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Afghanistan, Australia, Canada, China, Honduras,
Hungary, Kosovo, Mexico, Nepal, Netherlands,
New Zealand, Norway, Pakistan, South Korea,
Thailand

***COVER PHOTO:** NRCS Civil Engineer **Tim Brasuell** (bottom left) facilitates an agricultural flood impact work group session on September 24, 2015, as part of a civil-military disaster preparedness exercise in Laos. Photo by SFC Kevin P. Bell, U.S. Army Pacific.*

BEYOND THE INTERNATIONAL YEAR OF SOILS

Healthy Soils For Life

The USDA Natural Resources Conservation Service (NRCS) was proud to celebrate the International Year of Soils last year. We joined a global community of conservation partners, including the United Nations Food and Agriculture Organization (FAO), to talk about the benefits of healthy, productive soil and build a sense of awareness and a deeper appreciation for the living and life-giving ecosystem that lies just beneath our feet.

NRCS is a pioneer in soil conservation, founded more than 80 years ago to improve the quality of our nation's soils after the Dust Bowl. Since then NRCS has worked with landowners, local and state governments, and conservation partners to protect and improve not only the health of our soils, but our air, water, and wildlife resources as well.

During the International Year of Soils, NRCS staff shared its expertise in natural resource conservation, soil classification, and soil security at events around the world, including China, Mexico, Honduras, and Korea.

We helped create the first Status of the World's Soil Resources report published by the United Nations FAO (see newsletter page 6), which provides scientific data on soil erosion, soil organic carbon change, soil biodiversity changes and more to assist farmers and ranchers around the world with their operations.

NRCS also created a [video series](#) for the general public exploring the ways soil plays a critical role in our lives – from the food we eat, the water we drink, the trails we walk, and the homes where we live. The series highlighted the themes created by the Soil Science Society of America.

On December 3, NRCS Chief **Jason Weller** welcomed conservation partners to a finale event at USDA in Washington, DC, in celebration of the year. Guest speakers included Griffith Observatory Curator **Dr. Laura Danly**, FAO Liaison Office for North America Director **Ajay Markanday**, Filmmaker **Dr. Buz Kloot**, and Conservation Farmer **Carl Coleman**.

Coleman, a farmer from Dillon, South Carolina, worked with NRCS to improve his farming operation with conservation cover crops. Cover crops can significantly improve soil health, reduce soil erosion and soil compaction, and improve nutrient management, which is not only good for the environment but can improve production outcomes as well. Carl spoke passionately about how soil conservation has worked for him, and farmers like him.



NRCS Chief Jason Weller speaking at the Beyond the International Year of Soils event at the U.S. Department of Agriculture (USDA), December 3. Photo by Lance Cheung, USDA.

In the future, we will need to feed the planet's growing population on fewer acres. Climate change and extreme weather events, like droughts and flooding, will present unprecedented challenges to production. Healthy soils can help prepare farmers and ranchers for what's ahead. The future of agriculture is rooted in improving the health and function of our soil.

Learn more about [healthy soils](#) and the farmers and ranchers that are voluntarily stepping up to the plate to make sure they have the best practices in place for their operations and the environment.

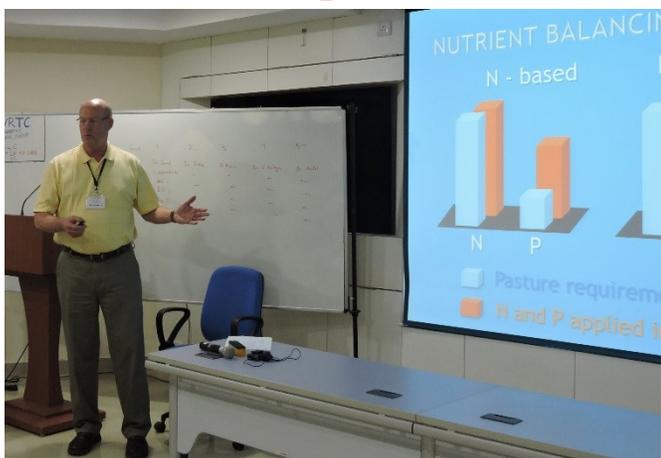
Article written by Amy Overstreet, Public Affairs Specialist, detailed to NRCS Soil Science Division in 2015 in support of International Year of Soils.



"Soils can also play an important role in climate change mitigation by storing carbon and decreasing greenhouse gas emissions into the atmosphere," said Ajay Markanday, Director of the FAO Liaison Office for North America. Markanday spoke at the Beyond the International Year of Soils event at the U.S. Department of Agriculture (USDA), December 3. Photo by Lance Cheung, USDA.

INDIA

Nutrient Workshop Aims To Maintain Balance Of Lake Chilika



NRCS National Agronomist **Norman Widman** discusses nutrient management during a workshop at the Wetland Training Centre in Odisha, India.

Photo courtesy of Norman Widman, USDA NRCS.

India's Lake Chilika serves for many as an important water resource. Local populations use the lake for fishing, recreation, tourism, employment, and even religious and cultural activities. The lake and its surrounding area have a diverse plant life and is also a habitat for numerous animals, such as a variety of fish, insects, migrating birds, and even the highly charismatic, but threatened, Irrawaddy dolphin.

Situated on India's eastern coast, this sensitive ecosystem originated from its brackish water, which is a combination of fresh river water and saline ocean water. Poor watershed management in the 1990s disrupted this environment when sediments continuously narrowed the lagoon mouth. Consequently, the lake's salinity decreased, which made it uninhabitable for many species.

However, in 2000, India's Chilika Development Authority (CDA) led, through international efforts, the creation of a new opening to the Bay of Bengal. This measure restored the tidal flux and salinity levels increased; transitioning the lake to its previous brackish composition and unique habitat features.

Restoring and maintaining the lake is an ongoing process and

that is why Natural Resources Conservation Service (NRCS) National Agronomist **Norman Widman** was invited to the

Wetland Training Centre of the CDA. Efforts to improve water quality and use of the lake include building scientific capacities among local stakeholders. The Global Environmental Technology Foundation organized a two-day workshop, July 20-21, for the CDA and requested Widman to serve as a speaker on sustainable nutrient management.

Government and non-government officials, academia, and farmers

were among the 40 workshop participants. "This was some of the first exposure of a comprehensive approach to nutrient management for those in attendance," said Widman. The classroom presentation consisted of three one-hour sessions and provided participants with a better understanding about soil nutrient tests and specific farming techniques to avoid, control, and trap nutrient runoff into the lake, as well as associated rivers and streams.

Widman also visited farms in vicinity of the lake, which provided an opportunity to directly assess nutrient runoff potential with participants. Characterized



NRCS National Agronomist **Norman Widman** (cyan shirt) visits a local farm to assess the impact of rice production on Lake Chilika.

Photo courtesy of Norman Widman, USDA NRCS.

primarily by subsistence farming, these farms were approximately one acre in size and very labor intensive, relying on oxen and hand tools to work the land. Fortunately, the impact by local farmers and their rice paddies seemed low and officials were urged to consider possible pollution sources from other watersheds.

Throughout the years, the CDA recognized the socio-economic and natural habitat importance of the lake and achieved significant accomplishments in restoring and protecting the environment.

Widman's role in this workshop, with associated field visits, was another successful initiative to build local capabilities in

sustainable nutrient management.

Furthermore, the reach of this workshop extends beyond the participants, as they themselves will contribute to the ongoing education efforts for the many beneficiaries of Lake Chilika.

Norman Widman contributed to this report.

LAOS

Agriculture Adds Value To Civil-Military Disaster Preparedness Exercise



Participants identify vulnerabilities and assess potential flooding impacts along the Mekong River, September 23, 2015. Photo by SFC Kevin P. Bell, U.S. Army Pacific.

Natural Resources Conservation Service (NRCS) Civil Engineer **Tim Brasuell** traveled to Laos to participate in the Lower Mekong Initiative Disaster Relief Exercise and Exchange (DREE), September 22-25.

As part of the interagency process, the U.S. Army requested Brasuell to serve as the agricultural technical expert during the annual civil-military engagement.

The DREE is a multinational event that brings together the Governments of Cambodia, Laos, Myanmar, Thailand, Vietnam, and the United States.

U.S. Army Pacific and the Government of Laos co-sponsored this year's event, which centered on a typhoon scenario that caused widespread flooding. A situation that was very familiar for many of the more than 130 participants, as the Lower Mekong region is regularly impacted by varying degrees of flooding.

However, for the first time, exercise planners were able to create a more complex scenario by incorporating experts from several disciplines, such as emergency response, public health, transportation, and agriculture, to name a few.

Brasuell also brought relevant personal and professional experience with him. He had gained significant regional awareness through extensive travel throughout Southeast Asia and served as a U.S. Peace Corps volunteer in Thailand. Additionally, working for NRCS in Saipan, Brasuell traveled to the exercise shortly after Typhoon Soudelor devastated the Northern Mariana Islands in August.

Eager to see the groups' familiarity, Brasuell begins facilitating his work group session. As he introduces the NRCS nine-step conservation planning process, Brasuell asks "What is the problem? Before we jump in for an answer, what really is the problem?" Soon lively discussions start and the participants explore more opportunities and alternatives to mitigate a drought that occurred after seasonal flooding.

Over a four-day period, civilian and military subject matter experts provided guidance and encouraged information



TOP LEFT: On September 22, 2015, NRCS Civil Engineer **Tim Brasuell** (center) discusses the conservation planning process as it relates to a drought following seasonal flooding.

TOP RIGHT: NRCS Civil Engineer **Tim Brasuell** discusses flooding impacts on agriculture during a work group session as part of the Lower Mekong Initiative Disaster Relief Exercise and Exchange, September 24, 2015.

LEFT AND BELOW: Exercise participants receive guidance and explore the floodplain as part of a field visit, September 23, 2015.

All photos by SFC Kevin P. Bell, U.S. Army Pacific.

exchanges during workgroup sessions, presentations, a field visit, and the actual tabletop exercise. Brasuell, who was leading the “Flooding Impacts to Agriculture” group activities, also appreciated the opportunity to observe the interrelations and dynamics of the international disaster response.

A particular benefit from participating in exercises or similar training events is that they introduce challenges and provide the opportunity to learn from

experiences others may have had in similar situations.

In times of crisis there are often variables that cannot be accounted for and that is when training, preparation, and rehearsed plans provide a solid framework for decision makers and emergency responders.

Brasuell knows that many Pacific Island nations are vulnerable to natural disasters and hopes there will be additional opportunities to conduct similar exercises.

Tim Brasuell contributed to this report.



VOLUNTEERING

Sammy Soil Introduced To Thai School Children

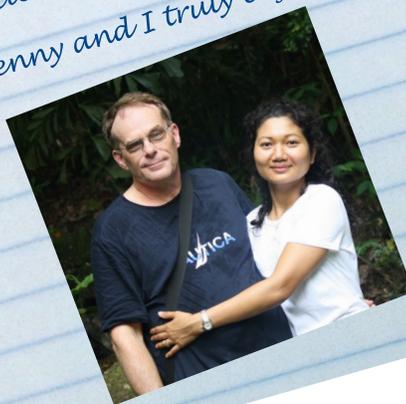
Dear International Programs Division
Sawadee Krup!!!

Early in 2015, my wife Penny and I began planning our vacation to Southeast Asia. We talked about doing something special for the trip, but at the time couldn't decide what that might be. In July, the middle of the International Year of Soils, I attended the 70th Annual Soil and Water Conservation Society Conference in Greensboro, NC. That's when I got the idea of taking "The Adventures of Sammy Soil" coloring books with us to Thailand and help reach children with the message of soil and water conservation.

By mid-October we were ready for departure. The added volume and weight of our baggage became a challenge, but we managed to get 225 coloring books and crayon boxes all the way to the Chawang District of Nakhon Si Thammarat, Thailand.

In what became a highlight of our trip, we distributed the materials to pre-school children throughout the district. Teachers are always looking for resources that help teach English and, with the help of Sammy Soil, we also promoted soil and water conservation. Even at such an early age, it's important and rewarding to inspire conservation consciousness in future generations.

Take care,
Scott



**Letter and photos provided
by Scott Gordon.**

*NRCS Cartographer and GIS Specialist **Scott Gordon** and his wife **Penny** distributed "The Adventures of Sammy Soil" coloring books and crayons to school children in Thailand. The Gordons were vacationing in Thailand and had made arrangements in advance to distribute the learning materials. All photos courtesy of Scott Gordon.*

GLOBAL SOIL PARTNERSHIP

Awaited Soil Report Released And International Soil Information Network Forms



On December 4, senior food security and international development officials from around the world participated in celebrations for World Soil Day and the closure of the 2015 International Year of Soils, in Rome, Italy.

Organized at the headquarters of the Food and Agriculture Organization of the United Nations (FAO) the officials discussed relevant developments, policies, and activities.

On that occasion, the Global Soil Partnership's (GSP) "Status of the World's Soil Resources" report was also released, which, in 648 pages, details major challenges facing sustainable soil

Officials gather for presentations, to include the release of the "Status of the World's Soil Resources" report at the United Nations Food and Agriculture Organization headquarters in Rome, Italy, December 4. Photo courtesy of FAO/Alessia Pierdomenico.

management, provides thorough regional assessments, and reviews ten major threats to soils across the planet, with nutrient imbalance, soil erosion, and loss of soil organic carbon identified as most significant.

Using the expertise from more than 200 internationally recognized scientists, the intricate soil-food relationship is closely examined and strategies are presented to address food security concerns. Significant consideration is also given to soils impact on the climate, water, and human health.

For completeness, the remaining seven soil threats reviewed in the report are soil acidification, soil biodiversity loss, soil compaction, soil contamination, soil salinization, soil sealing, and soil waterlogging.

Since 2013, the GSP's Intergovernmental Technical Panel on Soils (ITPS), charged with several additional responsibilities, met and exchanged information regularly to initiate, prepare, review, and endorse the report. The Natural Resources Conservation service (NRCS), a world leader in

incorporating soil data for policy development and conservation implementation, also made significant contributions.

NRCS National Soil Survey Center Director **Jon Hempel** (now retired) served as the U.S. technical expert on the panel and regional coordinator and NRCS National Leader for World Soil Resources **Thomas Reinsch** was a lead author.

-based, proven approaches and technologies, can increase nutritious food supply, provide a valuable lever for climate regulation and safeguarding ecosystem services.”

The ITPS plans to produce periodic reports that will show trends and developments in soils. This will be especially important as soil dependent geopolitical discussions – food, climate, water,

Network of Soil Information Institutions.

The network will support the partnership’s Pillar 4, Information and Data, and will depend heavily on research from national institutions and agencies. One goal is to develop a Global Soil Information System that will incorporate soil data and mapping to assist with monitoring and forecasting of soil conditions.



The 648-page “Status of the World’s Soil Resources” report was compiled using scientific contributions from more than 200 international experts, to include members of the U.S. Department of Agriculture. The report was released on December 4.

Photo courtesy of FAO/Alessia Pierdomenico.

“The report is aimed at scientists, laymen and policy makers alike,” stated FAO Director-General **Jose Graziano Da Silva** in the foreword of the report. Noting that a majority of the world’s soils are in poor condition, he also offers hope and continues “Sustainable soil management, using scientific and local knowledge and evidence

natural disasters, and migration – are increasingly recognized as priorities and influencers of overall global security.

Additionally, the GSP’s work continued beyond this report. Sixty soil experts from 45 countries met at FAO, December 8-10, to establish the 1st International

Reinsch, who serves as the North America Regional Soil Partnership focal point, represented the U.S. Government at this meeting and serves on the Pillar 4 Working Group. Through his participation, the U.S. has an active role in the development and formation of the implementation plan and is ideally positioned to assist partners around the world.

Likewise, the scientific collaboration provides many benefits to U.S. agriculture as international experts share their research and best practices. Reinsch, who will continue to engage, noted, “The main value of participating in the meetings is to develop a network of contact points to share information and develop international information systems and shared standards.”

For more information, please see the [“Status of the World’s Soil Resources”](#) report and the [Global Soil Partnership](#).

Thomas Reinsch contributed to this report.

CAREER DEVELOPMENT

Early And Mid-Career Employees Benefit From International Activities

Throughout the year, employees with the Natural Resources Conservation Service (NRCS) travel internationally to advance U.S. Government interests. The value these assignments have for personal

and professional development are often underestimated or simply overlooked.

Learning from foreign counterparts, participating in a discussion during a multinational

meeting, or providing the solution to a food security problem in a developing country are just a few examples of activities that challenge employees and allow them to broaden their perspectives.

Furthermore, departmental goals of incorporating and appreciating the many benefits of diversity are also promoted.

Maxine Levin, NRCS acting chief of staff for soil science and resource assessment, was especially pleased with recent opportunities that allowed early and mid-career employees to participate in international assignments. “Right now they may not have the level of experience of some of the higher graded employees, but they are learning and are building their own international scientific networks.”

Kristine Ryan and Randy Riddle, two NRCS soil scientists, attended a week-long urban soils conference in Mexico City and gave presentations related to urban mapping and soil taxonomy in their respective districts. Both employees have less than 15 years of experience with the agency and their September 2015 trip to Mexico was their first international assignment. “I loved giving my presentation,” said Ryan. “Any chance I can talk to people who are really interested in soils and natural resources, I jump at it.”

Working out of Aurora, Illinois, Ryan, who has been with NRCS for twelve years, regularly gives soils-related presentations at American community colleges. However, in Mexico, she presented and interacted with conference participants who were primarily non-native English speakers. “I think overall people understood everyone and if there was miscommunication, which probably happened, there was plenty of opportunities to meet one-on-one and speak to people,” she acknowledged.

Once conversations started, there was no way of telling where they might end. “It was interesting to exchange ideas with scientists and academics from around the

world because there is the potential for collaboration,” said Ryan.

Riddle agreed, noting that travelers need to be prepared for some scientific debate. Following his presentation on USDA’s Soil Taxonomy a few participants had reservations. “I also got some pushback from some people who were not on board with our approach,” explained Riddle, referring to audience members who preferred use of the World Reference Base instead. “There are obviously different schools of thought throughout the world.”

Aside from scientific deliberations, Oxnard, California-based Riddle, also appreciated the opportunity to establish numerous international contacts, such as with the managing director of an Australian laboratory or the Singapore government’s Soil Scientist. “You have the chance to meet people who have written text books in this field and other influential people,” said Riddle, who joined NRCS nearly eight years ago.

Tyler Witkowski is another NRCS soil scientist who has met influential people. On August 18, 2014, just a few weeks into his first job with the agency, he headed to Washington, D.C., along with his former teammates, to be recognized by Secretary Vilsack and NRCS Chief Weller for their accomplishments at the First International Soil Judging contest in Jeju, South Korea. Both USA-teams earned first and second place honors, while Witkowski won second place individually after competing with 45 contenders (see newsletter page 9, for Second International Soil Judging contest in Hungary).

In this case, Witkowski’s resume already included relevant international experience when he joined NRCS. “There were multiple benefits to going to South Korea,” Witkowski remembers.

“Being able to experience the volcanic soils first hand on Jeju brought the concepts of amorphous clays and andic soil properties to reality, which broadened my perspective as a soil scientist.”

Now surveying soils for NRCS in Virginia, he remains curious about studying different soil properties and hopes to eventually perform international field work, citing Canada as a personal favorite. “I think they would have a wide variety of soils I’ve never seen before, with features I’ve only read about, such as frozen water within soil profiles,” said Witkowski. “A close second would be Australia, which is highly variable ranging from desert to possibly tropical soils.”

Any employee, regardless of their career level, can benefit from participation in international activities. NRCS employees are encouraged to register with the International Programs Division. The candidate database is also used to identify subject matter experts for meetings with foreign visitors in the U.S. The [National Bulletin 280-15-5 INC](#) explains the procedures for database registration.

Maxine Levin, Randy Riddle, Kristine Ryan, and Tyler Witkowski contributed to this report.

VOLUNTEERING

NRCS Expert Helps Prepare Next Generation Of Soil Scientists

Students and young professionals from 28 countries traveled to Gödöllő, Hungary, September 1-5, to learn and explore soils in a field course and compete in the 2nd International Soil Judging Contest.

The Hungarian Soil Science Society and Szent Istvan University, along with several partners, organized the activities as part of the United Nations International Year of Soils. Amongst the more than 100 participants was also **Maxine Levin**, who volunteered to assist with the event. She also supported the activities in 2014, when the first competition took place in Jeju, South Korea.

Levin is a senior soil scientist with the Natural Resources Conservation Service (NRCS) and currently also serves as the acting chief of staff for soil science and resource assessment.

For Gödöllő, Levin volunteered as a technical expert and coach during the four-day course. In preparation for the event, Levin also helped with developing the course curriculum and necessary scoresheets, which would be used for soil characterization, interpretation and analysis.

Participants received classroom training on numerous topics, such as soil description, site characteristics, and the two internationally recognized classification systems, the World Reference Base and USDA's Soil Taxonomy.

Levin, along with Virginia Tech Associate Professor John Galbraith, gave presentations on soil interpretations and U.S. Soil Taxonomy.

Outside of the classroom, the participants tested their knowledge during field exercises. Here Levin functioned as a coach to provide additional guidance and enhance the learning experience. "This really is an international event and science diplomacy at its best," said Levin, who, as an American, coached a Tunisian-Turkish team. Her American colleague Galbraith coached a Serbian-Croatian team. Additionally, there were other scientific exchanges and recreational opportunities for participants to interact with others, beyond the team context.

On the fifth and final day the individual and team contests took place. Levin, who was also one of the judges, evaluated the participant's interpretations as they assessed the suitability for specific crop production and commercial planning.

In the end, the Americans did extremely well, with Auburn University graduate **Kristen Pegues** claiming first place in the individual competition and Team USA claiming second as a team. Furthermore, all four Americans scored high individually, ranking upon the top eight out of the 60 contestants. When combining the individual scores with the 16 team scores, Team USA secured first place overall.

In the previous year, eight Americans participated in the soil judging competition and earned similar accolades. Two U.S. teams claimed first and second place overall and University of Maryland graduate **Tyler Witkowski** claimed second place in the individual competition.

For Levin the ongoing capability of American universities to produce high caliber graduates, like Witkowski and Pegues, is critical for the future of domestic agriculture. Fortunately, Witkowski joined NRCS a few weeks after the contest and is now a Soil Scientist in Virginia.



NRCS Senior Soil Scientist and Volunteer Coach Maxine Levin (pastel shirt) helps Team Mediterranos, consisting of four participants from Turkey and Tunisia, use scoresheets to assess soil suitability, September 2, 2015. Photo courtesy of International Field Course and Soil Judging Contest.

As for Levin, who appreciated the opportunity to teach and coach at the events, she hopes more aspiring talent will join the agency in the future.

Maxine Levin contributed to this report.

OTHER ACTIVITIES

Afghanistan

On December 10, NRCS Conservation Engineering Division Director **Noller Herbert**, participated in a meeting with Afghanistan's Deputy Minister of Energy and Water. The Afghan government requested guidance from NRCS on possible development of conservation and irrigation districts, as well as recommendations on assisting farmers with actual implementation.

Australia

NRCS Senior Economist **Noel Gollehon** and NRCS National Civil Engineer **Dave Thackeray** met with an Australian parliamentarian on July 14 to inform about U.S. water and drought management policies.

Canada

Three NRCS employees travelled to Ottawa, Canada, for the GlobalSoilMap Consortium Meeting, November 11-15. Soil

Science Division Director **David Lindbo**, World Soil Resources National Leader **Thomas Reinsch**, and Research Soil Scientist **Zamir Libohova** represented NRCS as digital soil mapping progress of the last five years was reviewed and future goals discussed, such as development of a global fine grid soil map.

China

NRCS Agricultural Engineer **Charles Braden** presented a research paper on regression analysis of rain gage data at the International Conference on Agricultural and Biological Sciences, July 24-29, in Beijing, China.

Thomas Reinch, NRCS national leader for world soil resources, presented a paper on the progress in soil taxonomy at the 12th East and Southeast Asia Federation of Soil Science Societies International Conference. The conference took place September 18-21, in Nanjing, China.

Glenn Carpenter, NRCS national leader for animal husbandry, met with a Chinese delegation on December 14. The delegation was interested in waste resource recycling technology.

NRCS National Forester **Eunice Padley**, met with Chinese delegations on October 29 and December 22. The meetings offered opportunities to discuss urban landscaping, ecological barriers, shelterbelts, and benefit monitoring of U.S. windbreaks.

Honduras

NRCS National Leader of World Soil Resources **Thomas Reinsch** attended the Week of Soil in Honduras event, October 12-17, in Tegucigalpa, Honduras. The symposium's theme was "Rehabilitation and Soil Conservation as a Basic Resource for Life."

Hungary

Four American university students, forming Team USA, participated in the International Soil Judging Contest in Gödöllő, Hungary and claimed first place. Auburn University's **Kristen Pegues** also earned first place honors individually, competing against 60 contestants. A four-day course, consisting of classroom training and field exercises,



ABOVE: NRCS Agricultural Engineer **Charles Braden** (right) asks Cairo University Professor **Dr. Monir M. El Hussein** a question about Egyptian soil health practices, during the International Conference on Agricultural and Biological Sciences in Beijing, China, July 26. Photo courtesy of ABS 2015.



RIGHT: NRCS National Leader of World Soil Resources **Thomas Reinsch** speaks at the Week of Soil in Honduras event, October 14. Photo courtesy of Escuela Agricola Panamericana.

preceded the contest. Two U.S. Department of Agriculture employees, **Stephanie Connolly**, forest soil scientist with the U.S. Forest Service, and **Maxine Levin**, senior soil scientist with NRCS, supported the events as volunteers.

Kosovo

NRCS Acting Director of the West National Technology Support Center **Shaun McKinney** and NRCS National Civil Engineer **Dave Thackeray** met with a delegation from Kosovo on August 12. The Kosovars were interested in learning about techniques to improve watershed quality.

Mexico

Four NRCS soil scientists attended the 8th International Conference of the Working Group on Soils of Urban, Industrial, Transportation, Military, and Mining Areas, which took place September 20-25 in Mexico City, Mexico. **Maxine Levin**, **Luis Hernandez**, **Kristine Ryan**, and **Randy Riddle** had the unique opportunity to learn about urban soils in an environment that has been impacted by human settlement for more than 2,000 years. Aside from field visits and listening to various presentations from fellow soil scientists, all four NRCS employees also presented information on American soil research.

From October 5-10, **Thomas Reinsch**, NRCS national leader for world soil resources, served as a co-instructor at the 9th International Soil Classification Seminar and Workshop in Queretaro, Mexico. Reinsch also presented a paper on "Challenges and Use of Soil Taxonomy."

NRCS California State Conservationist **Carlos Suarez** continued his dialogue with Mexico's Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA).

Following the appointment of Agriculture Secretary **José Calzada** in August, Suarez met with various contacts at the ministry, November 8-14, to explore possible collaboration, such as for climate-smart agriculture.

joined a U.S. delegation on a trip to the Netherlands, December 5-12. New relationships were developed and opportunities for scientific collaboration to advance climate-smart agriculture were explored.



*Team USA (at the table, second from left to right, coach, students and assistant coach) **Joey Shaw**, **Erin Bush**, **Kristen Pegues**, **Stephen Geib**, **Adrienne Nottingham**, and **Stephanie Connolly**, talk about their travels and competition experience, at the International Soil Judging Contest in Gödöllő, Hungary, during a meeting with NRCS Chief **Jason Weller** (at table, on right), at USDA headquarters in Washington, D.C., December 3. Team USA won first place overall and **Kristen Pegues** won the individual competition. Photo by Lance Cheung, USDA.*

Nepal

On July 21 and 23, Soil Health Director **Bianca Moebius-Clune**, Conservation Engineering Division Director **Noller Herbert**, National Design Engineer **Steve Durgin**, Water and Climate Monitoring Team Leader **Tony Tolsdorf**, and International Programs Director **Lillian Woods Shawver** met with a delegation from Nepal. Organized on behalf of the World Bank, the delegation was interested in meeting with NRCS to learn about soil health, the DamWatch project, snow survey, and the international technical assistance request process.

Netherlands

NRCS California State Conservationist **Carlos Suarez**

New Zealand

A representative from New Zealand's Waikato River Authority called upon NRCS National Water Quality Specialist **Craig Goodwin** and NRCS Senior Economist **Noel Gollehon** to discuss watershed restoration, protection, and policy. The meeting took place September 3.

Norway

NRCS Rangeland Management Specialist **Karin Sonnen** gave a presentation at the 14th International Arctic Ungulate Conference in Roros, Norway, August 15-22. Sonnen's presentation "Monitoring for the sustainability of Alaskan reindeer ranges," emphasized the importance of generating and

The IPD Newsletter is a biannual publication, produced by the International Programs Division of the Natural Resources Conservation Service (NRCS).

The document provides a six-month overview of NRCS participation in international activities, which includes providing technical assistance and exchanging scientific and technical information.

Submit articles, photos, and comments to the newsletter point of contact: Sascha Dixon sascha.dixon@wdc.usda.gov

IPD Newsletter

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*NRCS California State Conservationist **Carlos Suarez** (third from right) was part of a U.S. delegation that traveled to the Netherlands for meetings, December 5-12. The delegation was headed by California Department of Food and Agriculture Secretary **Karen Ross** and aimed at building greater collaboration to advance climate-smart agriculture. The trip also included a visit to the renowned Wageningen University to observe latest agricultural research developments in soil health and water management. Photo courtesy of California Department of Food and Agriculture.*

incorporating data into appropriate grazing management strategies, especially important as the climate continues to change.

Pakistan

Four NRCS employees returned to Pakistan to continue work on ongoing projects focused on water management and soil fertility. The multi-year projects are facilitated through the U.S. Department of Agriculture's Foreign Agricultural Service and several partners, such as the United Nations Food and Agriculture Organization. In August, Civil Engineer **Jon Fripp** provided instruction during workshops as part of the "Watershed Rehabilitation and Irrigation Improvement Demonstration" project. Natural Resources Specialist **Cheryl Simmons**, Agronomist **Michael Kucera**, and National Leader for World Soil Resources **Thomas Reinsch** provided technical assistance in October. Their activities supported the "Improving Soil Fertility through Extension" project, which in collaboration with Pakistani officials, provides local farmers

with suitable techniques to improve soil health, irrigation, and crop yields. See the [IPD Newsletter, January 2015-June 2015 edition](#), for a detailed article highlighting activities from February 2015.

South Korea

NRCS Deputy Chief for Soil Science and Resource Assessment **David Smith** was a guest speaker at the Surface Soil, the Key for Human and Ecosystem symposium in Seoul, South Korea, November 26-27. Smith spoke about the evolution of U.S. soil policy and provided congratulatory remarks in celebration of the International Year of Soils.

Thailand

NRCS National Leader for Soil Survey Standards **Hugh Monger** gave a presentation titled "Developments in Soil Taxonomy," at the International Soil Conference, held in Phetchaburi, Thailand, August 18-21. The conference theme was "Sustainable Uses of Soil in Harmony with Food Security."