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Natural Resources Conservation Service

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International Programs Division

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Introduction

NRCS has had an international presence and involvement since the agency was established in the 1930s. A full range of activities help foreign Governments develop, use, and protect their natural resources, contributing to U.S. foreign policy by promoting economic stability, reducing poverty, and solving world food problems. Further, U.S. domestic agriculture benefits from NRCS staff, who are broadening their knowledge. NRCS staff regularly participate in international meetings, present findings at conferences, provide scientific and technical exchanges, engage in post-disaster recovery assistance, and provide short-term and long-term technical assistance.

Executive Summary

The International Programs Division (IPD) supported the agency's international efforts. In fiscal year (FY) 2015, *NRCS staff traveled to 18 different countries*, providing technical assistance in *Pakistan and Kenya*; speaking at conferences in *China, Spain, and Norway*; and participating in meetings in *Canada and Mexico*. In addition, two employees completed their *residential assignments* in the *Federated States of Micronesia and Republic of Palau*. The employees had remained in those countries for nearly 3 years and provided long-term technical assistance to help with agricultural development.

IPD also helped facilitate requests for *134 international visitors* (technical staff and officials) to meet with NRCS field and headquarters staff; discussions about *soil data and water management* were the most popular meeting requests. The visitors came from *34 countries*, which also included two multinational delegations. Further, *seven requests* supported the U.S. State Department's prestigious professional exchange program, the *International Visitor Leadership Program (IVLP)*.

Overall, international travel and visits to the USA provided NRCS staff the opportunity to *engage bilaterally with 26 different countries* in FY 2015.

FY 2015 Program Highlights

Feed-the-Future and Food for Progress

NRCS continued to support Feed-the-Future (FtF), which is the U.S. Government's global hunger and food security initiative. During this year, IPD engaged regularly with representatives from the U.S. Agency for International Development (USAID) and other U.S. Department of Agriculture agencies to review and assess programs in priority counties. Building upon the extensive work performed in the previous fiscal year with the *Haiti Pilot Soil Survey Project*, IPD regularly engaged with partners to discuss future opportunities, such as teaching and extension in other regions of the country. Unfortunately, ongoing political uncertainty in Haiti prevented development of any significant proposals for this FtF activity. IPD also met with U.S. partners to discuss potential opportunities for NRCS to provide technical assistance in *Rwanda* (FtF) and *Jordan* (U.S. Department of Agriculture's Food for Progress initiative), as well as explored possibilities in *Cuba*—as U.S.-Cuban relations normalize.

International Year of Soils

The Food and Agriculture Organization (FAO) of the *United Nations declared 2015 as the International Year of Soils*, and NRCS participated in several activities organized around the world. The campaign opened with significant departmental endorsement as USDA's Undersecretary for Natural Resources and Environment Robert Bonnie participated in a panel and addressed members at the UN headquarters on 5 December, 2014, also celebrating the first *World Soil Day*.

"USDA is embracing this unique opportunity to tell the world about the importance of soil conservation and how we've worked with private landowners since 1935 to protect and improve this priceless natural resource," Bonnie said.

IPD supported many international travel requests for NRCS staff to participate in activities throughout 2015, which included speaking engagements at conferences and symposia or working group meetings organized in *Spain, Thailand, China, Mexico, and Italy*.



Under Secretary Robert Bonnie speaking at the United Nations on 5 December, 2014. Photo by: FAO/Sudeshna Chowdhury

"Healthy soils for a healthy life," was the slogan for the International Year of Soils and was captured in this year's logo.



Addressing Climate Change and Management of Water Resources

NRCS technical specialists continued to make important contributions to domestic conservation by incorporating new knowledge learned through international engagements. Regular activities occurred throughout FY 2015 with experts from neighboring *Canada* and *Mexico*. Aside from ongoing exchanges of information at meetings, technical panels, and conferences, these activities strengthened cross-border cooperation. *Mexico's Secretary of Agriculture* expressed significant interest in *USDA's Climate Hubs* and how replication could

make Mexican agriculture more resilient to climate change. In addition, NRCS interacted with international experts (for example from *Australia* and *France*) to learn how they are addressing climate change and management of water resources. Lastly, NRCS also provided several countries with guidance on developing appropriate techniques and policy for sustainable agriculture, such as in *Pakistan*.

Global Soil Partnership

The Food and Agriculture Organization (FAO) of the United Nations continued its work on the Global Soil Partnership (GSP) and NRCS soil scientists remained involved in 2015. In April, the *Intergovernmental Technical Panel on Soils met in Germany* to discuss various items. Of great importance was the finalization of the draft Plan of Action for Pillar 3 (Research), which was endorsed by the GSP Plenary Assembly in June. In total, there are five pillars of action that promote sustainable development goals for soils.

NRCS also made significant contributions to the work of Pillar 4 (Information and Data). Panel Member Jon Hempel, director of the National Soil Survey Center, served as the North America representative on a specialized working group. Hempel highlighted the many resources USDA and NRCS has available and how they could contribute to the pillar, which focuses on enhancing the quantity and quality of soil data and information globally. Additionally, the panel also finalized the World Soil Charter and the Status of the World Soil Resources Report.



*The Global Soil Partnership's Intergovernmental Technical Panel convened in Germany.
Photo by: Jon Hempel, USDA-NRCS*

Interagency Support for DoD Exercise

One NRCS employee was requested by the U.S. Army to serve as the *agriculture technical expert* during a *multinational disaster preparedness exercise in Laos*. The Lower Mekong Initiative Disaster Relief Exercise and Exchange is an annual civil-military engagement, which brings together the Governments of *Cambodia, Laos, Myanmar, Thailand, Vietnam, and the United States*. Over a 4-day period, the NRCS employee provided guidance for a *typhoon scenario* that caused widespread *flooding*.

Information was shared during workshop presentations, field visits, and the tabletop exercise. Opportunities like this allow decision makers and emergency responders to improve plans by incorporating expert knowledge from multiple disciplines, such as health, transportation, and agriculture, to name a few.

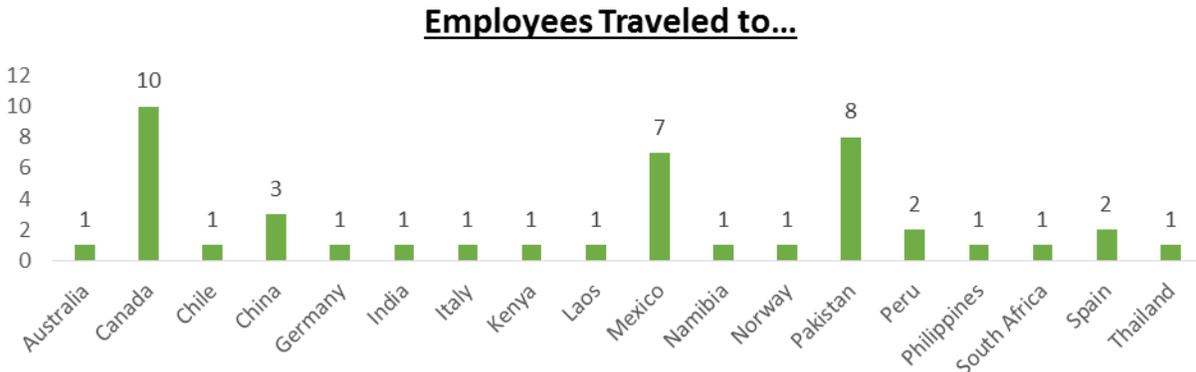


*Exercise participants assess potential flood damage caused by a typhoon and discuss mitigation measures.
Photo by: Sgt. 1st Class Kevin P. Bell, U.S. Army*

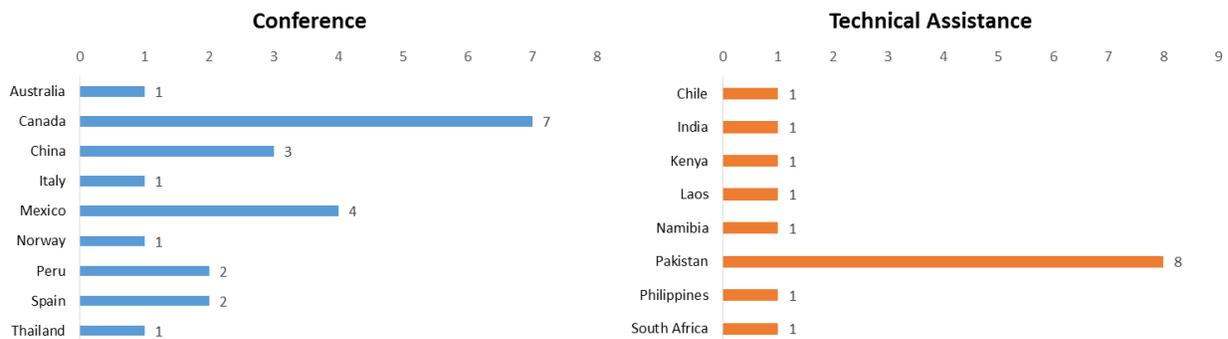
By the Numbers

International Travel

NRCS employees participated in *44 international trips* in FY 2015; taking them to *18 different countries*. The majority of the trips were to *Canada (10x)*, *Pakistan (8x)*, and *Mexico (7x)*.



These 44 international trips provided NRCS employees the opportunity to attend or speak at *22 conferences* and provide support for *15 technical assistance requests*. In addition, staff participated in *seven meetings* (Canada 3x, Mexico 3x, and Germany 1x). One NRCS employee also provided *technical assistance remotely* to assist the Government of *Moldova* (no travel required). Frequent travel also occurred *throughout the Pacific*, which was managed by the Pacific Islands Area office and is not captured in these statistics.



In total, *33 employees* traveled to support these *44 international trips*, with *nine employees traveling for the first time* for NRCS. Such international TDYs provide great opportunities for professional development, while also increasing cultural awareness. In FY 2015, *25 employees* traveled once, *six employees* traveled twice, *one employee* traveled four times, and *one employee* traveled three times.

IPD's International Travel Program remained busy as well, as requests for *71 official passports* were processed. These included 36 initial passports and 35 renewals to maintain travel readiness. In addition, coordination for issuance of *34 visas* was required to support international travel.

International Visitors

IPD received numerous requests for NRCS staff to meet with international visitors. These engagements included meetings for the exchange of scientific and technical information, policy discussions, or site visits. The agency maintains an outstanding international reputation and are continuously sought out by scientists and government officials for guidance.

In FY 2015, NRCS staff welcomed and met with *134 international visitors* from *34 countries*. This year the majority of visitors came from *Thailand (25)*, *China (15)*, and *Nepal (12)*.



In total, *28 engagement requests* were supported, which also included meetings with two multinational delegations. There were seven engagement requests in support of the U.S. State Department’s *International Visitor Leadership Program (IVLP)*. *Soil data (5x)* and *water management (3x)* were the most popular topics to be discussed. Others were soil quality, soil health, irrigation, and water quality.

30 NRCS employees supported these meeting requests; 21 employees met with visitors once, five employees met visitors twice, three employees met three times with visitors, and one employee met with visitors on four occasions.

International Volunteers

NRCS also supported requests to host international volunteers. In FY 2015, *11 international volunteers* offered their time and service to gain valueable experience in conservation. The majority of volunteers came from *China (6)*, and the State of Nebraska hosted four overall.

Country	Count
Australia	1
China	6
Pakistan	1
Peru	2
Thailand	1
Total	11

State	Count
CA	1
DC	2
IA	1
MA	1
MO	2
NE	4
Total	11

Country Activity Reports

NRCS supported *75 international activities during FY 2015*, which included short-term TDYs, international visits, residential assignments, and remote assistance. Overall, this led to *bilateral engagements* with representatives from *26 countries*, primarily at meetings or by providing in-country technical assistance. Of these engagements, *two were residential assignments* in the *Federated States of Micronesia* and the *Republic of Palau* and one *remotely supported* assistance request for *Moldova*. Additionally, major international conferences and meetings provided NRCS staff the opportunity to interact with counterparts from several countries simultaneously.

Below are brief summaries on select countries. Contact IPD for more information or to learn about activities in other countries not specifically mentioned below.

Australia

Collaboration with Australia remained strong in FY 2015, with NRCS staff hosting Australians on several occasions. A visitor from the University of Sydney's Soil Carbon Initiative discussed the use of soil data, a group from Australia consulted with NRCS staff about the progress of the Global Soil Partnership, and a visitor from Australia's University of New England participated in a technology transfer with the National Soil Survey Center, which also included conducting an agencywide webinar to inform about Australian perspectives on soil health. The webinar, titled "Understanding Farmers' Soil Sense and Monitoring Soil Health in Cropping Soils," secured 65+ participants. Another live webinar was held by a visitor from Australia's Agriculture Research Group, titled "Soil Carbon Stocks in Cropping and Pasture Systems of Victoria, Australia" (115+ participants). Further, a researcher from the Australian National University met with NRCS staff in Washington, DC, and agreed to record a webinar. The webinar, titled "Soil Security – Links to sustainable land management and land capability," shared the researcher's views as expressed at the 2015 Global Soil Security Symposium, held at Texas A&M University. The bilateral relations were further strengthened when department and agency senior executives met with the Australian Government's national advocate for soil health. The high-profile meeting provided the opportunity to explore the critical role soil plays in underpinning sustainable productivity, delivering high quality ecosystem services, and climate change. Lastly, one NRCS employee gave a presentation at a conference in Canberra.



NRCS's Michael Strobel, director of the National Water and Climate Center, speaking in Canberra at the Soil, Big Data, and the Future of Agriculture conference on June 25, 2015. Strobel's presentation was titled "Drought proofing America – the U.S. National Soil Moisture Network."
Photo by: United States Studies Centre

Canada

NRCS interacted with Canadian counterparts on a regular basis in FY 2015. Staff attended or spoke at conferences, such as the 32nd Red River Basin Land and Water International Annual Conference, the EcoFarm Day Conference, and the Assiniboine River Basin Conference. In addition, one staff member gave presentations on soil health, cover crops, and pasture management to Manitoba Grazing Clubs. U.S.-Canadian cooperation is particularly critical for water resource management. NRCS staff from North Dakota discussed cooperative opportunities for shared watersheds at the Saskatchewan Association of Watersheds meeting. Also, NRCS participated in two separate meetings of the Great Lakes Water Quality Agreement subgroup. The sessions focused on phosphorus reduction targets for Lake Erie.

China

NRCS had frequent exchanges with China as staff traveled to participate in conferences and also hosted Chinese delegations in the USA. NRCS employees presented information at two conferences, such as a research paper on regression analysis of rain gauge data at the 2015 International Conference on Agricultural and Biological Sciences in Beijing. Another employee gave a presentation on soil taxonomy at the 12th International Conference of The East and South East Asia Federation of Soil Science Societies in Nanjing. One employee also participated in the 6th Global Workshop on Digital Soil Mapping in Nanjing and also presented his findings on using legacy data for soil property predictions. Two Chinese delegations traveled to the United States to learn about conservation programs, with one meeting occurring at the Washington, DC, headquarters and another occurring with field staff in Davis, CA. The 2-day visit to California by representatives from the Chinese Ministry of Agriculture and academia was sponsored by a George Mason University training program. During this visit, the delegation learned about conservation planning and how USDA and NRCS policies and programs assist farmers. Furthermore, site visits to farms provided additional information about various crops, especially organic farming practices.



The Digital Soil Mapping workshop participants observed soil monoliths at China's Soil Museum.

Photo by: Zamir Libohova, USDA NRCS

India

An NRCS employee was invited to the Wetland Training Centre of the Chilika Development Authority to serve as a speaker during a 2-day workshop on sustainable nutrient management. India's Lake Chilika was selected by international partners, to include the United Nations Environment Programme, for a pilot project to improve water quality. Ongoing efforts to improve use of this water resource also include building

scientific capacities among local stakeholders, which is why the Global Environmental Technology Foundation organized the workshop. The classroom presentation provided by the NRCS employee consisted of three 1-hour sessions on nutrient management and provided participants with a better understanding about soil nutrient tests and specific techniques. Farms in vicinity of the lake were also visited to assess nutrient runoff potential. Fortunately, the impact by local farmers and their rice paddies seemed low and officials were urged to consider pollution from other watersheds. Government and non-Government officials, academia, and farmers were among the 40 workshop participants.



NRCS National Agronomist Norman Widman (center) visits a local farm to assess the impact of rice production on Lake Chilika. Photo courtesy of Norman Widman, USDA NRCS

Mexico

Three NRCS employees led a small U.S. delegation, which also included a member of the California State Board of Food and Agriculture and two dairy owners, during a trip to Mexico. The Mexican Government requested the visit to learn about the establishment of USDA's Climate Hubs for possible replication. Other topics of interests were renewable energy promotion in California and the development of agriculture friendly policies. The participation of Mexico's Secretary of Agriculture highlights the importance the Government placed on this U.S.-Mexico engagement. In addition, the U.S. delegation visited several farms and processing facilities to review different measures used to reduce greenhouse gas emissions that could be applied in the United States. This trip generated ongoing communication with Mexico's Ministry of Agriculture and additional cooperative engagements are expected next fiscal year. Additionally, four NRCS employees attended the 8th International Conference of the Working Groups on Soils in Urban, Industrial, Traffic, and Mining Areas. The week-long conference was held in Mexico City, which provided exceptional insights into urban soil monitoring. NRCS soil survey resources were repeatedly discussed and additional scientific exchange opportunities with European, Asian, and Latin American conference participants explored.



NRCS California State Conservationist Carlos Suarez (blue shirt) and his staff helped facilitate site visits to Mexican farms. The U.S. delegation included two California dairy owners who were interested in learning about digester systems. Photo courtesy of Carlos Suarez, USDA NRCS

Moldova

At the request of the Millennium Challenge Corporation, NRCS assisted the Government of Moldova. The east European country required guidance in developing and incorporating economic analysis methodology into their Nistru Basin Management Plan. Funding did not allow for an in-country visit, so an NRCS watershed economist assisted remotely by relying upon secondary information. The project required the NRCS employee to perform a literature review and make recommendations to improve the country's compliance with

European Union policy. Furthermore, guidance was also provided on developing mechanisms for economic analysis that Moldovan decisionmakers can use when managing water resources. Over the course of several weeks, information was exchanged by phone and email, and NRCS delivered a final product to Moldova's Ministry of Environment.

Namibia

One NRCS employee traveled to Namibia to participate in the Land Potential Knowledge System (LandPKS) Workshop. LandPKS is a USAID-funded pilot project that strives to provide a platform to allow for the global sharing of soil-related information. Farmers and resource managers can use the project's mobile phone applications to understand the relationship between soil resiliency and productivity, ideally matching land use and crops to areas that yield the best results. By accessing information from other countries and regions, conservationists benefit from experiences others have with similar soils and climates, such as similarities in Namibia and New Mexico. During this TDY, the NRCS employee learned more about the applications and provided the project team with information on how to improve the soils data collection. The project also has great potential for U.S. agriculture, as the global sharing of information allows American farmers and agencies to incorporate foreign country success stories into their conservation planning.

Pakistan

At request of the Foreign Agricultural Service (FAS), NRCS provided continued support for two multiyear projects focused on soil fertility and watersheds. These important projects, in support of the UN FAO, required NRCS staff to complete eight trips to Pakistan, with three additionally scheduled trips postponed until Oct 2015 (FY 2016). The projects, led by FAS, began in 2013 and are titled "Improving Soil Fertility through Extension" and "Watershed Rehabilitation and Irrigation Improvement Demonstration." In this fiscal year, NRCS performed a series of activities to improve traditional agricultural practices, which included workshops for farmers to learn about soil infiltration, use of cover crops, solar irrigation pumping systems, and soil health assessments. By speaking at a countrywide symposium, NRCS promoted the use of the four Rs (right fertilizer, right rate, right time, and right place); representatives from industry, academia, and government attended. Also, a gender workshop allowed NRCS to raise awareness about the inclusion of women in agriculture. All of these activities, as well as the many not included in this report, were well received and contributed to the enhancement of Pakistan's agricultural sector.



NRCS agronomist Michael Kucera (left) provides instruction during a soil health workshop.

Photo by: Jon Fripp, USDA NRCS



NRCS civil engineer Jon Fripp (left) explains the use of solar power and equipment to improve irrigation during a workshop training session.

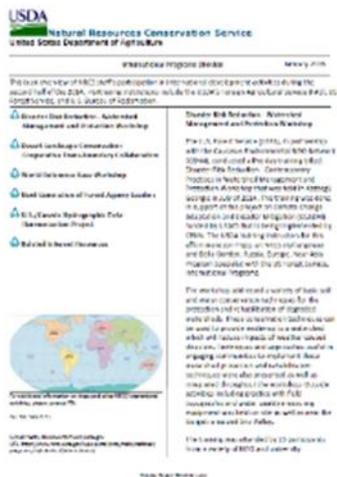
Photo by: Matt Stellbauer, USDA FAS

Division Operations

IPD created or revised several documents to improve the overall efficiency of the program or to provide specific information on a topic in FY 2015.

Five national bulletins related to IPD were circulated:

- International Assignment Candidates Database (NB 280-15-1 INC)
- Webinar on the Haiti Soil Survey Pilot Project (NB 280-15-2 INC)
- International Programs Division Annual Report for 2014 (NB 280-15-3 INC)
- Information on International Travel Procedures (NB 280-15-4 INC)
- International Assignment Candidates Database (NB 280-15-5 INC)



Two biannual newsletters (NRCS IPD Newsletter) were distributed in January and August 2015 to inform about international activities.

Further, revisions were made to the directive that governs the agency's international activities. Title 280, General Manual, Part 400, Subparts A-F, were amended and posted to the eDirectives System in August 2015.

IPD Staff

- Lillian Woods Shawver, Director
- Herby Bloodworth, Program Analyst
- Marita McCree, Program Analyst (*detailed to Acquisitions Division for 4 months*)
- Sascha Dixon, Program Analyst (*joined January 11, 2015*)
- Linda Ridsen, Program Assistant

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