World Association of Soil & Water Conservation – WASWC

NEWSLETTER

Reporting global SWC news to you quarterly since 1983

In English, Spanish, French, Chinese, Portuguese, Bahasa, Russian, Vietnamese, Arabic, Thai

Volume 23, Number 2-4
April – December 2007

WASWC Council up to December 2007
President: Miodrag Zlatic, Serbia
Deputy President: Machito Mihara, Japan
Treasurer: John Laflen, USA
Executive Secretary: Jiao Juren, China
Immediate Past President: Samran Sombatpanit, Thailand
Councilor for Africa: Mohamed Sabir
Councilor for America (Latin): Eduardo Rienzi
Councilor for America (North): Ted Napier
Councilor for Australia: Ian Hannam
WASWC Secretariat: Monitoring Center for Soil and Water Conservation, Ministry of Water Resources, Beijing, PR China, sglu@mwr.gov.cn, http://www.cnscm.org
Photo websites: http://community.webshots.com/user/waswc and http://community.webshots.com/user/waswc1
WASWC Japan: www.waswc.org (for J&P of WASWC)
WASWC China: http://waswc.soil.gd.cn (for Newsletter)
Publishing Partner: Science Publisher, Inc., P.O. 699 Enfield, NH 03748, USA. info@scipub.net, www.scipub.net
Newsletter Composing, Layout and Sending: WASWC Thailand and NRM Program, AIT, Bangkok, Thailand
Advisors: William C. Moldenhauer and David W. Sanders
Editor: Samran Sombatpanit sombatpanit@yahoo.com
Associate Editor: Surinder S. Kukal sskukal@rediffmail.com
Editorial Board: M. Agassi, *Israel,* menahema@moag.gov.il
Sanjay Arora, *India,* aroraspau@yahoo.co.in
Artemi Cerdà, *Spain,* acerda@uv.es
Will Critchley, *Netherlands,* wrs.critchley@dienst.vu.nl
Raymnd D. Desjardins, *Canada,* desjardins@agr.gc.ca
Nahid Elbezzaz, *Morocco,* nahidelbezzaz@yahoo.fr
Wyn Ellis, *Thailand,* wynellis.gtzbkk@gmail.com
Mike Fullen, *U.K.,* m.fullen@wlv.ac.uk
Yantai Gan, *Canada,* gan@agr.gc.ca
Tom Goddard, *Canada,* tom.goddard@gov.ab.ca
Mohammad Golabi, *USA,* mgolabi@guam.uog.edu
Antonio J.T. Guerra, *Brazil,* antoniotguerra@gmail.com
John Laflen, *USA,* laflen@wctatel.net
C. Licona-Manzur, *Italy,* Clemencia.LiconaManzur@fao.org
Li Dingqiang, *China,* dqli@soil.gd.cn
Li Rui, *China,* lirui@ms.iswc.ac.cn
Victoria Mack, *Australia,* vmack@silc.com.au
Machito Mihara, *Japan,* waswc@nifty.com
Prasanta K. Mishra, *India,* pkmbellary@rediffmail.com
Ted Napier, *USA,* Napier.2@osu.edu
Yuji Niino, *Thailand,* yuji.niino@fao.org
Franco Obando, *Colombia,* fobando1@yahoo.com
James O. Owino, *Kenya,* joowin@yahoo.com
Martin Parkes, *China,* martinpa@gn.apc.org
Sam Portch, *Canada,* sportch@ppi-ppic.org
Horrie Poussard, *Australia,* poussard@thereef.com.au
T. Francis Shaxson, *UK,* FShaxson@aol.com
Rhodri P. Thomas, *UK,* rhodri_p_thomas@hotmail.com
Takashi Ueno, *Japan,* erecon-hq@nifty.com
Willy Verheye, *Belgium,* wlverheye@telenet.be
Kristie Watling, *Australia,* kristie.watling@nrm.qld.gov.au
Alex Watson, *New Zealand,* watsona@landcareresearch.co.nz
Rob Youl, *Australia,* rob.youl@landcareaustralia.com.au
Guo Zixing, *China,* zxguo@soil.gd.cn
Miodrag Zlatic, *Serbia,* miodrag.zla@sbb.rs

WASWC Vision: A world in which all soil and water resources are used in a productive, sustainable and ecologically sound manner.

WASWC Mission: To promote worldwide the application of wise soil and water management practices that will improve and safeguard the quality of land and water resources so that they continue to meet the needs of agriculture, society and nature.

Conserving soil and water worldwide – join WASWC

In this issue

► **President's Message** *2*
► **Editor's Note** *3*
- **Travel to China in 2007** *3*
- **WASWC publications** *4*

► **Awards** *4*
- **Wichai Suriyuth f. Distinguished SWC Extensionist Award** *4*
- **David Sanders for Hugh Hammond Bennett Award** *4*
- **Hans Hurni for Norman Hudson Memorial Award** *5*

► **Association News** *6*
- **Photo Competition 10** *6*
- **New Officers – NRs for Rwanda and Armenia** *7*

► **Members' Forum** *7*
- **News from friends** *7*
- **What members say about the newsletter** *10*
- **What members say about My China Diary** *11*
- **What members say about WOCAT Global Overview book** *12*
- **News about our members** *14*

► **Members' contributions** *14*
► **SonTek Water Measurement Systems** *18*
► **SEMEATO's Safe and Sustainable Agricultural System** *19*
► **Features** *19*
- **CC & CI (Climate Change and Carbon Issues)** *19*
- **Finance Highlight** *21*
- **Food Production Highlight** *23*
- **Agroforestry Highlight** *24*
- **Vetiver Highlights** *24*
- **WOCAT Highlights** *26*

► **Summary Reports** *27*
- **Managing Agric. Landscapes for Env. Quality, USA** *27*
- **Soil Science Solving Problems, Australia** *27*
- **Sustainable Sloping Lands and Watershed Mgmt, Lao** *29*
- **Farmer Level Field Day by WASWC-India** *29*

► **Miscellaneous** *30*
- **CHARITY-ART WORKS** *32*
- **FEW WISE/INTERESTING QUOTES** *33*
- ***In the Next Issue*** *34*

The WASWC Newsletter seeks to keep conservationists worldwide informed of new developments in the field of soil and water conservation and land management issues. Please send editorial contributions to Dr Surinder Singh Kukal (sskukal@rediffmail.com), editor from issue 24(1) onward.

PRESIDENT'S MESSAGE

One of the main activities of the World Association for Soil and Water Conservation in 2007 was involvement and professional help with several significant international conferences, including the Fifth International Congress of the European Society for Soil Conservation in Palermo, Italy 25-30 June; the International Forum on Soils, Society and Global Change in Selfoss, Iceland 31 August-4 September; Erosion Control as a Factor of Sustainable River Basin Management, in Belgrade, Serbia 25-28 September; and the WOCAT Workshop at Bohol Beach Club, Philippines from 12-18 November.

The Fifth International Congress of the European Society for Soil Conservation, held in Palermo 25-30 June, drew about 400 participants from all over the world. The program comprised eight topics:

(1) Soil and society
(2) Soil erosion
(3) Soil organic matter
(4) Soil degradation and desertification
(5) Soil pollution and contamination
(6) Soil conservation and soil quality
(7) Policies for environmental conservation in a global society
(8) New approaches and technologies for soil assessment

From upper left and clockwise: Approximately 400 participants came from all over the world; Welcome speech of Jose Rubio, president of ESSC; Taking a question from the floor; Discussion after presentation; There were about 300 posters in 8 poster sessions; City of Palermo, taken from the bus; Examining a soil pit; Part of the experimental watershed at the Scarcia station (technical objects); Crop field; Smaller experimental plots; A large runoff experimental plot; Participants alongside one of the famous Greek temples in Agrigento.

This conference attracted great public and scientific attention. It was opened by Bruno Dettori, Under-Secretary of Ministry for Environment and Carmelo Dazzi, President of the Organizing Committee. Welcome addresses were given by President of the Sicilian Region, Regional Councilor for the Environment, Regional Councilor for Agriculture, President of the Province of Palermo, Mayor of Palermo, Chancellor of the University of Palermo,

Dean of the Faculty of Agriculture, Dean of the Faculty of Natural Sciences, President of the WASWC and President of the ESSC.

All topics comprised invited lectures, oral and poster presentations.

1. Soil and Society had an invited lecture and 10 oral and 37 poster presentations. It took into account problems of human-affected soils; soil technology; anthropogenic and technogenic soils; urban soils; spatial, social and environmental aspects of pedodiversity; human activities; land use and land cover change; and soils and cultural heritage.
2. Soil Erosion had an invited lecture and 14 oral and 50 poster presentations. The presentations considered soil erosion measurements and monitoring at different scales; modeling of soil erosion; soil erosion and productivity; soil erosion and global change; wind erosion; tillage erosion; and strategies for erosion control and water management.
3. Soil Organic Matter had an invited lecture and 14 oral and 40 poster presentations taking into account land use and soil organic matter dynamics embracing human activity and farming techniques; sustainable management of soil organic matter; carbon sequestration and climate change; and monitoring of soil organic matter content.
4. Soil Degradation and Desertification had an invited lecture and 14 oral and 34 poster presentations dealing with the problems of environmental effects of soil degradation/desertification, soil salinization, sealing, consumption, acidification and compaction.
5. Soil Pollution and Contamination had an invited paper and 15 oral and 51 poster presentations examining the problems of soil pollution/contamination, monitoring of soil pollution and remediation of polluted soils.
6. Soil Conservation and Soil Quality drew invited lectures and 14 oral and 62 poster presentations within the field of traditional SWC systems, conservation of soil qualities for high-value and traditional crops, soil-water interaction, indicators of soil quality and soils and human health.
7. Policies for Environmental Conservation in Global Society had an invited lecture and 14 oral and 9 poster presentations within the areas of socio-economic aspects of soil degradation; legislation issues of soil conservation; national and international soil policies; the role of mass media; soil education and public awareness; economic aspects of soil conservation; and the implications of the EU Soil Thematic Strategy.
8. New Approaches and Technologies for Soil Assessment had an invited lecture and 14 oral and 42 poster presentations in the field of pedo-technics for soil recovery in degraded areas, indicators for soil assessment, decision-support systems for soil conservation and priorities for soil science in the near future.

A scientific and cultural excursion was organized to Sparacia farm and Temple Valley, Agrigento. At Sparacia farm we saw and felt pedo-agronomical and cultural aspects of the Mediterranean environment. We paid special attention to the experimental installations for measuring soil erosion at microplot-, plot- and basin-scale in a hilly Sicilian landscape. Afterwards we visited Temple Valley in Agrigento, one of the best preserved Greek archaeological zones, with its temples to Concordia, Venus, Zeus and Hercules.

The plenary of the Congress summarized the event, and nominated task forces for ESSC activities in the next period with the established council.

Miodrag Zlatic

President of the World Association of Soil and Water Conservation
Faculty of Forestry, Belgrade University, Kneza Viseslava 1, 11090 Belgrade, Serbia
Phone: +381 11 3553 122, Fax: +381 11 2545 485, miodrag.zla@sbb.rs, mizlatic@yahoo.com

EDITOR'S NOTE

Travel to China in 2007

My travel to China in May-June 2007 saw another WASWC website established – at Guangdong Institute of Eco-Environmental and Soil Sciences. This website, http://waswc.soil.gd.cn, builds on its predecessor at the Asian Institute of Technology – though the latter has not been changed since June 2007. This website is being overhauled since recently; when ready it will be used for posting most items of WASWC other than WASWC PUBLICATIONS as mentioned above.

The trip allowed me to explore institutions that may cooperate in the future work of WASWC. Apart from the Guangdong Institute, I visited the Monitoring Center for Soil and Water Conservation in Beijing; the Institute of Soil and Water Conservation in Yangling; and the Shaanxi and Nanjing Institute of Soil Science. The main intention however was to strengthen the performance of our secretariat, especially when it supports the upcoming council of 2008-10. It is now known the secretariat work may need to expand beyond Beijing.

I have recorded my experiences in My China Diary, posted under TRAVELOGUES, on the website http://waswc.soil.gd.cn.

WASWC publications

The WASWC is still evolving. This means the way we do things will change, usually gradually, to suit new situations.

The decision to produce Special Publication No. 3 (SP III) on No-Till Farming Systems has brought a big change. This kind of publication, made possible through worldwide contributions and available to readers everywhere at an affordable price, should be the standard to which WASWC aspires. By now some 8,000 copies have been sent out, mostly by surface mail to keep the price low. I guess the majority of them have reached their destinations and the rest will do so by the end of May. At the same time more orders have been received and we will dispatch copies as long as stocks last. Retail prices for the 544-page book, with a CD and including delivery, were set at US$15 for ASEAN countries; US$16 for other Asian countries; US$18 for Africa, Australia, Europe and Oceania; and US$20 for the Western Hemisphere. For more details visit the Tokyo website www.waswc.org, looking under WASWC PUBLICATIONS.

However, distributing SP III affected work in other sectors to a great extent, which we regret. The (supposedly monthly) HOT NEWS, which requires less time to compose as we do not put it to exhaustive editing, was issued 10 times in 2007, while WASWC Newsletter went out only once, for the period January-March 2007. So we decided to gather materials to do another newsletter [23(2-4)] to cover the rest of the year, but preparation had to wait until April 2008, when SP III business had been finalized. We apologize for any disappointment this may have caused.

These circumstances have prompted us to consider two issues, which we will report on as soon as we can:

1. If we continue publishing Special Publications in this way, how do we do it without reducing work in other sectors?
2. Decentralizing production of our publications, particularly the WASWC Newsletter.

AWARDS

An important activity of any society or association is to honor people who have done good and useful things that benefit society at large – in our case, natural resources and mankind. Here are three extraordinary individuals whose achievements and dedication have been recently recognized.

1. The Distinguished Soil and Water Conservation Extensionist Award for 2007 went to Police Sec. Lieut. Wichai Suriyuth of Prang Koo District, Sri Saket Province, Thailand for his outstanding contribution to soil and water conservation through planting a large number of trees during the past several decades, voluntarily. He has planted around two million tree seeds during the past two decades and the majority of mature trees in his locality are his progeny. His principles are roughly that tree growing projects should provide a) food, b) wood for construction, c) beautiful landscapes and d) other values. Initially many people seeing him at work used to question his mental health. Despite his retirement in 2006 he still serves in several volunteer community development organizations. The top photo shows Mr Suriyuth (on the right) receiving a certificate and a small cash award on April 9, 2007. In the photo below we see him with roadside sugar palms he planted many years ago.

2. David W. Sanders was presented with the prestigious Hugh Hammond Bennett Award for 2007, the highest honor of the Soil and Water Conservation Society (SWCS) at its Annual Conference in Tampa, Florida, U.S.A. on July 24, 2007.

David Sanders has left his imprint on the landscape in many parts of the world. His career has ranged from implementing soil conservation practices in local watersheds in Australia to leading from Rome the soil conservation activities of the Food and Agriculture Organization (FAO). He has been a life-long professional advocate of conservation and has devoted his career to the management and wise use of soil, water and related natural resources. All of his efforts, including those as FAO administrator, have been undertaken with the objective of achieving sustainability. Most noteworthy among his accomplishments are his work in introducing modern agricultural techniques into the low rainfall areas of Jordan, addressing severe gully erosion in Lesotho and his presentations and visits to some 40 countries advising governments on soil conservation policies and programs. Mr Sanders has edited and/or been a major contributor to ten books, delivered several keynote presentations to ISCO Conferences and has contributed significantly to many journals and other conservation publications. In addition, he was a principal organizer of the World Association of Soil and Water Conservation (WASWC) and served as

president of WASWC from mid 1997 to the end of 2001. During his tenure, he initiated the draft constitution of WASWC, and many other activities that have helped develop our association.

David Sanders first worked as a field officer with the Soil Conservation Authority, Victoria, Australia from 1958-65. This involved advisory work to farmers in livestock and wheat growing areas. He then joined a team responsible for planning and implementing the Eppalock Project. Australia's first large-scale watershed project, it introduced new approaches to promote much closer working relationships with the farming community than had been the practice. This highly successful project played an important part in the evolution of the Landcare movement.

Following the success of the Eppalock Project, David was recruited by FAO and worked for five years (1965-70) in Jordan on the Dryland Farming Project, first as Soil Conservation Specialist and then as Project Manager. This large-scale development project aimed to introduce modern farming techniques, including soil conservation, to the low rain-fed farming areas of Jordan. This project led, in turn, to another project aimed at changing land use over a large part of the country's steeper slopes. Traditional techniques were developed and improved and large areas were taken from cereal production, terraced and planted to olive and fruit trees. Erosion was controlled, the goodwill of the farmers was secured and farm incomes increased.

David was then transferred to Lesotho for seven years (1970-77) to work on two successive large-scale integrated agricultural development projects in severely eroded cropping regions. He first worked as Watershed Management and Soil Conservation Adviser and then as Team Leader. Lesotho is one of the world's poorest countries and, arguably, the worst eroded. The job included working with hundreds of very poor subsistence farmers; the challenge was to introduce practices and techniques that they could readily adapt and that would quickly bring tangible results. Various approaches were used to involve the farmers in innovative food-for-work programs, through which village peopl planted woodlots, constructed access tracks and roads, built water supplies and fish ponds, controlled grazing and increased their incomes through improved farming practices.

Transferred to FAO headquarters, Rome, he established and then managed the FAO Soil Conservation Section from 1977-95. Work here involved promoting worldwide the need for soil conservation, and advising member governments on all aspects of soil conservation, including policy. It also involved setting up and running field projects in developing countries, hiring and deploying consultants to different countries, representing FAO at relevant meetings and arranging publication and distribution of up-to-date information on soil conservation technology and policy, including some of the well known FAO Soils Bulletins. Over the years, this work took him to more than 30 countries – from Iceland to China, Brazil and New Zealand. During his travels, he met and established contact with a large number of people working on many aspects of soil conservation, a very satisfying part of his activities. It also enabled him to promote new and emerging trends and approaches to conservation, particularly the realization that large-scale conservation could only be achieved if there was a far closer involvement of the landusers themselves in the process, and that farmers would only take up and continue to use conservation practices that brought them early and tangible results. He was also called on to contribute to major studies and reports on behalf of FAO. These included taking the leading role in developing the FAO strategies, The Conservation and Rehabilitation of African Lands and The Conservation of Lands in Asia and the Pacific, and assisting with FAO's contribution to Agenda 21 for the Rio Conference in 1992.

Address: David Sanders, Flat 1, Queen Quay, Welsh Back, Bristol, BS1 4Sl, UK. Tel & Fax: +44-0117-9276021, dsanders38@btinternet.com

3. Hans Hurni - Norman Hudson Memorial Award for 2007

The Awards Committee of WASWC has agreed to bestow the Norman Hudson Memorial Award to Hans Hurni for 2007.

Perhaps the most compelling reason to recommend Hans Hurni for the Norman Hudson Memorial Award is the least to do with soil conservation per se. Of the professional and technical reasons, more later, but if you were at the plenary session at the ISCO conference in Bonn in 1996, you will remember Hans asking: 'How many social scientists are present?' A mere handful stood up! As the then President of the World Association of SWC (WASWC), Hans highlighted a fundamental weakness of our profession. And that is our obsession with techniques to save the soil – and our ignorance of the fact that the land users are central to any solutions.

With his effortless charm and dignified authority, Hans Hurni has helped changed the face of soil and water conservation from a myopic focus on soil loss and technology to a holistic overview of land management. If you remain unconvinced, pick up a copy of the booklet Hans wrote for that conference – with hand picked colleagues. Entitled Precious Earth: from soil and water conservation to sustainable land management, it's a classic and retains a central position on my bookshelf.

Hans' career has been exemplary. Born in December 1950 in Switzerland, he gained his MSc in geography at the University of Berne in 1975. Living in Ethiopia for 10 years, he worked for the WWF and did field studies for his PhD, which he completed in 1980. Remaining at the University of Berne, he became a co-director of the highly respected Centre for Development and Environment in 1987, and was appointed Professor in 1997. Amongst his many international positions, Hans was President of the World Association of Soil and Water Conservation from 1991-97.

During his WASWC presidency Hans came up with the concept of WOCAT – the World Overview of Conservation Approaches and Technologies. His vision for WOCAT was that it should document success in sustainable land management at a time when the world was fixated on 'desertification', 'marching deserts' and calamity scenarios. The GLASOD map of soil degradation had just been published. Hans' clarion call was to wake us up to examples of good land management that exist all over the world. This year that WOCAT has produced its first major output – the book Where the land is greener. Hans must be proud of what he has initiated.

Amongst his other international positions, where he has wielded significant influence, Hans has been a member of the IBSRAM board since 1994; a board member of ISCO since 1988; a member of the World Commission on Protected Areas (WCPA) of IUCN since 199; and chair of the IUSS Working Group on the proposed Soil Convention.

Furthermore he holds editorial positions with various academic journals: Land Husbandry, the international journal of soil and water conservation; AMBIO, the journal of the human environment; and Mountain Research and Development – of which he is editor-in-chief.

Of course, those who know Hans well will recognize his special passion for – and contribution to – Ethiopia. From his early experiences as park warden in Simen National Park, to the establishment of the nationwide Soil Conservation Research Project, of which he was the program director from 1981-88, Hans has been a friend of Ethiopia. Amongst the thousands of students who have benefited from Hans' gentle but highly professional guidance, there have been many from Ethiopia. That is a country where his legacy is guaranteed.

But Hans' influence has been truly international, and his contribution to the worldwide cause of sustainable land management outstanding. There is no doubt that Hans Hurni is worthy of the prestigious Norman Hudson Memorial Award.

Address: Hans Hurni, CDE, Institute of Geography, University of Berne, SWITZERLAND
hans.hurni@cde.unibe.ch

Next issue will recognize further award winners.

ASSOCIATION NEWS

PHOTO COMPETITION 10

The photo competition committee nominates these three winners.

Left: Degraded landscape, Victorian uplands (Patrick Connor), Australia
Photo: Victoria Mack, Director, Secretariat for International Landcare Inc. (SILC), 3733 Romsey Rd., Darraweit Guim, 3756 Victoria, Australia. vmack@silc.com.au

Middle: Encroachment of sloping land in Indonesia.
Photo: Syaiful Anwar, Ministry of Forestry, Jakarta, Indonesia, sanwar@cbn.net.id

Right: Productive damland in Loess Plateau, Shaanxi Province, China
Photo: Xiang-Zhou Xu, School of Civil and Hydraulic Engineering, Dalian University of Technology, Dalian 116024, China. xzxu@dlut.edu.cn

Members are welcome to send photos to us for the next contest, with three books from www.scipub.net as prizes.

NEW WASWC OFFICERS

Celestin Ukozehasi, National Representative for Rwanda, ukozehasice@yahoo.fr & ukozehasice@gmail.com

Eng Celestin Ukozehasi was born in Nkombo Island, Rwanda, July 24, 1974. He graduated in tropical agronomy (BSc) and he is studying for his MSc in agroforestry and soil management at National University of Rwanda (This MSc is offered in collaboration with Wageningen Agricultural University of The Netherlands).

He has participated in the international postgraduate course in participatory planning, monitoring and evaluation at international agricultural centre (IAC) in Wageningen, The Netherlands, with internship of one week at the Parc Naturel de Pays des Collines in Wallonie-Belgium. He has also been on study tours in Uganda (Masaka) and Kenya (Kisumu).

He has worked for Vi-Agroforestry (a Swedish NGO), World Vision and for an international rescue committee. He can read, write and speak English, French, Kinyarwanda and Mahavu (the local language spoken in Nkombo Island). In his spare time, Celestin likes listening to music and reading.

He can be contacted at: Master Program of Agroforestry and Soil Management, Faculty of Agriculture, National University of Rwanda; or, P.O. Box 78 Byumba. Rwanda. Mobile: +250 088 96 315

Christina Hakopian, National Representative for Armenia, chakopian@ysu.am

Christina Hakopian graduated from the Faculty of Geography, Yerevan State University 1996, specializing in Physical Geography. Since 1996, she has worked at the Faculty of Geography, Yerevan State University lecturing in a number of courses at the university as well as supervising research papers and field works. Ms. Hakopian's research interests are in Environmental Studies, Hydroecology and Hydrobiology, Conservation of Water Resources, Landscape Ecology, Common Ecology and Biogeography. She has participated in a number of national and international conferences and other scientific events. She is a member of a several international societies and organizations, for example IGU, ESEH and others. Ms. Hakopian is the Executive President of the NGO, International Scientific-Research Centre on Water, Climate and Recreational Resources.

MEMBERS' FORUM

News from friends

▲ Samran

A short piece for inclusion in WASWC News: Three Irish agronomists recently held a briefing for the Irish Department of Foreign Affairs in Dublin on April 5, 2007 on Conservation Agriculture (CA) practices appropriate for developing countries.

Fintan Scanlan (FAO), Patrick Wall (CIMMYT) and John Geraghty (Consultant and National Representative for WASWC) gave briefings on international developments in CA, international research findings and practical benefits resulting from CA adoption in developing countries. Also highlighted was the importance of promoting and encouraging CA adoption in order to realize the primary objectives set out in The Millennium Development Goals of the United Nations.

Officers attended from Irish Aid, the overseas development section of the Irish Department of Foreign Affairs, together with representatives of Irish NGOs working in developing countries, primarily in Africa. It is hoped that further collaboration on CA project development will see sustainable soil and water management practices implemented in all future Irish-supported initiatives.

Picture from left-right: Fintan Scanlan (FAO), John Geraghty (consultant and WASWC), Patrick Wall (CIMMYT) and Garvan McCann (Senior Development Specialist with Irish Aid)

John Geraghty (info@jgeraghtyconsulting.com)
Geraghty Consulting, Kilsheelan, Clonmel, Co. Tipperary, IRELAND
Tel: +353 (0) 52 33202; Fax: +353 (0) 52 33203; Mobile: +353 (0) 86 811 20 60

▲ Dear Dr Samran,

Let me thank you for your messages about new publications on soil and water conservation issues. I have been receiving your messages for a long time and would like to be further informed about new publications, as our Department in particular and the University where I teach in general are very much interested in the innovations and new environmental technologies concerning soil and water security and conservation.

However at this point I am very much concerned in building new contacts or in forming a network of academicians and practitioners working in the field of soil and water conservation. Could you please advise me if there is any possibility of mutually succeeding cooperation between your organization and our university.

Let me offer just a couple of words about us. I represent the Department of Environmental Economics of the Armenian State University of Economics. We teach and prepare specialists in the field of Environmental Economics, Soil Economics, Water Resources Management and related disciplines. We are highly interested in bringing up-to-date knowledge and education to our students and researchers and are looking for new opportunities for cooperation.

Thank you in advance and looking forward to hearing from you soon.

With best regards,

Suren Gevorkyan
Department of Environmental Economics, Armenian State University of Economics,
Yerevan, Armenia. Phone: + 374 10 58 97 42; fax: + 374 10 58 04 03 surengev@yahoo.com

▲ Hello Samran,

I appreciate seeing the photos now available via the WASWC website and commend all who are responsible for getting this up and running. I have only one wish about them. Though there may be a general reluctance to offer photos of degraded landscapes in developing countries, there is a need for these to help those of us trying to convince reluctant bureaucrats in Aid agencies in the west that soil erosion is a serious issue that holds back advances in crop productivity in some areas and that investing in soil conservation programs and research is significant. Photos of low cost soil conservation techniques adapted from local knowledge would also be helpful in this regard.

Anything you can do to help will be appreciated.

Dave Cressman drcressman@rogers.com

▲ Hello Samran,

Greetings from Himalayas.

Great to find your email contact. Dr Vir Singh (a regular contributor to the column Members' Voices) is an old friend of mine and great philosopher. How is your life going on?

Tej Partap (a Wocateer since 1999 when he was an ICIMOD scientist)
Vice Chancellor
CSK HIMACHAL AGRICULTURE UNIVERSITY, PALAMPUR- 17606 India TEL: 91 1894 230521
vc@hillagric.org; preyee52@gmail.com

▲ Dear Samran,

I am now Chief Scientific Officer of the Soil Research Development Institute (SRDI) – the last technical post of our Institute (before the directorship).

I do appreciate your support.

J.U. Shoaib, Bangladesh shoaibju@yahoo.com

▲ Dear Samran,

How are you my dear? You will be glad to hear that we are implementing a project titled "Rehabilitation of SIDR affected Sundarban stakeholders" in cooperation with WWF-Italy and these days I am busy at the field so no much e-mail communication. Sorry!

MANY THANKS for the newsletter.

Mowdudur Rahman ccec_bd@khulna.bangla.net
Director, Centre for Coastal Environmental Conservation
House # 93, Road # 2, Sonadanga R/A, Khulna-9000, Bangladesh
Tel: 88 041 810982; Cell: 01712995180
ccec_bd@khulna.bangla.net; mowdud_ccec@yahoo.com

▲ Dear Past President Samran SOMBATPANIT, Good day!

I am happy to write to you and I thank you very much for your kindness in sending me all these interesting hot news! I shall pay into your bank my fee of membership and my colleague's fee too. My colleague's name is Prof Jean Chrisostôme RANDRIAMBOAVONJY. He is also a specialist in Soil Science and Soil and Water Conservation. His mail is: jc.randriamboavonjy@simicro.mg

We are both Professors in the Superior School of Agronomic Sciences, Water and Forestry Department at the University of ANTANANARIVO.

I am happy to inform you that some colleagues and I have founded an Association for Soil and Water Conservation (AMEGES) in Madagascar, which will become a member of WASWC. Our President is Professor Lilia RABEHARISOA. She will write to you and she will pay the fees for the association. I am also a member of this association. Her email address is: lrabehar@refer.mg

Marie Antoinette RAZAFINDRAKOTO, olala_jolimo@yahoo.fr

Ed: Members, and especially office-bearers, please see if your institution can join WASWC, as the Madagascans have done above. This helps us in many ways. Many thanks for that.

▲ From John Liu, EARTH'S HOPE Project http://earthshope.updatelog.com/projects/1075085 and www.eempc.org, johnliu@eemp.org

Dear Colleagues:

Greetings from Nairobi. I have been invited by the United Nations Habitat to Nairobi. Initially I participated in a preparatory meeting concerning media productions from slums for the World Urban Forum 4, to be held in Nanjing in October 2008.

It was a revelation to me to visit the world's largest slum, Kibera, and to see that when millions of people can no longer survive in the countryside they move into cities and live in the slums.

While at the UN headquarters in Nairobi I gave a presentation to Steve Jackson of the audio-visual department of UNEP. He has requested that I stay in Nairobi for two extra days and meet and present to other officials. Steve's goal is for UNEP to partner with EARTH'S HOPE and to assist with fundraising in support of the presentations worldwide, further documentation, film completion and worldwide broadcast. Since EARTH'S HOPE is closely in line with UNEP's mandate I am very optimistic about this potential partnership.

I hope to report next that UNEP has become a partner in EARTH'S HOPE, and exactly what that will mean in terms of support.

John Liu

▲ Dear Samran,

I have now finalized the book review (Soil Erosion and Conservation) I sent you in draft form yesterday, which you are free to edit in any way. By the way, I have been giving copies of Prof. Morgan's text as prizes to honors students completing courses hosted by the Asian-Pacific Institute of Soil-Bioengineering (APISBE) in India, I think that much of his work. I recently received a note from Jordi Camps Soler in Spain, also complimentary of Morgan's text. Jordi managed the conference IECA held in Spain in 1996, and is a past IECA Board Member. In

communicating with colleagues here in the US, many are familiar with Morgan's work. I felt honored to be asked to write this review, and inadequate to the task, but gave it my best.

John W. Peterson, PE, CPESC
President/CEO, KEMPS Consultants, Inc.
Consultants in natural resources public policy, water resources, erosion and sediment control.
9304 Lundy Court, Burke, VA 22015-3431, USA jwpeterson@cox.net

▲ Dear Ecoagriculture Partners,

Today, May 22, is International Biodiversity Day. International Biodiversity Day gives us an opportunity to reflect on the importance of our planet's biological diversity and reaffirm our commitment to protecting it and using it sustainably. It also reminds us that we are a global community of practitioners, researchers and policymakers who can be more effective in reaching our conservation, agricultural and livelihood goals by working in collaboration with each other.

The focus of this year's International Biodiversity Day is Biodiversity and Climate Change, a particularly timely theme. Biodiversity and climate are hugely influenced by agricultural and rural development, and we must find ways of linking these through action, research and policy-making to the larger mission of securing our environment for the future. Here we bring you a round-up of biodiversity-related organizations, publications and special events with the aim of encouraging the ecoagriculture community to explore new partnerships for achieving your individual goals.

Sara J. Scherr, President
Ecoagriculture Partners sscherr@ecoagriculturepartners.org

International Panel on Climate Change 2007 Report

Worried about biodiversity loss? The International Panel on Climate Change just gave us a lot more to worry about. In a seminal report on the impacts on climate change, the scientists outline how climate change affects ecosystems and species. In short, the report concludes that 30% of species face an increased risk of extinction if temperatures rise by 2?C. Half of all species are already altering their behavior or shifting their ranges in response to global warming, and a quarter of the world's coral reefs has died as a result of warming water. The impacts of climate change will not be evenly distributed: A rising sea level mainly threatens low islands and the crowded river deltas of southern Asia. Shifting rain patterns would halve crop yields in Africa and expose up to 250 million people to water shortages. All over, extreme weather events will become more frequent. The Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) summarizes the current knowledge on and the expected future impacts of climate change, and examines various methods of response to this phenomenon.
Read the full report at: www.ipcc.ch. Source: Countdown 2010

▲ From Godert van Lynden of ISRIC, the Netherlands, WOCAT-L Moderator

Dear readers,

One obvious question that could (and should!) be posed when dealing with Soil and Water Conservation (SWC) and Sustainable Land Management (SLM) efforts across the globe is: How much money is actually spent on SWC / SLM per year?

The question seems obvious, but the answer apparently isn't, judging from the amount of data available. Although often statements are made like 'millions (or billions) of dollars spent in the fight against land degradation' to justify projects on land degradation or SWC, it's amazingly difficult to find hard figures on a global scale, and even on a national scale.

Hence our appeal to you herewith: Do you have, or know of, any financial figures that would give us an idea of the order of magnitude of global spending on SWC / SLM? We do not need precise figures, no decimals, and if you only have figures at the national level, that would be a great start.

We look forward to a massive and positive response! Thanks in advance and best regards

Godert van Lynden (godert.vanlynden@wur.nl)

What members say about the WASWC Newsletter

▲ Dear all

It is so far so good to get the newsletter. It makes a difference as my extensionists seriously use it in their day-to-day trainings. Thank you

Mwadhini O. Myanza mwadhini@yahoo.co.uk
IRTECO, Tanzania

▲ **Midsummer Greetings (for June 2007)**

Dear Samran,

Thank you for these greetings, but down here in New Zealand we are suffering blizzard conditions in the south of the country (the first time in New Zealand that a weather forecast has ever used the term blizzard), and storm force winds in many other regions. For us it is mid-winter and not very nice at that!

I do enjoy reading the newsletter and as a result of your previous one, I made the effort to join up as a paid member. Keep up the good work.

Keith Betteridge keith.betteridge@agresearch.co.nz
Agresearch Grasslands, Private Bag 11008, Palmerston North, New Zealand.
Phone 64 6 351 8053, Fax 64 6 351 8032

What members say about MY CHINA DIARY (http://waswc.soil.gd.cn/)

▲ Dear Samran,

Thank you for sharing your diary with me and your other friends in China. It sounds nice and I will read the details later.

Dandan, China

▲ Dear Samran,

Thanks for your China diary which takes me to a colorful world. Meanwhile, it reminds me of the unforgettable trip in Jinggangshan when I read your story. Your wonderful description of the traveling to places in China touches me a lot. Hope to learn more from you both the attitude and the knowledge. Furthermore, your excellent English offers me a great opportunity to improve myself. I am looking forward to your more help. I am expecting our next meeting soon.

Charli, China

▲ Dear Dr Samran,

Thank you for sharing your travelogue with me. I enjoyed reading it. I felt as if I was traveling with you!

Normita, Thailand

▲ Dear Dr Sombatpanit,

Hope you are in good health and humor with your family.

Thank you very much for forwarding your tour experience (China). I always enjoy and learn from your reports. You have described your real time experience in such a way that everybody (all age groups) would like to read. Really you have provided a wealth of information.

I suggest you to compile all your travel experiences in a book to serve as a tourist technical guide and benefit the resource conservationists.

Mishra, PK, India

▲ Dear Samran,

I wish the world and the cosmos are up to your best hopes. Wonder, in fact, lies in the eyes of those who wish to see wonders around, who contribute to wonders. Feeling one is ordinary is feeling great. It is Gandhian ideology. An ordinary is wonderful in real sense. The cosmos, the world, the nature, the life in totality, the humanity are felt to be in perfect unity and harmony by the most ordinary.

Life on Earth combats cosmic entropy and thus contributes to put the whole cosmos in balance. This balance is the beauty of the cosmos. Those who contribute to enhance life on Earth really contribute to the balance of the cosmos and help preserve the beauty of our cosmos. You are precisely doing that, dear Samran. Congrats.

My daughter in Canada sent me some of the unique things about the places she visited. I forwarded her your MY CHINA DIARY for her inspiration.

I hope you will enjoy a feast of all wonders of the world, of the cosmos, Samran.

Vir Singh, India

▲ Dear Samran,

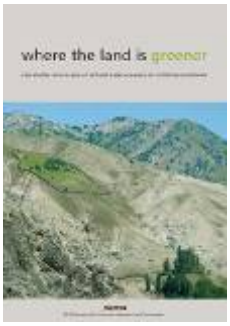
Congratulations to your successful trip and delightful China Diary. WASWC could not have wished for a better Coordinator and Ambassador. No doubt WASWC is one of the organizations which is most successful in reaching towards developing countries and spreading the important soil and water conservation messages. China has certainly changed since my first trip there some 25 years ago. But I also suggest you read on Dust Storms in China and Mongolia in Science 317, p. 314-316 (July 20, 2007) on the efforts exerted to tame them, where 4 million km^2 were degraded.

Dan Yaalon
Prof. (emer.) Dan H. Yaalon
Institute of Earth Sciences, Hebrew University Givat Ram Campus
Jerusalem 91904, Israel
Fax: 972-2-5662581 or 02-5704411; yaalon@vms.huji.ac.il

What members say about WOCAT Overview book

Where the land is greener (www.wocat.net)

▲ Dear Samran,



I extend my sincere thanks for sending me a copy of WOCAT book on 'Where the land is greener'. I have gone through the contents of the book. Before offering my comments, I congratulate you and the members of the team for the commendable job which they have done.

The World Overview of Conservation Approaches and Technologies (WOCAT) has brought out this technical publication, which consists mainly of 42 case studies of Soil and Water Conservation initiatives worldwide.

Moreover their case studies represent 23 countries in six continents. Good sustainable land management is the key to effective soil and water conservation. Therefore, acceptance of the new soil and water conservation approach will depend on location-specific, economically viable initiatives acceptable to farmers and with greater emphasis on micro-watershed management in rain-fed areas. Forest conservation and management programs, which are more people-oriented for biodiversity and ecology, also need due consideration. Post-harvest processing and value-addition technologies need to be devised for better acceptance, and the solar and wind energy resources in the region need to be harnessed to lessen dependence on conventional sources of energy. Sometimes, glacier/snow-melt harvest technologies can be promoted to augment water resources.

The comprehensive analyses of the case studies may be more useful for researchers, planners, implementing agencies, policy-makers, technocrats and other stakeholders. The efforts made by WOCAT to publish this

compilation are useful and the lessons learnt, with technologies and supporting approaches, will help in sustainable management of land and other natural resources, livelihood support and environmental protection.

Dr Suraj Bhan (bhan_suraj2001@yahoo.com)
President, Soil Conservation Society of India (SCSI)

▲ Dear Samran,
Thank you very much for all you do for us WASWC members; you are very much admired. Regarding the WOCAT, as I have probably mentioned to you (in mail or verbally) I have been using WOCAT for sometime, in a module I teach here at ITC on desertification. On several occasions (most recently in Dubai), in conferences, workshops...etc I have referred to it as an example that others should follow. It is a very good reference book for everyone involved in landscape ecology. What disappointed me very much is that no case from Iran (Persians being the pioneer in water management) was introduced. For me it is 30 years since I left Iran, but the research I did there (some 15 years ago) led to some publications, among others one on traditional irrigation water harvesting. See: Farshad, A. and Zinck, J.A. 1998. Traditional irrigation water harvesting and management in semi-arid western Iran: a case study of the Hamadan region. Water International, 23: 146-154.

Abbas Farshad, ITC, Enschede, The Netherlands (farshad@itc.nl)

▲ Thank you for the WOCAT book. It is very interesting for us. It demonstrates the great importance of site specificity in soil development, management and conservation, as well as enabling us to compare soil-concerned problems in different ecological and economical conditions.

Raimo Kölli, Estonia (raimo.kolli@emu.ee)

▲ The book Where the Land is Greener very well describes the success stories of adopted SWC techniques in different parts of the globe. It is a valuable asset with good photographs and illustrations, which makes it more legible and understandable. The mix of indigenous techniques and their refinement on scientific grounds and also some modern approaches are well described for land management.

Every technology is related to physiography, climate and environment apart from land uses and most appropriately with cost analysis, which makes it more understandable and can be evaluated for site-specific adoption. Some practices look new and feasible for my area of study, such as the trash lines adopted in Uganda in hilly areas. Also enclosing degraded lands through live fencing for their rehabilitation can be quite effective.

There are some indigenous practices being adopted in the foothills regions of Shivaliks in North India, including soil mulching, pebble mulching and stone filter bunds. These are refined on a scientific basis and are performing well in gently to moderately slopping lands.

The book is very informative and a good compilation for land and water management in drought-prone areas. I have included some practices of interest for our region in the soil and water conservation course at under graduate level in my university, and I hope that I will get an opportunity to evaluate these practices in our foothill regions for adoption amongst the farming community.

I congratulate Editors: Drs Hanspeter Liniger and William Critchley and WOCAT for the compilation and publication of the book.

I hope the book will surely help in greening degraded lands, if the techniques it describes are adopted and practiced in a participatory mode.

Sanjay Arora, India (aroraspau@yahoo.co.in)

▲ Dear Drs Samran and Hanspeter,

I had an overview of the book during the last couple of days. I really found the book a storehouse of so many success stories and going through these a person starts believing that anything is possible on this earth if we desire so. Taking the landowners/landusers along with you for the implementation of the soil conservation technologies is a must for ensuring their success. I strongly believe that the book promises to provide not only a sound knowledge but also an approach towards the successful implementation of the technologies. Particularly the mention of negative results in some case studies also gives a clue to the readers to follow the right approaches in handling the degraded lands. Moreover, the case studies discussed from a wide range of places differing in climate, soil and socio-economic conditions, lead us to use these approaches to manage our own degraded lands.

I congratulate the editors and officials of WOCAT for coming out with such a wonderful wealth of technologies and the approaches to implement these. Thanks are due to you, Dr Samran and Dr Hanspeter for choosing me to

receive this book and I plan to carry out land management projects in the foothills of the Lower Shiwaliks (Lower Himalayas region). Thanks for this precious gift.

Dr Surinder S Kukal
Professor of Soil Conservation and National Representative, World Association of Soil and Water Conservation
Department of Soils, Punjab Agricultural University, Ludhiana-141 004, INDIA
Phone: 91-9872777626 Fax: 91-161-2400945 sskukal@rediffmail.com

News of our members

▲ Ed Skidmore Has Retired

Our long-time member, Dr Edward Skidmore has more than 44 years of service to USDA-ARS and Kansas State University. A dinner was arranged in his honor on December 28, 2007 at the Clarion Hotel, Manhattan, Kansas.

Under Dr Skidmore's leadership the Wind Erosion Research Unit (WERU) has researched soil erosion by wind as it pertains to agricultural production, military lands and air quality. Dr Skidmore plans to continue working as a collaborator on a flexible schedule after his retirement.

Ed was a National Defense Education Act Fellow and received his Ph.D. in Soil Physics from Oklahoma State University in 1963. He joined the ARS-Wind Erosion Research Unit on the campus of Kansas State University in 1963. His research emphasis deals with wind erosion processes, prediction, control and related disciplines. He is the Research Leader for the team developing the Wind Erosion Prediction System. To commemorate the fiftieth anniversary of the Research Unit, he organized an International Symposium on Wind Erosion held at Kansas State

University in June 1997. He has co-directed the College on Soil Physics at the International Centre for Theoretical Physics, Trieste, Italy, from 1983 to the present. Ed is active in several national and international professional societies; has served as journal editor, an elected officer; and has been elected fellow of the American Association for the Advancement of Science; the American Society of Agronomy; the Soil and Water Conservation Society; and the Soil Science Society of America. He has been an Adjunct Prof. of Agronomy at Kansas State University since 1975.

Contact: Edward (Ed) L. Skidmore
Research Leader, Grain Marketing and Production Research Ctr., Wind Erosion Research Unit, 1515 College Avenue, Manhattan, Kansas 66502, USA
edward.skidmore@ars.usda.gov, www.weru.ksu.edu
Phone: (785) 537-5530; FAX: (785) 537-5507

▲ Also our friend PEPE has retired

Dear all,
I am planning on continuing working in land management and soil conservation with emphasis in conservation agriculture. I am interested in/available for any consultancy or project where I could be useful. My permanent address is 714 Burkeway, Dayton, Ohio, OH 45403, USA.

Pepe

JOSÉ R. BENITES
http://www.josebenites.com; jbenitesjump@gmail.com; jbenitesjump@hotmail.com

MEMBERS' CONTRIBUTIONS

Some dates of note

▲ Happy Arbor Day!

The idea for Arbor Day originally came from a Nebraska pioneer, J. Sterling Morton, who wished to revegetate his new homestead on the treeless plain. In 1872, Morton proposed a tree-planting holiday to be called Arbor Day at a meeting of the State Board of Agriculture. It was estimated that more than one million trees were planted in Nebraska on the first Arbor Day. During the 1870s, other states passed legislation to observe Arbor Day, and the tradition began in schools nationwide in 1882.

Today the most common date for the state observances is the last Friday in April, and several U.S. presidents have proclaimed a national Arbor Day on that date. But a number of state Arbor Days are fixed at other times of the year to coincide with the best tree planting weather. www.arborday.org/arborday/history.cfm

▲ International Day of the World's Indigenous People

Message From Mr Koïchiro Matsuura, Director-General Of UNESCO, on the Occasion of the International Day of the World's Indigenous People.

UNESCO, August 9, 2007

Safeguarding intangible heritage, particularly through the transmission of indigenous knowledge systems and cultural expressions, is inextricably linked to issues of land use, natural resource management and tangible heritage conservation. This has been recognized by the UN Permanent Forum on Indigenous Issues, which devoted this year's session in May to the theme of indigenous communities' rights to 'lands, territories and natural resources' – a contentious issue with far-reaching economic and social implications. The various activities spearheaded by UNESCO in areas of cultural landscapes, sacred sites, water and participatory mapping of indigenous cultural resources reflect the Organization's concern for this timely question. Moreover, to date, more than 55 cultural landscapes from some 35 countries are inscribed on UNESCO's World Heritage List.

▲ Global Warming

Dear friends,

On Saturday (July 7, 2007) well over a billion people around the world watched the Live Earth concerts, and heard the call to action against climate change. Will anything come of it? That's down to us.

With seven concerts on seven continents, and the thousands of parties Avaaz members organized all round the world, Live Earth helped launch the Climate Pledge – seven things we all can do against the climate crisis.

It's much more than a petition. It's a personal commitment, a challenge to politicians and corporations to wake up and do the right thing.

So drop everything, go to this link now and sign the Climate Pledge - then tell more friends:

http://www.avaaz.org/en/global_climate_movement/c.php

You can also see pictures of our thousands of grassroots house parties and community events in 125 countries around the world - from China to the USA, Portugal to Peru, ordinary people looking one other in the eye and pledging together. Some 390,000 of us have already pressed the G8 to agree to start negotiating a global climate deal before the end of this year. Now this pledge sets a deadline for those talks, and describes how we will do our part.

Here's the text of the pledge. Just imagine what's possible if our friends and millions of others sign it and take action:

I PLEDGE:

1. To demand that my country join an international treaty within the next two years that cuts global warming pollution by 90% in developed countries and by more than half worldwide in time for the next generation to inherit a healthy earth;
2. To take personal action to help solve the climate crisis by reducing my own CO2 pollution as much as I can and offsetting the rest to become 'carbon neutral,'
3. To fight for a moratorium on the construction of any new generating facility that burns coal without the capacity to safely trap and store the CO2;
4. To work for a dramatic increase in the energy efficiency of my home, workplace, school, place of worship, and means of transportation;
5. To fight for laws and policies that expand the use of renewable energy sources and reduce dependence on oil and coal;
6. To plant new trees and to join with others in preserving and protecting forests; and
7. To buy from businesses and support leaders who share my commitment to solving the climate crisis and building a sustainable, just, and prosperous world for the 21st century.

So add your name now and send it to friends - this week we could reach a million or more, then get started on the rest of the world! http://www.avaaz.org/en/global_climate_movement/c.php

Let's turn the moment into an unstoppable global movement. The climate crisis demands nothing less.

With hope, Paul, Graziela, Ricken, Ben, Hannah, Iain, Galit, and the entire Avaaz team

▲ Presentation on soil and water conservation in Taiwan, China

Recently Prof Su-Chin Chen visited Dalian University of Technology (DUT) in Dalian, Liaoning Province, China, and gave a wonderful presentation on soil and water conservation in Taiwan, China.

On Apr. 2, 2007, Professor Shi-guo Xu, director of the Institute of Environmental and Water Resources, accompanied Prof Chen in a visit to the State Key Laboratory of Coastal and Offshore Engineering and other laboratories in the School of Civil and Hydraulic Engineering. Prof Chen was surprised by and praised highly the advanced experimental devices and quick development of hydraulic engineering technology in DUT. The presentation was held in the Multiple Purpose Room, Laboratory Building 3#. About 100 attended the lecture, including graduate students and professors from different schools of DUT.

Prof Chen said that in the initial stages of soil and water conservation in Taiwan, China, attention was mostly paid to control of soil erosion and conservation of soil fertility for mountain disaster prevention and the development of agriculture.

However, after the economic take-off in the 1970s, it became more and more important to enforce soil and water conservation law since agriculture was transferred to sloping plots and large-scale mechanized production

replaced the small-scale peasant mode of farming. In the past ten years, eco-conservation, natural disaster prevention and countryside development have played a leading role in soil and water conservation in Taiwan. Recently high-tech emergency monitoring system and strict management concepts have become the new tools for soil and water conservation.

Dr Su-Chin Chen, a professor at National Chung-Hsing University, has studied soil and water conservation in Taiwan for decades. He is the author of more than 100 scientific papers and the referee of several journals.

From upper left: Head of School of the Civil and Hydraulic Engineering, Prof Hong-nan Li (left), met Prof Chen (middle); Prof Shi-guo Xu (right) and Prof Jing Zhou (left), accompanied Professor Chen (center) in a visit to the State Key Laboratory of Coastal and Offshore Engineering and other laboratories in the School of Civil and Hydraulic Engineering; Prof Chen gave an interesting presentation on soil and water conservation in Taiwan, China; A student asking questions; Google map showing location of Dalian City on the peninsula (east) in relation to Beijing (west).

- Xiang-zhou Xu (xzxu@dlut.edu.cn) & Ji-hui Gao

▲ Menachem's USLE model

(Continued from issue 21(4). For more information, contact Menachem Agassi, NR for Israel, at yehu8666@gmail.com)

The contribution of the USLE model to the development of soil erosion studies and development of SCM is unquestionable. While the model logically presents the factors affecting soil erosion: rainfall properties; soil properties; topography; and management, I would like to add another factor – the angle of incidence between raindrops and the sloping soil surface. I am happy to learn that this important factor is being researched by Donald Gabriel and his colleagues in Ghent University.

Recently, however, the USLE model has become an obstacle, and its advantages are overshadowed by its disadvantages. It is well accepted that the use of this model in regions for which it was not designed has brought invalid results. Also, soil erosion data for this model was collected using a particular methodology, while in other field studies different methodologies provide data that cannot be used in the same way. The location of the field plots and the measuring devices used affect the results as well. It is important, therefore, to carefully define the purpose of field studies and only then to decide where to install measuring devices.

I have often listened to scientists, usually young ones, who were annoyed and confused by the results they obtained using the USLE model. When I ask, "So why do you keep using it?" I usually do not get an answer. For this reason I consider USLE to be an obstacle. I am afraid that it has brought about a fixation and stagnation in the way of thinking. I agree with David Sanders who postulated that "many young researchers are making the mistake of building on old models without questioning them".

Our understanding of, and ability to quantify, the contribution of each of the soil properties to the soil erodibility factor have not significantly improved. The chemo-physical properties of the soil and their decisive effect on aggregate stability, as presented in numerous studies, are usually not taken into consideration. Some of these properties are: clay mineral types and content, soil sodicity, the ionic strength of the soil solution, and Al and Fe oxide content. Very few studies dealing with soil erosion present the chemo-physical properties of soils. I believe that relying on soil texture for erodibility evaluation by itself is misleading. I know of two soils, very different in their texture, but very similar in soil erosion rates, for which all the rest of the USLE components are rather similar.

A quantitative method for measuring the content of each clay mineral in the soil is still lacking. It is also amazing that we still do not have an instrument to measure rainfall kinetic energy in situ. These two tools are essential for the study of the effects of soil and rainfall properties on soil erosion.

The most problematic component of the USLE is K and soil erodibility. K is negatively correlated to aggregate stability and they are both dependant on the soil characteristics. However, there is no agreement between the scientists on how to measure aggregate stability. The final infiltration rate (FIR) of the soil, or equilibrium rate, should also be negatively correlated with K, and directly correlated to aggregate stability, as FIR, K and aggregate stability are all dependant on the soil characteristics (Ben-Hur and Agassi, 1997). FIR is rather easy to measure using laboratory or field rainfall simulators. The results are reliable, reproducible and similar for laboratory and field rainfall simulators (Agassi, 1985). I suggest the replacement of K with 1/FIR. As long as FIR is not lower than 1mm h-1, then 1/FIR will range between 1 and asymptotically approaching zero. Usually 1/FIR will range between 0.05 and 0.5. For other soil erosion models FIR may also replace K with the necessary modifications.

As I have not measured soil erosion since the eighties, I cannot test this approach myself. However, I suggest the testing of this approach and the comparison of the calculated soil erosion rates with the measured ones. In the laboratory, a rainfall simulator with kinetic energy of approximately 20 j per mm of rainfall per 1 m^2 should be used with deionized water to measure FIR. Air dried soil samples, 0-10 mm, should be sieved in the field from the 0-5 cm soil layer and packed in the soil boxes with at least four replications. The soil samples should not be pre-wetted. The rainfall should last until FIR is reached. Then the rain should be stopped and started again after 24 hours. The consecutive storm should last until FIR is reached again, this will usually be at a somewhat lower level than the former FIR. The boxes should be rained again 72 hours after the second rain with the same procedure. The three FIR levels represent the common soil surface conditions in the field during the rainy season: A: first rainfall on dry un-crusted soil after seedbed preparation; B: crusted wet soil surface; and C: crusted dry soil surface with visible fissures. Agassi (1985) postulated that after completion of the crusting process (and FIR was achieved) plant canopy development would not change the FIR. FIR measurements should be very precise at the 1-4 mm h^{-1} range, two decimal points are recommended.

The FIR scenarios (A, B, C) should be weighted before use in the model in accordance to the climatic zones where they were measured.

Climatic zones		FIR scenarios		
		*A%	B%	C%
Mediterranean, rain only in the cold season		10	25	65
	Hot season	15	30	55

FEATURES

Highlights: Climate Change (CC) and Carbon Issues (CI)

▲Carbon Offset your Summer Vacation

Many of us think green around our homes and businesses, reducing our carbon footprints as much as we can. However, what about when we go on vacation? All that green thinking need not go out the airplane window.

Conservation.org provides carbon calculators to help you figure out how much carbon your vacation will emit. Then you are given the option to purchase carbon credits.

SusTravel offers a different kind of carbon calculator. Based on the miles of your flight, this calculator gives you suggestions on how to offset the carbon emissions of your trip through your own actions.

Many travel sites and airlines are now offering travelers the option to buy carbon offsets when they purchase their plane tickets. Expedia, Air Canada, and Continental Airlines offer voluntary carbon offset options for green-oriented passengers.

http://www.gnmparents.com/carbon-offsetting-the-family-vacation/

▲ Congress Learns of Agriculture's Role in Climate Change Mitigation

On 30 May 2007, almost fifty Congressional staffers, members of the media including National Public Radio, and representatives of environmental, scientific, natural resource and governmental organizations interested in climate change, attended a House Soils Caucus educational briefing entitled "Carbon Farming: American Opportunities to Manage Climate Change". It was organized to highlight the positive role that agriculture has to play in mitigating climate change through the sequestration of carbon.

The briefing was particularly timely given the many climate change bills that have recently been introduced into Congress which fail to acknowledge this important contribution. The hour-long educational briefing was sponsored by the Soil Science Society of America and the Council on Food, Agricultural and Resource Economics.

Presenters included experts in soil, carbon research, farming, and economics including:

- Dr Chuck Rice, a professor at Kansas State University, explained the mechanism behind soil carbon sequestration with an emphasis on agro-ecosystems;
- Dr Rattan Lal, Carbon Management & Sequestration Center Director, Ohio State University and Soil Science Society of America President, focused his comments on the potential of terrestrial systems to sequester carbon;
- Mr Merle Holle, a no-till farmer from the 1st Congressional district of Kansas, offered his experiences with soil carbon management, and highlighted opportunities for farmers to participate in carbon trading; and
- Dr Brent Sohngen, an agricultural economist at Ohio State University, weighed the economic feasibility of adopting policies to encourage improved soil carbon management and carbon sequestration.

Following the four presentations, participants asked a range of questions focused on permanence, technologies needed in developing countries to ensure agriculture sequesters carbon, best policies to confirm and monitor farming practices which sequester carbon, the value of BMPs to farmers beyond sequestration, and possible competition between organic and no-till farming.

▲ Not all are GHG Believers from cloustonenergy@aol.com

Dear Fellows and Friends:
From a Newsletter, TCS Daily, was the following report of a small, but vocal, group of skeptics. A good Scientist ought to be an open-minded Skeptic, after all a good question makes for a good research project. I think of the Ice Man of Europe who became exposed because of the melting of snow and ice that covered him for hundreds of years. I think of the ice core project that did gas analysis which showed that greenhouse gas has increased by about 25% over the past hundred plus years which is related to the industrial expansion of Europe and North America, increased population and an increase in the human footprint.

Sid. (Abdallahi) Clouston

In Germany, while still in its infancy, EIKE has been established (Europ?isches Institut f?r Klima und Energie, Jena: http://www.eike-klima-energie.eu/). Moreover, a group of German climate skeptics has written something which could be regarded as a consensus among many climate skeptics: Climate Manifest of Heiligenroth (See: http://www.klimamanifest-von-heiligenroth.de/klimaman-e.html).
Furthermore, there are many climate skeptical websites in Germany. For those who like visual thrills and possess a basic command of the German language, Konrad Fischer's website might be fun: 'Videos and films concerning the greenhouse swindle and climate terror' (Ref: http://www.konrad-fischer-info.de/7video.htm).

Nonetheless, the Anthropogenic Global Warming (AGW) belief is still overwhelming in Germany. In newspapers and on TV, Stefan Rahmstorf, the German climate Torquemada - comparable to Al Gore in the US, George Monbiot in the UK and David Suzuki in Canada - is constantly attacking critics of the AGW hypothesis. Contrary to good scientific practice, he lavishly lards his interventions with ad hominem attacks and insinuations that his opponents lack qualifications and/or are being paid by industry. Although decades of pro AGW indoctrination has left its mark on the German psyche, even true believers are becoming fed up with him.

In Sweden, despite its high standards of political correctness, there is a very vocal group of climate skeptics, which regularly publish in 'Elbranchen'. In September 2006, they organized a seminar: 'Global Warming: Scientific Controversies in Climate Variability'. This meeting was hosted by the Royal Technical High School in Stockholm and chaired by its rector, Peter Stilbs (http://gamma.physchem.kth.se/~climate/). Even Swedish TV has aired a debate on the issue. For those who have some command of the Scandinavian languages, see: http://webbtv.axess.se/index.aspx?id=229: Veckans Debatt: Global uppvärming: Vad säger vetenskapen?

▲ Dear Fellows and Friends:

There are different ways to sequester, or offset, the atmosphere's carbon. One program is outlined below. It may serve as a model for other programs.

Sid. (Abdallahi) Clouston

www.climatetrust.org

Oregon Power Plant Offset Program: experts implementing The Oregon Standard

In 1997, Oregon became the first state in the nation to adopt legislation regulating greenhouse gases. The law requires new Oregon power plants (and other large energy facilities) to offset a significant portion of their carbon dioxide emissions. While emitters may choose to offset the emissions through their own investments, all of the regulated power plants, to date, have utilized the Climate Trust to achieve compliance.

The Climate Trust invests the offset funds it receives from the Oregon Standard regulated power plants into high-quality projects that reduce atmospheric carbon dioxide levels. Over 1.5 million metric tons of carbon dioxide have been offset, to date, through The Climate Trust's Oregon Power Plant Offset Program.

▲ EarthTalk: What Exactly is the 'Greenhouse Effect'?

/top_stories/article/640Dear EarthTalk:
What exactly is the "greenhouse effect" and how is it a bad thing?
Suanne Gladstone, Queensland, Australia (December 22, 2004)

The "greenhouse effect" occurs naturally when heat from the sun enters our atmosphere but cannot escape because it is blocked by water vapor, carbon dioxide and other airborne elements, thereby causing a warming of the Earth. Without a natural greenhouse effect, the average temperature of the Earth would be about zero degrees Fahrenheit instead of its present 57 degrees Fahrenheit.

But increasing amounts of pollutants from manufacturing and power plants, agricultural activities, automobiles and other sources that burn fossil fuels have led to an excessive build-up in the Earth's atmosphere of greenhouse gases such as carbon dioxide, nitrous oxides and methane. Scientists believe that this build-up is exaggerating the naturally occurring greenhouse effect and is to blame for the average temperature on Earth rising by more than one degree over the last century.

The International Panel on Climate Change, an international group of climatologists, predicts that Earth's temperature will continue to rise from two to 10 degrees Fahrenheit during this century as a result of human industrial activity. According to the Sierra Club, the likely effects of this global warming include the melting of massive icebergs and glaciers, sea level rise, accelerated coastal erosion, more (and more severe) hurricanes, the spread of infectious diseases and widespread species extinctions, among other problems.

To address this crisis, 127 countries have agreed on mandatory curbs on greenhouse gas emissions via an international treaty set to go into effect in 2005 called the Kyoto Protocol. The treaty is so-named because it was the outcome of a meeting held in Kyoto, Japan in 1997. Under the Protocol, the United States is supposed to cut its greenhouse gas emissions by seven percent by the period between 2008 and 2012. With four percent of the world's population, the U.S. currently accounts for about 25 percent of the Earth's greenhouse gas emissions. The U.S., however, has refused to sign this United Nations-backed agreement, arguing that U.S. compliance with the terms of the treaty would harm the American economy.

However, according to the Natural Resources Defense Council (NRDC), some of the U.S. government's own studies should quell such fears: While industry trade associations have published many misleading claims of economic harm, says NRDC, two comprehensive government analyses have shown that it is possible to reduce greenhouse pollution to levels called for in the Kyoto agreement without harming the U.S. economy. Instead, the U.S. is pushing for technological approaches that would remove carbon dioxide from the atmosphere and store it below ground or under water. But environmentalists fear that loading massive mounts of carbon dioxide into the Earth and oceans could wreak ecological havoc in other ways, and doubt that human-induced global warming can be solved by American ingenuity alone.

Submit your question at E/The Environmental Magazine or email us at earthtalk@emagazine.com.

Finance Highlight

Paying farmers to protect the environment?

FAO publishes The State of Food and Agriculture 2007

The Food and Agriculture Organization of the United Nations announces today the release of their annual flagship report, The State of Food and Agriculture 2007: Paying Farmers for Environmental Services. Three individuals, who worked directly on this year's report, are available at your convenience for inquiries and interviews. Their contact information is:

- Dr Gerald Nelson, co-author of the report, a Professor in the Department of Agricultural and Consumer Economics at the University of Illinois, Urbana-Champaign. Cell: 217-390-7888; Office: 217-333-6465; gnelson@uiuc.edu.

- Dr Leslie Lipper, lead author of the report. Senior Environmental Economist, Agricultural and Development Economics Division, FAO. +39 06 5707 5342; Leslie.Lipper@fao.org

- Keith Wiebe, Chief, Comparative Agricultural Development Economics Service, FAO, and a major contributor to the report. +39 06 5705 6624; Keith.Wiebe@fao.org.

Washington and Rome, 15 November 2007 – Carefully targeted payments to farmers in North America and overseas could serve as an approach to protect the environment and to address growing concerns about climate change, biodiversity loss and water supply, FAO said today in its annual publication The State of Food and Agriculture.

The report, however, cautions that payments for environmental services are not the best solution in all situations, and that significant implementation challenges remain in all areas of the world.

"Agriculture employs more people and uses more land and water than any other human activity," said FAO Director-General Jacques Diouf in his foreword to the report. "It has the potential to degrade the Earth's land, water, atmosphere and biological resources – or to enhance them – depending on the decisions made by the more than two billion people whose livelihoods depend directly on crops, livestock, fisheries or forests. Ensuring appropriate incentives for these people is essential."

Population growth, rapid economic development, increasing demand for biofuels and climate change are putting environmental resources under pressure throughout the world. For instance, agriculture is expected to feed a world population that will increase from six to nine billion by 2050.

One of the important reasons for environmental degradation is the perception that many of nature's services are free – no one owns them or is rewarded for them and farmers have little incentive to protect them. In addition, subsidies that encourage the production of marketed goods at the expense of other ecosystem services can aggravate their degradation.

Incentives

Current incentives tend to favor the production of food, fiber, and increasingly, biofuels, but they typically under-value other beneficial services that farmers can provide, such as carbon storage, flood control, clean water provision or biodiversity conservation.

Farmers can provide better environmental outcomes, but they need incentives to do so. Payments for environmental services represent one way of increasing incentives to adopt improved agricultural practices—and even to offset pollution generated in other sectors.

However, "payments may also have adverse impacts on poverty and food security in some cases, should they result in a reduction in demand for agricultural employment or increases in food prices," noted Dr Diouf.

Carbon sink

Farmers will need to play an important role in mitigating the effects of climate change, the FAO report said.

Agriculture plays an important role as a carbon "sink" through sequestering and storing greenhouse gases, especially as carbon in soils, plants and trees. Less deforestation, planting of trees, tillage reduction, soil cover increase and improved grassland management could, for example, lead to the storage of more than two billion metric tons of carbon in around 50 countries, including the US and Canada, between 2003 and 2012.

"Well-designed payments for environmental services are one way to help farmers to change land-use practices and make farming more environmentally friendly," said Leslie Lipper, Senior Environmental Economist. "These are payments for real services farmers can provide, much like farmers are paid for the rice or coffee they produce."

Payment programs

The report says payments can take a variety of forms as voluntary transactions involving farmers, communities, taxpayers, consumers, corporations and governments. They could be direct payments by governments to producers or indirect transfers, such as consumers paying extra for a cup of shade-grown coffee beans.

Hundreds of payment programs for environmental services are currently being implemented around the world, mainly as part of forest conservation initiatives. "But relatively few programs for environmental services have targeted farmers and agricultural lands in developing countries," the report said.

"If properly designed, payment programs for environmental services might also benefit many of the more than one billion poor people in developing countries that live in fragile ecosystems," Lipper said. This requires careful targeting as well as measures to monitor delivery of environmental services.

Food Production Highlight

IRRI finding new ways to feed world amid global warming, Saturday, August 18, 2007

LOS BAÑOS, Laguna (AFP) – On an agricultural research station south of Manila, a group of scientists are battling against time to breed new varieties of rice as global warming threatens one of the world's major sources of food.

According to the International Rice Research Institute (IRRI) more than half the world's 6.6 billion people depend on rice for nourishment.

"Parts of the world will become drier and apparently that's already happening, and some parts will become even wetter," said Moroccan crop physiologist Rachid Serraj.

"But most importantly it's going to shift the rainfall distribution. It's going to become more unpredictable, and that is the problem for rice cultivation," he said.

Chinese scientist Peng Shaobing wraps his paddy fields with tarp and blasts them with cold air from air conditioners.

His colleague, Indian plant geneticist Kumar Singh, grows 2,000 rice varieties inside giant metal cabinets, the seedlings sprouting above styrofoam trays soaked with varying degrees of brine to simulate the seawaters that threaten to engulf rice-growing areas over the next century.

The three IRRI scientists are entrusted with ensuring that the half of mankind who depend on rice will not go hungry as rising temperatures and ocean levels threaten one of the world's most important crops.

The Intergovernmental Panel on Climate Change projects the globe will warm by 0.2 degrees Celsius every 10 years, far higher than the 0.6-degree Celsius rise in the past century, with serious consequences for food production.

IRRI, based in this university town south of the Philippine capital and a vital part of the "Green Revolution" that dramatically raised cereal yields in the 1970s, has gathered top experts to work on "new frontier projects" to meet the threat.

This is apart from more conventional research to further boost yields, make the plants more resistant to pests and disease, and make the grain more palatable.

Rice yields would fall by 10 percent for each one-degree rise in the minimum temperature at night, time spent by the plant for growth processes, said crop physiologist Peng, a pioneer researcher in this field.

Between 1978 and 2003 minimum mean night-time temperatures rose by 1.5 degrees Celsius, suggesting a 15 percent production decline over 28 years, Peng told AFP.

Higher night-time temperatures shorten the growing time for rice. "The yield is reduced because the plant doesn't have enough time to grow," Peng said. "Higher night temperatures also lead to poorer grain quality."

Drought and salinity are already major problems. Twenty-three million hectares, or 18 percent of the world's rice farms, are considered "drought-prone", Serraj said.

A dry spell in hot spots such as eastern India can push up to 15 million rain-fed rice farmers into poverty in a single year, he said. Even in China, demand for water from industry and elsewhere is putting pressure on high-yield irrigated rice grown there, he added.

The two countries account for nearly half the world's rice growing areas.

Next to drought, the influx of saltwater, not only in coastal but also inland farms through careless irrigation practices, is the number-two problem, said Singh.

Some 6.3 percent of the world's soil surface is already considered saline, and global warming or not, the problem affects most of the rice fields of South Asia and Southeast Asia, he told AFP.

Global warming is projected to cause sea levels to rise by between 10 and 85 centimeters (four and 34 inches) over the next century, which would threaten key rice-growing areas in Vietnam, Indonesia, Bangladesh, and India among others.

For the IRRI scientists, the challenge is to produce new breeds and innovate crop management techniques to help farmers meet the triple threat of drought, higher temperatures, and soil salinity, along with the new pests and diseases that will emerge as rice is grown in radically new environments.

Peng said high-yield varieties developed by IRRI seem to have higher tolerance for warmer night-time temperatures. His experiments seek to determine their yields in simulated cooler night temperatures.

Breeding improved varieties, a process that begins at IRRI and other laboratories and involves crossing the desirable genes of the 110,000 varieties at the IRRI gene bank, ends with their dispersal to the farmer end-users.

The process used to take about 15 years, but Singh said it can now be done as fast as six years.

It now takes between 3,000 and 5,000 liters of water to produce one kilogram (2.2 pounds) of rice, but IRRI is trying to breed maize qualities into rice so farmers could also grow them on a dry field.

So which side is winning the race so far, climate change or the scientists? The research is being hampered by a funding crunch that has hit IRRI.

“At this stage, I think it is equal, but if we’re not going to increase our support, we’re going to lose the battle,” Peng said.

Agroforestry Highlight

LAND HUSBANDRY AND SOIL CONSERVATION by **Roland Bunch**

Vegetative technologies such as contour hedgerows (Photo left shows vetiver grass on Guam demonstration farm) have taken precedence over structural technologies in land husbandry during the past 30 years. Photo: Craig Elevitch

The evolution in terminology in the area of land husbandry and soil conservation reflects how attitudes have changed regarding the issues of erosion, crop production, and farmer assistance programs. At first, we talked of soil conservation, pure and simple. When we realized that the water we saved was having more impact on yields than the soil we saved, terminology changed to, "soil and water conservation." In the early 1980s, it became clear that land husbandry had to achieve more than just stop the erosion. Productivity was not going to increase much, nor would farmers become very motivated, if what little topsoil was left was not also improved. So the terminology became, "soil restoration" and "soil recuperation." Later, a movement in Africa began enlarging the concept once again by calling it "land husbandry," including everything a farmer does that conserves or improves the soil (Shaxson). We prefer the term "land husbandry," but do not use it very much because of one fatal flaw – it does not translate very well into many other languages.

The concepts behind the term "land husbandry" are very important. Soil conservation and recuperation should be seen as an integral part of agricultural development, not solely an end unto themselves. That is, we should not be making terraces or hedgerows without looking at the entire farming system, without working on other practices simultaneously, or without analyzing the over-all economic and social balance sheet. Also, soil improvement as an integral part of crop management is more important than any practices designed only to conserve or improve the soil. In other words, soil conservation and recuperation should be a result of good soil use throughout a farming system, not the result of one or more technologies implemented largely for this single purpose.

AN AMBITIOUS GOAL

Land husbandry efforts have been shifting strongly over the last 30 years from structural technologies (e.g. terraces, bunds and ditches) toward vegetative or agronomic technologies (e.g. hedgerows, green manure/cover crops (gm/cc's) and dispersed shade). The economics of land husbandry has become increasingly important. Heavily subsidized structural conservation efforts are very expensive, and many such projects have had more negative than positive impacts over the long term. Fewer and fewer outsiders are willing to finance structural soil conservation.

We can no longer claim that soil conservation is too expensive for small farmers. Increasingly, we are finding soil conservation and recuperation technologies that can pay for themselves within the first year of their application. These include many technologies involving organic matter use, green manure/cover crops (gm/cc's), improved fallows and dispersed trees.

A goal is in view that all agricultural techniques that impact positively on land husbandry should more than pay for themselves within the first year after adoption. This is an ambitious goal - one that requires constantly searching for better technologies. In our experience this goal will accelerate the shift from structural to vegetative technologies.

Farmers are as economically motivated with land husbandry as they are with any other investment. One post five-year study found that farmers developed more labor-intensive land husbandry practices where they had begun growing valuable vegetable crops aimed at good, nearby markets. On the other hand, farmers who only grow subsistence crops or are isolated from good markets generally invest very little in soil quality.

This article is an excerpt from: Bunch, Roland, 2002. Land Husbandry: The Overstory #111, Permanent Agriculture Resources, Holualoa, Hawaii, U.S.A. www.overstory.org, cre@agroforestry.net

Vetiver Highlight

Dick Grimshaw, Chairman, The Vetiver Network (International), 709 Briar Rd., Bellingham, WA 98225, U.S.A.

dickgrimshaw@vetiver.org, http://www.vetiver.org

Google Earth continues to amaze me. Recently I found natural terraces formed from Vetiver plantings in Fiji in the 1950s. 17?22'52.50"S 178?15'5.59"E (John Greenfield's old stamping ground).

Left: Looking for old vetiver hedgerows in the Pacific Islands raises both the need and interest in bringing more focus on mitigating increased erosion and declining fresh water groundwater on many low lying Pacific Islands. ***Right:*** The image at left shows a sediment fan from a catchment of no more than about 4 square miles affecting the coastal waters of Oahu's (Hawaii) windward shore. Most of the sediment is from point source erosion sites such as market gardens, overgrazed farm land, and recreational land terrain vehicles. Mary Wilkowski is setting up a Vetiver Systems company in Hawaii (http://www.vetiversystems.com/index.html) to deal with these sorts of problems. Athena Pratt Soil Conservationist USDA-NRCS. Pago Pago, American Samoa (Athena.Pratt@pb.usda.gov) is working very successfully with a farmer orientated vetiver based soil conservation program.

In the last few months there appears to be a surge of vetiver activity in various parts of the world. In China, the China Vetiver Network (Liyu Xu coordinator) by EED/Germany has started implementing the "Vetiver and Agroforestry Technology for Rural Poverty Alleviation and Natural Resource Protection in Minority Mountains of Guangxi Province". The project will help local farmers develop nearly 50,000 economic trees, 40 mini-irrigation systems and will be planting over 3 million vetiver tillers to conserve natural resources and provide farmers with multiple products and materials. (contact: vetiver@jlonline.com).

Liyu Xu shared some images of a highway embankment near Nanjing that was protected with vetiver in 2004. Three years later (2007), vetiver is very well established, the slope is stable, and native plants are establishing naturally. Liyu reports that the only maintenance required is an annual cutting – the local communities readily do this since they use the grass for fuel and other purposes.

We heard from Ben Mitai (benj_mitai@aprilasia.com), Forestry Training & Development Head for PT RAPP, a pulp & paper company in Riau Province, Sumatra, that the Vetiver System will be a key component of their training program: for the stabilization of roadsides, roadside cuttings, culvert & bridge entrance/exits; to rehabilitate eroded, damaged and degraded areas; toreduce siltation and improve water retention; and prevent future erosion/soil loss, etc. David Booth, coordinator of the Indonesian Vetiver Network (info@eastbalipovertyproject.org) is supporting this initiative.

New vetiver networks are being established in south India (prakashpgopinath@gmail.com) where there is an increased interest in VS, and in Morocco following a successful workshop there last November

(cjuliard@mtds.com). In Kenya James Orwino (Edgerton University) is working with farmers in Nyanza and Taita/Voi areas to introduce VS for soil conservation and river bank stabilization (joowin@yahoo.com). These are just a few of the many vetiver initiatives taking place around the world.

The Vetiver Network (International) has been busy. We have now given specific responsibilities to some of our directors. Paul Truong located in Queensland (truong@uqconnect.net) is responsible for Asia, Dale Rachmeler (TVNI's president) located in Ghana – Sub-Sahara Africa (drachmeler@busac.org), Criss Juliard located in Morocco – Mediterranean and north Africa (cjuliard@mtds.com), and Jim Smyle (located in Texas) – the Americas (millersmyle@earthlink.net). We have established another picture gallery – Vetiver Clients – comprising all the different applications of VS in shortened power point presentation style (http://picasaweb.google.com/VetiverClients) and are starting to work on a country picture gallery. (http://picasaweb.google.com/VETIVERCOUNTRIES). We have established a blog site at: http://vetivernetinternational.blogspot.com/

An excellent new 140 page manual with color images that covers all the major applications of vetiver – "Vetiver System Applications - Technical Reference Manual" by Paul Truong, Tran Tan Van and Elise Pinners is being published in Vietnamese, and will shortly be available online in English. We are having it translated into Mandarin, Spanish and French, and are looking for funds to print the translations in hard copy.

WOCAT Highlights

12th WOCAT Annual Workshop & Steering Meeting, 17 November 2007, the Philippines

The 12th WOCAT Annual Workshop & Steering Meeting (WWSM) was organized 2007 by the "PHILCAT" committee, consisting of several Philippine institutions in accordance with the agreement at the previous meeting in Cape Town (2006) where hosting the meeting was offered by PHILCAT coordinators Romy Labios and late Joe Rondal. The meeting was attended by 42 participants from 20 countries, including three new countries (Mongolia, Nigeria and Togo).

The first day of the meeting, which took place at the Bureau of Soils and Water Management (BSWM) in Manila, was also attended by some additional representatives from Philippines GOs and NGOs as well as representative from corporate business. National presentations were very impressive, especially regarding networking and capitalization through national overview books. At the global level the stimulation and impacts of the WOCAT book "where the land is greener" where highlighted.

Concerning WOCAT's networking, a.o. the collaboration with the LADA and DESIRE projects (through CDE, ISRIC and FAO) and the recent involvement with GEF/UNDP, UNEP and FAO on knowledge management, was mentioned.

The next day the meeting transferred to the quiet and scenic island of Bohol in the southern part of the Philippines. Here the focus of the meeting was on more specific taskforce topics, such as WOCAT's mid/long term

strategy document, a new thorough revision of the questionnaires, mapping (including the insertion of "WOCAses" in Google Earth), development of new on-line databases, and WOCAT as a tool for decision support.

From left: Group work on a specific taskforce; Agricultural diversification at the BSWM/ACIAR SWC project site; Some participants in front of the Chocolate Hills.

Specific global activities foreseen for the coming year are the completion of the revised mapping method and the questionnaire revision, and the implementation of the corresponding changes in the new on-line database system.

The field day included a visit to an ACIAR/BSWM soil conservation project where agricultural diversification was tested, with higher-value crops and various SWC activities. After this, the mysterious and spectacular "Chocolate Hills" of Bohol were visited, followed by a lunch on a floating restaurant on the Loboc River. Finally the trip led to the Ubay Agricultural Research Station in the northern part of the island.

Next years' meeting will be held in Switzerland. Tentative dates are 13-18 October 2008. The full proceedings of the meeting are expected to be ready and posted on the WOCAT Website www.wocat.net by early 2008.

Rima Mekdaschi Studer, CDE, Institute of Geography, University of Berne, SWITZERLAND
Rima.Mekdaschi_Studer@cde.unibe.ch

SUMMARY REPORTS

Managing Agricultural Landscapes for Environmental Quality

"Strengthening the science base", SWCS organized a workshop in support of the USDA Conservation Effects Assessment Program (CEAP), Kansas City, October 11-13, 2006
http://www.swcs.org/index.cfm?nodeID=8409&audienceID=1

This workshop presented results from the first few years of the CEAP program created from the last U.S. Farm Bill (2002) in response to the question "are we getting results from all the money we spend on conservation programs?" Much of the work was from U.S.A. research watersheds and some Canadian work predominantly from the AAFC-WEBs watersheds - not much from outside of U.S.A./CAN except one from Australia on wildlife. The CEAP report is supposed to come out next spring. Even though the word 'landscapes' is in the title, I did not see much on soils-landscapes. It was mostly watershed outlet data and some land cover (with a little land management) data. If you are very interested in this conference, I do have a travel report (required by my organization) on it that is several pages long but it does contain more of my tainted views on things as well.

The SWCS have mentioned they are writing a literature review and synthesis on environmental benefits of cropland conservation, due in late 2006. I do not see anything from them but you may want to check out the CEAP website where they have a collection of bibliographies. The two recent ones are on wetlands and grazing lands. The literature is U.S.A. based and grouped according to their geographic regions (e.g. prairie pothole).
http://www.nrcs.usda.gov/Technical/nri/ceap/

- Tom Goddard, Alberta Agriculture and Food, Alberta, Canada. tom.goddard@gov.ab.ca

ASSSI-ASPAC-ACMS National Soils Conference, "Soil Science Solving Problems", University of Adelaide, 3-10 December 2006

Hosted by the Australian Society of Soil Science Inc (ASSSI), Australasian Soil & Plant Analysis Council (ASPAC) and the Australian Clay Minerals Society (ACMS)

Sunday December 3rd 2006
Delegates assembled on Sunday afternoon to be welcomed by the University's Vice Chancellor, Professor James McWha. Our outgoing President, Professor Neal Menzies gave an account of the 50th Anniversary activities held

around Australia during 2005. The SA Branch President, Dr Damien Adcock, described South Australia's (somewhat controversial) project to select a State Soil. A short video was screened of an interview with Dr TJ (Tim) Marshall, our eldest Society member – 100 years in March 2007. After the formalities, the delegates assembled for an evening of refreshments in the Quadrangle of the Union Building. During the evening the CPSS Accreditation Board got down to the business of evaluating recent Ongoing Professional Development (OPD) Diaries and planning for 2007.

Monday December 4th 2006
The proceedings were opened by Chairman, Professor Roger Swift. Mr George Rayment gave an excellent keynote talk on how soil science is solving problems in Australia. We then heard another excellent keynote talk from Dr Donald Suarez (Director US Salinity Lab, Riverside California) on recent advances in measurement and interpretation of salinity and salt-affected soils. Rebecca Lines-Kelly opened the proceedings to the delegates for 20 minutes. This interactive format proved highly successful and set the tone for the whole Conference. After morning tea the concurrent oral sessions got underway. Lunch was served in the large poster rooms, so delegates were able to select which of the three concurrent poster sessions to attend. The "Oral Poster" format allowed each author to speak about their work for two minutes. Afternoon tea was followed by another set of concurrent oral presentations. The scientific part of the day was followed by the ASSSI AGM.

Tuesday December 5th 2006 (World Soils Day)
On World Soils Day three bus-loads of delegates had the choice of the Waite Campus, Barossa Valley or the Southern Vales for fun field day tours.

Wednesday December 6th 2006
The day started with two fantastic keynote talks by Professor Sally Smith and Professor Alan Cooper. Rebecca Lines-Kelly and her panel of experts got the open-discussion started and pointed out how fruitful lines of inquiry might be pursued by those interested in genetic fingerprinting of soil microbes. The remainder of the day followed a similar format to Monday. At the Conference dinner, Professor Sally Smith was presented with the 2006 JK Taylor OBE Gold Medal in Soil Science. The formal part of the evening was completed with an entertaining talk by Professor Bob Gilkes.

Thursday December 7th 2006
After the plenary session, followed the usual routine with morning coffee etc, and during the final poster sessions, cool drinks were supplied for the hot-headed and thirsty. This got us through to the closing ceremonies, at which the best oral and poster presentations were acknowledged, and the Organising Committee thanked etc. The CMS held their AGM following the closing ceremonies, then delegates slowly went their separate ways.
The remaining 3 days (8-10th) were taken up with post-conference field tours.

The abstracts from the conference are available from the ASSSI website at www.asssi.asn.au.

From upper left and clockwise: Conference delegates enjoy a soil pit on the mid-conference tour at the Virginia Demonstration Greenhouse Site; Perhaps the biggest soil pit in the world! Conference delegates enjoy the beautiful 'terra rossa' soil pit on the post-conference tour; Rob Fitzpatrick describes a soil pit at Lucindale, South Australia on the post-conference tour; Delegates enjoy Australia's only inland lighthouse at Port Malcolm, overlooking Lake Alexandrina near the mouth of the Murray River; Peter Kopittke, Neal Menzies, Christine Fyfe, Tim Smith and Mike Grundy enjoy a break during the conference.

- Kristie Watling, Department of Natural Resources and Water, 203 Tor Street, Toowoomba Q 4350, PO Box 318, Toowoomba Q 4350, Kristie.Watling@nrw.qld.gov.au

Sustainable Sloping Lands and Watershed Management Conference

Mr Khamphay Manivong, Head of Information Management Division, NAFRI, Lao P.D.R. December 15, 2006
(c/o omichael@loxinfo.co.th)

Concluding remarks

Traditionally, there has been a lack of investment both in resources and money in uplands research and development. The focus for the most part, both in Laos and in other countries, has been on developing the lowlands and river deltas.

Only in the last 10 years has there been a real shift in the political environment to address the issues of environmental degradation, poverty eradication and uplands social cohesion. What we have seen in this conference is that there is now an emerging:

* Set of more sophisticated policies focused on the uplands to deal with the complex issues of environmental degradation and poverty.
* Improvements in infrastructure to reduce problems of isolation and access market and government services.
* More intricate planning policies both at the middle-scale and the local level to ensure that national policies are meeting local needs.
* An emerging Research and Development Community that is forming policy level decisions and development efforts in the uplands.

If we look at the other key objective of the conference, which was how to link research policy and practice, I think we have seen a number of clear messages. These include:

* The on-going decentralization and governance processes occurring in many countries. We require planning processes that are more flexible and allow for local initiatives and differences, rather than applying uniform pproaches and arrangements;
* A number of land classification processes are currently being used for the uplands with the primary focus being on biophysical suitability, should include social, market and infrastructure related aspects to support more realistic planning;
* The uplands are developing quickly because of marketization. There is a need for greater engagement of the private sector as they are the key drivers of change;
* Further research and development focused on better modeling and prediction of land degradation processes;
* The issues of incentives and payment for environmental services. In a number of countries a range of chemes are coming into play which recognize the need to pay upland communities for the protection services they provide;
* An understanding of the different dimensions of poverty and the diversity of populations in the uplands. Gender plays a role in poverty and there is a need to ensure that the requirements of both men and women are taken into account;
* A need to understand and build upon indigenous knowledge and decision-making processes. Researchers need to understand local systems and blend these with complementary scientific knowledge;
* A much better understanding of traditional shifting cultivation systems. From research it is clear the replacement of traditional rotational systems with intensive annual crops could cause more soil erosion and water related problems than the traditional land use systems.

It is clear from this conference there are positive changes in uplands development. The commitment by governments, researchers, donors and communities to develop the uplands equitably and sustainably has increased enormously. Finally, may I thank you all and hope we will see each other in Vietnam in 2008.

Farmer Level Field Day by WASWC-India

Punjab Agricultural University, Ludhiana, India, August 17, 2007

WASWC group working in North India organized a Farmers' Training Camp at village Khuda in submontaneous Punjab, India on 17th August 2007. The aim was to inform the farmers of the region of various soil and water conservation techniques being developed by Punjab Agricultural University (PAU), Ludhiana, a leading university of India. The event was organized in collaboration with an NGO called "Shubh Karman Society" in which around 300 farmers and extension workers participated.

Dr S S Kukal, Associate Professor at PAU and National Representative WASWC, and Dr M J Singh, Extension Specialist at PAU and an active life member of WASWC, were the main organizers of the event. Experts from PAU interacted with the farmers to answer questions and discuss with them the latest technologies in the field of soil and water conservation. Dr S.S. Kukal particularly demonstrated to the rice farmers the soil matric potential based irrigation scheduling which could save up to 40% irrigation water compared to farmers' practice of irrigation scheduling.

From left: Dr S S Kukal speaking to the audience at the Farmers Training Camp; Farmers listening to the experts at the Training Camp; The dignitaries on the occasion of Training Camp gracing the occasion.

The Chief Agricultural Officer and Divisional Soil Conservation Officer of the district presided over the function. S. Rachpal Singh, Chairman of the NGO, urged the farmers to adopt the suggested soil and water conservation measures on their farms. An exhibition of farm and health care literature was also organized on the occasion.

The event organized by WASWC-India is first of its kind in the region and was successful in reaching out to the farmers, the end users. Dr S S Kukal made a special acknowledgement for Dr Samran Sombatpanit, Past President of WASWC, for constant encouragement to organize such activities by WASWC-India.

- Surinder Singh Kukal, Punjab Agricultural University, Ludhiana, Punjab, India sskukal@rediffmail.com.

MISCELLANEOUS

▲ Engineers Take the Fun out of Christmas

Something to tell the kids when they question the existence of Santa Claus:

There are approximately two billion children in the world. However, since Santa does not visit children of Muslim, Hindu, Jewish or Buddhist religions, this reduces the workload for Christmas night to 15% of the total, or 378 million (according to the population reference bureau). At an average (census) rate of 3.5 children per household, this comes to 108 million homes, presuming there is at least one good child in each.

Santa has about 31 hours of Christmas to work with, thanks to the different time zones and the rotation of the earth, assuming east to west (which seems logical). This works out to 967.7 visits per second. This is to say that for each Christian household with a good child, Santa has around 1/1000th of a second to park the sleigh, hop out, jump down the chimney, fill the stocking, distribute the remaining presents under the tree, eat whatever snacks have been left for him, get back up the chimney, jump into the sleigh and get on to the next house.

Assuming that each of these 108 million stops is evenly distributed around the earth (which, of course, we know to be false but will accept for the purposes of our calculations), we are now talking about 0.78 miles per household; a total trip of 75.5 million miles, not counting bathroom stops or breaks. This means Santa's sleigh is moving at 650 miles per second or 3,000 times the speed of sound. For purposes of comparison, the fastest man-made vehicle, the Ulysses space probe, moves at a poky 27.4 miles per second, and a conventional reindeer can run (at best) 15 miles per hour.

The payload of the sleigh adds another interesting element. Assuming each child gets nothing more than a medium sized LEGO set (two pounds), the sleigh is carrying over 500 thousand tons, not counting Santa himself. On land, a conventional reindeer can pull no more than 300 pounds. Even granting that the "flying" reindeer can pull 10 times the normal amount, the job can't be done with eight or even nine of them, Santa would need 360,000 of them. This increases the payload, not counting the weight of the sleigh, another 54,000 tons, or roughly seven times the weight of the Queen Elizabeth (the ship, not the monarch). A mass of nearly 600,000 tons traveling at 650 miles per second creates enormous air resistance - this would heat up the reindeer in the same fashion as a spacecraft re-entering the earth's atmosphere. The lead pair of reindeer would adsorb 14.3 quintillion joules of energy per second each. In short, they would burst into flames almost instantaneously, exposing the reindeer behind them and creating deafening sonic booms in their wake. The entire reindeer team would be vaporized within 4.26 thousandths of a second, or right about the time Santa reached the fifth house on his trip.

Not that it matters, however, since Santa, as a result of accelerating from a dead stop to 650 miles/second in .001 seconds, would be subjected to acceleration forces of 17,000 g's. A 250-pound Santa (which seems ludicrously slim considering all the high-calorie snacks he must have consumed over the years) would be pinned to the back of the sleigh by 4,315,015 pounds of force, instantly crushing his bones and organs and reducing him to a quivering blob of pink goo. Therefore, if Santa did exist, he's dead now.

▲ Anecdote from Stanislav Kern

It is very nice joke! Stanislav Kern is from Russia and compiles educational activities for everyone, who studies English (English For Fun & For Everyone)

Toko (Toktogul Azykov, the translator of WASWC Newsletter to Russian toktogul@mail.ru)

Please, read! Laughable play up on words!

George Bush: Condi! Nice to see you. What's happening?
Condoliza Rice: Sir, I have the report here about the new leader of China.
George: Great. Lay it on me.
Condi: Hu is the new leader of China.
George: That's what I want to know.
Condi: That's what I'm telling you.
George: That's what I'm asking you. Who is the new leader of China?
Condi: Yes.
George: I mean the fellow's name.
Condi: Hu.
George: The guy in China.
Condi: Hu.
George: The new leader of China.
Condi: Hu.
George: The Chinaman!
Condi: Hu is leading China.
George: Now what are you asking me for?
Condi: I'm telling you Hu is leading China.
George: Well, I'm asking you. Who is leading China?
Condi: That's the man's name.
George: That's who's name?
Condi: Yes.
George: Will you or will you not tell me the name of the new leader of China?
Condi: Yes, sir.
George: Yassir? Yassir Arafat is in China? I thought he was dead.
Condi: That's correct.
George: Then who is in China?
Condi: Yes, sir.
George: Yassir is in China?
Condi: No, sir.
George: Then who is?
Condi: Yes, sir.
George: Yassir?
Condi: No, sir.
George: Look, Condi. I need to know the name of the new leader of China. Get me the Secretary General of the U.N. on the phone.
Condi: Kofi?
George: No, thanks.
Condi: You want Kofi?
George: No.
Condi: You don't want Kofi.
George: No. But now that you mention it, I could use a glass of milk. And get me the U.N.
Condi: Yes, sir.
George: Not Yassir! The guy at the U.N.
Condi: Kofi?
George: Milk! Will you please make the call?
Condi: And call who?
George: Who is the guy at the U.N?

Condi: Hu is the guy in China.
George: Will you stay out of China?!
Condi: Yes, sir.
George: And stay out of the Middle East! Just get me the guy at the U.N.
Condi: Kofi.
George: All right! With cream and two sugars. Now get on the phone.
(Condi picks up the phone.)
Condi: Rice, here.
George: Rice? Good idea. And a couple of egg rolls, too. Maybe we should send some to the guy in China. And the Middle East. Can you get Chinese food in the Middle East?

▲ Water Proverbs (F.X. Browne, Inc. Lake and Watershed News, July 2007)

We never know the worth of water until the well runs dry. ~ France

A mule can swim seven different strokes, but the minute he sees the water he forgets them all. ~ Armenia

Even hard rocks can be drilled by the persistent soft drops of water. ~ Portugal

All water flows into the ocean or into the purses of the rich. ~ Denmark

Don't spit into the well - you may need to drink from it. ~ Russia

Fools grow without watering. ~ Italy

▲ CHARITY-ART WORKS

Sisal Titja Baskets from Swaziland: to know more click here

The Kingdom of Swaziland is a small, landlocked country in southern Africa (one of the smallest on the continent), situated on the eastern slope of the Drakensberg mountains, and embedded between South Africa in the west and Mozambique in the east. The country is named after the Swazi, a Bantu tribe.

Due, in part, to a high rate of HIV infection, Swaziland has the world's lowest life expectancy, 33.22 years.

The women's development project which supplies our baskets has trained over 600 craftswomen to date. Rural crafters work from their homes and usually support 8 to 12 children. These baskets are made from sisal, an invasive weed in Swaziland. Making a 7 inch basket requires over 30 hours of work, spinning the sisal takes about 15 hours and the actual weaving another 15 hours. Each basket is completely handmade and unique. You will receive the basket pictured.

Swazi Basket #537
$60.00
Add to Basket

Swazi Basket #538
$60.00
Add to Basket

Swazi Basket #539
$60.00
Add to Basket

Swazi Basket #540
$60.00
Add to Basket

Swazi Basket #541
$75.00
Add to Basket

Swazi Basket #542
$48.00
Add to Basket

Swazi Basket #547
$60.00
Add to Basket

Swazi Basket #548
$30.00
Add to Basket

Swazi Basket #549
$30.00
Add to Basket

Swazi Basket #551
$60.00
Add to Basket

Swazi Basket #552
$60.00
Add to Basket

Swazi Basket #553
$60.00
Add to Basket

Swazi Basket #554
$60.00
Add to Basket

Swazi Basket #555
$60.00
Add to Basket

Swazi Basket #556
$60.00
Add to Basket

▲ A Few Wise / Interesting Quotes

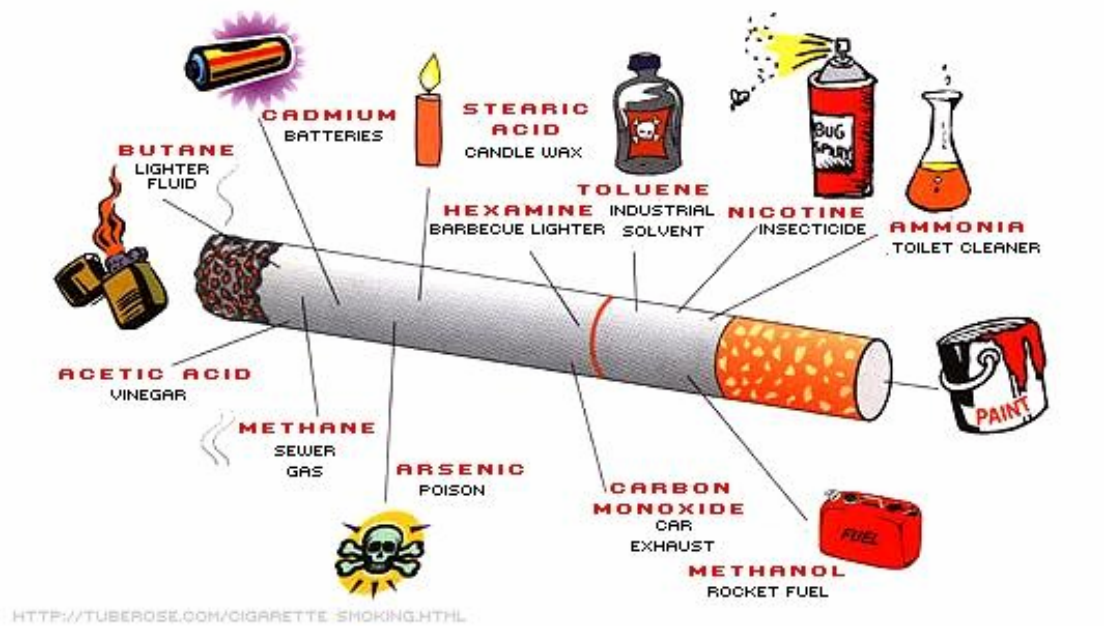
The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it. – *Michelangelo*

"If a man empties his purse into his head, no one can take it from him. An investment in knowledge always pays the highest return." – *Ben Franklin*

"Far and away the best prize that life offers is the chance to work hard at work worth doing." – *Theodore Roosevelt*

The Time is always right - to do what is right. – *Martin Luther King, Jr.*

▲ What substances are there in one cigarette?



In the next issue, 24(1)

- Osmosis or Project Activity? The Spread of Improved Land Husbandry in Malawi.

- Pakistan Suffers from Acute Soil Degradation

- International Symposium on Balanced Fertilization for Sustaining Crop Productivity

- The 4th International Conference of African Society of Soil Science

- International Meeting of Fire Effects on Soil Properties