

GLOBAL SOIL WEEK 2013:

LOSING GROUND?

27-31 OCTOBER, 2013

The second Global Soil Week (GSW 2013) convened in Berlin, Germany, from Sunday, 27 October, to Thursday, 31 October 2013, on the theme "Losing Ground?" Following an opening reception on 27 October, participants assembled in plenary discussions, interactive dialogue sessions and an action forum from 28-30 October. The discussions were organized around four thematic threads corresponding to key areas of response to global soil loss: transforming global material and nutrient cycles; upscaling sustainable land management (SLM) and soil engineering at the landscape level; integrating land and soils in the sustainable development goals (SDGs) debate; and responsible land governance.

During a wrap-up session on Wednesday afternoon, 30 October, participants highlighted some messages from the three days of discussion for possible inclusion in the final outcome document, "Agenda for Action." Noting that this is a live document, the organizers invited participants to continue to provide their inputs. The Agenda for Action can be downloaded from the Institute for Advanced Sustainability Studies Potsdam (IASS) website at: http://globalsoilweek.org/wp-content/uploads/2013/10/GSW_Agenda_for_Action_Draft_web.pdf.

On Thursday, participants held informal workshops to deepen the debate on key issues that had been identified during GSW 2013 and to plan follow-up activities and collaboration.

GSW 2013 brought together more than 450 scientists, policy makers and practitioners from 71 countries. The event was co-organized and funded by the IASS-Global Soil Forum, European Commission, Food and Agriculture Organization of the UN (FAO), UN Convention to Combat Desertification (UNCCD), UN Environment Programme, German Federal Ministry for Economic Cooperation and Development (BMZ), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the German Federal Environment Agency (UBA).

This report covers the sessions that took place from 28-30 October. It first provides a brief history of the Global Soil Week and overview of related meetings and initiatives in the past year. It then summarizes discussions that took place during plenary sessions, followed by detailed summaries of 12 of the 22 interactive dialogue sessions held over the three days. After a brief outline of topics discussed during the "open space workshops" on 31 October the report concludes with a list of upcoming meetings.



Theatersport Berlin improvisational theater group, opened the kick-off session

A BRIEF HISTORY OF THE GLOBAL SOIL WEEK

ORIGINS OF THE GLOBAL SOIL WEEK: The Global Soil Week (GSW) is an initiative of the Global Soil Forum, which was established by IASS in 2011. GSW is also convened within the framework of the Global Soil Partnership (GSP), launched in 2011 by FAO and a group of partners to improve global governance of the world's soil resources to guarantee healthy, productive soils for a food-secure world. The first Global Soil Week (GSW 2012) convened in Berlin, Germany from 18-22 November, 2012, as a forum for interactive

IN THIS ISSUE

A Brief History of the Global Soil Week	1
Global Soil Week 2013 Report	2
Kick-Off Plenary	2
Understanding Soils In The Nexus	2
Managing The Nexus	4
Creating Pathways To Societal Change	6
Interactive Dialogue Sessions	7
Parallel Events	16
Upcoming Meetings	16
Glossary	17



exchange and dialogue among stakeholders from science, government, business and civil society regarding their land and soil-related experience and expertise, and to develop plans of action for sustainable land/soil management and governance. The meeting also served to initiate follow-up actions on land and soil-related decisions made at Rio+20.

FOLLOW-UP INITIATIVES: Building on the outcomes of GSW 2012, the Global Soil Forum continued to expand its strategic partnerships aimed at building awareness on the contribution of sustainable soil and land management to key global target-setting processes, including the Post-2015 Development Agenda and the G8 Land Transparency Initiative. Relevant events co-organized by Global Soil Forum-IASS and its partners in the lead up to GSW 2013 included, *inter alia*: two expert hearings on opportunities and limitations of transparency in strengthening responsible land governance (April and August 2013); a workshop on defining potential indicators for soils and land in the SDGs, (June 2013); the working group on “Governing Land Responsibly – Institutions and Actors” focusing on the Voluntary Guidelines on the Responsible Governance of Land Tenure at the “Policies against Hunger” conference (June 2013); the expert meeting on “Soils in the Nexus” (June 2013); and the final workshop of the IASS-IFAD project “Pro-Poor Resource Governance under Changing Climates” (September 2013). For more information on these events, please visit: <http://globalsoilweek.org/news/>.

GLOBAL SOIL WEEK 2013 REPORT

KICK-OFF PLENARY

GSW 2013 opened on Monday, 28 October, with a creative interpretation of the event’s theme “Losing Ground?” by Theatersport Berlin. Jes Weigelt, Coordinator of the Global Soil Forum-IASS and facilitator of the session, welcomed participants and introduced the five keynote speakers.

In his opening remarks, Klaus Töpfer, Executive Director, IASS, noted the first Global Soil Week was convened as an experiment but it had succeeded in convincing the global community to “repeat” it. He underscored that losing ground does not only refer to the physical loss of soils, but to the perspectives, practices and local ownership that are critical in sustainable management of natural resources. Töpfer called for substantial investments in science and scientific collaboration to ensure the nexus between soil, water, food security, natural resources and energy is addressed effectively.

Tarja Halonen, Former President of Finland and Co-Chair, High-Level Panel of the UN Secretary-General on Global Sustainability, noted that there is global consensus that sustainable development requires green growth, with environmental and social justice. She further noted that a focus on soil management is one of the most effective means for addressing poverty as it is essential for enhancing access to sustainable food, water and energy services.

Tanja Gönner, Chair, GIZ Management Board, stressed the need to focus the international community’s



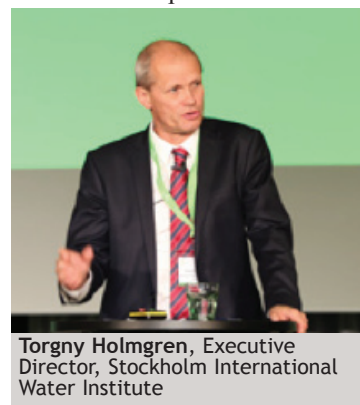
Tarja Halonen, Co-Chair, UN Secretary-General's High-Level Panel on Global Sustainability

attention on the cost of soil loss and land degradation and develop solutions. Emphasizing that the nexus depends on the availability of soil, she argued that holistic and multi-level approaches provide concrete solutions.

Via a video message, Janez Potočnik, European Commissioner for the Environment, discussed a range of European Commission initiatives targeting improved soil management. Regarding the proposed EU Soil Framework Directive, he stressed the urgent need for member countries to give a firm sign of their commitment to adopt the Directive or the Commission would have to withdraw it.

Citing a poem by Rabindranath Tagore, Vandana Shiva, International Forum on Globalization, cautioned against thinking of soils as dead matter, said soil fertility paradigms need to acknowledge living soils, and encouraged participants to use this event as a platform to cultivate hope.

Torgny Holmgren, Executive Director, Stockholm International Water Institute, stressed the need to change how water is used and valued, including for food production, by investing in new technologies and building partnerships among water and land owners and users, including the farming community and agribusiness.



Torgny Holmgren, Executive Director, Stockholm International Water Institute

The kick-off event closed with a short film in which Berlin citizens discuss their personal relationship to soil. They urge decision makers to undertake measures to reduce food waste, create gardens in cities, educate the youth and stop land grabbing, so as not to “lose ground.”

UNDERSTANDING SOILS IN THE NEXUS

On Monday, following the kick-off plenary, GSW 2013 participants initiated discussions on the role of soils in the nexus of water, food and energy security, and with other natural resources (the Nexus). The discussions took place in a plenary session in the morning, followed by eight dialogue sessions in the afternoon organized around the four thematic threads running through GSW 2013. In the late afternoon, participants reconvened in a wrap-up plenary to review the outcomes of the dialogue sessions and highlight issues for inclusion in the outcome document, “Agenda for Action.”

PLENARY SESSION ON “TOUCHING GROUND”:

Alexander Müller, IASS, facilitated this session on Monday morning, which aimed to present practical experiences and perspectives from around the world in tackling challenges in soil management and land governance.

Lindiwe Sibanda, Executive Director, Food, Agriculture, Natural Resources Policy Analysis Network (FANRPAN), South Africa, shared her personal experience of growing food in Zimbabwe and noted that soil is a farmer’s main asset. She emphasized that national and global policies must find solutions to fight rural abandonment by young people through revitalization of soils and lands. Responding to questions from participants, she stressed the need for science-based policies, community education and empowerment, and a new paradigm for smallholder farmers.

Pia Bucella, Director, Directorate B Natural Capital, European Commission, said that a study by the Commission's Joint Research Centre (JRC) on the state of soils in Europe found that 1.3 million square kilometers are affected by soil erosion, with 20% of these losing up to ten tons of soil per hectare every year. She further noted that there are approximately three million contaminated sites across Europe and suggested the rehabilitation of these sites is a cost-effective solution to the demand of new land for urban development, which could help avert land grabbing. Responding to a question on whether considerations on soil have been included in the reformed EU Common Agricultural Policy (CAP), she said the reformed CAP gives greater flexibility to member states to shift to environmentally sound agricultural practices.



César Morales, Economic Commission for Latin America and the Caribbean

César Morales, Economic Commission for Latin America and the Caribbean (ECLAC), stressed the importance of public policies in combating land degradation, but noted that challenges result when there is a disconnect between science and public policy and between scientific research and the requirements of affected communities. During the ensuing discussions

participants highlighted how agricultural paradigms are being changed at national and regional levels, how effective actions stem from synergies between scientists, agricultural extension officers, and farmers, and the role of soil policies, such as those developed at state level in Brazil.

Tewelde Egziabher, Director General, Environmental Protection Agency, Ethiopia, outlined how agro-ecological practices have helped minimize soil erosion and improve soil health in his country, and noted that these techniques can be applied throughout Africa and the rest of the world. He called for increased research and development on how to boost natural cycles that improve the ecosystem as a whole. He further underlined the importance of national policies and technical support to empower local farming communities to take unanimously agreed collective actions. In the ensuing discussions, participants highlighted ways to integrate traditional knowledge to support policy making and to scale up local practices and technologies to improve food security.

Jae Yang, President, International Union of Soil Sciences, outlined the Republic of Korea's experience with soil



Jae Yang, President, International Union of Soil Sciences

value assessment for soil degradation. Citing a study that estimated the total value of Korean soils at approximately USD30 billion, he noted that this underscores the importance of soil policy in sustainable development. In the ensuing discussion, participants pointed out that the high cost of undertaking such studies prevents many countries

from reflecting the true value of soils in policy and emphasized the need to involve industry stakeholders in sustainable soil management (SLM).

KEY MESSAGES FROM THE INTERACTIVE

DIALOGUE SESSIONS: On Monday evening, during a plenary session facilitated by Manfred Konukiewicz, Green Climate Fund, four "thematic ambassadors" presented key messages and insights from the day's interactive dialogue sessions for incorporation in the GSW 2013 "Agenda for Action."

Rattan Lal, Global Soil Forum Steering Committee, highlighted key points from the two dialogue sessions relating to material cycles. On diffuse soil pollution, he said participants focused on: types of monitoring needed; which funding sources can be mobilized; who should pay; and how to monitor ecosystem health. On soil carbon management, he reported the participants discussed: preserving versus enhancing soil carbon; how land tenure can influence technology adoption; monitoring soil carbon at the landscape level; and carbon credits. Participants also debated how to target effective communication to both farmers and policy makers.

Reporting on outcomes from the two dialogue sessions on SLM and soil engineering, Liesl Denise Wiese, Institute for Soil, Climate and Water, South Africa, noted that the session on the impacts of extractive industries on soil had highlighted three core issues: the centrality of political will; the need to go beyond project-based environmental impact assessments to understand the cumulative effect of individual mining projects at national, regional and global levels; and the need to embed measures into mining operations from the onset to enhance sustainable practices and local empowerment. With regard to the dialogue session on urbanization, Wiese highlighted the need to consider: synergies between ecosystem services within urban environments; seize opportunities at institutional levels; and factor in the full economic costs and benefits of rehabilitating brownfields as opposed to continued greenfield development.

Ephraim Nkonya, International Food Policy Research Institute, reported on the outcomes of the dialogue session on international soil policy and SDGs, highlighting discussions on: the importance of language for communicating scientific results to policy makers; the need to focus on the macro-economics of land degradation; the importance of urban soils; participatory approaches for land degradation; methods for data standardization; the African Soil Information Service; and the EU legal framework for the protection of soil.

Joan Cuka Kagwanja, African Land Policy Initiative, UN Economic Commission for Africa, reported on the dialogue session on responsible land governance, which discussed "money for the Nexus," noting the richness of perspectives presented. She said private investments in land often occur in the absence of land data and basic rules, although promising developments exist, such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (Voluntary Guidelines). She further reported that there were diverging opinions on whether large-scale land acquisitions are good for achieving food security and the role of non-legally binding instruments when the governance basis for their implementation is not guaranteed.

FINAL MESSAGES: During a final panel discussion on Monday evening, Ania Grobicki, Executive Secretary, Global Water Partnership, reflected on the role of soils in the Nexus. Emphasizing the need to employ multi-disciplinary approaches, she provided examples from integrated water resource management, and how soil and water resources are intertwined. She stressed that soil governance is essential for healthy water based ecosystems, and highlighted that governance issues had arisen across the day's thematic sessions.

Noting the challenges of soil fertility, quality and sustainability, Reinhard Hüttel, Scientific Executive Director, Helmholtz Centre Potsdam, German Research Centre for Geosciences, stressed: the need for more information on sustainable soil management; the importance of the ecosystem approach in establishing soil monitoring systems; and the need to identify the appropriate language to communicate with scientists, the general public and policy makers.

Alok Adholeya, Director, Biotechnology and Bioresources Division at The Energy and Resource Institute, India, underscored the importance of creating knowledge hubs to share successful approaches for soil biological reclamation, and of conducting research on their sustainability.

Lothar Hövelmann, Managing Director, Competence Center, German Agricultural Society, said farmers are increasingly conscious of their role as soil stewards, beginning to drive the research agenda on soil's physical properties, and are requesting information and capacity building in this regard. He highlighted, among such farmer-led initiatives, efforts to explore different tillage systems and their impact on soil compaction, erosion and productive functions.

Yaya Adisa Olaitan Olaniran, Permanent Representative of Nigeria to the Rome-based UN Agencies for Food and Agriculture, provided concrete examples of how soil cuts across the Nexus. He argued that multi-stakeholder and multi-disciplinary approaches take time, and therefore "we have to hurry gently," ensuring that actions are taken in systematic and strategic ways. On moving forward, he emphasized making use of traditional knowledge of both indigenous peoples and farmers.

In the ensuing discussion, panelists responded to questions raised by participants. Hüttel commented on the societal value of soil carbon and stressed the need for transparency. Speaking on the issue of bioenergy, Adholeya said the impacts on biodiversity are unavoidable. Hövelmann emphasized the need to build awareness on microorganisms in the soil. On challenges, he highlighted soil erosion, soil compaction, and reducing the nitrogen surplus and called for a focus on education, awareness raising, and capacity building in support of sustainable production in the, "Agenda for Action." Olaniran emphasized that smallholder farmers hold the key to food security, stressed the need to engage women and youth, and underscored the need to build political will.

MANAGING THE NEXUS

Discussions on Tuesday focused on how best to manage soils within the Nexus to achieve sustainable development. In the morning, participants met in six interactive dialogue sessions to explore this topic, reconvening in two plenary sessions in the afternoon to review the key outcomes and share perspectives on the way forward.

PLENARY SESSION ON KEY MESSAGES FROM THE INTERACTIVE DIALOGUE SESSIONS: On Tuesday afternoon, facilitator Camilla Toulmin, Director, International



L-R: Camilla Toulmin, IIED; Moujahed Achouri, FAO; and Pablo Pacheco, CIFOR

Institute for Environment and Development, noted the session would explore how to find common ground among diverse insights, scales, actions and arenas that together can help in managing the Nexus. The four "thematic ambassadors" then presented highlights from the dialogue sessions.

Deborah Bossio, Director of Soils Research, International Centre for Tropical Agriculture (CIAT), presented the outputs from the dialogue session on sustainable soil nutrient management in sub-Saharan Africa. She underlined wise use of both organic and synthetic fertilizers and the role of science as the foundation for agricultural extension and policy. On issues that had generated debate she highlighted: impacts of subsidies, including subsidies to support integrated approaches, and the use of nitrogen fertilizers; the need to talk about water issues; and recycling nutrients from urban sources. During discussions, participants highlighted the need to invest in integrated approaches to soil and how to target subsidies to get the "right" outcomes.

Pablo Pacheco, Center for International Forestry Research (CIFOR), highlighted outcomes from the two dialogue sessions on SLM and soil engineering, which discussed: integrating knowledge systems for SLM; and enhancing the functioning of soils in the "critical zone." He noted participants' call to move away from the false dichotomy between indigenous and scientific knowledge, and the challenge posed by institutional barriers, and the lack of political will in many countries. He noted that improved awareness on Nexus issues, such as the link between deforestation, soil erosion and silting of large dams, could contribute to more effective resource allocations by prioritizing environmental protection and SLM. He further noted that the dialogue sessions highlighted the role of the GSP in fostering integrated policy approaches.

Walter Erdelen, Former Assistant Director General, UN Educational, Scientific and Cultural Organization (UNESCO), reported on the outcomes of the dialogue session on international soil policy and SDGs, which highlighted a number of initiatives dealing with how to integrate soil and land in the Post-2015 Development Agenda. Highlighting the need to bring together the diverse initiatives represented at GSW 2013 and also invite other partners to join, he noted the proposal to establish a GSW working group for indicators for soil and land. He further stressed the need to be proactive and consider the timeline of the global discussion within the SDG process. Responding to a question on how to enhance integrated approaches within the SDGs process, Erdelen said

that although the focus of discussions at GSW 2013 is on soils, the debate has the potential to influence the intergovernmental process towards the SDGs.

Iris Krebber, Food Security and Land Adviser, DfID, UK, reported on two dialogue sessions on responsible land governance: one that discussed integrated governance for energy security and sustainable land use; and the other on balancing trade offs and assessing virtual land imports. She underscored that technology is available for assessing environmental impacts, but that much needs to be done to measure social and policy impacts, address trade offs from a political economy perspective and for delivering policy changes. The ensuing discussion addressed transparency and accountability, energy security, scarcity and unbalanced access to resources, and the Post-2015 Development Agenda as a unique opportunity for land-related policy changes.

Summing up the contributions of the session to the Conference outcome, “Agenda for Action,” facilitator Toulmin highlighted the need to: broaden the constituency beyond the soil scientists and use the media to communicate research results; value natural capital and investments in lands made by millions of smallholder farmers; be ambitious and set universal targets; and act strategically by seizing the political momentum to bring more stakeholders to the table.

PANEL DISCUSSION ON MANAGING THE NEXUS:

Following the review of key messages, facilitator Toulmin asked the panelists to look forward and identify their ambitions for Global Soil Week 2016, which would be the first GSW held in the post-2015 context.

Moujahed Achouri, Director Land and Water Division, FAO, noted that messages on SLM and the crosscutting nature of soils should be taken to the political level. Martin Yemefack, President, Africa Soil Science Society, suggested focusing on incentives that support sustainable agriculture and soil management. Johan Kuylenstierna, Executive Director, Stockholm Environment Institute, proposed addressing the drivers of change for natural resources in the context of the SDGs, noting that this may facilitate a strategic discussion on policy coherence.

Maria Betti, Director, Institute for Environment and Sustainability, JRC, proposed assessing what has been achieved since the GSW 2012 and discussing soils in terms of the ecosystem services they provide. Fon Nsoh, Coordinator, Community Initiative for Sustainable Development in Cameroon, recommended a focus on exchanging experiences on gaining ground to balance the GSW 2013 focus on losing ground. He also proposed bringing local perspectives and practical examples of resource-efficient approaches into the dialogue.

In the ensuing discussion a participant from Ethiopia underscored the need for a food security perspective, and identified the Ethiopian SLM agenda as one example of this approach. Teofilus Nghitila, Commissioner, Department of Environment, Namibia, recalled the Namibia Declaration at UNCCD COP 11, emphasizing its focus on strengthening the science-policy interface.

PLENARY SESSION “REVIEW”: On Tuesday evening, this closing panel discussion highlighted perspectives from different world regions and stakeholder groups on strategies for societal change and the way forward.

Yanira Ntupanyama, Principal Secretary, Ministry of Environment and Climate Change Management, Malawi, underscored the need for a holistic understanding of all drivers of SLM by involving a broad range of policy makers, planners and economists in the discussion.

Luc Gnacadja, former Executive Secretary, UNCCD, welcomed the adoption of the concept of a land degradation-neutral world in the scientific discourse and the variety of proposals on how to promote it, but cautioned that with respect to the SDG process, what matters is to get the political message right. He added that this can be done through demonstrating the links between SLM, human security, economic prosperity and vulnerability, and called for the, “Agenda for Action” to focus on what is needed to get this message across in the next few months.

Günther Bachmann, General Secretary, Council for Sustainable Development, Germany, noted the GSW is making a big difference in bringing these issues to the table, but stressed the need to ensure connections to “real issues”



L-R: Günther Bachmann, Secretary-General, Council for Sustainable Development, Germany; Jennifer Franco, Coordinator, Agrarian Justice, Transnational Institute, US; Jae Yang, President, International Union of Soil Sciences; Ronald Vargas, Soils and Land Management Officer, FAO; Luc Gnacadja, former Executive Secretary, UN Convention to Combat Desertification (UNCCD); Yanira Ntupanyama, Secretary, Ministry of Environment and Climate Change Management, Malawi; Anneke Trux, Team Leader, Human Capacity Building Academy for International Cooperation, GIZ; Helge Wendenburg, Director-General, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Germany; and Md. Sirajul Islam, Head, Agriculture and Food Security Program, BRAC University, Bangladesh

along the food value chain by linking soils to the commodities grown on them. He proposed establishing a soil stewardship community to assist policy makers make the right trade offs between economics and sustainability.

Ronald Vargas, FAO, commented on opportunities to link the GSW to the work of the Intergovernmental Technical Panel on Soils (ITPS). Jennifer Franco, Transnational Institute, underscored the need to explore who makes decisions at the local level, discuss land rights, and focus on how to value soil, land, and water.

Sirajul Islam, Programme Head, Agriculture and Food Security Program, BRAC University, Bangladesh, highlighted the importance of food security and its close connection to soils, water and crops.

Praising the achievements of the GSW, Reinhard Kaiser, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), stressed the need to: highlight success stories; continue work on indicators and finding “courageous” solutions; and reflect on the role of soil not only in the context of agriculture, but also cities.

In the ensuing discussions participants highlighted: arsenic contamination of soils in Bangladesh; the need to recognize that the best scientific or technical solutions are not always the best solution for people; increased funding for soil research; how to find the appropriate language to include soils in the SDGs; and highlighting the costs of inaction on land and soil degradation.

When asked by the moderator which argument they would use to convince the German government of the importance of soils, panelists stressed: the economic value of soils; the current opportunity for integrating soils and land in the international agenda; and the value of conferences like the GSW.

CREATING PATHWAYS TO SOCIETAL CHANGE

On Wednesday, the final day of the formal programme at GSW 2013, eight dialogue sessions took place in the morning. Following a review of the outcomes, a closing high-level panel in the afternoon reflected on the outcomes of GSW 2013 and proposed ways forward.

PLENARY SESSION - CREATING PATHWAYS TO SOCIETAL CHANGE: Key messages from the interactive dialogue sessions: Moderator Jes Weigelt, IASS, invited

thematic ambassadors from the four GSW 2013 threads to distil the important messages for the way forward.

On solutions and ways forward, Roland Scholz, Fraunhofer Project Group Materials Recycling and Resource Strategies, Germany, highlighted: the need for strong leadership; engaging public participation and consensus building; innovative financing to support soil de-sealing; and new technologies for spatial analysis and urban agriculture that can contribute to sustainable urban planning.

Pieter Ploeg, Summer of Soil (SoS), raised that urban sprawl left youth with no access to land, and SoS was facilitating opportunities for urban agriculture.

Luca Montanarella, JRC, and Chair, ITPS, highlighted outcomes from the four dialogue sessions on SLM and soil engineering. With regard to the session on capacity building for reclamation and re-valuing of degraded land, he noted case studies from Brazil, Namibia and India had highlighted potential of gaining ground by exploring investment opportunities in land reclamation. He highlighted the LivestockPLUS programme, a sustainable intensification approach that aims to deliver the triple win of improved productivity, profits, and improved food and nutritional security, as a promising approach in this regard.

On transdisciplinary collaboration and strengthening science-policy-practice linkages, he noted the discussions had identified a number of opportunities, such as: integrating regional information in global research; strengthening links with the private sector; and contributing to the monitoring framework being developed under the new UNCCD Science-Policy Interface. Among the challenges, he highlighted the need to reward researchers for multi-disciplinary work and implementing policies to enhance access to data.

With regard to the two sessions on effective soil communication, he highlighted the need to: better explain interdependence of people and soil; explain the contribution of smallholder farmers to food security; promote images of “living soils”; and initiate a global campaign on soil to coincide with the UN International Year of Soils in 2015.

In the ensuing discussions, Madiodio Niasse, Director, International Land Coalition (ILC) stressed the need to ensure that investments in degraded land help benefit local communities. Observing that land conflicts are primarily focused on fertile land, he said this provides opportunities to redirect investment to degraded areas through well-targeted policies. He also proposed seizing the opportunity to reallocate degraded and abandoned land to reduce social inequality.

Joachim von Braun, Director, Center for Development Research, University of Bonn, Germany, advocated bringing emotion into the discussion on soils, noting that farmers and scientists can give soil “a voice.” He urged all countries to emulate Senegal’s example of creating an institution dedicated to soil science.

Other participants highlighted: opportunities for scientific collaboration as part of preparations for the 2015 World Soil Resources Report; the need to better utilize existing knowledge to overcome fatalism that degraded soil is lost for ever; and ensuring that those who degrade land pay for restoration.

Maria Betti, Director, Institute for Environment and Sustainability, EC Joint Research Centre, stressed the importance of considering issues such as soil biodiversity, land degradation, climate change, and urban and rural development, in an integrated, holistic and sustainable manner.

Pia Bucella, Director, Directorate B Natural Capital, European Commission, reported on the dialogue sessions covering international soil policy and SDGs. On the session dealing with Rio+20 implementation, she said the group agreed on the need to work towards a new instrument to address land degradation and soil, which should be: legal; under the UNCCD; broader in scope than



Roland Scholz, Fraunhofer Project Group Materials Recycling and Resource Strategies and Thematic Ambassador, Material Cycles



Pia Bucella, Director, Directorate B Natural Capital, European Commission, and Thematic Ambassador, International Soil Policy and Sustainable Development Goals

the UNCCD; and defined by governments, NGOs, local authorities, and business. She said that the work undertaken in the GSW context should be done under the auspices of the intergovernmental working group established at UNCCD COP 11 and work through the SDGs process.

Reporting on the session on how to address land degradation and reduce poverty and the role for local policy actions, Bucella noted a case study comparing food security in Botswana and the Democratic Republic of the Congo. She underlined the importance of effective public authorities for efficient land management and urged ensuring that governments, local farmers, civil society and women are part of the solution. She emphasized the need to empower women who are “at the heart of dealing with soils.”

Ana Euler, Executive Director, Amapá State Forestry Institute, Brazil, congratulated participants for their proposals and solutions discussed during the GSW 2013, and recommended involving holders of traditional knowledge in the next GSW.

Patrice Burger, Drynet, highlighted that differences exist in terminology between soil and land and called for clarifying how they are related.

Lillian Bruce, National Coordinator, Civil Society Coalition on Land, Ghana, reported on the dialogue session on partnerships for responsible land governance. She emphasized that transparency is a means to an end rather than an objective. She stated that governance encompasses other aspects beyond transparency, such as participation and security, and underscored the need for prior, informed and meaningful participation of local communities, and for the rights of communities to negotiate, review and recede from contracts.

Marita Wiggerthale, Oxfam, stated that ensuring secure access to land and water resources is an element of fighting poverty, and that free, prior, informed and meaningful consultation is essential but difficult to realize. Citing the example of Guatemala, where land was partly returned to farmers who had been previously evicted, she underlined the importance of strong farmer organizations and community empowerment.

CLOSING PLENARY:
High-level panel on ways forward: On Wednesday evening, Klaus Töpfer, Executive Director, IASS, introduced the session and invited panelists to highlight some priorities for the way forward.

Minister Aroldo Cedraz, Vice-President, Federal Court of Accounts (TCU), Brazil, said his participation at GSW 2012 had “left a mark,” inspiring TCU to use its constitutional mandate for improving government performance to convene an international seminar in 2015 on soil governance and improving governance mechanisms for dealing with SLM in an integrated way.

Karl Falkenberg, Director-General for the Environment, European Commission, cautioned that the current way of managing soils is not sustainable, and reminded participants that issues related to soil, water and climate need to be addressed holistically. He discussed efforts to establish a common soil policy through an EU Soil Framework Directive

and the challenges faced in doing so. He said that without a clear signal from member states, the Commission would withdraw the proposal, leaving Europe without a dedicated policy for soil and land use. Falkenberg concluded with a call to the global community to look at the SDGs as a whole and develop targets that can be monitored.

Rapibhat Chandarasrivongs, Permanent Representative of Thailand to the Rome-based UN Agencies for Food and Agriculture, highlighted international events related to soil, including World Soil Day, the International Year of Soils 2015, and Expo Milano 2015 on the theme “Feeding the Planet, Energy for Life.” He encouraged those attending GSW 2013 to contribute to these events.

Panelists offered final thoughts on pathways for societal change. Niasse stressed that countries with land resources need strong, transparent governance structures. Euler signalled the importance of social media in making local peoples’ voices heard. Von Braun called for emphasizing regional cooperation and embedding SLM and soil protection into sustainable agriculture goals. Ploeg noted the challenge of making knowledge accessible and getting actively involved, and called for bringing inspiring actions and success stories to public attention.

In his closing remarks, summarizing the messages of the GSW 2013, Alexander Müller, IASS, urged participants to: realize the present opportunity for soil issues in the international debate; recognize the political, technical and socioeconomic dimensions of a land degradation-neutral world and to work strategically to facilitate a common understanding of this concept by all stakeholders; and find a communication approach able to convince others that a land degradation-neutral world will bring benefits for all and particularly for the poorest and more vulnerable people. He encouraged participants to provide their inputs on the draft, “Agenda for Action.”

The plenary session concluded with a wrap up performance by Theatersport Berlin, extracting key messages from the discussions.



Alexander Müller, Senior Fellow, IASS



Klaus Töpfer, Executive Director, Institute for Advanced Sustainability Studies (IASS)

INTERACTIVE DIALOGUE SESSIONS

UNDERSTANDING SOILS IN THE NEXUS

On Monday afternoon, eight dialogue sessions convened simultaneously to address: the neglected issues of diffuse soil pollution; soil carbon management for sustaining agricultural productivity; space to sprawl vs. controlled urbanization; impacts of extractive industries on soil; economics of land degradation; global soil information; towards an EU legislative framework for soils; and money for the Nexus.

The following summaries offer an overview of four of the dialogue sessions, covering each of the four thematic threads of GSW 2013.

MATERIAL CYCLES - SOIL CARBON MANAGEMENT FOR SUSTAINING AGRICULTURAL PRODUCTIVITY: Sandra Naumann, Ecologic Institute, Germany, outlined the focus of the session, which was to

review current knowledge of soil carbon, discuss best practices for its management, and explore the mainstreaming of soil carbon in policy formulation.

Kristen Schelde, Aarhus University, Denmark, provided an overview of current understanding of soil organic matter, its influence on soil functioning as well as productivity, and how increasing soil organic matter can increase both crop yields and yield stability.

Julie Ingram, University of Gloucestershire, UK, presented outcomes from multi-stakeholder consultations under the Smart Soil project. She focused on socio-economic and behavioral issues, as well as barriers and incentives that influence choices farmers make regarding soil carbon management. Regarding challenges, she noted the paradox between long-term benefits of managing carbon with the fact that farms operate in the short-term.

Peter Kuikman, Alterra, presented on opportunities for financial incentives through the EU Common Agricultural Policy pillars on: greening measures; and on rural development, credits from voluntary emissions trading, and regional funds. Regarding carbon credits for soil carbon, he explored the reference levels that could be used and types of possible payments for both carbon stock and flux.

Luca Montanarella, JRC, discussed how soil carbon cross-cuts food security, climate change, desertification, and biodiversity, and how these synergies are gaining attention within the associated global policy agenda processes. He noted opportunities through: the Intergovernmental Platform



Luca Montanarella, Chair, Intergovernmental Technical Panel on Soils and Thematic Ambassador, Sustainable Land Management and Soil Engineering

on Biodiversity and Ecosystem Services (IPBES); the UNCCD and the Convention's Committee on Science and Technology; and through renewed policy activity centered on food security.

Ana Frelih-Larsen, Ecologic Institute, Germany, focused on European policies, explaining that while soil carbon management is gaining recognition, existing policy measures address soil protection indirectly or as a secondary objective. She discussed framing soil carbon in an evolving policy framework, noting, *inter alia*: the need for an overarching soil policy; setting targets for different soil threats including the loss of soil organic matter; targeting and balancing regulatory and voluntary measures according to risk and the potential to deliver multiple benefits; and supporting instruments such as land-use, land use change, and forestry (LULUCF) accounting and ecosystem services mapping.

Round table discussions: Participants rotated between 5 small groups to discuss soil carbon management within the following contexts: best management practices for soil carbon, soil productivity, and crop yield; innovative financing mechanisms to enhance peatland preservation; awareness raising and knowledge exchange; policy frameworks at EU and global levels; and translating scientific knowledge into useable concepts for practical policy advice.

The moderators reported on the main issues that emerged, including, *inter alia*: the importance of governance; closer cooperation with farmers when developing programmes; incentives for diversified farm systems, reclaiming degraded land, and restoring ecosystem functions; the concept of global farm carbon stewardship; monitoring soil carbon at landscape levels; being more strategic in communication and talking more holistically about soil health; and the impact of farmer-to-farmer dissemination.

SUSTAINABLE LAND MANAGEMENT AND SOIL ENGINEERING - THE REAL IMPACTS OF EXTRACTIVE INDUSTRIES ON SOIL: This session was moderated by Mariné Pienaar, Terra Africa Consult.

Graciela Metternicht, University of New South Wales, Australia, noted that despite the potential for extractive industries to contribute to economic growth and poverty reduction, most mining countries have so far failed to control negative environmental and social impacts. Among solutions, she stressed the need for: scaling up leading practices in sustainable mining; technical and institutional capacity building; continuous research and evolution of engineering practice; responsible land governance, focused on strengthening institutions to enforce sustainable practices; properly valuing soil stocks and ecosystem services; and investing in education for sustainability.

Moderator Pienaar charted the trajectory of a new iron ore mining concession in Namoya, in the eastern part of the Democratic Republic of the Congo, noting that some of the land-use impacts in less than one year of operations include environmental destruction, displacement of artisanal miners, and social differentiation through benefitting only a section of the local community.

Jorge Jurado, Ambassador of Ecuador to Germany, discussed institutional measures to reduce the impacts of extractive industries. He highlighted the impacts following four decades of oil extraction in the Ecuadorian Amazon as, *inter alia*: losing billions of tons of fertile soil; soil and water contamination; and environmental degradation due to expansion of human settlements and agricultural production. He stressed that finding effective solutions requires political will and strong institutions, a focus on strategic planning and systemic approaches, and technical know how. Asserting that "market solutions do not work," he mentioned that recreating state-owned public enterprises to balance economic, social and environmental imperatives was one approach that worked in his country.

Theresia Ott, Richards Bay Minerals, South Africa, described her company's experience in regenerating indigenous coastal dune forests. She highlighted sustainable practices adopted by the company, including: the development of a 200 meter-wide buffer zone between the shore and mine; restoring the topography of sand dunes by pumping back processed sand; reclaiming topsoil and planting of wind breaks to kickstart ecological regeneration; and expanding commercial forestry in collaboration with local communities to provide alternative livelihood opportunities. She underscored that independent studies, which include testing of water quality and soil carbon and nitrogen, as well as mapping of plants and animal biodiversity in regenerated forests, have confirmed that the company's approach works.

During discussions on the four presentations, participants highlighted the importance of comprehensive post-mine closure planning, with some stressing that conventional



Dialogue session on Economics of Land Degradation (ELD)

environmental impact assessments are inadequate for this. However, many noted that enforcing regeneration policies requires strong leadership, significant financial investment and continuous public pressure. Several contributors noted the “natural resource curse” is reinforced when states give generous concessions to mining companies, who subsequently fail to meet expectations that they will bridge the gap in infrastructural development and provision of basic services. Stressing that this demonstrates that Voluntary Guidelines are not effective, one participant noted the need to prioritize enforcement and good integration of policies at national and higher levels.

In a final round table session moderated by Roland Scholz, Fraunhofer Project Group Materials Recycling and Resource Strategies, Germany, participants highlighted, *inter alia*: the need to foster alternative land-use practices and security of tenure for small-scale miners and affected communities; make better use of the growing competition in the extractives sector by awarding concessions to companies with a strong track record in sustainable practices; prioritize access to education, health and infrastructure to contribute to broad systemic change; and invest in trans-disciplinary and multi-stakeholder policy making approaches to ensure the right trade offs between environmental, social and economic values.

INTERNATIONAL SOIL POLICY AND SDGs - THE ECONOMICS OF LAND DEGRADATION (ELD) INITIATIVE: This session was facilitated by Maïke Potthast, GIZ, and Mark Schauer, GIZ/ELD.

Introducing the ELD Initiative, Stefan Schmitz, BMZ, said the Initiative’s purpose is to raise political, public and private sector awareness of the impacts of land degradation and the economic benefits of SLM, and to develop a harmonized cost-benefit analysis toolbox for use in decision making on rural development and food security. He noted that the ELD approach stems from a cost-benefit analysis based on the total economic value of ecosystem services derived from land. Facilitator Schauer presented a short film on the value of soil.

Richard Thomas, UN University, Institute for Water, Environment and Health, presented on the ELD-Initiative’s Interim Report released at the UNCCD COP 11 in Namibia. Stressing the importance of ELD and SLM, he noted that if 95% of the potential crop productivity were reached, the gain would amount to 2.3 billion tons of crops, worth

about USD1.4 trillion per year. He presented options at the private sector level, including: helping to establish new markets for ecosystem services; focusing on local cluster building; and joining existing research, policy and stakeholder platforms. On policy sector options, he noted a portfolio of economic, communication and educational instruments and complementary regulatory instruments.

César Morales, ECLAC, presented a case study aimed at estimating the costs of inaction on desertification and land degradation in the Piura region of Peru, which concluded that the losses fluctuated from 13-15% of the agricultural gross value product. Morales noted the study’s success factors, including: participation, coordination and communication among stakeholders at all levels; knowledge and technology transfer between researchers and stakeholders; and common data validation between researchers and local/regional agencies, experts and small farmers.

Geertrui Louwagie, European Environment Agency, presented on the economics of soils in the urban and peri-urban context. She stressed the importance of an ecosystems approach to identify the contribution of soils to the delivery of land-based services and goods, as a basis for their valuation. She further noted that cost-benefit analyses help assess options for soil use and management in urbanized areas for maximizing net social welfare, while cost effectiveness analyses help determine the least cost options for achieving soil-related policy targets.

Joaquín Etorena, Ministry of Environment, Argentina, described the “commodity consensus” in Latin America in the past 10 years, saying that economic growth was pursued through exploitation of natural resources, as in the past, with the difference that in the last decade governments played an active role in income redistribution processes. He explained that this has allowed Argentina to reduce poverty from 40 to 5% through growth and income redistribution in a 50-50% relation, but highlighted negative impacts on: terrestrial ecosystems, including land degradation and increased desertification of dryland regions; economic and political stability; livelihoods; and democracy, such as conflicts on lands, rents and distribution.

In the ensuing discussions, participants addressed issues such as: private sector involvement; communication between the scientific community and policy makers; alternative

measures of wealth besides the gross domestic product; and the ELD-Initiative's usefulness as a tool to put soil in the international agenda.

RESPONSIBLE LAND GOVERNANCE - MONEY

FOR THE NEXUS: This session was co-facilitated by Bettina Rudloff, German Institute for International and Security Affairs and Christine Wieck, Institute for Food and Resource Economics, University of Bonn, Germany.

Christine Wieck made a presentation on the role of land and water-related investments in countries vulnerable to food insecurity. Using undernourishment as an indicator for food security, she classified countries as "bad" or "good" performers, and stressed that good performers show a more dynamic inflow of land and water related investments. She noted that countries experiencing large-scale land acquisitions should pay attention to other indicators of food security, such as dependence on food imports, which may in the longer term offset the positive effects of agricultural investments.

Facilitator Rudloff interviewed Friederike Diaby-Pentzlin, University for Applied Sciences, Wismar, Germany, and Michael Brüntrup, German Development Institute, on risks and chances of land investments in Africa. The interviewees expressed opposing views on: the need for a moratorium for investors from Europe; whether countries that are the target of land investments should be considered responsible for land acquisitions; and whether land registers would help minimize land acquisition risks in target countries. Dialogue participants also discussed the low capacity of civil society in countries that are the target of land acquisition, the absence of basic land data, and the role of standards and of other soft law instruments.

Rudloff then presented a EU perspective on investments in the Nexus, noting that EU investments in energy, water and agriculture are equally balanced but that support to integrated energy-water-agriculture actions has not increased.

Jeanot Pelzer-Melzner, German-African Resources and Infrastructure Corporation, presented his experience as a private land investor in Guinea, and emphasized the role of medium sized investments as a model for land projects to support community development.

Michael Windfuhr, German Institute for Human Rights, discussed the role of human rights-based approaches in standard and obligations setting, such as the Voluntary Guidelines.

MANAGING THE NEXUS

On Tuesday morning, six dialogue sessions took place on the following topics: sustainable soil nutrient management in sub-Saharan Africa; integrating knowledge systems for sustainable land management; soil engineering to enhance the functioning of soils in the critical zone; a proposal for global targets and indicators for soils and land in the SDGs process; integrated governance for energy security and sustainable land use; and balancing trade-offs in the "rush for land."

The following summaries offer an overview of four of the dialogue sessions, covering each of the four thematic threads of GSW 2013.

MATERIAL CYCLES - SUSTAINABLE SOIL NUTRIENT MANAGEMENT IN SUB-SAHARAN

AFRICA: Introducing the session, co-host Deborah Bossio, CIAT, couched the dialogue within three broad lenses: the Abuja Declaration on increasing fertilizer use in Africa to an average of 50 kg/hectare by 2015; agro-ecology and sustaining soil fertility over the long-term; and the interlinkages between science, politics, and economic processes.

Ronald Vargas, FAO, discussed trends in mineral fertilizer use in Africa. He stressed the need to invest in science and foster effective links with policy, especially with regard to fighting food insecurity and developing holistic strategies for sustainable soil management. On the way forward, he noted discussions on a second Abuja Declaration that would link with the Zero Hunger Challenge and the Comprehensive African Agriculture Development Programme.

Mwatima Juma, Tanzanian Organic Agriculture Movement, provided examples of losing ground in Tanzania through erosion, fertility decline, and the loss of traditional cultivation technologies. She noted challenges with subsidies for synthetic fertilizers including "leakages" within the value chain and potential entry points for corruption. Juma underscored that smallholder farmers are central to supplying the country's food needs, and provided examples of how organic production systems can improve soil health, tackle erosion, build



L-R: Fon Nsoh, Coordinator, Community Initiative for Sustainable Development (COMINSUD), Cameroon; Maria Betti, Director, Institute for Environment and Sustainability (IES) at the European Commission Joint Research Centre; Johan Kuylensstierna, Executive Director, Stockholm Environment Institute (SEI); Martin Yemefack, President, African Soil Science Society (ASSS); Moujahed Achouri, Director, Land and Water Division, Food and Agriculture Organization of the UN (FAO)

resilience, and reduce financial risks linked to dependency on external inputs. During discussions, participants debated, *inter alia*: externalities associated to both subsidy policies and synthetic fertilizers; diffuse pollution and impacts on water resources; whether organic fertilizers can “feed Africa”; and finding solutions that balance the wise use of both organic and inorganic fertilizers.

Johannes Kotschi, Association for Agriculture and Ecology, Germany, discussed the economic and environmental costs associated with mineral fertilizer use within the smallholder context in Africa. On ways forward, he identified: first establishing a national soil fertility strategy and then integrating fertilizer into the strategy; improving phosphorus supply and tapping into local deposits rather than phosphates transported from long distances; moving from synthetic to biological nitrogen; and ensuring extension service officers are trained in SLM.

Lindiwe Majele Sibanda, FANRPAN, moderated a dynamic “fish bowl” discussion in which panelists identified priority issues for moving sustainable soil nutrient management forward, and then participants from the floor were invited to respond with their own priorities. Participants raised, *inter alia*: further investment in extension services that transfer scientific results to farmers and contextualize science within local realities; moving from a debate on organic versus synthetic inputs to an emphasis on improving the quality of organic inputs; and understanding the heterogeneity of African soils and that one technology may display different results in different contexts.

SUSTAINABLE LAND MANAGEMENT AND SOIL ENGINEERING - INTEGRATING KNOWLEDGE SYSTEMS FOR SUSTAINABLE LAND MANAGEMENT

The session was facilitated by Andrew Noble, Consultative Group on International Agricultural Research (CGIAR). Introducing the panelists, he said the session would explore how to bridge knowledge gaps between science, policy and civil society and identify challenges and success factors for scaling up SLM practices.

Egline Tawuya, Southern African Research and Documentation Centre, Zimbabwe, and Pavel Krasilnikov, Eurasian Center for Food Security, spoke on farm-level experiences.

Tawuya noted that indigenous knowledge systems hold the key to SLM since local communities have an intimate understanding of their context and are better able to accept new ideas and science if embedded in local practices. Highlighting that challenges include population pressure, impacts of climate change, loss of traditional knowledge and lack of policy attention, she called for integration of indigenous knowledge systems at all levels through: documenting indigenous knowledge; identifying similarities to encourage simulation while respecting differences; and promoting knowledge networks and centers of excellence for awareness creation.

Krasilnikov stressed that while farmers have in-depth knowledge, scientists can help raise awareness on good practices and alternatives, making indigenous knowledge and science mutually enriching. With relation to knowledge on soils and land, he said indigenous knowledge contributes age-old experiences of farmers, and site-specific management tools, while science helps distil insights that can be extrapolated to other environments, and enhances adaptivity to new challenges such as contamination or population pressure. Krasilnikov said

the GSP offers three pillars for bridging the two approaches: SLM; soil education and awareness; and investment and practice-oriented soil research.

Bodo Richter, German Development Cooperation, and Olegario Muniz Ugarte, Soil Institute, Cuba, presented on planning at the landscape level.

Discussing the “Integrated Ecosystem Management made SIMPLE (Sustainable Integrated Management and Planning for Local Government Ecosystems)” project in the Philippines, Richter said the aim is to help avert conflicts due to unclear ownership and user rights between ancestral, private and government ownership, as well as fragmented planning and accelerated impacts from climate change. He highlighted the broad scope of the pilot project, currently being implemented in 56 municipalities, and underscored project benefits, including: setting new standards for planning based on fully geo-referenced data; introducing an integrated approach that enables local authorities to co-manage their entire territory; supporting scale-up of the project nationally; and developing knowledge products such as trainers’ manuals.

Ugarte described the recent launch of the regional soil partnership in Havana, Cuba, bringing together 15 countries of Central America and the Caribbean, and Mexico. Noting that countries in the region share common characteristics, with 75% of agricultural soils currently affected by land degradation, he highlighted regional SLM priorities as: establishing national legislation for soil protection; elaborating plans of actions for each of the five pillars of the GSP; creating a coordinating committee to advise on harmonization of indicators for SLM; and bridging the gap between science, policy and practice.

Parviz Kohafkan, World Agricultural Heritage Foundation, noted that agricultural investment policies in most countries have traditionally favoured: prime vs. low potential land; irrigation intensification vs. water productivity and management; single crops vs. total farm productivity; and export vs. food and local crops. He noted that these types of policies have led to a situation where agriculture uses 70% of all water withdrawals globally despite only accounting for only 12% of cultivated land, and has also exacerbated land degradation and desertification, food insecurity and migration.



Nathalie Van Haren, Both Ends, the Netherlands

Noting the green revolution only invested in technical, not human and social capital, Kohafkan stressed that rebuilding sustainable food systems requires a paradigm shift in agricultural and development policies and that small holders and family farmers are a major opportunity since they produce the bulk of global food. In this regard he highlighted the “Globally Important Agricultural Heritage Systems” (GIAHS) initiative’s

role in promoting awareness on the need to preserve such systems, and said examples include fish farming in rice paddies in China and conserving oasis systems in North Africa, and added that about 200 such unique systems have currently been identified.

Yanira Ntupanyama, Principal Secretary, Ministry of Environment and Climate Change Management, Malawi, highlighted the realities of day-to-day environmental policy making. She explained that her ministry has produced numerous environmental action plans and undergone

institutional restructuring, but continues to be marginalized in budget allocations. Noting that the key lies in making a stronger economic case for environmental protection, and harmonizing and enforcing existing policies, she said the ministry is exploring new approaches such as highlighting the costs of inaction on SLM and building alliances with local communities, traditional leaders and other groups with a stake in SLM.

In an interactive segment facilitated by Nathalie van Haren, Both Ends, The Netherlands, participants discussed how to win hearts and minds by communicating more effectively on the urgency of protecting ecosystems and using land sustainably for food production. They stressed that this requires not only making economic assessments but linking soil issues to human health and livelihoods. On how to galvanize political will, participants stressed the need to speak directly to individual citizens and politicians and using the right language for this. On appropriate messages, participants highlighted the need to target different audiences with appropriate tools.

Several speakers stressed the need to promote GSW to young people, farmers and local businesses through building more effective links with other advocacy processes.

INTERNATIONAL SOIL POLICY AND SDGs - SOILS AND LAND IN THE SDGs, A PROPOSAL FOR GLOBAL TARGETS AND INDICATORS: This session was moderated by Alexander Müller, IASS.

Introducing the topic, Klaus Töpfer, Executive Director, IASS, stressed the need for taking action to put soil and land resources on the global sustainable development agenda and for linking SDGs with concrete targets and indicators. He encouraged participants to “have a dream” and contribute ideas on how to “change dreams into reality.”

Sergio Zelaya, UNCCD, provided an update on the outcomes of UNCCD COP 11, highlighting, *inter alia*, the establishment of: an intergovernmental working group to operationalize the concept of land degradation-neutral world as agreed upon at Rio+20; and a Science-Policy Interface mechanism to harness in the body of knowledge on SLM.

Luca Montanarella, Chair, ITPS, presented the work of the ITPS, noting that it: focuses only on soils; is designed to address requests by the GSP partners and GSP Secretariat; has the potential to provide scientific advice to other Conventions and UN organizations related to soils; complements other existing intergovernmental panels lacking specific expertise on soils, such as the Intergovernmental Panel on Climate Change and IPBES; will provide short and medium term assessments and advice to FAO and GSP partners on selected priority topics; and is ready to collaborate with other organizations to develop soil-related SDGs.

Remy Sietchiping, UN-Habitat, delivered a video message presenting opportunities to advance land and tenure security in the post-2015 Development Agenda. He highlighted progress through the Report of the High-Level Panel of Eminent Persons on the post-2015 Development Agenda released in May 2013, saying it quotes the UN-Habitat methodology and basis for the land as target. On next steps, he underscored the need for partnerships, networking and resource mobilization.

Knut Ehlers, UBA, presented the draft proposal for targets and indicators on a land degradation-neutral world, saying it reflected discussions at GSW 2012 and a follow-up workshop. He stressed the importance of a people-centered approach that takes into account the specific needs of poor people and vulnerable groups who depend on land and soil

services. Describing the proposed targets on land degradation, restoration and ecosystem services, land use change, and socio-economic aspects and poverty, he pointed to next steps, including: revising and further developing sub-targets into indicators; introducing the findings into the SDGs and post-2015 agenda negotiations; and linking this activity to similar initiatives to come to a joint proposal.

Andrea Koch, United States Studies Centre, University of Sydney, Australia, introduced the concept of soil security, saying it is about ensuring that soil is managed and maintained in a way that it can continue to provide essential ecosystem services. Describing the biophysical, economic, social and policy dimensions of soil security, she noted this concept can help further develop land degradation neutrality.

Opening the discussions, Alexander Müller, IASS, noted the existence of several groups working on the topics of soil and land for the SDGs thanks to the momentum created by the Rio+20 agreement. Stressing that there is “no progress without process, he underscored the need to identify common ground and agree on targets. He also underlined the importance of the inter-linkages between soil, food, water, energy, and biodiversity to make the case for soils.



Andrea Koch, US Studies Centre, University of Sydney, Australia

Participants then debated on the need to, *inter alia*: undertake action on targets and indicators for soils, including by developing a single indicator; identify easily understandable and applicable indicators; use internationally agreed language, such as the agreed terminology on ecosystem services as encompassing land productivity and agricultural systems; ensure interaction and co-production of knowledge between scientists, policy makers and farmers; develop science-based definitions; and use mass and social media to bring messages across different audiences. He also reminded the participants that the debates would be deepened in the workshop titled “Targets and Indicators for Land and Soils in the SDGs and the Post-2015 Development Agenda.”

RESPONSIBLE LAND GOVERNANCE – INTEGRATED GOVERNANCE FOR ENERGY SECURITY AND SUSTAINABLE LAND USE:

David Jacobs, IASS, moderated the session, which explored approaches, models and techniques for enhancing sustainable land use in the context of transforming energy systems.

Suhas Wani, International Crops Research Institute for the Semi-Arid Tropics, discussed vertical (global to local level) and horizontal (cross-sector) integration of land use governance in India. He highlighted, *inter alia*, institutional integration under the Integrated Watershed Management programme and the inability of the National Biofuels Policy to attract farmers in an initiative to grow energy crops on degraded lands.

Long Nguyen, Joint FAO/International Atomic Energy Agency (IAEA) Division, introduced the application of nuclear techniques for quantitative assessment of the impacts of land uses, farming practices and climate change and variability on soil quality.

Thomas Alfstadt, IAEA, presented the correspondent modeling framework for climate, land, energy and water interaction (CLEW). He used an example from Mauritius, where the CLEW model was used as an aid to decision making on converting sugar cane plantations to ethanol production following the loss of preferential access to the European market for Mauritian sugar exports.

Thomas Weith, Leibniz Centre for Agricultural Landscape Research, Germany, presented lessons learned on different modes of governance in the context of changing energy system from the German SLM research programme. He emphasized the need to develop new “functional” governance models that integrate urban and rural land uses and energy production value chain and that avoid an urban-rural dichotomy.

Stephanie Wunder, Ecologic Institute, Germany, and Franziska Wolff, Öko-Institut, Germany, presented the findings of the GLOBALANDS project on global governance perspectives for sustainable land use. They identified windows of opportunity provided by existing international policies, such as: the UN Framework Convention on Climate Change, the Convention on Biological Diversity and the UNCCD; the post-2015 Development Agenda; the Voluntary Guidelines; and the Roadmap to a Resource-efficient Europe. They highlighted the increase in foreign development investments in agricultural lands as potentially negative for SLM, and stressed that important related issues, such as dietary and other consumption patterns and population growth, are not adequately addressed by international policies.

In the ensuing discussion, participants debated about: quantifying land occupancy for biofuel production; the high costs of renewable energy systems; the role of agroforestry in integrated production; the actual testing of “functional” governance models; and who should be responsible for land governance.

Participants then engaged in a round table discussion around four aspects: limits and opportunities of international land use governance and its interplay with regional and local governance; the challenge of energy transformation with regards to sustainable land use practices; finding new alliances and partnerships to enhance governance towards sustainable land use and disseminate good practices; and knowledge and evidence requirements for policy integration.

CREATING PATHWAYS TO SOCIAL CHANGE

On Wednesday morning, the final set of dialogue sessions covered the following eight topics: how to reactivate soil functions in urban regions; trans-disciplinary collaboration and strengthening science-policy-practice linkages; capacity building for reclamation and re-valuation of degraded sites; developing effective soil communication; communicating the pivotal role of soil quality in sustainable agriculture and food security; a new instrument to address soil and land degradation under the UNCCD; mobilizing societal change to address land degradation and reduce poverty in the developing world; and partnerships for responsible land governance and the role of transparency.

The following summaries offer an overview of four of the dialogue sessions, covering each of the four thematic threads of GSW 2013.

MATERIAL CYCLES - HOW TO REACTIVATE SOIL FUNCTIONS IN URBAN REGIONS: Katleen de Flander, IASS, introduced the session and encouraged participants to think about: how to reactivate urban soil functions; the role of soil in restoring natural resource cycles; and ways to enhance resource production in cities.

Jorge Sánchez and Adriana Lagos, Bogotá Botanical Garden, Colombia, presented the work of the Botanical Garden in supporting urban reforestation, gardening initiatives, and education. They outlined urban design renewal and participatory processes under the Bogotá District Development Plan (2012- 2016), including efforts to: address horizontal urbanization; restrict growth in risk zones; increase protected areas and biological connectivity; encourage multi-functional land use; and improve water catchment governance. They highlighted that these policies were supported by laws and regulations.

Martin Wattenbach, German Research Centre for Geosciences, presented a case study from the Shanghai-Nanjing region of China where urban and peri-urban agriculture is promoted as part of green urban planning. He noted that co-benefits included improving the resilience of cities and reducing urban heat island effects. Wattenbach provided examples of analytical tools, such as mapping and remote sensing, that can identify optimal areas for production, quantify the cooling effect of vegetation, and provide information on energy consumption and hydrological patterns. He illustrated how integrating resulting data into three-dimensional city modeling can provide a powerful policy-making tool.

Ciro Gardi, JRC, presented research on threats to soil caused by land take and soil sealing and the extent of the area affected by urbanization. By analyzing data sets for global land cover and population growth, and using nightlights as a proxy for urbanization, he illustrated how urban expansion often occurs in the most fertile areas, and that most growth will likely occur in Africa followed by Asia. Calculating that only 13 – 18% of the planet has naturally fertile soils, he noted this type of analysis shows the effect land take has on food security at the global scale.



Dialogue session on reactivating soil functions in urban regions, with Martin Wattenbach, GFZ German Research Centre for Geosciences, presenting a case study from Shanghai-Nanjing, China

Sabine Hilbert, Berlin Senate Department for Urban Development and the Environment, Germany, presented on efforts to address soil sealing in Berlin. While Berlin has a soil protection act and has included soil protection as core indicator under the city's local Agenda 21, she noted that the interplay with other laws and regulations could lead to soils to be placed on the back burner.

During the group discussion, participants noted several take-away messages, including: the need to have land take change indices; diet and consumption patterns must be changed; knowing what type of land is sealed versus unsealed is important information for policy makers; and innovative options for funding desealing should be found. In closing remarks, Nicola Dall'Olio, Parma Province, Italy, related the discussions to the No Net Land Take by 2050 goal of the European Commission's Roadmap to a Resource Efficient Europe.

SUSTAINABLE LAND MANAGEMENT AND SOIL ENGINEERING - CAPACITY BUILDING FOR A RECLAMATION AND RE-VALUATION OF DEGRADED SITES: The session was co-facilitated by Franz Makeschin, Dresden University of Technology, Germany and Christian Graefen, GIZ.

Minister Aroldo Cedraz, Vice-President, Federal Court of Accounts (TCU), Brazil, outlined how the TCU is utilizing its mandate for conducting public performance audits to expand its oversight role in the area of sustainable land management. In this regard he also highlighted the work of the 78-member Working Group on Environmental Auditing (WGEA), in facilitating information sharing and standards to enhance the governance of public policies and programmes.

Teofilus Nghitila, Environmental Commissioner, Department of Environmental Affairs, Namibia, presented experiences of the Country Pilot Partnership for Integrated Sustainable Land Management (CPP), noting it has contributed to policy harmonization and leveraging financing for community-based conservation and income generation initiatives. Among lessons learned, he stressed the need to allocate sufficient time to capture the concerns and aspirations of communities and understand their capacity needs, and ensure that initiatives add value by contributing to income generation at local level.

Deborah Bossio, Director Soils Research, CIAT, presented on CGIAR's capacity building approach, highlighting the institution's efforts to respond to the shift from traditional research disciplines to the growing demand for agro-ecological expertise, "learning by doing" programmes and institutional strengthening focused on managing complex, multi-stakeholder

approaches. She noted that while this poses challenges, there are also opportunities for exchanges at the regional level, citing Brazil, China and Vietnam as examples of countries with high research capacity.

Ana Euler, Executive Director, Amapá Forestry Institute, Brazil, outlined challenges in managing the 2.3 million hectare forest conservation area in the eastern Amazon. Noting that most of the rural population lives in the adjacent savannah zone, which is unprotected, she said this poses numerous challenges, including unplanned urbanization, illegal logging, and increased population pressure. Posing the question, "who ultimately benefits from good management of ecosystems?" Euler noted it is ironic that Amapá is not eligible for REDD funding because it has been successful in combating deforestation.

Presenting the first of three country experiences, Sakkie Coetzee, Executive Manager, Namibia Agricultural Union, said commercial farmers have the capacity to sustainably manage rangelands but need access to capital to make the necessary investments. He called for clear guidelines for both commercial and community restoration.

In the ensuing discussion, participants noted that the unique problems highlighted in the Namibia case confirm: that a one-size-fits-all approach does not work; and the need for raising awareness about the long-term impacts of unsustainable practices. In response to questions from participants Coetzee acknowledged that farmers' organizations have a responsibility in providing information about the long-term impacts of unsustainable practices to their members.

Michael Peters, CIAT, discussed the LivestockPLUS, a sustainable intensification initiative, explaining that the rationale behind the project is that the livestock sector has such wide ranging environmental impacts it should become a focal area in environmental policy. He discussed a project in Colombia that aims to reduce the area under pasture by 10 million hectares while doubling productivity by 2020, noting that advantages include carbon sequestration and biological nitrification inhibition, resulting in a higher level of system performance for both crops and livestock. He however cautioned that achieving greater efficiency is incumbent upon the correct pricing of natural resources such as land and water.

Maria Silvia Rossi, Federal District Government, Brazil, explained a key provision of the country's new forestry code is defining criteria for compensation for relocating existing farms from protected areas. She noted this creates challenges as well as opportunities for the federal institutions involved to collaborate with diverse stakeholders in defining land uses, and to build capacity in using new geo-processing tools and



L-R: Anna Euler, Executive Director, Amapá State Forestry Institute, Brazil; Teofilus Nghitila, Commissioner, Department of Environmental Affairs, Namibia; Franz Makeschin, Scientific Director, Dresden International University, Germany; Christian Graefen, GIZ; Minister Aroldo Cedraz, Vice-President, Federal Court of Accounts, Brazil; and Deborah Bossio, Director of Soil Research, International Centre for Tropical Agriculture

conducting public negotiation processes. Concluding that compensation is still a very new concept in Brazil, she said gaps include the focus on private land and the absence of seed banks, knowledge and technical capacity to promote native species.

B.N. Patil, Director, State Environment Department of Maharashtra State, India, discussed the state's experience in facilitating the downscaling of adaptation action plans in six districts. He said effective adaptation measures could include: significantly increasing wasteland reclamation; transforming agricultural extension services and aligning them to climate services; crop diversification; integration of green energy technologies; efficient irrigation; developing agro-processing clusters and special direct market for organic produce; and weather-based insurance.

INTERNATIONAL SOIL POLICY AND SDGs - IMPLEMENTING RIO+20: A NEW INSTRUMENT TO ADDRESS SOIL AND LAND DEGRADATION UNDER THE UNCCD: Patrick Wegerdt, European Commission, moderated the session.

During the first panel discussion, Jes Weigelt, IASS, introduced a paper tabled by the GSW working group of legal experts on options for a regulatory mechanism under the UNCCD on achieving a land degradation-neutral world and the sustainable use, management and protection of soils and their functions.

Harald Ginzky, UBA, Co-Chair of the GSW working group of legal experts, presented the paper's outcomes, focusing on two main options to establish a regulatory mechanism under the UNCCD: a protocol to the Convention, as a longer-term option; and a thematic annex under Articles 30 and 31 of the Convention, as the most realistic option.

Presenting highlights from the UNCCD COP 11 outcomes, Sergio Zelaya, UNCCD, described the establishment of a target setting approach and legal issues under the Convention. On the legal framework, he recalled a proposal by IUCN on a multi-convention protocol on soil, but observed that COP 11 did not agree on broadening the mandate of the Convention.

Breaking into round table discussions to focus on the added value of an annex under the UNCCD to achieve a land degradation-neutral world, participants noted that a new legal instrument would be helpful to strengthen the UNCCD, improve SLM and raise awareness on SLM. Pointing out that the UNCCD's scope is limited to drylands, participants stressed the importance of global applicability of the new instrument to ensure its added value.

Regarding institutional and political barriers to such an instrument, participants identified, *inter alia*: lack of political will and conflicting national and regional interests; lack of a tradition on soil and land use planning in some countries; global insecurity hindering international commitments; and difficult resource mobilization in developing countries. Participants also noted alternative options to a legal instrument, including the UNCCD's regional groups, which could address soil issues, and establishing voluntary guidelines on soils.

The discussions on means of implementation methods at local and national levels focused on: governance issues; the importance of synergies in addressing land degradation; and the importance of involving the private sector, civil society, local communities, particularly women and youth.

During the ensuing panel discussion on the strategic options and the way forward, Teofilus Nghitila, Commissioner, Department of Environment, Namibia, stressed the need for



Emmanuel Seck, ENDA Tiers Monde, Senegal

addressing land degradation in overcoming poverty as the overarching goal.

Emmanuel Seck, ENDA Tiers Monde, Senegal, called for increased awareness raising on land degradation at the local level, and stressed the importance of documenting local experiences and building on best practices.

Thomas Caspari, International Soil Reference and Information

Centre, described the pillars of the Gross National Happiness indicator used by Bhutan to measure prosperity, including: conservation of the environment; equitable and sustainable development; good governance; and preservation of culture. He stressed that all these elements are connected to soil.

RESPONSIBLE LAND GOVERNANCE - PARTNERSHIPS FOR RESPONSIBLE LAND GOVERNANCE: WHAT ROLE FOR TRANSPARENCY?:

Moderators Joan Cuka Kagwanja, African Land Policy Initiative, and Alexander Müller, IASS, introduced the dialogue session.

Iris Krebber, DfID, UK, presented the G8 Land Transparency Initiative, promoted by the UK presidency of the G8, and its objectives to improve the transparency of data on land investments, donor coordination and support to implementation of the Voluntary Guidelines. She reported on the initial partnerships established in countries committed to the principles of transparency and of the Voluntary Guidelines: Burkina Faso, Namibia, Niger, Nigeria, Senegal, South Sudan and Tanzania, each partnered with a G8 member.

Adam Patrick Nyaruhuma, Ministry of Lands, Housing and Human Settlements Development, Tanzania, outlined objectives of the Land Transparency Country Partnership as, *inter alia*: promoting investments; increasing the benefits of large transactions to the communities; promoting greater participation; regularization of tenure; and publishing information on lands already allocated.

Rugemeleza Nshala, Tanzania, cautioned that although the Tanzanian laws provide for land control by communities, there is a need to strengthen the capacity of community institutions and of the government for overseeing land administration and negotiating deals with foreign investors.

Jana Schlegel, BMZ, reported that the Land Transparency Partnership aims at exchanging the Namibian experience with land reform and institutions for supporting civil society participation and implementation of the Voluntary Guidelines between Namibia and another African country. She further stated Germany's will to support the Land Transparency Initiative during the German G8 presidency in 2015.

Selassie David Mayunga, Ministry of Lands, Housing and Human Settlements Development, Tanzania, stated that Tanzanian national laws clearly stipulate procedures for land acquisition, and emphasized that the role of the Tanzania Investment Centre is to promote land investments in the country.

Anna Locke, Overseas Development Institute, UK, presented insights from a comparative study of five international transparency initiatives, highlighting that for land transparency to bring positive change, the following must be in place: building consensus is a long process; data should be

of high quality and openly accessible; and a clear institutional structure needs to be set up with distinct roles and mandates at international and national levels.

Megan MacInnes, Global Witness, UK, underscored that it is necessary to address what, when and how information is disclosed for transparency to occur and bring the desired change. Sérgio Sauer, University of Brasília, Brazil, cautioned against oversimplifying land issues by focusing on investments and property aspects and on land as a means of production. He noted that transparency could also be a tool for land speculation.

Jennifer Franco, Transnational Institute, emphasized the need for safeguards such as the right of communities to review and cancel contracts after they are signed.

Charlotte Beckh, IASS, read a communication by Roman Herre, FIAN, Germany, expressing concern about the G8 Land Transparency Initiative, with regards to: the fact that information about investors from G8 countries is not disclosed; the view of land as a market commodity; and whether vulnerable people can benefit at all from large-scale land acquisitions.

During the discussions, participants noted the lack of the business sector's perspective and willingness to disclose data. They also noted, among other things, that: governance is a broader concept than transparency; mechanisms for complaint and redress are needed; and that land transparency partnerships should be coordinated with FAO's effort to support countries in the implementation of the Voluntary Guidelines.

Michael Windfuhr, German Institute for Human Rights, wrapped up the session adding that the concept of prior, informed and meaningful participation is an important element of the Voluntary Guidelines.

PARALLEL EVENTS

ACTION FORUM

The GSW 2013 Action Forum took place during the lunch breaks and aimed to provide an inclusive and participatory space for developing creative ideas and joint actions. Contributions to the forum included:

THE SOIL "TASTING" EXPERIENCE: Organized by Falmouth University, UK, participants were encouraged to bring with them a soil sample for incorporation in the soil culture exhibition that provided opportunities to interact with the soils and enhance awareness and appreciation for the beauty and uniqueness of each sample.

GUERRILLA SEED BALL ACTION: Co-convened by the Agricultural and Rural Convention (ARC 2020) and the Foundation for Future Farming, this experience aimed to demonstrate that participants can become directly involved in revitalizing cities.

HORIZONS - SCENTS OF EARTH: This experience, organized by Food Planning Systems, had participants smell handcrafted fragrances of earth made with local soil samples from around Berlin to stimulate and create distant memories for many of the participants.

OPEN SPACE WORKSHOPS: On Thursday, participants convened in "open space workshops" to deepen the debate on some of the issues highlighted during the first three days of GSW 2013. The workshops focused on the following topics: targets and indicators for land and soil in the SDGs and Post-2015 Development Agenda; how to reactivate soil functions in urban regions; Voluntary Guidelines on the

responsible governance of land tenure; towards a European regional/sub-regional soil; Global Soil Partnership open space workshop; global governance for sustainable soil and land management; how to operationalize the Nexus; and an initiative for action for GSW 2014 on spreading good soil management by and for the people, add developing effective soil communication.

UPCOMING MEETINGS

European Development Days: This Forum on international affairs and development cooperation is organized by the European Commission. Its aim is to foster engagement between European development practitioners and their global partners. **dates:** 26-27 November 2013 **location:** Brussels, Belgium **email:** accreditation@eudevdays.eu **www:** <http://eudevdays.eu/>

Global Landscapes Forum: This Forum will convene on the margins of UNFCCC COP 19 and is co-organized by the Collaborative Partnership on Forests (CPF) and the Consultative Group on International Agricultural Research (CGIAR) Research Program on Climate Change Agriculture and Food Security (CCAFS). The Forum will focus on four main themes: investing in sustainable landscapes and livelihoods; landscape policy and governance; synergies between adapting to, and mitigating climate change in landscapes; and landscapes for food security and nutrition. **dates:** 16-17 November 2013 **location:** Warsaw, Poland **contact:** Bruno Vander Velde **phone:** +62-811-8006-150 **email:** b.vandervelde@cgiar.org **www:** <http://www.landscapes.org/>

World Soil Day 2013: The day is celebrated on 5 December. **dates:** 5 December 2013 **location:** worldwide **contact:** GSP Secretariat GSP-Secretariat@fao.org **www:** <http://www.fao.org/globalsoilpartnership/en/>

IPBES-2: The second meeting of IPBES will address, *inter alia*: the initial work programme; financial and budgetary arrangements; and rules and procedures for the operations of the Platform, including for the Multidisciplinary Expert Panel. **dates:** 9-14 December 2013 **location:** Antalya, Turkey **contact:** UNEP Secretariat **email:** secretariat@ipbes.net **www:** <http://www.ipbes.net>

Land Transformations: Between Global Challenges and Local Realities: The 2014 Global Land Project Open Science Meeting will synthesize and discuss the role of the land system as a platform for human-environment interactions, connecting local land use decisions to global impacts and responses. Conference themes include: rethinking land change transitions; the role of human decision making on land use as both a driver and response to global environmental change; land systems changes to mitigate global environmental change impacts and adapt to increasing demands for food, fuel and ecosystem services; and ways in which alternative approaches to governance of land resources can enhance the sustainability transition. **dates:** 19-21 March 2014 **location:** Berlin, Germany **www:** <http://www.glp-osm2014.org/>

World Day to Combat Desertification 2014: The day is celebrated on 17 June, to mark the conclusion of negotiations on the UN Convention to Combat Desertification (UNCCD). **date:** 17 June 2014 **location:** worldwide **contact:** UNCCD Secretariat, Awareness Raising, Education and Communication Unit **phone:** +49-228 815-2800 **fax:** +49-228 815-2898 **email:** arce@unccd.int **www:** <http://www.unccd.int/en/programmes/Event-and-campaigns/Pages/default.aspx>

International Food Policy Research Institute (IFPRI)

2020 Conference: The conference will bring together policy makers, practitioners and scholars to discuss how resilience can be strengthened for food and nutrition security. The conference will: articulate an intellectual framework for resilience; identify key emerging shocks that pose the biggest threats to food and nutrition security; assess experiences through case studies; identify key approaches and tools to build resilience to shocks; set priorities for action by different actors and in different regions; and identify knowledge and action gaps in research, policy and programming that need to be met or scaled up in order to successfully build resilience to food and nutrition insecurity. Participation in the conference is by invitation only. **dates:** 15-17 May 2014 **location:** Addis Ababa, Ethiopia **contact:** IFPRI Secretariat **phone:** +1-202-862-5600 **fax:** +1-202-467-4439 **email:** ifpri@cgiar.org **www:** <http://www.ifpri.org/event/building-resilience-food-and-nutrition-security>

20th World Congress of Soil Science: This meeting is organized in commemoration of the 90th anniversary of the International Union of Soil Sciences (IUSS) **dates:** 8-13 June 2014 **location:** ICC Jeju, Republic of Korea **contact:** 20WCSS Secretariat wcscs@20wcscs.org **www:** <http://www.20wcscs.org>

The First Soil Biodiversity Conference: This conference is organized by the Global Soil Biodiversity Initiative (GSBI) and EcoFINDERS together with other partners. The goal of the conference is to incorporate the growing scientific knowledge on the provision of vital ecosystem services by soil biodiversity into future land management and policy plans at the local, regional and global scales **location:** Palais des Congrès, Dijon, France **dates:** 2-5 December 2014 **contact:** GSBI gsbi1@dijon.inra.fr **www:** <http://colloque.inra.fr/gsbil>

Global Soil Week 2014. **dates:** to be determined **location:** to be determined **contact:** IASS Potsdam **email:** info@iass-potsdam.de **www:** <http://globalsoilweek.org/>

Fourth Special Session of the CST and UNCCD 3rd Scientific Conference: CST S-4 will convene back-to-back with the UNCCD 3rd Scientific Conference and is expected to take place in the first quarter of 2015. The meeting will be held in Bonn, Germany, unless another party offers to host the meeting. Organized by the Scientific and Traditional Knowledge for Sustainable Development (STK4SD) Consortium, the 3rd Scientific Conference

will address the theme of combating desertification, land, degradation, and drought (DLDD) for poverty reduction and sustainable development, and the contribution of science, technology, traditional knowledge and practices. **dates:** to be determined **location:** to be determined **contact:** UNCCD Secretariat **phone:** +49-228-815-2800 **fax:** +49-228-815-2898 **email:** secretariat@unccd.int **www:** <http://www.unccd.int/>

Seminar on Soil Governance: The seminar is organized by the Federal Court of Accounts of Brazil with the purpose of addressing the issue of soils and their interfaces. The objective of the seminar will be to improve the governance mechanism to deal with a complex and multifaceted theme. **dates:** 2015 to be determined **contact:** Federal Court of Accounts of Brazil **phone:** + 55-61-3316-5408 **email:** min-ac@tcu.gov.br

GLOSSARY

BMZ	German Federal Ministry for Economic Cooperation and Development
CIAT	International Centre for Tropical Agriculture
ELD	Economics of Land Degradation
FAO	Food and Agriculture Organization of the UN
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSP	Global Soil Partnership
GSW	Global Soil Week
IASS	Institute for Advanced Sustainability Studies
ITPS	Intergovernmental Technical Panel on Soils
JRC	European Commission's Joint Research Centre
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
UBA	German Federal Environment Agency
UNCCD	UN Convention to Combat Desertification



Seed balls from the Save our Seeds (SOS) exhibition