

World Association of Soil & Water Conservation – WASWC



NEWSLETTER

Reporting global SWC news to you quarterly since 1983

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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

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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 the editor at sombatpanit@yahoo.com.

Message from the Acting President – Samran Sombatpanit

Since the damage to life and properties caused by the recent Hurricane Katrina in Southeast USA has been so great, the WASWC Council and all members offer our deepest condolence to the families and relatives of the victims and to those who suffer from the extreme discomfort at its aftermath.

Expanding the Base, Reorganizing Our House and Excelling Our Association

I. From my experience last year until now, I can say that being ready to travel is essential for anyone running the Association. On the road one encounters a large number of people and a great amount of synergy is generated. I would like to exchange ideas on this point, particularly for the benefit of others who will be running the Association



in the future.

- My South American trip in August-September last year, following the invitation of AAPRESID in Argentina and other institutions in both Argentina and Brazil, started the landmark project of having our newsletter available in four other languages besides English (Spanish, French, Chinese and Portuguese); with more useful contacts in that continent; and leading to the idea of a WASWC Special Publication written on no-tillage agriculture – a highly successful practice in the Western Hemisphere.



- My China trip during October-November helped strengthen our work with the Ministry of Water Resources, our host organization in Beijing. It enabled me to have more contacts with people in various circles while attending a high-level meeting on Sustainable Development of SWC in China in Nanchang, Jiangxi Province. This has resulted in bringing WASWC to join hands with the Chinese Soil and Water Conservation Society, with its 8,000 members. I met the international community at the WOCAT workshop in Yichang and promoted our Association in many more countries.



Lastly, I had a chance to visit several Chinese academic institutions and recruited more people to join the editorial team for the newsletter and the newly launched online Journal of the WASWC (JWASWC).

- The trip to Japan in November-December made me acquainted with many more colleagues, both Japanese and foreign. I met many people at the universities where I gave lectures: at the Tokyo University of Agriculture, Nihon University, University of Kyushu and University of Shikoku at Nankoku. Having got to know ERECON during that short period enabled me to gather sufficient ideas and confidence to involve them in the present administration of WASWC. Several more members have joined us because of that trip.



- In May this year a few friends and I from the Thai Land Development Department went to Northern Vietnam through the invitation of Prof. Dao Chao Thu, our NR for Vietnam. We went to Hanoi Agricultural University, the National Institute of Agricultural Planning and Projection (NIAPP), the Soil Science Society of Vietnam and the National Institute of Soils and Fertilizer. We lectured on SWC, soil improvement, salinity research, and about the tsunamis that struck Thailand and other countries before the end of last year. We have extended our invitation to these institutions to join us as Organization members. Encouragingly, the Soil Science Society of Vietnam, with 500 members, has decided to join, as has the Hanoi Agricultural University (around 200).

Details from all trips have been documented in photographs at our photo websites.

II. With the responsibility for several more activities than before, we need to prepare our house to accommodate the changes.

- **House preparation:** During June and July this year our Council struggled with the task of building up two websites in addition to the one we already have in Beijing. These two new sites, in Japan (www.waswc.org) and Thailand (<http://waswc.ait.ac.th>), will be linked together and will carry the subjects of new development – for we have agreed on posting the multi-language newsletter on the web instead of sending it to members by e-mail; the same applies for the JWASWC. The Japan website is sponsored by the ERECON and the Thailand website by AIT. Luckily, with information technology so efficient, simple and inexpensive these days, we are able to post any language on the website. We are now ready with everything for our websites except the papers to post on the page for the Journal. They do not seem to come quickly but I am sure this journal will play a big role, especially for developing country members far into the future. Additionally, the two photo websites that I operate by myself from home, featuring all aspects of SWC, have proved popular with and useful to members and non-members.

- **New membership fee structure:** In July the Council discussed a new fee structure to correspond with our present function. We considered that, in order to make WASWC's products and services reach many more people in a relatively short time, we should now give more emphasis to groups of people who may join us as Organization members, whereby all their staff and students will obtain benefits similar to members in other categories. Such organizations may include universities, research and implemental organizations, GOs, NGOs, societies and associations. We agreed that the fees should be very affordable (see Association News section) to all organizations, with an average of less than one dollar per person per year! Furthermore, organizations in developing countries may even be allowed to pay less. Our intention is that many organizations will join us to benefit their staff or members as a service, and the small fee will enable WASWC to carry out activities, which will in turn, bring benefits back to the members.

In fact, the idea of Organization membership has caught the interest of a few organizations already. Apart from those early Organization members from a few years ago and those mentioned earlier in this note, we have now AAPRESID (Argentina – 1,000 members), CAAPAS (Inter-American Countries – 25 members), APDC (Brazil – 8,000 members) and *Réseau Erosion et GCES* (France – 100 members) among the more recent groups to have registered with us.

So members can now help by introducing us to their colleagues at any organization of relevance and tell them how to access our newsletter and journal (**waswc** and **waswc8641** as username and password, respectively). Those interested may sign up as members in any category for the calendar year of 2006 and enjoy receiving all benefits immediately.

- **Constitution amendment:** When the WASWC Constitution was written in 1998 we did not foresee the many changes in the Association and how it is run. We did amend it once when we moved our office to China. Now, with the many activities WASWC is embracing it is essential that some articles and clauses in the Constitution are adjusted. First of all, we need to expand the number of councilors from five, but to what number? Looking at one example, the European Society for Soil Conservation (ESSC) has 22. WASWC has global responsibility; it would be good to have at least one councilor to represent each habitable continent. The Council has therefore agreed to expand the number of councilors to nine and that each continent, Africa, America (Latin), America (North), Asia, Australia and Europe, should be represented by at least one councilor. This first step of expanding the Council needs to be done right now in order to answer the need for a bigger workforce than at present. Our council does not have the luxury of having councilors solely to deliberate its business; each councilor has his (sorry, up to now WASWC Council is still gender biased – this needs to be improved soon) special task to do too. There are several other issues concerning the recent changes in administration and representation that need to be addressed in the constitution. But we need to wait until next year when it can be done in a more leisurely manner.

If you have any ideas, positive or negative, about increasing the number of councilors please let us know immediately. We expect to bring in new councilors to work with us from October onward. Our constitution is presently posted on our Beijing website, www.swcc.cn/waswc/, which will be amended accordingly.

III. I have recently received an interesting note from Menachem Agassi, yeahu8666@gmail.com, our NR for Israel, and would like you to read it.

Dear Samran, As I already told you I am very much impressed with your achievements as WASWC president. You really pulled the wagon from the mud onto a firm ground. Now let me present a picture of WASWC today; it looks to me like a group of more than 1,000 members sitting around a nice table in a very nice room, wondering about the food they are going to get. Now the question is what we are going to feed them with? If we feed them every day with fish & chips they probably will get tired of it after some time and will look for another "restaurant".

Of course you know that the "food" is the information and the benefits WASWC members will get via their membership. There is of course something wrong with this picture; some of the "diners" have to prepare some "food" for the other members.

Samran, we have to stir the pot; we have to make the Newsletter a podium so that as many members as possible will feel it easy to introduce "off the beaten track" ideas and thoughts with regard to the relevant issues of WASWC. We have to try to make the Newsletter a brainstorming forum. Sorry to be pushy, but my concern is the progress of the soil and water conservation cause that can be achieved through WASWC. Therefore, WASWC has to be strong, intriguing and attractive to as many people as possible who are dealing with water and soil conservation. Menachem.

Menachem's message rightly hit the point! Let's see what we should do to prevent the boredom of having 'fish & chips' everyday and provide some variety into our newsletter. The subject of SWC is very wide, as wide as that of soil science and water science themselves and the concept 'soil conservation means erosion control' is already a thing of the distant past!

First, let us examine what my predecessors have put as the objective of WASWC (see History page of our Beijing website – by Bill Moldenhauer and David Sanders):

* The basic objective of WASWC is to promote the wise use of our soil and water resources. In doing so WASWC aims to:

- *Facilitate interaction, cooperation and links among its members.*
- *Provide a forum for the discussion and dissemination of good soil and water conservation practices.*

- Convene and hold conferences and meetings and conduct field studies connected with the development of better soil and water conservation.
- Assist in developing the objectives and themes for ISCO conferences and collaborate in their running.
- Produce, publish and distribute policies, guidelines, books, papers and other information that promote better soil and water conservation.
- Encourage and develop awareness, discussion and consideration of good conservation practices among associated organizations.
- Liaise, consult and work in conjunction with environmental organizations on the development and promulgation of global environmental and conservation policies, strategies and standards.

The Council has attempted to do all these things – maybe some more than others – but to some members these activities may seem too general. If so, what would appeal and in what direction should we go?

Like most professional organizations, people join the WASWC for various reasons. Many or most of them join the Association with the expectation of receiving benefits from its activities, products and services, essentially to enhance their career development. However, I believe that a sizable number join us because they have a lot of experience and knowledge and they wish to contribute and help society and make the world's natural resources better managed and cared for. This reminds me of the famous saying by Henry Boyle, "The most important trip you take in life is meeting people half way." My wish is that many more WASWC members would step forward to join the rank of contributors.

In a recent message to WASWC councilors, I wrote, "*Looking at various societies and associations (e.g. SWCS, IECA, ESSC) I feel that they have done a lot and have advanced a long way. But what are we doing?*"

"At the very beginning the founders thought of WASWC as a kind of forum that people could use for exchanging views and information internationally!!! That has been more or less achieved by issuing a quarterly newsletter. Now, we can do a lot better, with much more coverage and many more languages than 10-20 years ago. We also have a newly launched online journal, JWASWC, through which members can publish their works with our editorial help. But I feel we are still way behind in what we could be doing."

"My idea now is that we should be able to produce a lot more quality 'goods' to offer to members at a very low cost, in our status as a world association."

"Normally it is some kind of technical meeting that gives a society or association more appeal to members to join. We generally do not hold meetings entirely by ourselves but in collaboration with other interest groups. The reasons are the high costs involved and the fact that WASWC was structured more to act as a forum and to provide for the needs of our members between the biennial meetings of our sister organization, ISCO. After all, there are dozens of meetings every year that are relevant to the common subject of soil and water conservation and resource management, but there is no other organization that acts as an international forum for soil and water conservation workers besides WASWC. However, I wonder if there are other things that we could do to make WASWC more appealing?"

So this is an open forum for everyone to comment. Apart from our present activities, what else should WASWC be doing in order to promote its image and serve its members? Returning to what Menachem said earlier, I can say that the WASWC store has been constructed, we have told people everywhere where our store is and what generally we have to sell, but what exactly is the 'merchandises' we will sell in order to gain interest and acceptance so that people will always come to us to meet their needs?

GUEST MESSAGE

A changing approach to soil and water conservation in the Republic of Moldova, Dr. Valentin Ciubotaru, NGO BIOS, Republic of Moldova. ngobios@mtc.md, www.bios.org.md

Dear friends and colleagues,



Having recently become a WASWC member both personally and through my organisation, I believe it desirable to share with you some of the ideas and principles that guide our activities. The work in soil and water conservation is challenging everywhere,

but it is more so where the causes of degradation are very active as is the case in my country. By presenting my

views below, I invite you to discuss an important issue, but also to cooperate in conservation work. I also hope to have many of you as guests in Moldova within the framework of future cooperation activities.

The Republic of Moldova is a newly independent country (having obtained independence in 1989 upon the disintegration of the Soviet Union) with an area of 3,384,400 ha, 74.9% being agricultural. The soils are mainly chernozems (78%) and are the country's main natural resource. The share of agriculture in GDP was 38% in 2003. This, along with the fact that 80% of the territory is on slopes, calls for extensive conservation. Prior to independence, soil and water conservation was only addressed by researchers within research institutions. Their conclusions were presented in scientific papers with

recommendations on conservation actions being provided to managers of cooperatives to decide on their implementation.



Since all land was public, the employees of cooperatives had no say in decision making regarding the effectiveness and acceptability of recommended practices.

While many conservation activities were undertaken in orchards, vineyards and arable lands, local people were never involved, the works being executed by specialised teams. Thus, conservation works made little sense to rural people and most of them were later abandoned.



Land privatisation led to the emergence of numerous landowners, many of them genuinely interested in maintaining their plots in good condition and the opportunity came for joint conservation research by researchers and farmers. While initially the process was difficult, gradually a dialogue was instituted both through national farmer-researcher conferences and

through personal contacts. This gradual change of attitude resulted in several important benefits:

- Research objectives came closer to farmers' needs;
- Testing research hypotheses became easier through direct researcher-farmer contacts;
- Farmers' feedback on research made for more focused research;
- Farmers acquired conservation knowledge;
- Good conservation practices were implemented by advanced farmers.

While the cooperation process is far from smooth and it may bear fruit only in the future, research results can become effective and implementable only through cooperation.



Moldovan researchers who expect their work to have a significant impact on the environment are committed to overcome communication

barriers and to further cooperate with farmers on equal terms. While the approach is not novel, its significance and brilliant effects are underestimated in many places. In order to make the best of existing international experience in the area of common research between farmers and researchers there is genuine need and scope for a multinational discussion of the issue.

More photos showing activities of NGO BIOS can be found on our photo website <http://community.webshots.com/user/waswc1>.

NEW OFFICERS

Valentin Ciubotaru, WASWC NR for the Republic of Moldova. ngobios@mtc.md



Dr. Valentin Ciubotaru was born in Butesti village, Republic of Moldova in 1955. He graduated from Moscow Agricultural Academy and received his PhD in soil conservation at the Chisinau Agricultural Institute. He worked as Coordinator Researcher and Head of Soil Erosion Department in the Research Institute for Pedology and Agrochemistry in Moldova for 12 years. Since 1995 he promotes implementation of UN Conventions in the Republic of Moldova working in various projects in NGO BIOS, World Bank and UNDP/Moldova. His activities are mainly concerned with participatory approaches in research, implementation, education and training in soil, water and biodiversity conservation. He has published one book, 152 articles and research papers; he is co-editor of 48 publications. Far from being a theoretician, he manages implementation of sustainable agriculture and environmental protection projects in villages of Moldova using practical experience as basis for his training work. He is utterly devoted to rural life, enjoys sports, outdoor activity, gardening.

Michael Fullen, WASWC NR for the United Kingdom. M.fullen@wlv.ac.uk, <http://myprofile.cos.com/fullen1>



Prof. Fullen received the degrees of BSc and MSc from The University of Hull, U.K. and a PhD from the UK Council for National Academic Awards. Currently, he is Professor of Soil Technology at the University of Wolverhampton. His research activities are mainly concerned with soil erosion, soil conservation, desertification and desert reclamation and his fieldwork is mainly based in Europe and Asia. He has published widely in soil science (1 book, 97 refereed papers, 114 conference papers and 21 consultancy reports). He is a referee for 16 journals and a member of the Editorial Board of the journal 'Geomorphology'. Prof. Fullen has jointly supervised 16 PhD theses to completion and been Examiner for 10 PhD theses. He has received research grants from over 28 institutions, principally in the European Union. He is also UK Representative on the Council of the European Society for Soil Conservation (ESSC) and Editor-in-Chief of the ESSC Newsletter.

ASSOCIATION NEWS

Amending the Constitution

The present WASWC Constitution was adopted in 1998 and it was amended once when we moved our office to China. The Council now feels it is essential to amend it again to reflect the present situation of our Association. This will be done in two steps: the first, by expanding the number of councilors from five to nine, with each continent, Africa, America (Latin), America (North), Asia, Australia and Europe, represented by at least one councilor; the second, by incorporating all the recent changes in administration and representation. The first step of expanding the Council is going to be done immediately, so that we will have more heads and more hands to do the work. The other changes may need to wait until next year as there are many issues to consider.

If you have any ideas, positive or negative, about increasing the number of councilors, please let us know. We expect to bring in the new councilors to work with us from October. Our present constitution is now posted on our Beijing website, www.swcc.cn/waswc/.

WASWC Newsletter in five languages is ready on the web

After attempts last year to have our newsletter published in various languages, we have been successful in publishing it in five languages, English, Spanish, French, Chinese and Portuguese, and have posted it on the web. These five languages represent a large proportion of the world's population, so we are certain that our message can be delivered to members and non-members in most parts of the world. At present, our two websites, Tokyo (www.waswc.org) and Bangkok (<http://waswc.ait.ac.th>), are working together to post the newsletter, journals and other materials relevant to the WASWC and its members. Our original website in Beijing, www.swcc.cn/waswc/, is backing this up by posting previous copies of the newsletter and articles of interest. For Tokyo and Bangkok, members may access the newsletter and journal by typing **waswc** and **waswc8641** as username and password, respectively. Members are urged to invite friends, colleagues, students and anyone who may benefit from our works to have free access to our websites until the end of this year, to learn about us, and hopefully they will then join us. For practical reasons, the password will change once a year.

Honorary members



The WASWC Awards Committee, headed by Prof. Stanimir Kostadinov of the Faculty of Forestry, Belgrade University, Serbia and Montenegro, kost@yubc.net, has decided to award the Honorary Membership to **Dr. Michael Zoebisch**, m.zoebisch@gmx.de, former Deputy President of WASWC (2002-4) for having involved in WASWC for many years through different activities: being the deputy president who worked closely with the President, editing several WASWC books and Special Publications, participating in WOCAT Program for a number of years, developing the WASWC digital newsletter at the Asian Institute of Technology (AIT) in Bangkok since middle 2001 and improving it continually and sending it out from AIT, thereby helping establish WASWC to be in close cooperation with his institute, the AIT.

The translation of the newsletter into various languages is a heavy and long-term task that needs much time, energy

and personal commitment. It is expected to have a tremendous impact. The WASWC Awards Committee has therefore decided to award the Honorary Membership to the following WASWC officers:



- **Prof. Eduardo Rienzi**, University of Buenos Aires, WASWC NR for Argentina, for translating the newsletter into Spanish
- **Prof. Mohamed Sabir**, National School of Forest Engineers, Sale, Morocco, WASWC VP for Africa (North), for translating the newsletter into French
- **Prof. Li Rui**, Institute of Soil and Water Conservation, Yangling, Shaanxi, China, WASWC VP for Asia (China), for translating the newsletter into Chinese
- **Dr. Antonio J.T. Guerra**, Federal University of Rio de Janeiro, Brazil, NR for Brazil, for translating the newsletter into Portuguese

We sincerely congratulate all these Honorary members and hope that their exemplary action will inspire our members to do some other useful tasks to benefit society and natural resources.

Photo competition 3

In the 3rd competition, we have received following winners:



1. Soil degradation & reclamation at Kjolur, Iceland, showing clear effect of fencing on soil cover, by Andrés Arnalds, Soil Conservation Service, Hella, Iceland.
2. Terraced fields in SHASEA Project, Yunnan, China, by Mike Fullen, University of Wolverhampton, Wolverhampton, UK.
3. A mosaic of terraces, near Yichang, China, by Thomas Ledermann, WOCAT Program, CDE, University of Berne, Berne, Switzerland

These photos and all other photos in this competition can be viewed at

<http://community.webshots.com/album/328571974HZRrsJ>.

We welcome entries for the new competition with deadline already approaching (September 25).

New fee structure

Discussions in the Council during July-August 2005 have resulted in a new fee structure that takes effect immediately as follows:

- 1. Individual membership:** US\$5 per year for developing countries; US\$10 for developed countries and international organizations
- 2. Life membership:** US\$80 for developing countries; US\$160 for developed countries and international organizations
- 3. Organization membership:** For universities, research institutions, government agencies, NGOs, societies, associations in developed countries and international organizations, etc.:
 - \$100 per year for an organization with up to 150 persons;
 - \$150 per year for an organization with up to 300 persons;
 - \$200 per year for an organization with up to 500 persons;
 - and \$10 per year for an additional 100 persons or part thereof

MEMBERS' FORUM

What members say about the significant milestones WASWC has reached, especially our achievement in having the newsletter available in five languages:

* It is nice to see the WASWC newsletter in Portuguese.
- *Patma Vityakon, Khon Kaen University, NR for Thailand, responsible for the Northeast*

* Congratulations on the achievement of a Portuguese version of the WASWC Newsletter. That is truly to be commended, to extend this to so many additional conservationists worldwide.
- *Jean L. Steiner, USDA-ARS-National Program Staff and SWCS President*

* Dear Samran, You have given us an excellent summary of the achievements of our association during the past 5 years in the form of milestones of achievements. This is very encouraging. I think you can use these achievements to attract others to join our association. The current membership of 1,000 members is still too small given that there are 6 billion people on earth and at least 1 million scientists in the agriculture sector. We cannot make a significant impact on soil and water conservation unless we can reach a larger audience. Our newsletter should be read by at least 100,000 people to have an impact. Our mission is therefore to make a significant impact on soil and water conservation work in developing countries through recruitment of a large number of members. Hope that you can achieve this mission. - *Dimyati Nangju, VP for Asia, based in Indonesia*

Ed. – We thank all members who gave us kind commendations, but we also wish to hear some negative aspects that you have observed also. While we are recruiting more members by various means, we also think hard how to excel ourselves in science and technology so WASWC will render more benefits to members and contribute to the progress of SWC implementation worldwide. Up to now the Council has been able to make the WASWC platform to work on stronger, but for the development of technologies and strategies for worldwide application we need more contributions from all members and collaboration with sister societies and associations.

Organizations in developing countries (except international organizations) may apply to pay less but the minimum should not be less than 50% of the above rates.

4. Gift membership: US\$5 per year all over the world, to be purchased and given to colleagues, friends, students, etc.

This reflects the present situation and especially for the Organization membership fee we have made it very affordable, in the hope that several organizations, such as universities, research institutions, GOs, NGOs, societies and associations, will join and that their many staff may benefit from our work.

All members are therefore asked to help identify suitable organizations in their vicinity and invite them to join. In the first place, it may be appropriate to let them become acquainted with us and our work by informing them how to access our password-protected webpages, especially to view the Newsletter and the JWASWC at no cost, so they may decide to join us later next year as a result.

Congratulations



We congratulate you, **Dan Yaalon**, Professor Emeritus of the Hebrew University of Jerusalem, Israel, on reaching your 80th birthday and wish you many happy returns and, of course, excellent health!

And we are glad to announce the achievements of the following WASWC members:

Chihua Huang has become Chief of the National Soil Erosion Research Laboratory, Purdue University, West Lafayette, Indiana, USA since last year.

Mohammad Golabi became Associate Professor of Soil and Environmental Sciences, College of Natural and Applied Sciences, the University of Guam, Mangilao, Guam in June 2005.

Michael Fullen received his Professorship in Soil Technology at the University of Wolverhampton, UK in June 24, 2005.

Christos Tsadilas has been recently elected President of the Hellenic Society of Soil Science, Greece.

Eric Roose has become President of the newly established *Réseau Erosion et gestion conservatoire de l'eau et de la fertilité des sols (GCES)* managed by *Agence universitaire de la Francophonie (AUF)* based in Montpellier, France.

Response from Menachem Agassi

(yehu8666@gmail.com), NR for Israel

Dear Samran,

I read with great interest the Newsletter Vol. 20, No. 1 of January-March 2004 and I would like to take this opportunity to respond to some of the features that were presented in it.



I. Green Water issue by Sjeff Kauffman

Mr. Kauffman indicated the importance of the rainwater that is stored in the soil cross-section and available to the plants. He named this water "Green Water". I would like to take this very important issue one step forward by asking what is the fate of the rainwater that was already stored in the soil? In the Mediterranean basin and especially in the Middle East the rainy season usually commences in October, when the soil surface is generally bare. During the rainy season, which

lasts approximately till next April, about 40% of the green water is lost due to evaporation.

In temperate regions this loss may be smaller, due to lower air temperatures. However, how much green water is lost due to evaporation during the summer rainfall season? And how much is lost due to evaporation in regions where the rainy season coincides with the hot one, especially in arid and semi-arid regions (ASAR)? I do not have an answer to these questions but I believe that it is considerable.

Due to the rainfall patterns predominant in ASAR, surface runoff is not happening every rainy season but green water evaporation is obviously an annual phenomenon and the main loss of rainwater.

Now, how can we control and reduce green water evaporation? The common approach is mulching the soil surface, usually with organic matter of different sources, with stones, gravel, or geomembrane sheets. In a study that was already published I found that annual mulching the soil surface with 1-cm layer of composted municipal solid wastes (CMSW) reduced evaporation considerably, increased wheat yield by at least by 50%, while completely supplying the necessary nutrients for the potential crop as controlled by the available water content in the root zone. Obviously, runoff and erosion were totally controlled.

Obviously economics are an issue. At least in my country, the direct benefits for the farmer: yield increase and fertilizers saved, do not cover the expenses of this operation, especially the transportation of CMSW to the fields. It is very difficult to convince farmers of the long-term advantages of CMSW application, namely: soil erosion control, increasing

of soil organic matter content (from 0.9 to about 2.5% after 4 years of consecutive application), and better soil fertility in general. Benefits to the environment and society in general should also be taken into consideration when calculating the financial benefits of this operation. So, government intervention is a must, based on the principle that the one who produces the garbage is the one who should pay the expenses for its environmentally safe disposal, or pay incentives to the farmers to use CMSW, etc.

It is globally accepted that mulching the soil surface with organic residuals is beneficial to the farming system and the environment. However, the question is how to transport the enormous amounts of these valuable residuals to the sites where they are so desperately needed? One suggestion is to compost these residues and then produce compost pellets, thus reducing the volume and transportation expenses considerably. There are enormous amounts of organic residues all over the world, e.g. the organic part of domestic garbage, sludge of domestic sewage purification plants, cow, poultry and pig manure, pulps of sugar production and food industry residues.

Again, who will pay the expenses for the processing and transportation of the pellets? The World Bank, FAO, many other NGOs and GOs are spending considerable amounts of money on projects in rural areas, while the results are usually not very satisfactory. I suggest that WASWC should adopt this idea and prepare a program with the necessary information in brief and deliver it to the UN or any other international organization that can cope with such a program. (To be continued in the next issue.)

REGIONAL NEWS

Resource degradation in Mali: cotton, not the poor (PLECserv article No. 59, electronically distributed by Ecoagriculture Partners, July 10, 2005)

A close link between poverty and environmental degradation in rural areas is often postulated in the modern literature; poor people are unable, even if willing, to invest in natural resource management. In a recent article, William Moseley of Macalester College, St Paul, Minnesota, examined soil indicators of degradation in conjunction with data on levels of welfare in two sites in southern Mali, West Africa. He found an absence of significant correlation between the indicators of poverty and the state of the soil.

In terms of management practices, farmers in the intermediate wealth category of a small sub-sample applied significantly more organic inputs than the poor, and the 'rich' applied significantly more inorganic inputs.

There are, however, several paths to beneficial soil management, including traditional fallow-rotation, intercropping and no-till cultivation, as well as organic and inorganic inputs. Rich and poor households employ different combinations according to their means, but some households in both categories are unable to stay on these paths. Sometimes, sound traditional techniques have been abandoned without mitigation through changed management. Overall, wealth effects are mixed, explaining why no clear correlations emerge.

These changes, and others, can be traced to the post-1950 impact of cotton production. Cotton production and weaving have a long history in the Sudano-Sahel region, and in the 1950s the French administrations promoted new strains for export production. The policy and the organizations set up to manage the policy continued after independence. A national cotton corporation was formed in Mali in 1974, partly owned by a French regional trading company. Supplies, credit, marketing and also research and extension were handled through this monopolistic filière (network).

Promotion focused on the 'best' farmers, mainly the already 'rich'. Of the two study sites, one participated in the initial cotton promotion in the 1950s, the other participated only from the 1970s. Nationally, production has undergone a major increase since the devaluation of the West African Franc in 1994, as cotton has been valued as the principal basis for rural development.

All but a minority now grow cotton in rotation with food crops. The heavy fertilizer inputs for cotton have some benefit for the food crops that follow. Initial advantages of the early adopters persist. They have more ploughs, more oxen, and more cattle. Land is held by its using households rather than owned, and it is common to enlarge the area by borrowing the fallow of a neighbor. For those holding ploughs and oxen, it is more economical to enlarge the farmed area than to manage it more intensively.

The poor, who depended mainly on long fallow for soil management, have in some cases found their land so reduced (often because they have lent land to wealthier farmers) that adequate fallow periods are no longer possible. The large cattle herds of the more successful households make use also of the common land in these communities at the top and at the bottom of the soil catena. This further reduces the land available for collecting and gardening activities of the poorer households, as well as reducing biomass, increasing runoff and infilling stream beds.

In this dynamic situation, it should be impossible to lay the blame for land degradation only on the poor. Yet, although there are writers who identify the nutrient-demanding cultivation of cotton as the major cause, it is convenient to link degradation with poverty. It helps justify the continuing expansion of cotton cultivation to generate resources 'to combat poverty'. Yet in both areas, and more widely in Mali, cotton yields are in serious decline. One cause may be the rising cost of fertilizer and pesticide in face of sagging world prices. Ecological deterioration, given the very uncertain status of management, is very likely

responsible. But the imperative to produce more, despite a chronically weak market, is impelling expansion of cotton onto new and more marginal lands. It may be true to say that international capitalism is the ultimate cause of local degradation, but the immediate agents are the relatively better-off Malian farmers, who were selected by the company and government agents to grow cotton, and who have been able to command an expanding share of natural resources. Other members of rural communities have sought to emulate

them, but have never had the means to practice resource exploitation on the same scale.

To communicate with the author, or to request an electronic copy of the paper, write to Moseley@macalester.edu. Reference: Moseley, W.C. 2005. Global cotton and local environmental management: the political ecology of rich and poor small-hold farmers in southern Mali. *Geographical Journal*, 171: 36-55.

SHORT NEWS on conservation-environment

Edited by **Alex Watson**, Landcare Research Institute, Christchurch, NZ watsona@landcareresearch.co.nz

CLIMATE CHANGE

Nations agree to cuts in ozone-depleting pesticide, July 3, 2005

WASHINGTON — A group of 189 developed nations have agreed to cut the use of the pesticide, methyl bromide (CH₄Br), which has been used for decades to sterilize soil and help grow crops such as tomatoes and strawberries. Thirteen developed nations won exemptions allowing them to continue using the pesticide in 2006. More than half of next year's amount will be used in the United States. Other exemptions, in order of use, went to Italy, Spain, Israel, France, Japan, Australia, Britain, Canada, Poland, New Zealand, Switzerland and Belgium. The importance of today's decision maintains the downward trend in methyl bromide use by developed countries. The latest cuts will send a positive signal that alternatives are available and should be adopted as quickly as possible. – AP

Richardson: Local leaders must lead fight on global warming, July 12, 2005

SALT LAKE CITY — Former US Energy Secretary Bill Richardson urged mayors from across the nation to take the lead in fighting global warming. "If we wait around for the Congress to ... take steps that are going to be significant, we are not going to address this problem," said New Mexico's governor.

Last month, the US Conference of Mayors unanimously passed a resolution requiring their cities to try to meet or surpass emissions standards set by the Kyoto Protocol, the international treaty ratified earlier this year without the United States. The cities' efforts will include reducing dependence on fossil fuels by accelerating development of technologies such as wind and solar energy, efficient motor vehicles and biofuels. – AP

World Heritage Committee to investigate effects of climate change, postpones decision on Mount Everest, July 14, 2005

JOHANNESBURG, South Africa — UNESCO agreed to investigate the effects of climate change on World Heritage Sites after environmental activists raised concerns about the threat to Mount Everest.

But the United Nations agency postponed a decision on whether to include the world's highest peak on its endangered list. Environmental campaigners warn that Himalayan lakes are swelling from the glacial runoff and could burst, threatening the lives of thousands of people and destroying Everest's unique environment. They urged the World Heritage Committee to reconsider the listing at next year's meeting.

"If the majestic beauty of Everest is lost, future generations would never forgive UNESCO for its inaction," said Friends of the Earth in Nepal. – AP

Clinton warns of global warming dangers, July 20, 2005

JOHANNESBURG, South Africa — While on a six-nation Africa tour to check on projects funded by his foundation in the battle against AIDS former President Bill Clinton sounded a warning against the dangers of climate change when he had lunch with anti-apartheid icon Nelson Mandela and met with volunteers of City Year South Africa, a youth service organization he helped inspire. Clinton's comments contrasted with the position of his successor, President Bush, who has questioned the existence of global warming. Bush rejects US participation in the Kyoto Protocol negotiated by Clinton's administration, arguing its restrictions on greenhouse gas emissions would damage the US economy. – AP

Outsourcing forests to India, July 27, 2005

PUNE, India — Farmers in Maharashtra are set to cash in on opportunities offered by carbon credit trading, a scheme aimed to reduce greenhouse gas (GHG) emissions. A Pune-based non-governmental organization, 'Friends of Carbon' (FoC), has brought together 5,000 farmers to exploit the option, which permits a developed country to meet part of its targeted emission cuts by funding tree plantations in developing countries for carbon sequestration.

Plantations are one of the best solutions to curb damage from GHG emission, but the expenditure in developed countries is high. So, they can fund plantations in countries like India, where the costs are low, and in turn take credit for the carbon absorbed by the trees. The funding will be based on the tonnage of carbon absorbed. This is calculated on factors like tree age, height and canopy cover. Farmers need a minimum of 20,000 ha to begin trading. - The Times of India

ENVIRONMENT

Earth Day founder dies, July 14, 2005

Gaylord Nelson, 89, died July 3rd at his home in Kensington, Maryland, USA. Best known as the founder of Earth Day, Nelson had been a lifelong conservationist and environmental leader. He began public life in 1948, when he was elected to the state Senate of Wisconsin. After serving for 10 years he was elected governor of Wisconsin and after two terms as governor was elected to the US Senate. He led the way in pioneering conservation policies including legislation to preserve the 2,100-mile Appalachian Trail. He was best known as the father of Earth Day, first observed on April 22, 1970, which is celebrated every year until now. – Conservogram

Children's World Summit for the Environment convenes in Japan, July 25, 2005

NAIROBI/NAGOYA — Around 600 children aged 10 to 14, selected from over 2,000 applicants from 65 countries, are gathering in Japan for the first Children's World Summit for the Environment during 26-29 July 2005. They will share their experiences and voice their concerns on the importance of the environment in achieving the Millennium Development Goals.

The Summit will be presided by His Imperial Highness Prince Akishino. His 14 and 11 year old two daughters will participate in the Summit as delegates.

Each day focuses on a different theme, Energy, Biodiversity, Water, and Recycling. A giant canvas will be developed with an environmental message addressed to heads of state and government who gather in New York at the World Summit in September 2005. – UNEP

LAND**Scarce, degraded land is spark for Africa conflict, July 26, 2005**

JOHANNESBURG, South Africa — On a continent where a man's worth is often measured by his cattle, rivalry for the beasts and the degraded land they graze on is sparking lethal conflicts across Africa. The violence is exacerbating struggles among communities with ancient and blood-stained histories.

Last week cattle rustlers in northern Kenya massacred 80 villagers, sparking brutal reprisals in a lawless region near the Ethiopian border. In Niger, nomadic herdsman and crop farmers are locked in age-old battles. Explosive population growth has increased pressure on land, forcing farmers to sow crops on "corridors" traditionally used by migrating herders for access to rivers.

"This is the age-old farmer/herder conflict, the old Biblical tale of Cain and Abel. The struggle over resources between people who are using them in different ways," said an official of the UN's Food and Agriculture Organization. – Reuters

WIND EROSION**Hazy cloud of Saharan dust nearing US, July 25, 2005**

MIAMI — An enormous, hazy cloud of dust from the Sahara Desert is blowing toward the southern United States, but meteorologists do not expect much effect. The leading edge of the cloud - nearly the size of the continental United States - should move across Florida making sunrises and sunsets spectacular. Such dust clouds are not uncommon, especially at this time of year. They start when weather patterns, called tropical waves, pick up dust from the desert in North Africa, carry it a couple of miles into the atmosphere and then drift westward. If the dust is concentrated enough, it could create some problems for people with respiratory problems requiring them to be more cautious. – AP

FOREST**Hollywood could help save Madagascan forests, July 12, 2005**

ANTANANARIVO, Madagascar — The hit movie "Madagascar", the animated film by DreamWorks Studios, has raised hopes that its namesake island will benefit from higher tourist visits. This could encourage locals to conserve rainforests considered among the world's most pristine and rare. Madagascar attracted 230,000 tourists in 2004. "More tourists would give some of the island's poor an economic incentive to preserve their environment," said the Conservation International President Russell Mittermeier, "I don't think we're going to resolve the problems of poverty. But for the community in the immediate vicinity of the tourist areas, one could generate enough benefits to encourage concern about conservation." The island, the world's fourth largest, is home to tens of thousands of species of plant and animal life found nowhere else. – Reuters

Brazil considers moratorium on Amazon logging, July 18, 2005

BRASILIA, Brazil — The Government is considering a 6-12 months logging ban in Brazilian forests in an effort to slow the destruction of the Amazon rainforest, the Environment Minister, Marina Silva, said. The moratorium would allow some exceptions where companies used certified forestry management practices to log in a sustainable manner, and small-scale farmers would be allowed to cut down up to three hectares (7.5 acres) for planting. Environmentalists said the moratorium must last a full year to be effective, as most logging occurs during May and July, during the dry season. – AP

INDIGENOUS TECHNOLOGY**Beijing to Plant Rooftop Grass to Clean Away Smog, January 10, 2005**

Polluted Beijing is planning to clean up its act by planting grass on rooftops. The gardening campaign was part of the Chinese capital's drive to improve air quality in time for the 2008 Olympics. "Downtown Beijing is too crowded to insert more green belts, so we'll try it on the roofs," said Yang Zhihua, an official with the city's parks and woods bureau. The preferred vegetation for roofs was "evergreen grass" because it could resist high temperatures and Beijing's typical dry weather. The city government had planted 10,000 sq m of rooftop lawns in 2004 and would expand the coverage to 100,000 sq m this year. – Reuters

Laotians thatch roof to buffer conference venue from earsplitting rain, July 25, 2005

VIENTIANE, Laos — Planners in impoverished Laos needed a fix for the cacophony of rain pelting the metal roof of their conference venue. So they thatched it with local grass. The conference building in the Laotian capital looks like a converted airplane hanger with corrugated roofing panels that sounds like Niagara Falls when the rain pours hard. To allow VIPs at a six-day Asian security conference to hear one another, organizers put clumps of grass on the corners of the roof that extend over key meeting rooms. So if there is a downpour it will not disturb the meeting. Organizers spent 60 million kip (US\$6,000; €4,941.12) on the long indigenous grass. – AP

FEATURES

Fostering networking and exchange of information in the Mediterranean region: The MEDCOASTLAND Thematic Network, Pandi Zdruli and Giuliana Trisorio Liuzzi, International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), Mediterranean Agronomic Institute of Bari, Valenzano (BA), Italy. pandi@iamb.it. (Project ICA3-CT-2002-10002 funded by the European Commission, INCO-MED Programme; Scientific Officer Dr. Dirk Pottier)

Land degradation and desertification represents one of the most striking sets of processes affecting the Mediterranean Region. It causes persistent deterioration of the physical, chemical and biological properties of the land components, especially the soil. Land degradation, then, results in loss of overall productivity, which in turn impairs sustainable development. This is particularly evident in the Southern Mediterranean with entire landscapes no longer able to maintain their productive functions. Although many EU-funded research projects have succeeded in collecting information and understanding physical processes of land degradation, their impact on the territory has been rather poor, partly due to the still existing communication gaps between institutions/scientists and land users. The lack of networking among different Mediterranean countries and the lack of integration between physically driven and income-product generating criteria are proving to further aggravate the situation.

In addition, a real participatory approach involving scientists, decision-makers, and local communities is still missing. In order to fill these gaps and to foster an exchange of information in the region through the establishment of a task force involved in combating land degradation, the MEDCOASTLAND Thematic Network was set up. The main objective of the Network is to contribute to the sustainable development, planning and management of natural resources in the Mediterranean through dissemination of existing research results derived from previous projects. The dissemination is being done via the Internet, five workshops, and one international conference. These events will be organized over the period 2002-2006.

There are 13 countries (from south Europe, North Africa, Middle and Near East) participating in the Network making a total of 36 partners, of whom 18 are research and educational institutions, nine represent decision makers and the remaining nine partners are farmers' associations and/or non governmental organizations (NGOs). The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), through the Mediterranean Agronomic Institute of Bari in Italy, is coordinating the project. The project is addressing not only the physical aspects of land degradation. Specific Work Packages deal with income-generating aspects of soil conservation, including socioeconomic considerations; detailed analyses of participatory approaches (top-down and bottom-up) involving decision-makers and local farming communities; drafting and development of national and regional policies and guidelines to promote sustainable land management; and finally setting up the basis for continued cooperation in the region after the project.

Three workshops have been held so far: one in Adana, Turkey in June 2003, one in Marrakech, Morocco February 2004, and another one in Alexandria, Egypt in October 2004. They dealt with the physical and socioeconomic factors of land degradation and with the participatory management of the farming system. They all drew important conclusions in

evaluating the risks and suggested solutions to the problem. The proceedings of the Adana and Marrakech workshops are published and are available for distribution. The next workshop will be held in Beirut, Lebanon, 13-17 April 2005 and will deal with policies and guidelines and their impact on sustainable use and management of natural resources.

Additional information is available on the web page of the project: <http://medcoastland.iamb.it>. The Knowledge Database of the project is also available to the worldwide public. Interested people should request a Username and Password to the project's Coordinator at medcoastland@iamb.it. The MEDCOASTLAND website also provides important links with other projects where similar activities are taking place (e.g. LADA, SCAPE).

Water Issue Highlights

Singapore opens fourth recycling plant to turn sewage into water, July 12, 2005 — AP

SINGAPORE — Singapore on Tuesday opened its fourth recycling plant designed to turn sewage into water, as part of the water-scarce island nation's move to self-sufficiency.

The plant in Ulu Pandan, just outside the Central Business District, is the largest in the country and will supply water for downtown business air conditioners by 2006, Junior Finance Minister Raymond Lim said at its opening. No further details on the plant's capacity were provided.

Singapore, which has for decades been largely reliant on neighboring Malaysia for its water, has made self-sustainability one of its national priorities since a recent breakdown in talks over water imports. The first of its water import deals with Malaysia ends in 2011.

Separately, the country's environment minister, Yaacob Ibrahim, said Monday the administration was looking to turn 90 percent of the entire island into fresh water catchment areas.

Both Lim and Yaacob said there was a need to get Singapore's 4.2 million citizens to conserve and appreciate their water sources.

"The intention is to get more people closer to water, to build a relationship with it so that they will regard the reservoirs as a resource to cherish," Yaacob said.

Chirac asks French not to waste water during summer dry spell, July 19, 2005 — AP

LA ROCHELLE, France — President Jacques Chirac urged the French on Monday not to waste water as the country copes with a spell of sizzling, arid weather that has forced several regions to impose restrictions to conserve water.

Bans and limits have been issued across 51 of France's 96 regional departments. Residents in some of the hardest-hit areas, in southern and western France, have been barred from watering gardens, filling private swimming pools and cleaning cars outside of professional car washes.

Speaking in the Atlantic coastal city of La Rochelle, Chirac asked the French to "make an effort to limit abusive and unnecessary use of water."

Noting that there was no threat to France's drinking water supply, Chirac said it was essential that water "be treated with a little more respect than it is today."

Chirac, who was meeting with officials to discuss concerns over the dry spell, asked farmers and businesses to be particularly attentive to the restrictions that apply to them.

Three volunteer firefighters died Monday while fighting a blaze in the central France town of Metz-le-Comte that may have been aggravated by a dry spell, said Jean-Francois Moniotte of the regional prefecture.

Soil Fertility/ OM Highlights
Slash and Burn Agriculture in the Humid Forest Zone of Southern Cameroon: Soil Quality Dynamics, Improved Fallow Management and Farmers' Perception, Jaques Kanmegne, Wageningen University and Research Centre 2004. 184 pp. ISBN 90-850-40-329. Also published as Tropenbos-Cameroon Series, Publication No. 8 (2004). ISBN 90-5113-070-8 (Tropenbos International edition). jkanmegne@hotmail.com.

A field study was conducted on acid soils in the humid forest zone of Southern Cameroon, to characterize the traditional slash-and-burn land uses, assess the major effects of land use change on soil nutrient stocks, flows and soil biological quality, and to explore alternatives for sustainable land management. The typical land use chronosequence in the area after forest felling includes *essep* (cucumber-based), banana and *afup* (groundnut/ cassava-based), and is interrupted by short (after banana) and long (after *afup*) fallows. Moreover, farmers have cocoa farms where many shade trees are kept. Yield declines in farmers' fields were attributed to diseases and weed infestation (56%) and soil properties (44%). Burning is practiced prior to *essep*, and prior to *afup*. It reduces the weed seed-bank, cleans the field and improves short-term soil fertility, but, together with changing land use, it strongly reduces standing biomass, carbon and nutrient stocks in the vegetation. The forest carbon stock decreases from 199 Mg* ha⁻¹ to 102 Mg ha⁻¹ in *essep* and to 64 Mg ha⁻¹ in banana farming. Nutrient stocks showed the same trend but *Chromolaena* short fallow, that followed banana, recovered most of the P.

The cocoa plantation had 53% of the carbon stocks of the original forest. Soil carbon stock was less affected than vegetation stocks. Burning increased P, K, Ca and Mg available stocks in *essep* and *afup*. Lowest 'system' C and N occurred in *afup*, which is followed by a long fallow to restore soil fertility. The nutrient balance at farm level was strongly negative, i.e. -72.6 kg N, -4.8 kg P and -38.2 kg K ha⁻¹yr⁻¹, showing its 'no external input' character, where food and wood are derived from natural stocks.

Major losses were due to burning, leaching and the non-recycling of farm residues. Only the cocoa farm had a positive nutrient balance: +9.6 kg N, +1.4 kg P and +7.6 kg K ha⁻¹yr⁻¹, as burning is absent, leaching modest and deep capture by shade trees provides inputs to the productive system. Simple scenarios showed that recycling farm residues is able to redress the P and K balance, and avoiding burning could even turn the entire nutrient balance positive. Burning also negatively affected earthworm density and casting activities. Up to 95% loss in density was recorded, and casting activity was inhibited during 14 and 19 months in land use systems following *afup* and *essep*, respectively.

Inga edulis fallow proved to favor rapid and intensive casting just as in the forest ecosystem. Total cast production was: 5.9 Mg ha⁻¹ in *afup*, 3.2 Mg ha⁻¹ in forest and *Inga*, and 2.9 Mg ha⁻¹ in *essep* after 2 years, but although the casts were richer in nutrients than the topsoil, the nutrients recycled from casts alone were insufficient for sustained crop production. *Inga* was found to be a suitable planted fallow, providing several benefits to farmers and follow-up crops. *Inga* fallows produce more biomass (between 44.5 and 62 Mg ha⁻¹) and accumulate more C and N than natural fallow. Maize following *Inga* fallow yielded 800 to 2,200 kg ha⁻¹, against a mere 200-400 kg ha⁻¹, which is similar to yields obtained in *essep* following natural forest. Mulching instead of burning, however, only gave 50 kg ha⁻¹. An innovative on-

farm approach was used in the development and implementation of planted fallows, ensuring high adoption. *Inga* planted fallow can play a leading role among strategies to fight the gradual process of land degradation in the land use chronosequence, providing wood and fruits, and mimicking the natural forest to a considerable extent.

* Note: 1 megagram (Mg) = 1 ton.

Agroforestry Highlights

Craig Elevitch, Agroforestry Net, Inc. P.O. Box 428, Holualoa, Hawaii 96725 USA, cre@agroforestry.net

There are many different definitions of agroforestry. One definition adapted from definitions published by the USDA Natural Resources Conservation Service and World Agroforestry Centre (ICRAF) is:

Agroforestry is a collective name for land management systems that optimize the economic and ecological benefits created when trees and/or shrubs are integrated with crops and/or livestock.

An agroforestry system is more than simply including trees. The key is to encourage beneficial connections formed between trees and other elements on the farm. For example, alley cropping is an agroforestry technique that integrates trees with cropland or pasture to provide various products such as fertilizer, fodder, fuelwood, and organic matter. With careful design, this technique can also provide erosion control, windbreaks and shade. Some agroforestry systems are very simple, forming just a few connections. Other agroforestry systems are more complex and their form and function can ultimately resemble a multistoried forest.

Trees are valuable elements in agricultural systems because by their nature, they lend themselves to making connections to other plants, animals, people, soil, etc.

Some of the benefits of agroforestry to people:

- * Greater long-term economic stability through diversified products
- * Reduced need for purchasing off-farm inputs
- * Broader opportunities for rural enterprises
- * Reduced risk to the farmer
- * Increased overall yields
- * Year-round production
- * Local production of resources such as firewood, animal fodder, construction materials, etc.

Some ecological benefits:

- * More efficient use of land to provide for human needs, allowing more land to be left to nature
- * Decreased use of manufactured fertilizers, insecticides, fuels, etc.
- * Protection of the land from wind and erosion
- * Habitat for wildlife (which in turn can balance insect pests on the farm)
- * Support for a diversity of soil microflora
- * Carbon storage, helping to reduce carbon dioxide pollution and global warming

Agroforestry systems have been cultivated traditionally in the Pacific islands and numerous other regions of the world for many generations, and modern agroforests have often expanded on this traditional knowledge to improve productivity and sustainability. By implementing agroforestry systems, we build upon time-honored human understanding about how the many forms of life can interact to benefit everyone.

Agroforester's Library is a periodic feature of The Overstory, a free agroforestry e-journal published by Agroforestry Net, Inc. www.overstory.org. Beginning in 1998,

agroforestry specialists from around the world have recommended their favorite resources for agroforestry. The Agroforester's Library covers general references, species references, book sources, organizations, periodicals & web sites. The listings were last updated and revised last April.

The library can be viewed at www.agroforestry.net/afibr.html. We welcome your comments and input.

Source: Elevitch, C.R. and Wilkinson, K.W. 1998. Agroforestry. The Overstory #7. Permanent Agriculture Resources, Holualoa, Hawaii. url: www.overstory.org.

Vetiver Highlights

Vetiver Grass and Pest Control, Dick Grimshaw, The Vetiver Network. dickgrimshaw@vetiver.org, www.vetiver.org

We know that vetiver hedges are one of the most effective measures for reducing sediment flows leaving farmland and other areas. These same hedgerows also effectively act as rainfall run off "spreaders", spreading out concentrated water flows, thus acting as a form of "irrigation" to plants that otherwise might not get their fair share of water. However, most small farmers don't often see the economic connections from these benefits. Now we have rediscovered an old attribute of vetiver, long forgotten, that could have real and visible economic benefits to farmers – vetiver's ability to interact with pests.

In the 19th century growers of vetiver in St. Tammany Parish of Louisiana, USA used it as a hedge and would dig up the roots for use in sachets as a moth repellent; also when the leaves and roots were ground up and used as a mulch for strawberries, the mulch effectively controlled incidence of white fly. More recently a commercial farmer from Zambia, Dereck Jacobi, wrote:

"We have noted the control of maize stalkborer in fields of Baby Corn as well as control of leafminers in peas and in our coffee blocks. Vetiver acts as a trap crop for the stalkborer moth when it lays its eggs, whereas with the leafminer it seems that the beneficial wasp population takes care of the leafminers." The kill rate in coffee was almost 100%, and in the peas out of a sample of 50 infected leaves they found only two live leaf miners.

Dereck Jacobi has been working with Professor Johnnie van den Berg of the School of Environmental Sciences and Development, North West University (Potchefstroom Campus), South Africa. Prof. Van den Berg has undertaken serious research on vetiver's impact on stalkborer (*Chilo partellus*) and has now confirmed and quantified Jacobi's observations. Studies were conducted to determine preference of female moths for vetiver grass compared to maize and to determine the suitability of vetiver, Napier grass and maize for survival of stemborer larvae. Results indicated that vetiver grass was highly preferred for oviposition, but that larval survival on vetiver grass was extremely low. Thus, vetiver has potential as a trap crop component of an overall "push-pull" strategy to concentrate *C. partellus* oviposition away from the maize crop and reduce subsequent population development. This technology may also have application in rice pest management. (Currently, controlled observations of the impact of stemborer in rice are about to commence in Vietnam.)

In subsequent field scale studies van den Berg reports: "Large scale field experiments showed that vetiver really does work as a trap crop for *Chilo partellus* under field conditions. Other fieldwork showed that the vetiver barrier around the maize acts as a reservoir for beneficial insects that attack crop pests in maize. We observed a move of beneficial insects (predators and parasites of pests) from maize towards vetiver when it became winter and the maize

crop died. We are now waiting for spring to monitor if and when they move back. We will then be able to see if vetiver can be said to be a reservoir and refuge for beneficial insects. We have done many surveys and samples here and have not come across any pests of vetiver. One unidentified stemborer was found where vetiver was used for soil stabilization in a mountain pass but it was not important".

These results have tremendous implications for farmers and the environment. Vetiver Systems with one stroke can, on a farm, reduce crop damage, reduce the use and cost of pesticides, and do its basic job of soil erosion control. In addition the bi-product use of vetiver for handicrafts, mulch, thatch, fodder, and fuel are all there for the taking! What a plant!

If readers want to contact Prof Van den Berg he is available at: DRKJVDB@puknet.puk.ac.za.

WOCAT Highlights

Hanspeter Liniger and Godert van Lynden (hanspeter.liniger@cde.unibe.ch, godert.vanlynden@wur.nl)

WOCAT in Europe: In November 2004, two PhD proposals with a common title: "On- and Off-site Effectiveness of Soil and Water Conservation in Switzerland – Steps Towards the Integration of Scientific, Experts' and Farmers' Knowledge" were submitted to the Swiss authority in Berne, Switzerland, for funding. The WOCAT methodology is to be used for both studies.

Thomas Ledermann was invited to make a presentation on: "The need for proper documentation, monitoring and evaluation of soil and water conservation technologies and approaches using the WOCAT tools" at the International Atomic Energy Agency's Second Research Coordination Meeting of the Coordinated Research Project (IAEA-CRP) on "Assess the effectiveness of soil conservation techniques for sustainable watershed management using fallout radionuclides" in Istanbul, Turkey in October 2004. WOCAT takes an active role in the IAEA Coordinated Research Project and has been accepted to document SWC within the IAEA's research projects.

WOCAT at national level: * The Philippines (PHILCAT): WOCAT presented one of seven papers during a national symposium held on January 19-20, 2005 at the Bureau of Soils and Water Management in Manila. The symposium was organized by the BSWM and the Japan International Cooperation Agency (JICA). About 150 Filipino and Japanese participants from Japanese assisted projects in the Philippines, government agencies, state colleges, universities and NGOs attended. The symposium is in line with the goal of the government to develop one to two million ha of idle marginal lands, mostly on sloping land, over the next 6 years for food security and employment generation. – *Jose Rondal and Romeo Labios*

* **Bangladesh** (BANCAT): Two technologies (Foothill Rice Terraces and Multipurpose Earthen Dam) from Chittagong Hill Tracts, were sent in December 2004 to WOCAT HQ for inclusion in the World Overview Map to be published by WOCAT. Several informal meetings with some of the working group members of BANCAT were held for briefing and the follow-up activities of WWSM9. The main purpose was to publish an overview book on the Documentation of Conservation Approaches and Technologies on Hill Farming Practices and Natural Resource Management from Chittagong Hill Tracts and printing of brochures and posters. – *Sudibya Khisha*

* **Ethiopia** (ETHIOCAT): An ETHIOCAT Training workshop was held in Nazareth, from December 28-January 3. Sixteen participants from the Amhara and Harari regions took part.



This was followed by data collection and synthesis. – *Daniel Danano*

* **Serbia and Montenegro:** QM data have been entered in the database for nine communities and new data for four communities in Jablanicki District in South Serbia have been collected. A PhD student, Ms Jelena Tomicevic (photo),

using WOCAT questionnaires, has successfully completed her thesis at Freiburg Univ., Germany. Serbia and Montenegro is going to host the next meeting, WWSM10 from September 5-10, 2005. – *Miodrag Zlatić*

* **Niger:** A final report of the workshop on “the techniques of water and soils conservation and the WOCAT data” held in November 2002 in Niamey was recently finalized. A CD-Rom was published and distributed. – *Abdoulaye Soumaila*

RESEARCH ABSTRACTS

ABSTRACT: Transgressing boundaries: Gendered Spaces, Species, and Indigenous Forest Management in Uganda. PhD thesis by **Gorettie Nsubuga Nabanoga K.**, Tropical Resource Management Paper No. 60, Forest and Nature Conservation Policy Group. Dept of Environmental Sciences, Wageningen Univ. and Research Centre, Wageningen, Netherlands. 2005. 227 pp. ISBN 90-6754-902-9, ISSN 0926-9495, <http://www.dow.wau.nl/eswc/> Contact: Barbara Koliijn, barbara.kolijn@wur.nl

All over the world, professional foresters and scientists concerned with resource conservation have supposed that forest management is dependent on the establishment of legal boundaries based upon a strong notion of property (especially State and private) that define ‘bundles of rights’ or prohibitions for forest resource use. Local forest users, on the other hand, may also recognize their own sets of social norms or ‘morals’ that regulate access to land and forest resources found in various landscape niches. These norms affect their action and behavior in using and managing these resources. Under local norms, land-based resources such as plants, trees or crops can often be accessed separately from any rights in land that may exist. The ‘moral’ and behavioral norms are everywhere defined, at least partly, according to gender. This study investigates the gendered nature of access to and use and management of forested landscapes and forest resources among the Buganda living in central Uganda. Many factors influence people’s rights and obligations to use and manage different species in different forested landscape spaces. Both kinship relations, intra-community and intra-household power relations, social obligations and cosmological beliefs play an important role in defining who has what types of right. They create multiple access, use and management boundaries for different spaces, species, products, and product uses. Formally, the State and male peasants own land and trees, which creates a set of legal boundaries. When using and managing locally-valued species these boundaries are continually transgressed. Such informal access is associated with the local norms of access that associates certain species and certain uses more with one sex than the other. The act of transgressing legal boundaries therefore simultaneously means respecting boundaries as set by local beliefs and social rules and rights. The study concludes that understanding such complex and context-specific local perspectives on access, use and management of plant resources in forested landscapes requires recognition that conventional disciplinary boundaries have been transgressed.

ABSTRACT: A multi-scale approach for erosion assessment in the Andes. PhD thesis by **Consuelo C. Romero León**, profcherichi@yahoo.com, Tropical Resource Management Paper No. 61, Erosion and Soil & Water Conservation Group. Dept of Environmental Sciences, Wageningen Univ and Research Centre, Wageningen, Netherlands. 2005. 147 pp. ISBN 90-6754-903-7, ISSN 0926-9495, <http://www.dow.wau.nl/eswc/> Contact: Jolanda Hendriks, jolanda.hendriks@wur.nl

Information on Andean soil erosion is often criticized because of a lack of quantitative data. The erosion processes are poorly understood and few studies had been carried out during recent years. A multiscale methodology was therefore applied in La Encañada watershed, northern Peru. At the small plot scale, erosion processes like infiltration, interrill and rill erosion under simulated rain were studied. At the runoff plot scale, the combined effect of rill and interrill erosion under natural rainfall was measured. Data collected in these two initial phases served to validate the hillslope version of the Water Erosion Prediction Project (WEPP) model for this watershed. The third scale consisted of the measurement of suspended sediment loads in the river at three different points. Further, we are presenting an interface called Geospatial Modeling of Soil Erosion (GEMSE), a tool that integrates any GIS with the WEPP model in order to obtain runoff and soil loss maps. Though these maps do not give the runoff and erosion at watershed level, they can be used to identify hotspots in the area. We found that the erosivity of rainfall as well as the erodibility of the soils were low. These are the main reasons why both measured and predicted erosion from the agricultural fields were low (<1 mm runoff and <0.5 Mg ha⁻¹ soil loss per event). The river analysis showed that little sediment in suspension was lost during the year under evaluation (<10 g L⁻¹) with one exception (50 g L⁻¹). This shows that the sediment load came from rare events and from sources other than agricultural fields, like abandoned fields, roads and small rural roads, as well as build-up areas that show low infiltration capacity caused by soil compaction and the absence of vegetation.

ANNOUNCEMENTS

Swiss ReSource Award

Paulo Tarimo, our Vice President for East Africa (tarimops@hotmail.com) and a jury member of the ReSource Award, an annual award of Swiss Re, sent us the following information:

Swiss Re, one of the world's leading reinsurers, launched the first "ReSource Award" in 2002 to actively support the planning, evaluation and implementation of water-related projects with the aim of promoting awareness and encouraging the efficient use of this precious resource. The award is an annual competition for innovative watershed management projects and is worth US\$150,000 in total. It will be granted to one or several projects selected by an international jury. The prize money is to be used exclusively for project implementation.

NGOs, private, scientific or public institutions and similar bodies are invited to participate in the tender for the ReSource Award every year. The award is looking for projects that genuinely seek to contribute to raising awareness of the ecological, social and economic significance of water sources and watersheds in developing and emerging countries.

Preference will be given to those projects that demonstrate innovative preventative measures for protecting water resources, i.e. projects that have a pioneering character in the local context (cultural, institutional or technological) and involve local community and/or regional institutions.

All information on the ReSource Award, including application guidelines (available in English, Spanish, Portuguese, French, Russian and Mandarin) and form, criteria, schedule, members of the international panel of patrons and jury, previous winners and a sample proposal can be found at www.swissre.com/resource. Contact resource_award@swissre.com for more information.

Doctorate Scholarships in AGROBIODIVERSITY

Sponsored by the Sant'Anna School for Advanced Studies of Pisa, FAO, the International Plant Genetic Resource Institute (IPGRI) and the National Academy of Sciences of Italy. If interested in this program, conducted in English, please contact Dr. Paolo Bárberi, Phone: +39-050-883525, Fax: +39-050-883512, barberi@sssip.it, www.sssip.it. Closing date: Sept 30, 2005.

Search for a Professor of Soil Science

- Masters or PhD in soil science or related field
- Practical experience in the application of soil and other agricultural sciences to sustainable production systems in the tropics
- Experience teaching at the university level, preferably in an environment applying the principles of student-centered, experiential learning
- Excellence as a facilitator of learning
- Fluency in Spanish (language of instruction) and English
- Capacity to motivate students to think creatively and independently
- Experience in Latin America preferred

If interested please contact Dr. Daniel Sherrard, Provost, EARTH University, Apdo. 4442-1000, San José, Costa Rica. Fax +506-713-0001, amunoz@earth.ac.cr



International Erosion Control Association

CHINA TOUR

IECA is pleased to offer you a very special opportunity to experience issues of erosion and its prevention in the unique cultural and environmental setting of China. We invite you to participate in IECA's first study tour to China, October 16-23, 2005.

Although agricultural practices have long commanded the attention of controlling erosion for food production purposes, the Chinese government is now recognizing the need to apply sound soil management practices to the construction sector. In 1991, China instituted its first law for soil erosion control, the Soil and Water Conservation Law. Two years later, the State Council issued the Implementation Regulations for the Soil and Water Conservation Law. Both the law and the regulations require erosion control for construction activities. The Ministry of Water Resources, as the administrative body for soil and water conservation, jointly issued several erosion control regulations with various agencies for construction activities relating to power station construction, power transmission, highways, railways, mining, dams, channels, etc. Subsequently a series of technical standards and rules for soil erosion control were implemented. Therefore, the need to understand erosion control design principles, installation techniques, and equipment and product technologies for application to construction sites is very high.

The tour will be limited to a maximum of 15 people and will begin in Beijing on October 16. The cost of the tour is \$3,495. The fee does not include your air fare to Beijing, but does include hotel accommodations, group meals, ground transportation, tour guides and interpreter, and round trip economy air fare to tour sites within China.

In brief, the tour will visit Beijing, Xi'an, Yangling (workshop at the Institute of Soil and Water Conservation and field visit to Loess Plateau to view scope of gully erosion and control measures, use of terraces, highway challenges), Yichang (field visits to see erosion control in highway construction, mining and infrastructure applications) and some tourist sites.

Contact IECA for more information at 3001 S. Lincoln Avenue, Suite A, Steamboat Springs, CO 80487 USA. Phone: +1-970-8793010, Fax: +1-970-8798563, ecinfo@ieca.org, www.ieca.org

International Training Course on Vetiver Handicraft

The Office of the Royal Development Projects Board (ORDPB), as the Secretariat of the Pacific Rim Vetiver Network (PRVN), has received many requests from PRVN members who want to learn how to make handicrafts from vetiver grass. Now, the Office and the Department of Industrial Promotion, Ministry of Industry of Thailand, will organize a 2-week "International Training Course on Vetiver Handicraft" in October 2005 at the Bureau of Cottage Handicraft Industries Development, Department of Industrial Promotion, Bangkok, Thailand. The course provides training from the preparation of vetiver leaves to the making of handicrafts from the leaves. The course is free-of-charge but the airfare cost and other expenses (estimated not to exceed US\$50 per day), which include local transportation, accommodation and meals, shall be taken care of by the trainees. Those who are interested in learning about another benefit of vetiver - apart from its use for soil and water conservation - can contact vetiver@rdpb.go.th or spasiri_2000@yahoo.com.

MAPPING FOR CHANGE

International Conference on Participatory Spatial Information Management and Communication
Nairobi, Kenya 7-10 September 2005

The conference will bring together people with extensive practical experience in Participatory GIS (PGIS) and community mapping in Developing Countries and First Nations (indigenous people of Canada). The focus of the event will be on sharing experiences and defining good practices for making geographic information technologies and systems available to less-favoured groups in society in order to enhance their capacity in generating, managing and communicating spatial information in the contexts of:

- * asserting ancestral land and resource rights and entitlements;
- * supporting collaborative planning and management of lands and natural resources;
- * promoting equity in terms of ethnicity, culture, gender, environmental justice, hazard mitigation, etc;
- * managing and ameliorating conflicts amongst and between local community groups, and between communities and higher-level authorities or economic forces; and
- * supporting cultural heritage preservation and identity building among indigenous peoples and rural communities.

The conference's objectives are to develop and share a knowledge base on PGIS practice. The event will lay the foundations for the development of regional networks and resource centres.

The following outcomes are expected from the conference:

- * Identification of enabling conditions for PGIS practice to function effectively
- * Development of suitable strategies for establishing such conditions in places where none exists
- * Outlining guidelines for sound PGIS practice under different socio-political contexts in developing countries
- * Identification of communication channels and facilities (e.g. regional networks) for supporting dissemination and wider adoption of sound PGIS practice

The intention of the organizers is to build on experiences gained in developing countries and First Nations to develop guidelines on sound PGIS/community mapping practices and to set the foundation for the establishment of regional networks and resource centres.

Contact: Giacomo Rambaldi of CTA (Technical Centre for Agricultural and Rural Cooperation ACP-EU, Netherlands), grambaldi@iapad.org, and access conference website at <http://pgis2005.cta.int>.

International Workshop on Strategies, Science and Law for the Sustainable Management and Conservation of the World's Soil Resources

Selfoss, Iceland September 14-18, 2005

Organization and objectives: This International Workshop is organized by SCAPE in conjunction with a group of legal and scientific experts from around the world, and with the Soil Conservation Service of Iceland, the Agricultural University of Iceland and other Icelandic institutions. Other associated key institutions with specific interests in legislative and scientific aspects of soil conservation include the International Union of Soil Sciences (IUSS), the World Association of Soil and Water Conservation (WASWC), the World Conservation Union (IUCN), and the European Confederation of Soil Science Societies (ECSSS).

The workshop will include seminar presentations and discussions as well as field excursions, exploring issues of land degradation and soil erosion, mitigation work and strategies, policies, programs and law for achieving goals of soil conservation and sustainable land use. SCAPE will present its main results of the last three years. It aims to communicate its findings in clear statements regarding the strategies that Europe could take to achieve its goals of sustainable land management. Furthermore, it will make recommendations regarding future research needs.

Workshop themes include:

- The state of the world's soil resources
- How sustainable management of soil can actually be achieved
- The state of scientific and legal knowledge and research needs
- Strategies and policies
- Law and legal management and solutions

Contact Andrés Arnalds, WASWC NR for Iceland at andres.arnalds@land.is; more information in www.scape.org

Yundola 2005, an international conference on FOREST IMPACT ON HYDROLOGICAL PROCESSES AND SOIL EROSION, in Sofia and Yundola, Bulgaria, October 5-8, 2005. See more details in the Newsletter 21(1). Contact Elena Rafailova at erfailova@hotmail.com.

Manage your soils and grow your business, a forward looking "strategic lecture- and discussion-led workshop exploring the impacts of global markets, climate change and current farming practices on the functionality and biodiversity of soils, and air and water quality in arable, livestock and horticultural farming systems" will take place at Rothamsted Research in Harpenden, Herts., UK on November 15-16, 2005. A full workshop program is available in www.smi.org.uk/publications/index.html.

Contact Barbara Vernon at Barbara.Vernon@bbsrc.ac.uk or fax No. +44-1582-760981.

SUITMA 2005, Cairo, Egypt, 17-25 November 2005

Scientists in the soil and related disciplines have often focused their work on agricultural and forest land, overlooking soils of urban, industrial, traffic, mining, and military areas. These unconventional soils are characterized by intense anthropogenic effects, generating irregular transformation, addition of exogenous materials, and mixing.

Soils in such localities may incorporate pollutants inducing environmental degradation. These problems were recognized by scientists who met in SUITMA 2000 in Essen Germany and SUITMA 2003 in Nancy France. SUITMA 2005 in Cairo seeks to create the enabling environment to generate more knowledge and facilitate information exchange. More than 120 contributions by many scientists from 32 countries have been submitted to the conference. Themes include properties of the unconventional soils, methodology and classification, transfer risks, sectoral competition, soil rehabilitation of mining and military sites and soils of historical sites. These contributions will be presented and discussed in oral and poster sessions 19-21 November, 2005, preceded and followed by field trips. See more details in www.eun.eg/suitma.

Regional Conference on Vetiver In Vietnam, early 2006

The Vietnam Vetiver Network (VNVN) is going to organize a Regional Conference on Vetiver (RCV) in the early part of 2006. One of the keynote speakers will be Prof. Johnnie van den Berg from the North West University, Potchefstroom Campus, South Africa, himself a Life member of WASWC. Prof. van den Berg's pioneering work, reported at ICV-3 in Guangzhou, China in October 2003, on the use of vetiver in the push-pull technique to attract pest insects to vetiver plants, thus reducing their potential in damaging crops such as rice, maize, sorghum, etc. will have tremendous effects on rice and other field crops in the region.

Announcements, with contact information, will be made on the following websites:

- VNVN www.ctu.edu.vn/VetiverVN/index.htm
- PRVN <http://prvn.rdpb.go.th>
- TVN www.vetiver.org

1st International Symposium on the Management of Tropical Sandy Soils for Sustainable Agriculture: A Holistic Approach for Sustainable Development of Problem Soils in the Tropics, Khon Kaen, Thailand. November 28-December 2, 2005. See more details in the Newsletter 20(4). Contact Andrew Noble at a.noble@cgiar.org, <http://203.209.62.252/tropicalsandysoils/index.htm>



The Uplands Program

Research for Sustainable Land Use and Rural Development
in Mountainous Regions of Southeast Asia



INTERNATIONAL SYMPOSIUM TOWARDS SUSTAINABLE LIVELIHOODS AND ECOSYSTEMS IN MOUNTAINOUS REGIONS

Chiang Mai, Thailand, March 7-9, 2006, Organized by "The Uplands Program" University of Hohenheim, Stuttgart (Germany), Chiang Mai University (Thailand) and World Agroforestry Centre (Thailand) and supported by DFG - Deutsche Forschungsgemeinschaft (German Research Foundation)

The objective of the symposium is to bring together scholars and practitioners to exchange both innovative multidisciplinary and integrated research results and successful extension and development approaches, as well as to present and discuss the research results of "The Uplands Program" and compare these with experience and scientific analyses from other regions.

THEMES:

- Mountainous Regions: A challenging ecosystem
 - Sustainability concepts, research priorities & development strategies for mountainous areas
 - Comparative perspectives from mountainous areas in Asia, Africa and Latin America
- Securing mountain livelihoods in a globalizing economy: Options and strategies
 - Viable conservation-oriented cropping strategies
 - Integrated livestock and aquaculture systems
 - Processing and marketing of high-value products
 - Policies, institutions and social networks
 - Payment for environmental services
 - Alternative livelihood strategies
- Assessing and modeling complexity and diversity in mountainous areas
 - Innovative methodological approaches
 - Assessment of mountain agroecosystems
 - Modeling land use changes and landscape dynamics
 - Bridging local and scientific knowledge
 - Multi-scale and multi-criteria analysis

Registration fee: US\$150. Early-bird-registration fee of US\$120 is valid until 31 December 2005. A fee of US\$75 is for participants from developing countries. The fee includes conference material, refreshments, lunches, a reception dinner and a half-day mid-symposium excursion. The organizers cannot provide funding for travel costs and accommodation of participants.

Important dates: Submission of oral presentation/poster abstracts (1-2 pages): 15 October 2005
 Notification of acceptance of oral presentation/poster abstracts: 15 November 2005
 End of early-bird-registration (reduced fee): 31 December 2005; End of registration: 31 January 2006
 Deadline for submission of final papers/posters: 15 February 2006

Organizers: Andreas Neef (a_neef@usa.net) and Pittaya Sruamsiri, Uplands Program, Thailand; David Thomas, World Agroforestry Centre, Thailand; Karl Stahr, Franz Heidhues and Jens Pape, University of Hohenheim, Germany.

Secretariat: The Uplands Program, Hohenheim Office, Faculty of Agriculture, Chiang Mai University, Chiang Mai 50200, Thailand. Phone: +66-53-944647, Fax: +66-53-893099, uplands@loxinfo.co.th, www.TheUplandsProgram.net.ms

A Special Session on “Wild fire effects on soil carbon dynamics, soil degradation and soil redistribution” at the **European Geophysical Union meeting, Vienna, Austria**. April 2-7, 2006. Convenors: Artemi Cerdà, Stefan Doerr and Peter Robichaud. More details about the meeting will be published later. Contact Artemi Cerdà, our NR for Spain at acerda@uv.es

Rationale: Several hundred million hectares of forest and other vegetation types are estimated to burn annually throughout the world. A further increase in the area burnt, and in some cases also in fire severity, is expected as a consequence of climate and land use changes. Some of the impacts of wildfires and associated post-fire processes on the soil system, such as increased soil erodibility or nutrient losses, have been key research topics for some time, while others, such as potential increases or decreases in soil carbon sequestration and soil redistribution patterns, have seen comparatively little attention. These impacts are, however, frequently interlinked and progress in the understanding of one often translates into advances in another.

Recent catastrophic fires in Europe, Australia, North America and elsewhere have once again highlighted the need to improve and adapt our capability in predicting and addressing their on-site and off-site effects. This will only be achieved through progress in understanding the short- and long-term effects of fires in environments increasingly affected by changes in climate, vegetation cover and land management, in turn presenting us with unprecedented fire behaviour and post-fire conditions.

This session aims to facilitate exchange and accelerate progress in these fields by providing a major opportunity for cross-disciplinary exchange between researchers with a wide range of backgrounds but common interest in fire effects on the soil system. Presentations are welcome on all fire-related studies that focus on soil organic carbon dynamics, soil degradation and soil redistribution.

AGRO ENVIRON 2006



Faculty of
Bioscience Engineering

AGRO ENVIRON 2006: Agricultural Constraints within the Soil-Plant-Atmosphere Continuum
 Faculty of Bioscience Engineering, Coupure Links 653, Ghent, Belgium September 4-6, 2006

The first Agro Environ symposium was organized by the University of Agriculture, Faisalabad (Pakistan) in 1998. Trakya University, Tekirdag (Turkey) hosted the second symposium in 2000 and the National Authority for Remote Sensing and Space Sciences (NARSS), Cairo (Egypt) organized the third in 2002. The fourth symposium was organized in 2004 by the University of Udine (Italy). This series of symposia proved to be a tool for involving scientists, engineers, planners, research centers and institutions in issues related to the agricultural environment.

Symposium Chairman: Dr. Donald Gabriels, donald.gabriels@Ugent.be

Proposed topics:

- Role of conservation agriculture for sustainable farming
- Contamination of the soil-water-atmosphere continuum in agricultural areas
- Waste re-use on agricultural soils
- Desertification and land degradation in agricultural ecosystems

The sessions are open for applications of RS/GIS techniques and Geo-information systems.

More information: <http://users.Ugent.be/~jvdestee/agroenviron/>

**International ESSC Conference on
"Soil and Water Conservation under Changing Land Use"**
Lleida (Catalonia, Spain) September 12-15, 2006

Organizer: Department of Environmental and Soil Sciences, University of Lleida, Lleida, Spain as an ESSC conference, with cooperation from WASWC

Background. Land degradation affects, directly or indirectly, all the vital processes on the earth's surface, which mainly depend on the conservation of soil and water in adequate places, amounts and qualities. Economic and social problems, associated with changes in population, markets and prices of products, technology, etc, may induce drastic and sudden changes in land use and management, which may increase the hazard of land degradation and environmental side effects. Global climate changes may increase the negative influences of these changes. This is especially true in the South European countries, where the recent abrupt and generalized changes in land use and management, involving in some cases abandonment of agricultural lands, and in others intensification of agricultural land use or utilization of land for other purposes, are leading to different environmental impacts, with immediate or future negative effects. Those effects include problems of loss of biodiversity, decreased supply and quality of available water, and increase in surface erosion, landslides, flooding, etc, all of them with strong social and economic effects in both the short and long term. In arid and semiarid regions those effects may lead to irreversible land desertification.

Objectives and Topics of the Conference are to analyze and discuss the most recent cases and results of studies and research in relation to soil and water conservation problems associated with changes in land use and management. The main topics will be those related to the evaluation, prediction, diagnosis and prevention of the environmental impacts derived from specific cases of changes in land use and management.

General Program

Monday 12th September, Registration, Inauguration, Keynote Presentation, Session Topic I (oral and poster presentations): "Land use changes affecting soil and water conservation: Case studies", and ESSC Council meeting.

Tuesday 13th September, Sessions Topic II (oral and poster presentations): "Processes of soil and water degradation under changing land use and management", Conference Dinner

Wednesday 14th September, Field tour to close-by areas with vineyards, including places of tourist interest, where recent drastic changes in land use and management have led to different environmental impacts.

Thursday 15th September, Session Topic III (oral and poster presentations): "Soil and water conservation practices under changing land use and management", ESSC Council meeting and Closing.

Key dates

September 30, 2005: Intention to participate

December 31, 2005: 2nd Announcement. Deadline for reception of abstracts and pre-registration forms

February 28, 2006: Notice of acceptance of abstracts

March 31, 2006: Deadline for registration with reduced fee

May 31, 2006: Deadline for reception of extended abstracts and registration fee for accepted participants

June 30, 2006: Publication of the preliminary program

Registration fees

	Before March 31, 2006	After March 31, 2006
Participant	€300	€350
Members ESSC	€270	€320
Students (ID required)	€150	€200

(Registration fee includes: welcome cocktail, coffee breaks, conference book of abstracts, proceedings on CD, access to all sessions, conference dinner and field tour)

Abstracts

- Should not exceed one A4 page (2.5 cm margins)
- Title: Centred, Times New Roman, 14 point font, capital letters, bold font
- Author's name: Centred, Times New Roman, 12 point bold font
- Affiliation (Institution, City, Country): Centred, TNR, 12 point Italic font
- Email (main author): Centred, TNR, 10 point font
- Text: Justified, Times New Roman, 12 point font

Contact: Ildefonso Pla Sentis, WASWC Vice President at ipla@macs.udl.es, www.udl.es/serveis/sedai/sigtel/ESSC2006.html

IV International Conference on Vetiver (ICV-4), "Vetiver and People"
A Green Investment for Sustainable Development - Weaving a Better World
Caracas, Venezuela October 22-26, 2006

Social problems and poverty are closely related with environmental quality and the possibilities to improve people's income. Vetiver (*Vetiveria zizanioides*) is an affordable alternative to eradicate the poverty, mitigate and solve environmental problems shared by many Latin American countries and the rest of the world. At the same time, vetiver technology can mobilize and empower communities through their participation in social projects that combine economic and basic services improvements with ecological benefits.

Vetiver grass has multiple uses due to its anatomical and eco-physiological characteristics that make vetiver a unique plant in its diverse uses and applications. This extraordinary grass is adaptable to multiple environmental conditions and it is globally recognized as an easy and economical alternative to control soil erosion and to solve a variety of environmental problems. It has been used for restoration, conservation and protection of land disrupted by man's activities, like agriculture, mining, construction sites, oil exploration and extraction and infrastructure corridors. It is also used for water conservation in watershed management, disaster mitigation and treatment of contaminated water and soil.

During the last International Conference on Vetiver (ICV-3) in China in October 2003 it was proposed that the ICV-4 would be held in Venezuela, for the special interest derived from its application and socioeconomic impact in deprived communities.

Organized by: Fundación Polar, Faculty of Agronomy-Central University of Venezuela, Venezuelan Soil Science Society, The Vetiver Network TVN, Latinamerica Vetiver Network LAVN, Venezuelan Vetiver Network VEVN, and Aragua Conservation Society

Program in brief:

I. Sessions:

- * Contributions of vetiver to sustainable agricultural development and poverty eradication.
- * Protection and stabilization of infrastructure in rural and urban areas.
- * Handicraft and Vetiver: an innovative approach for community participation.
- * Social development through vetiver multiple purpose projects.
- * Vetiver role in watershed conservation and management.
- * Disaster prevention and poverty mitigation.
- * Prevention and control of soil and water contamination and treatment and disposal of wastewaters.

II. Plenary sessions:

- * Vetiver grass technology and its impacts on economic and ecological sustainability.
- * Vetiver and People. Social sustainability impacts.
- * The challenge for technological innovation, entrepreneur and scientific research in relation to vetiver grass.

III. Exhibition and poster session during the conference

IV. Technical tours:

- * Pre conference tour: Visit to land restoration and stabilization projects in the SE region of Venezuela.
- * Mid conference tour: Within the north central region of the country with visits to nurseries, bioengineering companies, social projects and watershed restoration and protection sites.
- * Post conference tour: To be announced.

Place and date: Fundación Polar, Caracas, Venezuela. October 22-26, 2006.

Official language: Spanish and English with simultaneous translation.

Registration Fee: US\$300, incl. materials, conference attendance and related events, mid-conference tour & some meals.

Note: To receive the second announcement please contact oluque1@cantv.net, narongchc@au.edu, www.fpolar.org.ve

SUMMARY REPORTS

IAR4D Conference, Uganda 1-4 September 2004

Proceedings now available on web-sites

The National Agricultural Research Organization, Makerere University and others hosted a conference on Integrated Agricultural Research for International Development (IAR4D) in September 2004. Papers from around the world were synthesized and reviewed according to five different themes:

- Understanding people, their livelihood systems, demands and impact of innovations;
- Enhancing innovation process and partnerships;
- Enhancing integrated management of natural resources;
- Technological options that respond to demands and market opportunities;
- Enabling policies and linking producers to markets.

Proceedings and presentations, original papers, thematic syntheses and an overview can now be accessed on the following web sites: www.coard.co.uk/section09.php, www.naro.go.ug/Events/NARO_Conference/conference.html

Please send any comments or queries to Dr. L.K. Serunjogi, Conference Organizing Committee Chair, Agriculture Director of Research, Serere Agriculture & Animal Research Institute, P.O. Soroti, Uganda. director@narosaari.org

Eco-engineering: the Use of Vegetation to Improve Slope Stability, Thessaloniki, Greece, September 13-17, 2004

The first International Conference on "Eco-engineering: the Use of Vegetation to Improve Slope Stability" was held in Thessaloniki, Greece, 13-17th September 2004. Over 100 participants representing 22 countries attended the meeting, which was split into eight sessions, with one field trip and an afternoon of workshops. Sessions ranged from the fundamental understanding of root-soil interaction to the application of eco- and ground bioengineering techniques. Key-note speakers included T. Wu (University of Ohio, USA), R. Morgan (Cranfield University, UK), T. Fourcaud (CIRAD, France), E. Cammeraat (University of Amsterdam, Netherlands), H. Nakamura (University of Tokyo, Japan), C. Koerner (GMB, University of Basel, Switzerland) and S. Mickovski (University of Dundee, UK). The workshop sessions demonstrated a range of field and numerical techniques used in the field of eco-engineering.

The prize for best talk was awarded to F. Rey (Cemagref, France) and best poster was jointly awarded to P. Lorenzo (University de Vigo, Spain) and H. Khuder (INRA-LRBB, France).

The conclusions of the meeting were that not enough is known about root growth on slopes, but that the experimental and numerical aspects of root reinforcement on slopes were better understood. A better quantification of the beneficial and/or adverse effects of vegetation on slopes is needed not

only with regards to roots reinforcement and ecology, but also economical factors. More work on the screening of appropriate species on a given slope is necessary, especially concerning native species and biodiversity. Monitoring of sites should be longer, and in particular, climatic conditions and slope hydrology should be studied over the long-term. Finally, the training of eco-engineers is of utmost importance, not only at the researcher level, but also at the end-user and local stakeholder level.

Proceedings will be published in special editions of *Plant & Soil* and *Geotechnical and Geological Engineering*, as well as in book format in the series "Developments in Plant and Soil Sciences" published by Kluwer Academic Publishers, Dordrecht. Proceedings should be available in 2005. The second International Eco-engineering Conference is likely to be held in Beijing, China, 2008. Further information can be obtained from Dr. Alexia Stokes (stokes@lrbb3.pierroton.inra.fr).

The Organizing Committee: I. Spanos (NAGREF, Greece), A. Stokes (INRA-LRBB France) & J. Norris (Nottingham Trent University, UK) would like to thank all speakers, chairmen, poster authors and participants for their contribution to this conference, and we look forward to seeing you again in 2008.

– Alexia Stokes, INRA-LRBB, France
(stokes@liama.ia.ac.cn for 2005-6)

Land Resource Management and Ecological Restoration in the Loess Plateau – Rural Development Strategies, Sci-Tech University, Xi'an, Shaanxi, China, September 20-24, 2004. **Mohammad Golabi**, University of Guam, Mangilao, Guam 96923, USA. (mgolabi@guam.uog.edu)

I was invited by UNESCO to attend "the 3rd International Conference on Land Resource Management and Ecological Restoration" that was organized by the UNESCO Office in Beijing and the Northwest Sci-Tech University of Agriculture and Forestry.

Ecological Research for Sustaining the Environment in China (ERSEC) is a cooperative project between the Chinese Ministry of Education, the German Ministry of Education and Research, and the UNESCO office in Beijing to promote the practical use of ecological research results in China. ERSEC aims at supporting Sino-German ecological research projects by providing them with a platform for an interdisciplinary exchange with other scientists and institutional experts to present and discuss their results. This Conference was targeted primarily at high-level government administrators and decision-makers and institutions that deal with land use policy and was aimed at deriving or refining recommendations to promote the application and extension of scientific research results for the restoration of the Loess Plateau.

The conference had the following main foci:

- I. Combating Soil Erosion
- II. Revegetation
- III. Land Use Planning for Rural Development.

Each of the above sections consisted of several scientific/policy-related presentations and case studies presented by experts from China, Germany, USA, Guam and other countries. These contributions included summary resolutions and recommendations that were fed into an open discussion session at the end of the conference. On the final day there was also a panel discussion including all topics.

During the panel discussion the overall problems were identified as the following:

- * Environmental degradation
- * Inappropriate land use, and
- * Effect on the ecological environment and local, regional and national economies and standards of living.

It was recognized that soil and environmental protection are fundamental to sustainable development and that the Loess Plateau is a key national site for soil and water conservation. During the panel discussion, it was recognized that the causes of environmental degradation are:

- * Overgrazing which removes vegetative cover and leads to soil erosion
- * Deforestation that reduces forest cover, and that
- * Poverty and population density vary spatially in their individual and combined associations with soil erosion.

A number of technical recommendations were made including:

- * Best management practices for farmers
- * Use of legumes to promote revegetation
- * Alternative crops such as grasses
- * Intercropping: combining orchards with row crops to increase income
- * Reducing tillage in the interests of carbon management and reduced soil movement
- * Increasing soil organic matter with compost and other amendments to reduce erosion and increase plant survival
- * Reducing burning of vegetation to increase or maintain soil organic matter
- * Reducing or stopping free-range grazing in favor of stall-feeding
- * Seeking soil-binding grasses such as Vetiver grass
- * Recognizing that vegetation-friendly management of grazing is more important than simply stopping grazing
- * Promoting appropriate farming methods that come from farmers (check dams; contour ploughing; ditching; planting)
- * Increasing soil organic matter
- * Using plastic mulch

In the area of good agricultural practices and community interactions the following issues were discussed and/or recommended:

- * Integration of economic land use planning with biodiversity conservation
- * Listening to farmers
- * Necessity for farmers to participate in planning for agroforestry
- * Adoption of a holistic approach to integrated management and involvement of all stakeholders
- * Economic incentives for good management of plantations by farmers to ensure cooperation and success

PUBLICATION REVIEWS

E. Roose, G. de Noni, C. Prat, F. Ganry and G. Bourgeon, eds. 2004. Land Use, Erosion and Carbon Sequestration. 1. Carbon Erosion; 2. Soil Erosion and Carbon Sequestration, Proceedings of the International Colloquium, 23-28 September 2002, Agropolis-Montpellier, France, 493 p. (vol. 1)

and 636 p. (vol. 2), Bull. Réseau Erosion, vol. 22 and 23, IRD-Réseau Erosion and CIRAD-Programme Agronomie/Labo MOST, Montpellier, France. €10/volume for WASWC members. Send your order to: Eric Roose, Centre IRD-Réseau Erosion/Labo MOST, P.O. Box. 64501, F-34394 Montpellier, France.

Fax: +33-(0)467-416294, roose@mpl.ird.fr,
<http://www.mpl.ird>

The two volumes of these proceedings include the full text of the 112 papers and posters, in English and French, presented at a 5-day international double symposium organized at Agropolis-Montpellier (France) by the French Erosion Network and MOST (Matière Organique des Sols Tropicaux) Laboratory, in collaboration with IRD and CIRAD. The aim of this meeting was to present and discuss the actually available knowledge on biomass management and its impact on carbon depletion and biological erosion control and prevention as a tool for reducing global environmental damage. In connection with these issues, due attention was also paid to the adverse effects of soil erosion, flooding and the emission of greenhouse gases.

The papers presented at this seminar have been grouped into 9 main headings or themes, the first 4 of which made up the program of a first symposium; they are published in volume 1 of these proceedings. Chapter 1 gives an overview of the mechanisms that govern erosion and carbon dynamics in the world (5 papers). As such, it constitutes a good introduction for setting the theme of the meeting. This first section includes also an interesting paper on global change and the carbon cycle, and its impact on soils and agriculture.

Chapter 2 (17 papers) deals with carbon depletion and sequestration at the plot level. It argues that, compared with biomass production, the loss of organic matter from erosion is relatively small. The loss of carbon in the soil by erosion and drainage is in the same order of magnitude as C sequestration. Chapter 3 focuses on carbon fluxes and erosion at the slope level (12 papers), and chapter 4 (9 papers) groups studies on the carbon dynamics in rivers and waterways, including examples from the Amazon, Niger, Ubangi and Congo basins. The contributions in these chapters contain a multitude of data, otherwise rather rare, on the importance of carbon losses by various forms of erosion at the plot level in tropical (Brazil, Burkina Faso, Cameroon, Indonesia, Ivory Coast, Kenya, Mali, Zambia, etc.) and Mediterranean areas (Algeria, France, etc.).

Chapters 5 to 9 make up the contents of volume 2 of these proceedings. They correspond to presentations and discussions held in a second symposium, and focus mainly on the influence of biological land use management, erosion control and prevention of the carbon cycle.

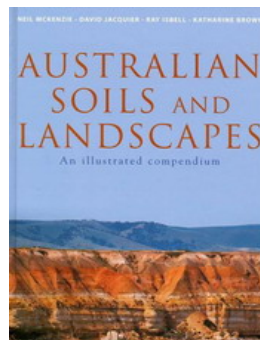
Chapter 5 presents an introduction to alternative strategies on integrated soil and water conservation (2 papers). This is followed by chapters 6 (13 papers) and 7 (17 papers) dealing respectively with the importance of trees and agro-forestry on the carbon cycle, and of animal husbandry and grazing. Chapter 8 (25 papers) focuses on the impact of cultural practices and land management systems, ranging from traditional practices in Brazil, Colombia and North Africa to zero tillage and other modern systems applied in Europe. Chapter 9 (12 papers) reviews currently used soil and water conservation techniques, and their effects on soil carbon sequestration, supported by field examples from Mali, Burkina Faso, Cameroon, Ethiopia, China, etc.

Though very voluminous (more than 1,100 pages) this publication offers an excellent state-of-the-art on the presently available knowledge on biomass management in direct relation to the carbon cycle. It is highly recommended to all those who from the theoretical, practical or research point of view are interested in this very actual problem.

The final conclusion after having read most of the contributions is that, despite the enormous soil losses from erosion, there exist good perspectives for a better ecological management of our productive land, to the point that these can meet the double challenge of providing the food for a growing world population while at the same time limiting

consistently environmental risks. – W. Verheye, *Acaciaaan*, 21, B-9840 De Pinte, Belgium. wverheye@telenet.be

Australian Soils and Landscapes – An illustrated compendium: Neil McKenzie, David Jacquier, Ray Isbell, Katharine Brown, CSIRO Publishing, 2004. 432 pp. ISBN 0 643 06958 5, A\$110/copy + delivery charge. Contact Neil McKenzie at neil.mckenzie@csiro.au for details and you may order from www.publish.csiro.au/pid/3821.htm



This publication can be subdivided into two parts: a general introduction with 5 chapters, starting with "properties of soils", including soil morphology, mineralogy, and chemical, physical and biological properties of soils and a 2nd chapter, "The evolution of Australian soils", which shows dominant processes and a model for soil formation, highlighting environmental change in ancient landscapes. A 3rd chapter deals with "characteristic Australian landscapes", distinguishing between ancient, deeply weathered landscapes, erosion landscapes, fluvial landscapes, aeolian landscapes, coastal landscapes, alpine and sub-alpine landscapes, with a concluding chapter highlighting contrasts with other continents. A 4th chapter explains soil functions within ecosystems, including cycles of matter and energy, water, vegetation, fire, and fauna, and concludes with lessons from natural landscapes. A 5th chapter in this introductory part of the book deals with "Land use, soil change and future management", looking into the impacts of land use, the management of Australian landscapes, and land and soil resources.

The second and more comprehensive part of this publication is a "Compendium of Australian soils", starting with an introductory chapter, dealing with the "Rationale and format", explaining the structure of the subsequent chapter, entitled "The representative soils", in which different typical soils of Australia are shown, with color pictures, sub-typed into Anthrosols, Calcarosols, Chromosols, Dermosols, Ferrosols, Hydrosols, Kandosols, Kurosols, Organosols, Podosols, Rudosols, Sodosols, Tenosols and Vertosols. The book concludes with endnotes, a chapter with references, and an index, facilitating the search for specific soil issues.

The whole book is excellently illustrated with color pictures, colored figures and tables, which are easily understandable, not only for specialists, but also for readers generally interested in soil issues.

The most important and most comprehensive part of the book, with 258 pages, is the "Compendium of Australian soils", which shows and explains the main soil forms of Australia. This part is excellently structured, indicating the distribution of the soil types over Australia for each major soil class, the locations of the profiles, the climatic conditions of the locality, the soil morphology and soil chemical and physical properties, with further illustrations showing the key profile properties and the general qualities of the soil for different uses. Moreover, photographs illustrate the associated landscapes.

The introductory chapters deserve attention, because they are well structured and well illustrated by figures and pictures, helping to understand the evolution and the properties of soil as well as the relationship between soils and landscapes, the function of soils within ecosystems and the impact of humans on soil and land use. However, some amendments could be made: In Fig. 1.9, e.g. "aluminium" figures under "soil nutrients"; Fig. 1.10 mentions under "soil

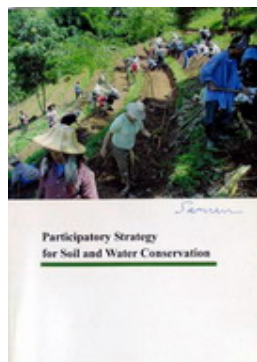
organic matter" also the living organic matter, i.e. the biomass, which normally does not count as soil organic matter; and under "clay minerals found in Australian soils", oxides and hydroxides are shown, using the term kaolines, which has not been introduced into the general literature on soil and soil properties. Such small errors however do not diminish the excellent general impression which this book provides and one must agree with the authors when they write in the introductory chapter that they prepared the book for interested individuals, students of environmental sciences, land managers and catchment management groups, as well as professionals in the fields of forestry, agronomy, hydrology and ecology in general.

The index is a very valuable help to readers. Nevertheless, the use of endnotes is a little cumbersome, because, instead of citing the authors directly, numbers are used, which have to be looked up in the endnotes, and then again under "References", which makes the reading somewhat time consuming and impractical.

Generally, it can be said that this book is a comprehensive, richly illustrated compendium of Australian soils and landscapes. It deserves a wide distribution, not only in Australia itself.

- Winfried Blum, Vienna, Austria University of Natural Resources and Applied Life Sciences (BOKU), Peter-Jordan-Str. 82, 1190 Vienna, Austria. herma.exner@boku.ac.at

Participatory Strategy for Soil and Water Conservation (Eds: Machito Mihara and Eiji Yamaji), a 304-page proceedings from the International Symposium of the same title in Tokyo, Japan, November 27-28, 2004, organized by the Institute of Environmental Rehabilitation and Conservation (ERECON). ISBN 4-916174-03-8.



Available from ERECON at hq-erecon@nifty.com, www.waswc.org. US\$30/copy, including delivery

This is an edited collection of chapters emerging from a workshop held by ERECON – the 'Institute of Environmental Rehabilitation and Conservation' – in Japan. ERECON, we are told, was set up in 2000 as a non-profit, research and extension organization, with the goal of

"harmonizing agricultural and urban development with natural environment".

It becomes clear from the introductory text that ERECON seeks to bridge the divide between researchers in the field and land users. In their preface, the editors set out their aspirations in producing this book: "We do strongly hope this book works meaningfully between the facilitators of GO or NGO and the local farmers in international cooperation programmes".

Unfortunately, these good intentions are rather let down by the product itself, which is a bewildering array of chapters – only loosely connected thematically and many of them without direct relevance to land users. A carefully written introductory chapter could have succeeded in distilling out the more important lessons and messages, but this is conspicuous by its absence. Neither is the standard of English editing up to scratch. This is more the pity as clearly considerable effort has gone into producing an attractive and well laid out book, with stunning cover photograph.

What this book does have, however, is a wealth of research information which will be useful to scholars – and to an extent, practitioners – to dip into. The main sections are 'soil and water conservation' (27 chapters), 'technology transfer' (9 chapters) and 'participatory strategy' (11 chapters). A strangely entitled fourth section: 'follow-up of acceptability' has just 3 chapters – and appears to have been added as an afterthought.

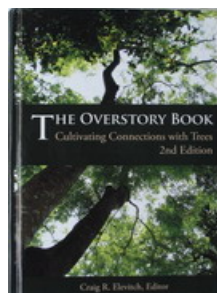
While the emphasis is on Asia, there are a number of chapters from Africa (Senegal, Malawi, the Sahel generally) and both Latin America (alternative tillage practices in Bolivia) and Europe (reduction of nitrate leaching in Scotland) get a brief look-in. The Asian-based chapters range hugely in their focus. We have, for example, chapters on biodiversity in northeast Thailand, status of arsenic in soils in Bangladesh, influence of 'near-river areas on water quality' in Japan, protection of peat layers through remote sensing in Indonesia, and assessment of soil fertility management practices in rice fields of central Luzon, the Philippines. There certainly will be something of interest for everyone working in watershed management in Asia

Where from here? One feels that if ERECON really wishes to communicate with farmers and (presumably) decision makers, then it would be worthwhile producing a companion volume, based on this book and other fieldwork. That volume would be quite different in nature: a clear and brief summary of findings, clearly illustrated, attractively presented. That would clearly not be beyond the capabilities of this apparently dynamic and enthusiastic organization.

- Will Critchley, Vrije Universiteit Amsterdam, The Netherlands. wrs.critchley@vu.dienst.nl

INFORMATION SOURCES

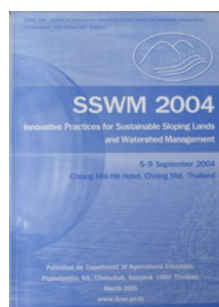
Books, Proceedings, Manuals & Reports



The Overstory Book: Cultivating Connections with Trees, Craig R. Elevation, 2nd Edition, Permanent Agriculture Resources, P.O. Box 428 Hualaloa, HI 96725 USA. Phone: +1-808-3244427, Fax: +1-808-3244129, par@agroforestry.net, cre@agroforestry.net, www.agroforestry.net. A large format

book, 526 pp., it has been written by dozens of agroforestry experts worldwide, including Roland Bunch, Robert Chambers, Jeff McNeeley, Bill Mollison, P.K. Nair and Anthony Young. 2004. ISBN 0-9702544-3-1. The price – with airmail delivery – is

affordable at US\$64.95 (hardbound), \$49.95 (paperback) and \$24.95 (CD). We will publish the review of this book in the next issue of the newsletter.



Proceedings of the International Conference on "Innovative Practices for Sustainable Sloping Lands and Watershed Management (SSWM 2004)", held in Chiang Mai from September 5-9, 2004 is now ready. 400 pp. WASWC members who are interested in obtaining one please contact Mr. Kukiat Soitong at ksoitong@doae.go.th or Phone: +66-

25791981, Fax: +66-29406123. It is free for sending to Thai addresses and it will be charged according to the postal rate for foreign addresses. It is an interesting and timely subject.

Visual Soil Assessment, A small e-publication, developed by the Landcare Research Institute of New Zealand and co-published by Vaederstad, a Swedish farm machine manufacturer and Soil Management Initiative, a UK company. Jean-Luis Allard, a Switzerland-based member, introduced this 21-page long publication that can be freely downloaded from www.smi.org.uk/publications/index.html. It is a new and good idea to develop a simpler method to judge the quality of the soil, which can be used in combination with the conventional methods involving physical and chemical analyses. There is enough relevant information in this small book to develop a short course for students. Our NZ member, Alex Watson, provided us with the link to the unit that involved the development of this Visual Soil Assessment booklet:

www.landcareresearch.co.nz/research/rurallanduse/soilquality/The_VSA_method.asp. Two more related sites have recently been introduced by Yuji Niino of FAO in Bangkok at [ftp://ftp.fao.org/aql/agll/lada/vsfast_china.pdf](http://ftp.fao.org/aql/agll/lada/vsfast_china.pdf), [ftp://ftp.fao.org/aql/agll/lada/vsfast_methodology.pdf](http://ftp.fao.org/aql/agll/lada/vsfast_methodology.pdf). Enjoy!

Journals, Magazines, Newsletters & Brochures

Geijkt Nieuws, an 8-page Newsletter of the Eijkelkamp Agrisearch Equipment Company, Giesbeek, The Netherlands. The present number, No. 20, June 2005, features soil sampling and other soil research equipment, as well as other interesting subjects in soil science. Ask for your copy, either in digital or in print, from the Editor, Laura van der Lecq at info@eijkelkamp.com, www.eijkelkamp.com.

ARLDF (Asian Rural Life Development Foundation)

Network News is a 4-page newsletter, now in its third year. The present issue, No. 3.1, features the following articles: Water, Water, Everywhere...; Water Development Basics; and Technologies that Work! ARLDF, with headquarters in Chiang Mai, Thailand, has development activities in Afghanistan, India, Indonesia, the Philippines, Nepal and Vietnam, and you may access its website at www.arldf.net for the newsletter and all other project information. The ARLDF Director, Mr. Jeff Palmer, can be reached by phone No. +66-53839005 and palmer@mymailworld.com.

Websites:

Database on soil conservation and management on sloping upland available in seven languages (www.agribase.org)

The International Water Management Institute (IWMI), in collaboration with seven partner countries (China, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam) of the ASIALAND Management of Sloping Lands for Sustainable Agriculture Project has produced this web-based database on soil conservation and management on sloping upland as an on-line website. At present, it is in eight languages (English, Chinese, Indonesian (Bahasa), Laotian, Malay, Filipino (Tagalog), Thai and Vietnamese and can be accessed via www.agribase.org. This web-based database is intended as a tool to support extension workers, providing useful and practical information to discuss with farmers/landusers. We at IWMI Southeast Asia Regional Office in Bangkok are searching to collaborate with an authority in Cambodia to add the Cambodian language to the database.

- Suraphol Chandrapatya, IWMI-SEA Office, Bangkok, Thailand. s.chandrapatya@cgiar.org

Integrated Approaches to Participatory Development (IAPAD) - www.iapad.org

Integrated approaches to participatory development (IAPAD) act as a focal point for sharing information and technical progress on community-based mapping and Participatory GIS (PGIS). The Participatory 3D Modeling (P3DM) is an efficient tool for merging indigenous technical knowledge (ITK) and traditional spatial information. In P3DM, key-informants' knowledge can be successfully collated on relief models made at 1:20,000 or better at larger scales. The geographical coverage of a model is influenced by its final size. Reducing the scale (say 1:50,000) in order to cover the larger areas limits accuracy and the ability of informants to internalize the model and to transpose their knowledge. A solution is to produce a series of models to be made and displayed at different locations – each one covering a portion of the desired area. The informants and representatives from all stakeholder groups generally work in a voluntary capacity as they have to address their own needs and opportunities. The number of participants working at one time should allow everyone to physically access the model and avoid overcrowding. Community mobilization is one of the most important components of the process, which leads to the construction of a 3-D model.

The community-based relief models can be used for watershed management as done in Thailand and for negotiating access to resources in Indonesia. The 3-D models can be readily linked to GIS and have ample possibilities of being used for collaborative research, planning and management in the sectors of environmental protection, community-based natural resource management, agricultural production, rural development, poverty alleviation, health, transport and water supply.

Actually the 3-D modeling process and its output are the foundations upon which participatory GIS can release its full potential. The 1:10,000-scale or larger maps would be sufficient for generating household level information in densely populated areas, generally located in alluvial plains. In the Philippines, the P3-D models have been used in the context of collaborative protected area management, whereas in Thailand it helped in management of the Doi Sam Mun Highland Development Project. The recorded uses include locating, georeferencing and visualizing community knowledge, spatial distribution of social facilities, uphill soil erosion and downhill sedimentation patterns, monitoring landuse changes and locating human settlements and social infrastructure. The website provides ample documentation on P3DM, an efficient tool for merging indigenous technical knowledge and traditional spatial information.

- Giacomo Rambaldi, CTA (Technical Centre for Agricultural and Rural Cooperation ACP-EU, The Netherlands) grambaldi@iapad.org

Institution:



Jiangxi Provincial Research Institute for Soil and Water Conservation was initially set up in 1964 and formally approved to rebuild in 1989. Up to now, it is the only provincial research agency of SWC in South China, simultaneously engaging in research and experiment, extension and application, planning and consulting and training and demonstration.



The institute occupies an area of 0.77 ha, with a modern office building equipped with modern instruments. The institute's SWC staff is highly qualified. It has also

founded two companies, i.e. Luye SWC Engineering Co. Ltd. and Jiangxi SWC Eco-science Park. Meanwhile, both Jiangxi SWC Monitoring Headquarters and Jiangxi SWC Association are attached to the institute. There are a total of 30 staff members working in the institute, including professors, senior engineers, PhDs and postgraduates.



The institute has achieved outstanding progress in many fields involving research in the fundamental theories of SWC, biology, engineering technology, integrative

small watershed management, technological extension, etc. It has undertaken more than 40 scientific projects and

obtained about 30 awards at various levels from the State and Jiangxi Provincial Government. It has explored a set of technological measures for SWC within its local environment, developed a series of health products from *Vitex trifolia* L. and acquired a national patent. In addition, the institute has published over 200 papers in academic journals in China and abroad. These research findings have been widely applied in Jiangxi and other provinces of South China. The Institute has been regarded as an advanced establishment for national SWC.

Jiangxi SWC Eco-science Park is a state-level base for SWC. It covers an area of about 5.33 ha. It is located in the Yan'gou small watershed of De'an County in the northern part of the province, in the red soil area of South China. One weather station and 21 standard runoff plots are set up in the Park, including three plots equipped with artificial rain making machinery, three drainage lysimeter plots, and 15 surface runoff plots. This is the first time that lysimeters have been used in SWC research in China and the scale of their construction is unique. Furthermore, researches on grass-planted farm roads, terrace walls planted with grasses, grassed waterway, hillside ditches and ecological restoration are carried out here. About 40 species of grass suitable for SWC, 20 varieties of trees and 30 species of excellent fruit trees are also being introduced. The Park is to become the base for teaching, training and practicing, demonstrating functions of research, demonstrations, education and extension.

We sincerely hope to exchange and cooperate with experts and organizations from home and other countries, to attain a beautiful and harmonious environment from our joint efforts.

- Prof. Zuo Changqing, Director (zuochq@sina.com)

Note to readers: All other features that have appeared in previous issues of the WASWC Newsletter are now posted on the website.