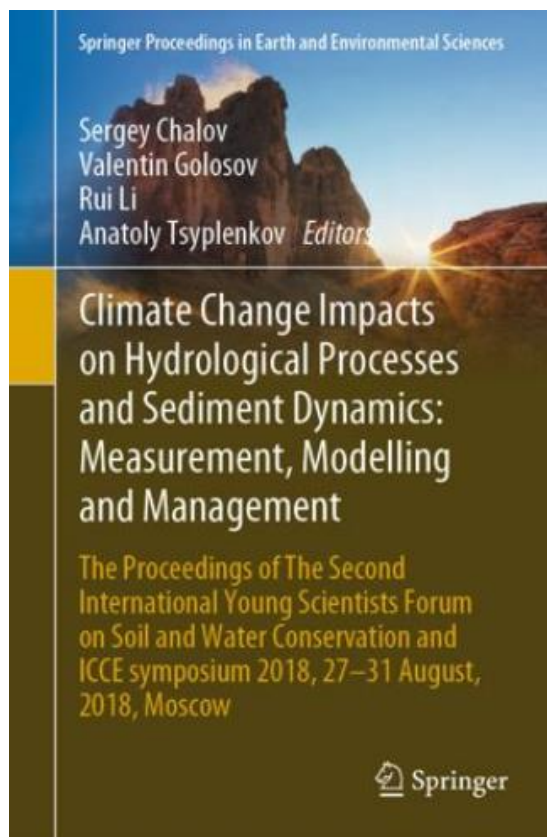
All papers in this issue are available here:

<http://www.waswac.org/waswac/ISWCR/webinfo/2019/03/1552619521351049.htm>

and welcome to submit your manuscript to our journal via

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

The 2nd IYFSWC Forum proceeding published



Based on the submitted manuscript for the 2nd IYFSWC Forum held in Moscow in August, 2018, the proceeding edited by Sergey, Chalov, Valentinn Golosov, Rui Li, and Anatoly Tsyplenkow, was finally published with 24 related papers inclusive.

As part of the Springer Proceedings in Earth and Environmental Sciences book series (SPEES), this book now is available online here: <https://link.springer.com/book/10.1007/978-3-030-03646-1#toc>

The series Springer Proceedings in Earth and Environmental Sciences publishes proceedings from scholarly meetings and workshops on all topics related to Environmental and Earth Sciences and related sciences. This series constitutes a comprehensive up-to-date source of reference on a field or subfield of relevance in Earth and Environmental Sciences. In addition to an overall evaluation of the interest, scientific quality, and timeliness of each proposal at the hands of the publisher, individual contributions are all refereed to the high quality standards of leading journals in the field. Thus, this series provides the research community with well-edited, authoritative reports on developments in the most exciting areas of environmental sciences, earth sciences and related fields.

GRANTS for young researchers that wish to attend the 9th ESSC Int. Congress

The ESSC provides **2** grants of **500.00 Euro** each to **2 young researchers** (less than 35 years old) working in a European country and members¹ of the ESSC. The grants will support their participation to this International Congress.

To apply for a grant just fill in the following **grant application form** and send it by e-mail to the President and to the Secretary of the ESSC (carmelo.dazzi@unipa.it; edoardo.costantini@crea.gov.it) no later than **April 30th 2019** together with:

1. An extended abstract of the paper that the applicant wishes to present at the Congress (four pages with: **Introduction; Material and Methods; Results; Conclusions; Keywords**);
2. A short curriculum vitae of the applicant;
3. A letter of presentation from the Institution/Department of the applicant.

Ad hoc ESSC Commission will evaluate the grants requests. Applicants will be notified of the Commission's decision within **May 31st, 2019**.

ESSC GRANT APPLICATION FORM

NAME and SURNAME	
Place and date of Birth	
Nationality	
Institution	
Address	
Email:	
Presentation (oral/poster)	
Title of presentation	

¹ Note that [membership subscription](http://www.soilconservation.eu/registration-form.html) can be submitted at the same time of the grant application (<http://www.soilconservation.eu/registration-form.html>).

Worldwide policy issue to curb down soil erosion and reverse the eroded lands for sustainable and incremental production of food and other agricultural commodities

By Prafulla Kumar Mandal

It is true that, the past decades were by no means wasted years in development, advancement, increased food production and laudable socio-economic transformations of which the countries can boast of many significant achievements. But, yet the pace could not keep up with the march of times. World famous agricultural scientist and former independent chairman of Food And Agricultural Organisation, Prof. M. S. Swaminathan alerted “Among the troubles of the real world, land degradation and increasing diversion of prime farm land for nonfarm purposes, are among more serious ones , since they affect the future of food and water security. There is currently well justified concern for Oil prices, but it is not commonly understood that while Coal or renewable energy can stand in for Oil, there is no substitute for top soil.” (ICLRMFEEES 2000-New Delhi, India). This forecast is evident from the present status of soil erosion land degradation.

UN / FAO forecasted in different times about the current world human population of 7.6 billion will expected to reach in 2030 to 8.6 billion, in 2050 to 9.8 billion and to 11.2 billion in 2100. FAO’s estimation is of hungry people in the world is increasing over **815 million** together with more in malnutrition (2018). Food production must be increased by 70% to feed this population. Increase of annual cereal production will need about 3 billion tonnes from 2.1 billion tonnes today. In addition to cereals and pulses, demand of the other agricultural commodities, like oil seeds, vegetables, fruits, sugar and jaggery, tubers, commercial crops, fodder & forage, medicinal plants, aromatic plants, flowers and aesthetics, spices and condiments, raw materials of agri-based industries, structural materials, etc. many others are in the rise day by day to ensure food and nutrition security and for shelter. All these should be produced on the arable productive land with optimum fresh water.

It is very general for all the purposes, particularly for advancing the agriculture and allied sectors that - (1)If land is available, then every kind of utilization (Agriculture &Non-Agriculture) is possible and can be accommodated; (2)If Arable land with productive soil exists, then sustained remunerative

output from farming is possible and can be expected; (3) If there is enough stock of fresh water in the surface and under-ground aquifer throughout the year, then can be applied for irrigation for multiple cropping, ensure production and for all other purposes. Irrigation solely depends upon stock / reserve of fresh water; (4) if abiotic stresses are managed, then loss or decrease of farm production can be avoided.

Till any re-estimation, the picture of land resource is that, World's 1.54 billion hectare is arable land. As per GLASOD 1.216 Billion hectare is degraded land in one and more ways. Only about 3% of the global land surface can be considered as prime or Class I land and this is not found in the tropics. Another 8% of land is in Classes II and III. This 11% of land must feed the 7.7 billion people today and the 7.8 billion expected in 2020. Desertification is experienced on 33% of the global land surface and affects more than one billion people, half of whom live in Africa. The soil resource is suspected to accelerated erosion processes like splash, sheet, rill, gully and ravine, land slide/slip, sea coastal, river bank. River system/network burdened with high sediment load, for which becoming shallow depth but increased width. Evidence of less reserve of fresh water on inland area, with incidence of drought, flood, depletion of ground water reserve due to increase exploitation. Reported range of annual Global Soil Erosion by water is 20 – 30 gigaton, faulty tillage erosion may amount to 5 gigaton. Hilly croplands under conventional agriculture and orchards without additional soil cover in temperate climate zones are subject to annual erosion rates up to 10-20 tonnes per hectare, values during high-intensity rainfall events may reach 100 tonnes. Wind causes soil erosion by suspension, surface creep and saltation that disperses dry, loose, bare soil finer particles ($< 80 \mu\text{m}$) are pushed to great distances, the finest particles enter in global circulation (Shao, 2000). Total dusts erosion yearly mobilized by wind is at 2 gigaton. About 430 million ha of dry lands are susceptible to wind erosion (Ravi et al., 2011, Middleton and Thomas, 1997, Shao et al., 2011). Global dust emissions range from 500 to 3320 teragram (Tg) per year (Ginoux et al., 2012). Natural dust sources do account for about 75 percent of emissions and 25 percent attributed to anthropogenic sources. Soil erosion has direct negative impact on global agriculture. By water, it induces annual fluxes of 23-42 Megatons (megaton) N and 14.6 - 26.4 Megatons P off agricultural land. This is annual fertilizer application rates, which is equivalent to 112 Tg for N and 18 Tg of P. Annual economic cost of US\$ 33-60 billion for N and US\$ 77-140 billion for P. So far generated data, out of the eroded soil, 61% ladens

and deposits on land and water courses, 10% in inland water bodies, and 29% transported to the estuaries where deposits on less current location of the rivers. About 52% of land used for agriculture is degraded and nearly 2 billion hectares is seriously degraded, sometimes irreversibly; over the next 25 years, may reduce global food production resulting in an increase of, as much as, 30% of world food prices (FAO).

Other name of water is LIFE. If soil conservation measures are taken up, then automatically water also will be conserved/ stored within (i) soil profile, surface water bodies, recharge the aquifer, it will also refresh environment and resist its degradation. Some confuse water conservation with irrigation. But, irrigation is dependent on the water conservation, since, if there is stock of water then only , irrigation is possible. As such hereinafter only Soil Conservation is mentioned to mean Soil and Water Conservation.

In the article, the extent of Global soil erosion, its negative impacts have been highlighted, also the steps necessary to conserve land soil and rainwater as a matter of policy by the countries on suigeneris manner (TRIPS) suggested. The main matter behind the Global (TRIPS) policy should be that, evolved, validated technologies are known and discussed in seminars, conferences, symposiums etc. also specialized human resources come out from educational and research institutes, but the matter who will implement those are ignored or by-passed. Unless specialized human resources are deployed , proper achievement is never possible. The present Global Symposium on Soil Erosion (GSER19) of FAO from 15-17/05/2019 on “ STOP SOIL EROSION–SAVE OUR FUTURE” may resolve giving emphasis on the human resources deployment to deal with exclusively Soil Conservation.

For the Global community, the policy issues suggested are:

- (1) To launch a time bound (15 yrs) programme worldwide, say “GLOBAL SOIL CONSERVATION GOAL” to curb down extent of soil erosion and to reverse the eroded lands, for which may impress upon the Countries to undertake Soil Conservation Programme in MISSION MODE in suigeneris manner.
- (2). Plot to plot prioritizing the need, soil conservation measures should be taken up. Group wise conservation measures to be taken up through launching schemes are -
 - (i) Mechanical measures – Erection of barriers by works on the field to intercept the run-off and safe disposal of surplus. New works and maintenance of Contour bunding, Field bunding, Compartmental

bunding, Bench Terracing, Gully plunging, Graded terracing (inward and out ward), Conservation Bench Terrace, Stager Contour trench cum ridge, Small Dam, De-siltation basin, Silt detention dam, Waste wire, Inlet drops, Chute, Diversion channel, Land shaping, Land levelling, sluice gate, percolation tank, impoundment ditch, Dug out, Farm pond, Cause -way, Vented cause -way, Course training (spur), surface reservoirs, torrent control structures, land slip and land slide resisting structures, culverts with weir or without weir, wire net binded loose boulder/stone gabion etc.

(ii) Vegetative measures: Raising non-weed grasses and legumes on the lands, like carpet cover (Agrostological). Contour Vegetative Hedge, Eye-brew of erect, bushy grasses on riser of contour bund and terrace risers. Grassed water ways. Turf on embankment flank. Trees like umbrellas on the land. Shelter belt on the border, etc.

(iii) Cultural / farming practices (Agronomic) – Farming operations like Contour ploughing across the slope, Contour cropping (row) across the slope, Strip cropping with Erosion Resisting and Erosion Permitting Crops at appropriate ratio of the cover of the strip along the contour, Intercropping at appropriate ratio of rows of Erosion Resisting and Erosion Permitting Crops. Association of trees and crops/grasses and legumes on the land, such as Agro-forestry, Farm forestry, Detailed Soil Survey report based replenishment of Macro and Micronutrients through green manuring, Organic and Inorganic manures and fertilizers combination, etc.

(3) Countries should re-start more vigorously, all the Soil Conservation schemes, programmes, so far closed/ stopped and should launch exclusively distinguished soil conservation scheme.

(4) Strong official organization/set up should be established with the specialized enough number of technical personnel who will transform education, undertake research and transmit and implement the established practices, will survey, plan, design, formulate and implement the schemes. Governments should establish such functionary from Ground level to National level maintaining a line of hierarchy on the principle of responsibility and authority should be co-terminus.

(5) For strengthening official human infrastructure/ se up, the existing number of official functionary should be increased and manned by deployment of specialized technologists for evolving, refreshing, disseminating and materializing technologies by education, research, training, extension and implementation on the field. Offices should have direct hierarchy and command from grass root level to national level.

- (6) The countries, its States and Provinces should fill up all the existing vacant posts.
- (7) Each country should include Agriculture, Soil Conservation in the Concurrent list, both in the federal/central and State/Provincial list of its Constitution to make much accountable both level of Governments.
- (8) There should be one “ Department of Soil Conservation” under each Agricultural University of the Central and State/Provincial Government or Govt.recognised Private.
- (9) Each Country and State/Province should establish Department of Soil Conservation, alternately, Directorate of Soil Conservation and Watershed development, under the Department of Agriculture /Ministry of Agriculture.
- (10)Each Country should have Soil Conservation Research and Training Institute with its regional Centers to deal exclusively Soil & Water Conservation.
- (11) Countries should constitute statutes from Block level to national level for soil conservation and allied sectors with the Agril. Graduates in principal position and members of Allied subjects and farmers representatives.
- (12) Each Country, State/Province should enact Soil Conservation Act to protect the land and soil from degradation and restore degraded land.
- (13) Each country should prepare National Watershed Atlas.
- (14) Rapid Reconnaissance Soil Survey, Detailed soil survey to determine Land Capability Class, Land and Soil irritability Class and prioritization should be taken up.
- (15) On the principle of use the land according to its capability (Land Capability Class based) should be ensured.
- (16) For optimum and efficient use of water, Land & Soil irritability Class based application of irrigation water irrigation should be given by installation of infrastructure adopting technologies.
- (17) For highest biomass production, soil conservation, economic and multiple benefits Farm forestry, Agri-forestry, Agri-horti, Pasto-horti, Horti-forestry, Pasto-horti should be adopted.
- (18) For resisting SPLASH erosion, Grasses and legumes should be grown, that will also be for fodder and forage and according to the need industrial raw materials in non-arable lands.
- (19) Organic matter amelioration with the soil is a good measure of soil conservation. Organic manures production with crop residues and other plant materials should be taken up as much as

possible. Each family should have 3 chambers Compost pit.

(20) Countries should give preference on construction and strengthening of multipurpose surface water reservoirs, dams, barrages. Completion of incomplete projects and schemes of this category. Soil conservation should be done in the Catchment area.

(21) Urbanization, industries and other non-farm activities on farm land should not be allowed. Use of Ground water for non-farm, industries should be restricted.

(22) Training, demonstrations of vegetative and cultural measures should be undertaken at mass scale to the peasantry and the experts (for refreshing).

(23) Countries (National, State Provincial level) should send their Official soil conservation functionaries to other countries to visit the soil conservation works, education, research, extension, instead of keeping territorial.

(23) Budget and actual expenditure in soil and water conservation both in Centre and in States/ Union –Territories should be adequate.

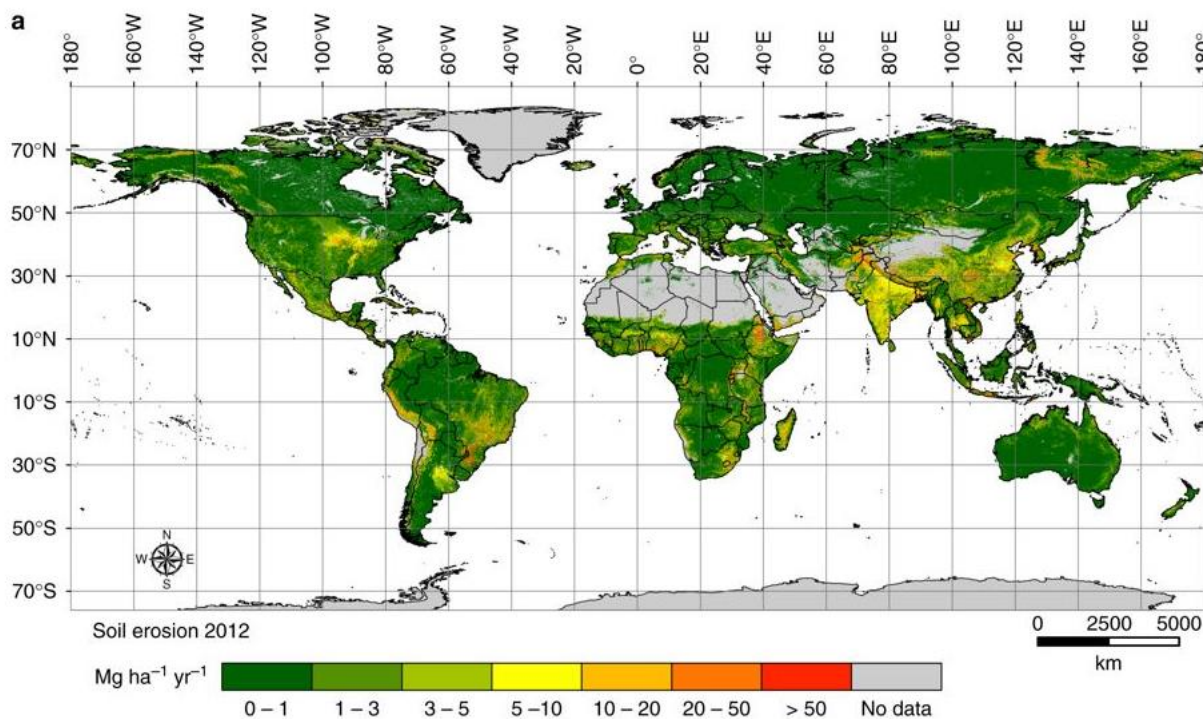
Conclusion - Clarion call: Land users are yet to be well aware of the course of soil erosion, its negative impacts. Education, research, extension on soil conservation should be emphasized. There is need of a clarion call to generate awareness to give real emphasis on the integrated soil conservation, rather plot to plot soil conservation in order to upgrade the degraded lands and soils to resist degradation of land and soil, conserve rain water in inland both in surface and in ground to build and maintain a strong and firm foundation of Agriculture as well as non-agriculture for the present and for the future. Strength official functional human resources set up should be established to deal exclusively Soil Conservation. This should be given the top agenda. Let the forthcoming year be the year of “Integrated Soil Conservation”. May it be voiced “Agriculture is the super culture of all the cultures in the World. Conserve Land, Soil, fresh water for nourishing People, Plants and Animals and for survival of the Civilization”. Therefore, the Governments may consider afresh to launch a development programme exclusively for “Natural Resources Conservation (Soil and Water Conservation) Mission”.

(Data and information cited mostly from UN, FAO, proceedings of conferences, seminar etc.)

To contact Prafulla Kumar Mandal for further details via prafullamandal@rediffmail.com

Global Soil Erosion dataset

From: An assessment of the global impact of 21st century land use change on soil erosion



Metadata:

Title: Global Soil Erosion Modelling platform (GloSEM)

Description: This map provides an assessment of global soil erosion for 2012 and 2001. We used the 250m original data to re-sample at 25km. In this study 202 countries are included with more than 125 million Km². The total soil loss has been estimated to 35 Pg yr⁻¹ of soil eroded in 2001. The estimates are lower compared to past studies in 2012, 35.9 Pg yr⁻¹ - Increase of 2.5% in soil erosion globally (due to land use change).

Spatial coverage: World (125 million Km² - ca 84% of the earth surface)

Pixel size: 25km.

Measurement Unit: t ha⁻¹ yr⁻¹

Projection: GCS_WGS_1984

Temporal coverage: 2012 and 2001 Pixel size: 25km

Data

The Global Soil Erosion map (GeoTIFF format) at 25km resolution is available for free

download in the European Soil Data Centre (ESDAC). This is based on the Version 1.1 of the JRC/ UniBasel "RUSLE-based Global Soil Erosion Modelling platform (GloSEM)". The native resolution is ca. 250m and we provide an example of those data (at the equator marked with a rectangle).

Shared files are resampled to ca. 25km.

We provide two RUSLE outputs:

- RUSLE Soil loss in 2012 (25km resolution)
- RUSLE Soil loss in 2001 (25km resolution)

In addition, we provide the 25km resolution resampled input datasets:

- * R-factor
- * K-factor
- * C-factor
- * LS-factor

Four ArcMAP project files (.mxd) are provided: ver. 8.3, ver 9.0, ver 10.0 and ver 10.5.

An example of the high resolution 250m soil loss maps and their ability to detect anthropogenic disturbances is provided for comparison (location - Amazon rainforest, headwater of the Madeira River). This example shows the "original" data at 250m modelled in this study. In case researchers/policy makers have specific requests with high priority or proposals for joint collaborations to develop new studies with the high resolution data, then please contact Panos Panagos/Pasquale Borrelli. However, we cannot ensure that we can cover the requests due to heavy workload.

Note: In case you use the data for applications in European Union, we recommend the European Soil Erosion dataset and the relevant K, LS, C, R, P factors.

Details at: <https://esdac.jrc.ec.europa.eu/content/global-soil-erosion>

References

Borrelli P., Robinson D.A., Fleischer L.R., Lugato E., Ballabio C., Alewell C., Meusburger K., Modugno, S., Schutt, B. Ferro, V. Bagarello, V. Van Oost, K., Montanarella, L., Panagos P. 2017. An assessment of the global impact of 21st century land use change on soil erosion. Nature Communications, 8 (1): art. no. 2013

The 2019 International Qian Ning Prize for Erosion and Sedimentation Technology will soon be awarded

The International Qian Ning Prize for Erosion and Sedimentation Technology will be awarded in the 14th International Symposium on River Sedimentation (Chengdu, China, Sept. 16-19, 2019). Nominations for the Prize for 2019 are being sought. You may contact the WASER Secretariat (chliu@iwhr.com or cliu.beijing@gmail.com) for more information.



Professor Qian Ning* (1922-1986) was a highly respected international authority in the field of erosion and sedimentation research, a professor of hydraulic engineering at Tsinghua University and a member (Academician) of the Chinese Academy of Sciences. He was also a member of the Board of Honorary Directors of the Chinese Hydraulic Engineering Society and a Vice Chairman of the Advisory Council of the International Research and Training Center on Erosion and Sedimentation (IRTCES). He was one of the

founders of the IRTCES. He devoted his entire professional life to scientific research in the field of erosion and sedimentation and his work spanned a wide range of topics, extending from soil erosion to channel morphology, bedload transport and the application of physical and numerical models. He also made highly important contributions to the regulation and improved management of two of the world's most important rivers, the Yellow River and the Yangtze River, and he directed research investigations on many rivers in China. Furthermore, he was very influential and successful in promoting international cooperation for the advancement of the state-of-the art in sediment research.

To commemorate Professor Qian's outstanding contribution to research on erosion and sedimentation, foster further advancement of the state-of-the art and recognize current leadership and major contributions in the field of erosion and sedimentation research, the World Association for Sedimentation and Erosion Research (WASER) and the Chinese Qian Ning Prize Foundation Committee, after much discussion, decided to jointly establish the

International Qian Ning Prize for Erosion and Sedimentation Technology and to set up the International Qian Ning Prize Foundation Committee.

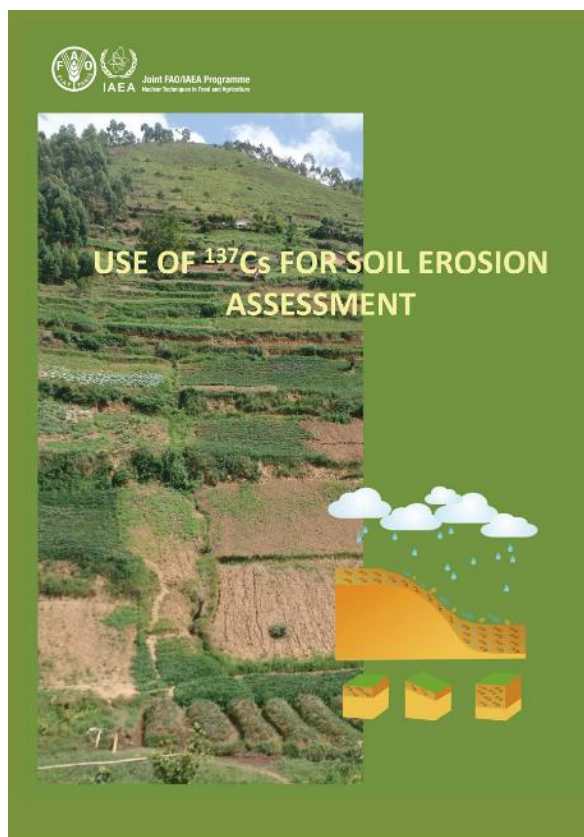
The International Qian Ning Prize is awarded to individuals. Professionals who are members of WASER, and who meet one or more of the following requirements, are eligible to be nominated as candidates for the Prize. Persons eligible for nomination shall be: i) Persons who have made outstanding scientific or technological contributions in the fields of erosion and sedimentation research, and/or related work on project planning, design and implementation; ii) Persons who have made outstanding contributions to promoting scientific and technological training of personnel in the field of erosion and sedimentation; and iii) Persons who have an outstanding record of achievement in the management and/or technical exchange of science and technology and its social benefits, as related to erosion and sedimentation.

Professionals, who are not members of WASER, but who meet one or more of above requirements and who are supported by three or more members of WASER or one member of the Nomination Committee, are also eligible to be nominated as candidates for receiving the Prize.

* Qian Ning: Qian is family name and Ning is given name. Ning Chien was used as author for his publications

International Symposium on River Sedimentation (ISRS) is a triennial event initiated in 1980 by the Chinese Hydraulic Engineering Society (CHES) with the support of UNESCO. The objective of ISRS is to provide a forum for scientist, engineers, researchers and decision makers to exchange ideas, research results, advanced techniques, and to share their experiences and information on sediment study and management. The International Research and Training Center on Erosion and Sedimentation (IRTCES) in Beijing is the permanent secretariat of ISRS. The WASER was inaugurated at the 9th ISRS in 2004, and the ISRS has been served as the official symposia of WASER since then. The 14th ISRS will be held in Chengdu, China, Sep. 16-19, 2019.

New Book



The ^{137}Cs method uses traces of nuclear activity to measure soil loss, and constitutes a relatively swift and cost-effective means of collecting data on soil erosion as compared to more conventional methods. This guide covers the main principles, sampling strategy, gamma spectroscopic measurements, estimation of erosion rates with conversion models, data interpretation and validation of erosion models. The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture of the IAEA has been working on this method for over 20 years.

Product details:

Paperback: 71 pages

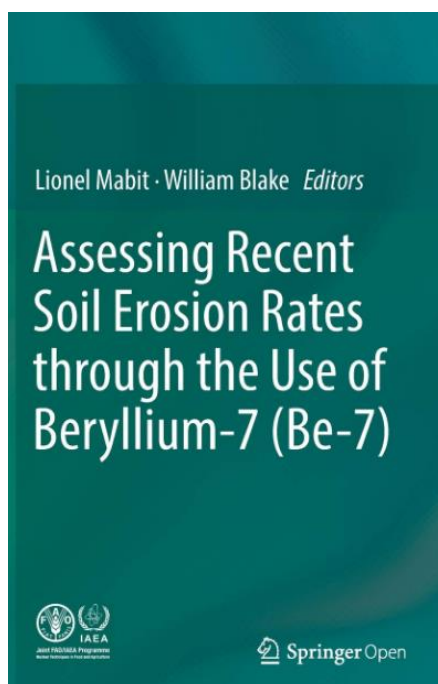
Publisher: Food & Agriculture Organization (March 12, 2019)

Language: English

ISBN-10: 925130050X

ISBN-13: 978-9251300503

Product Dimensions: 7 x 0.2 x 9.8 inches



This open access book is the first comprehensive guideline for the beryllium-7 (Be-7) technique that can be applied to evaluate short-term patterns and budgets of soil redistribution in agricultural landscapes. While covering the fundamental and basic concepts of the approach, this book distinguishes itself from other publications by offering step-by-step instructions on how to use this isotopic technique effectively. It covers experimental design considerations and clear instruction is given on data processing. As accurate laboratory measurement is crucial to ensure successful use of Be-7 to investigate soil erosion, a full chapter is devoted to its specific determination by gamma spectrometry. This open access contribution further describes new developments in the Be-7 technique and includes a concluding chapter highlighting its potential benefits to support the implementation of area-wide soil conservation policy.

Product details:

Hardcover: 69 pages

Publisher: Springer; 1st ed. 2019 edition (February 19, 2019)

Language: English

ISBN-10: 303010981X

ISBN-13: 978-3030109813

Product Dimensions: 6.1 x 0.2 x 9.2 inches

Coming Meetings



Objectives:

The workshop aims at bringing together stakeholders from different policy and user domains with remote sensing experts to discuss the requirement of a Soil Monitoring System utilizing space-based EO data with in-situ data and modeling. The focus will be on the potential use of existing and future planned space-based EO systems including data gaps and research issues of priority. The outcome of the workshop will be used to develop a roadmap of relevant research and demonstration activities supporting the development and implementation of a space-based EO Soil Monitoring System.

Themes:

- ✚ Soil related national and international policies, agreements and frameworks
- ✚ Economics of soils
- ✚ Soils and ecosystem functioning
- ✚ Sustainable Soil Management including conservation practices
- ✚ Ongoing and planned space-based EO systems of relevance
- ✚ Remote Sensing of Soils
- ✚ Soil monitoring systems and requirements

Important Dates:

Abstract submission closing **31 May 2019**

Notification of acceptance 14 June 2019

Preliminary Programme 14 June 2019

Registration opens 14 June 2019

Registration closes 24 June 2019

Contacts:

Workshop Coordinator: Earth Observation R&D Team ✉ envmail@esa.int

Details at: <http://worldsoils2019.esa.int/index.php>



The Global Symposium on Soil Erosion (GSER19) will be a high level science-policy meeting, held from **15 – 17 May 2019**, at **FAO HQ in Rome, Italy**. This Symposium is jointly organized by the Food and Agriculture Organization (FAO), the Global Soil Partnership (GSP), the Intergovernmental Technical Panel on Soils (ITPS), the United Nations Convention to Combat Desertification Science-Policy Interface (UNCCD-SPI) and the Joint FAO/IAEA International Atomic Energy Agency division for Nuclear Techniques in Food and Agriculture. Soil erosion represents one of the most pressing environmental issues of our time, decreasing agricultural productivity, degrading crucial ecosystem functions, amplifying hydrogeological risks and, in severe cases, leading to the displacement of populations. Starting from the latest scientific knowledge on the status of interventions and innovations related to soil erosion management and existing assessment frameworks, the Symposium will address soil erosion prevention and control for increased food security and ecosystem services.

Themes

-  Use of data and assessment tools in soil erosion control
-  Policy in action to address soil erosion
-  The economics of soil erosion control and restoration of eroded land

Registration will be open until 8 May 2019.

Participants will include representatives from UN organizations, member countries, academia, scientists, practitioners, policy makers, private businesses, economists, research institutes, NGOs, civil society, farmers associations, and land users. Please note that participation to the Symposium is free.

Details at: <http://newsletters.fao.org/q/1mbXoKxFYG03aAJUOPg/wv>



74th SWCS International Annual Conference

BRIDGING the DIVIDE:

Uniting Rural and Urban Landscapes for Conservation

July 28-31, 2019 • Pittsburgh, Pennsylvania

The 74th SWCS International Annual Conference with topic “Bridging the Divide: Uniting Rural and Urban Landscapes for Conservation” will be held during July 28 - 31, 2019 in Pittsburgh, Pennsylvania.

Workshops:

Workshop 1: Introduction to Green Infrastructure: Principles, Applications, and Policies, Sunday, July 28, 1:00 PM – 5:00 PM

Workshop 2: Nutrient Tracking Tool (NTT): A Farm Decision-Making Tool for Water Quality/Quantity Assessment and Trading Programs and a New Interface for APEX Model, Sunday, July 28, 1:00 PM – 5:00 PM

Workshop 3: Turning Soils Data into Information: SSURGO OnDemand—Quicker, Easier, Faster, Sunday, July 28, 1:00 PM – 3:00 PM

In order to remain on the conference agenda, you must be registered **on or before June 19, 2019**. Any presenter not registered by June 19, 2019 will be removed from the agenda. The meeting rooms are equipped with internet, lectern, wireless microphone, AV cart, laptop, screen, projector, extension cord, and a slide advance remote. Please note that all presenters are required to utilize the laptop provided in the meeting room.

Full Conference Registration Rates

SWCS Member: \$435, Register and Join SWCS: \$550, Nonmember: \$560, Senior (65+): \$335, Full-Time Student: \$250 (Includes a 12-month SWCS Student Membership)

One-Day Rates

SWCS Member: \$250, Nonmember: \$300, Senior (65+): \$185, Full-Time Student: \$130 (No Membership), Wednesday ONLY: \$150

Details at: <https://www.swcs.org/events/conferences/2019-annual-conference/>