



Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program

September 2006

Sustainable Agriculture and Natural Resource Management Cooperative Research Support Program

NEWS

Promoting stakeholder empowerment and improved livelihoods through knowledge-based sustainable agriculture and natural resource management systems.

TABLE OF CONTENTS

Program Director's Message
2007 Annual Meeting
Dates to Remember
Biodiversity Conservation in Agriculture Symposium
2006 Annual Meeting
Maria Elisa Christie – SANREM Gender Equity Coordinator
Andes Project Featured on National Public Radio
Long-Term Research Project Updates
Knowledge Base Needs Your Contributions
News Notes
Program Director Named President of the Soil and Water Conservation Society
Research Briefs Online
EcoAgriculture Assessment Released
Technical Committee Expanded
Board of Directors Changes
Payments for Environmental Services Programs Associate Award
SANREM to Produce Development Book
Partners to Participate in Agroecology Symposium

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As the SANREM CRSP nears the end of its second year, we see our long-term research program engaged in research that is improving livelihoods and conserving natural resources in ten countries in Latin America, Africa, and Asia. The past two quarters have been extremely busy as project PIs met with Co-PIs and host country partners to plan and initiate research activities. SANREM partners participated in the 2006 Annual Meeting in April and the SANREM-sponsored Biodiversity Conservation in Agriculture Symposium in the Dominican Republic at the end of May. We also began planning for the 2007 Annual Meeting, which will be held during the last week of June in Cochabamba, Bolivia. SANREM is also in the process of receiving its first Associate Award, which will fund the development of a primer on payments for environmental services in collaboration with the BASIS CRSP.

In June, we welcomed Maria Elisa Christie to the Management Entity Team, where she now serves as our Gender/Equity Coordinator. We are also awaiting the completion of a book authored by some of our partners on the use of adaptive management and the SANREM landscape systems approach in natural resources management. These and other activities are described in more detail below.

2007 Annual Meeting

The 2007 SANREM CRSP Annual Meeting is tentatively scheduled for a three-day period during the week of June 23 to June 30, 2007 in Cochabamba, Bolivia. The meeting will be hosted by <u>PROINPA</u>, a SANREM CRSP partner and non-profit organization that promotes technology innovation and the conservation, use, management, and development of genetic resources for the benefit of farmers and the nation of Bolivia as a whole. Please mark your calendars. More details will follow shortly.

Dates to Remember

Oct. 2, 2006	SANREM CRSP Board of Directors Teleconference		
Oct. 15, 2006	Annual reports due from project PIs		
Jan. 7, 2007	1 st Quarter Report Due		
April 7, 2007	2 nd Quarter Report Due		
June 23-30, 2007	2007 SANREM Annual Meeting, Cochabamba, Bolivia		

Biodiversity Conservation in Agriculture Symposium

More than 85 biodiversity conservation and agricultural researchers and development specialists from seven countries participated in the Biodiversity Conservation in Agriculture Symposium, from May 31 to June 2, 2006, in Punta Cana, the Dominican Republic to learn how wild biodiversity can be conserved in agricultural areas around the world. The goals of the symposium were to:

- 1) Better understand the importance of biodiversity and why it is essential for the provision of ecosystem services;
- 2) Explore how biodiversity conservation can be integrated into agricultural development activities;

- 3) Demonstrate why biodiversity conservation is essential to sustainable development; and
- 4) Learn how agricultural development projects can be designed to meet US Agency for International Development (USAID) Biodiversity Conservation Earmark requirements.

The keynote speakers included Jeff McNeely, Jon Erickson, Paul Ferraro, Sara Scherr, and Mary Rowan. Jeff McNeely, Chief Scientist at the World Conservation Union (IUCN) in Gland, Switzerland, spoke on "Magnitude of Global Biodiversity Loss," recounting the history of biodiversity loss and it causes. Jon Erickson of the Rubenstein School of Environment and Natural Resources and the Gund Institute for Ecological Economics at the University of Vermont, spoke on "Biodiversity—What is it and Why is it Important?" His presentation used an ecological and economic framework to define biodiversity, appraise its importance, and assess the synergies and trade-offs between agricultural development and biodiversity conservation. Paul Ferraro of the Department of Economics in the Andrew Young School of Policy Studies at Georgia State University spoke on "Biodiversity, Agriculture and Markets," and described the positive and negative relationships between biodiversity and agriculture and the roles of payments for environmental services in biodiversity conservation. Sara Scherr, the President of Ecoagriculture Partners, spoke on "Ecoagriculture: Integrating Agriculture and Biodiversity Conservation—a Landscape Perspective." Mary Rowen, Wildlife and Biodiversity Advisor at USAID, provided an overview of USAID biodiversity conservation programs, which currently have an annual investment of \$165 million. She also described USAID's definition of biodiversity conservation and delineated what projects must do to meet USAID biodiversity conservation earmark requirements.

Synergies between agriculture and biodiversity in existing ecoagriculture systems were discussed as well as approaches to landscape design that respect both agricultural livelihood and biodiversity conservation goals. In addition to these concepts, speakers addressed such concepts as "<u>Biodiversity Conservation in Cattle Production Systems</u>," "<u>Biodiversity Conservation and Coffee Production in Central America</u>," "<u>Aquaculture and Biodiversity Conservation</u>," "<u>Alternative Biodiversity Conservation Standards</u>" and "<u>Considering Biodiversity Threats to Production Agriculture</u>."

A central theme of the symposium was the understanding that biodiversity sustainability and development are not mutually exclusive. If agriculture and development are managed intelligently, the goal of sustaining biodiversity while improving people's livelihoods can be achieved. During their presentations, many of the speakers acknowledged that combining biodiversity and development goals is a challenge, but if done with proper planning, balance can be achieved and result in substantial long-term benefits. Speakers acknowledged that producing short-term results poses a major challenge because of the difficulty in measuring livelihood improvements associated with conservation activities. Conservation activities may not be seen as worthwhile, since historically, international development activity evaluations have tended to focus on short-term rather than long-term gains.

The symposium was sponsored by the Integrated Pest Management and SANREM CRSPs, with funding and support from USAID and the PUNTACANA Ecological Foundation. More information on the symposium, including abstracts and presentations from all presenters, can be found on the SANREM CRSP website at: www.oired.vt.edu/sanremcrsp/other/biodsymposium.php.

2006 Annual Meeting

The Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program held its Annual Meeting April 18-20, 2006 in Blacksburg, Virginia. Over 50 SANREM CRSP partners participated. Meeting participants were welcomed by Dr. S. K. De Datta, who serves as Virginia Tech's Associate Provost for International Affairs as well as the SANREM CRSP Administrative PI. In his opening remarks, Dr. De Datta emphasized the need for research activities to produce measurable results and impacts during the next three years to ensure the renewal of the SANREM CRSP in 2009.

After a SANREM CRSP overview presented by Program Director Theo Dillaha, Chris Kosnik, USAID Cognizant Technical Officer for the SANREM CRSP, spoke on ways to engage local USAID

missions in the countries where research is being carried out. His presentation also stressed the responsibility of PIs to inform Missions of travel to host countries in advance. He also encouraged PIs to visit with Mission personnel and keep them informed of project activities.

Each Long-Term Research Activity PI gave a presentation on the goals and objectives of their activity, their partners and study sites, and what they hoped to accomplish during the coming year. Bridging Grant recipients also summarized their activities and their results to date. Long-term Research Activity teams also meet individually to plan their activities for the coming year.

The possibility of collaboration on cross-cutting themes across the Long-term Research Activities was discussed. After considerable discussion, the consensus of the research teams was to support a cross-cutting watershed management/modeling/remote sensing activity to quantify the potential long-term benefits of different land management practice scenarios for each project. Virginia Tech agreed to develop a proposal to address this cross-cutting theme.

The SANREM CRSP Technical Committee (TC) also met at the Annual Meeting and reviewed SANREM progress to date. The TC recommended expanding its membership to include the lead PIs of the new Long-term Research Activities, and this recommendation was approved. The TC also reviewed its roles and responsibilities and agreed to review and provide feedback on SANREM CRSP activity quarterly reports, annual work plans, and baseline surveys.

Participants proposed to hold the next SANREM CRSP Annual Meeting in Cochabamba, Bolivia in April or May of 2007. Three SANREM CRSP Long-Term Research Activities have field sites in Bolivia, and Virginia Tech will work with the Bolivia activity PIs to plan the 2007 meeting.

The final morning of the Annual Meeting was devoted to reviewing SANREM CRSP policies and procedures with the new Long-Term Research Activity recipients. Additional details (agenda and presentations) on the 2006 SANREM CRSP Annual Meeting notes are available on the website at: <u>http://www.oired.vt.edu/sanremcrsp/AM06/AM_2006.php</u>.

Maria Elisa Christie – SANREM Gender Equity Coordinator

SANREM CRSP welcomes Dr. Maria Elisa Christie as the new Program Director for Women in International Development at Virginia Tech's Office of International Research, Education, and Development. Maria Elisa replaces former director Colette Harris, who accepted a Research Fellow position with the Institute of Development Studies at the University of Sussex in Brighton, England. With more than 20 years of experience in international development, Maria Elisa will serve as the Gender Equity Coordinator for the SANREM CRSP, working with SANREM CRSP PIs to ensure that all activities are sensitive to the needs of women and other under-represented groups. As a member of the Virginia Tech community, Dr. Christie will also provide leadership to effectively address gender issues in international development activities.

Maria Elisa played a role in the start-up of the Pesticide Action Network—she organized its first meeting to bring together farm workers, environmental groups, and consumer groups in Latin America. Her dissertation research focused on gendered spaces and everyday life in nature/society relations, participatory research methodologies, kitchens and gardens, and women's reciprocity networks. She also serves as a PI on both the IPM and Peanut CRSPs. Additional information on Maria Elisa is available on her web page at: http://www.oired.vt.edu/faculty/christie.htm.

Long-Term Research Project Updates

Decentralization Reforms and Property Rights: Potentials and Puzzles for Forest Sustainability and Livelihoods; Elinor Ostrom, Indiana University

The team finalized administrative arrangements with Bolivian and Mexican partners (Uganda and Kenya were completed last quarter) and SANREM activities were initiated. Inaugural meetings of the

National Advisory Councils were held in three host countries, with Bolivia electing to postpone their NAC meeting until August because of recent political changes. In addition, the first Steering Committee meeting was held in conjunction with the biennial conference of the International Association for the Study of Common Property (IASCP) in Bali. These preparations will enable the host-country partners to begin field work in the third quarter. All activities are proceeding as planned.

Developing a Participatory Socio-Economic Model for Food Security, Improved Rural Livelihoods, Watershed Management, & Biodiversity Conservation in Southern Africa; Alex Travis, Cornell University

Four U.S. research teams including business economics and marketing, soil and crop sciences, poultry husbandry and veterinary medicine, and social sciences worked in Zambia over the summer with their host country counterparts on project objectives. Two additional teams in natural resource management/economics and wildlife have or will travel to Zambia during the fall to initiate research activities. Miscellaneous items needed to initiate research have been purchased and installed. Workshops have begun, organized by host country PI Dale Lewis. These include the training of village scouts to supplement aerial wildlife surveys with ground surveys to generate multi-species data and to produce more highly controlled datasets for the impacts of COMACO's interventions on biodiversity conservation.

Watershed-based Natural Resource Management in Small-scale Agriculture: Sloped Areas of the Andean Region, Jeff Alwang,

Virginia Tech

The SANREM team completed a participatory appraisal in Bolivar Province, Ecuador. A second team collected soil samples from the study region to estimate carbon retention, construct a profile of the time path of erosion in the region, and to analyze the overall suitability of agricultural activities in the region. A third team monitored study site streams for macroinvertebrate biodiversity and began to develop a local protocol for monitoring stream biodiversity. A fourth team identified and collected data needed for initial watershed modeling activities. The teams held a workshop with local partners and cooperators in Guranda, Ecuador in June to explain the goals of the project and to plan future collaborative activities.

Using the participatory appraisal approach at the workshop, the following key project priorities were identified: (i) measures to control extreme soil erosion; (ii) options for higher-valued agriculture and increased income diversification; (iii) water quality and quantity; and (iv) biodiversity conservation. SANREM activities have also been initiated at the Tiraque, Bolivia project site.

Adapting to Change in the Andean Highlands: Practices and Strategies to Address Climate and Market Risks in Vulnerable Agro-Eco Systems; Corinne Valdivia, University of Missouri

Subawards were signed with all partner institutions. Seven team members participated in the SANREM Annual Meeting, and team members also participated in the Biodiversity Conservation in Agriculture Symposium. The first project planning workshop was held April 23-29 in La Paz, Bolivia. Five US, three Peruvian, and twelve Bolivian researchers participated in the workshop. A stakeholder meeting took place April 28th with USAID Bolivia Title II NGOs, the World Food Program, and the UNDP Climate Change Donations Project. Subaward coordination meetings took place in Bolivia and Peru. During May and June, the team developed data collection instruments, purchased instruments for field research, and identified project graduate students in climatology, economics, soils, sociology, and pests and diseases.

Agroforestry and Sustainable Vegetable Production in Southeast Asian Watersheds; Manuel Reyes, North Carolina Agricultural and Technical University

The Technology, Marketing, Policy, Environmental and socio-economic impacts, Gender and Scaling-up (TMPEGS) project team held successful kick-off meetings in Vietnam, Indonesia, Philippines, and at NC A&T. Coordinators were identified for each TMPEGS objective in each country. Meetings were held with stakeholders, including farmers and government officials in Vietnam, Indonesia, and the Philippines, and experimental sites in each country were finalized. In addition, TMPEGS PIs visited with USAID Mission's partners in each country. Four TMPEGS scientists attended and participated in the 2006 SANREM Annual Meeting at Virginia Tech. Subawards with nine institutional partners were developed. Baseline survey instruments were developed and baseline surveys were initiated in Indonesia, Vietnam, and the Philippines. Experimental plot studies were initiated at the Asian Vegetable Research and Development Center site in Taiwan and the Mars, Inc. site in Vietnam.

Andes Project Featured on National Public Radio

Work related to the SANREM research project, "Sustainable Land Use and Biodiversity Conservation in the Andes: Scaling Up SANREM-Andes Research", was recently featured on National Public Radio's (NPR) "Living on Earth" program and in Salon.com's online magazine. The programs relate the experiences of Ecuadorians concerning the disappearance of the glacier on Mount Cotacachi in the Andes, which natives and the city of Quito depend on for water. The programs focus on the impacts of glacier loss on Ecuadorians in the region and how impacts might be mitigated in the future. The SANREM research project is led by co-principal investigators Drs. Robert Rhoades and Virginia Nazarea, Professors of Anthropology at the University of Georgia. This research project was initiated during SANREM CRSP Phase II and was continued as a Bridging Award by the current SANREM CRSP program.

Two NPR stories are available on-line. The first one, titled "When the Water Runs Out," describes the role of glaciers as the main source of water for the city of Quito, Ecuador. Seventy percent of Quito's water supply comes from glaciers, and as they continue to disappear, concerns about the water supply become more pronounced. Melting glaciers and irregular rainfall—effects linked by scientists to global climate change—have already begun threatening Ecuador's electrical grids, agricultural production and drinking-water supplies. (http://www.salon.com/news/feature/2006/04/07/ecuador2/).

The second program, "Early Signs: Melting Ice Caps in Ecuador," describes how the glaciers have melted due to climate change and how the region's native people try to cope with a warmer, drier, world. (http://www.loe.org/shows/segments.htm?programID=06-P13-00014&segmentID=5).

Knowledge Base Needs Your Contributions

The SANREM Knowledge Base (SKB) is intended to serve as a catalog of resources specific to the SANREM project, as well as a catalog and archive of other resources that relate to sustainable agriculture and natural resource management. The resources catalogued in the SKB include articles, papers, reports, and other digital resources (presentations, images, WebPages, etc.). The SKB can also store copies of digital resources. This practice is recommended if not prohibited by copyrights. The overall goal of the SKB is to make these resources more readily available to facilitate the wide and effective dissemination of sustainable agriculture and natural resource management knowledge, as well as to provide a structure for effective search and retrieval of the resources. To date, 923 entries have been made into the SKB by 20 SANREM partners. All partners are encouraged to identify significant SA and NRM articles and other useful sources of information that could be added to the SKB. For more information or to obtain a user ID and password to contribute to the SKB, contact Keith Moore at

<u>keithm@vt.edu</u> or Sara Breakiron at <u>sbreak@vt.edu</u>. The SKB website can be found at: <u>http://www.oired.vt.edu/sanremcrsp/menu_information/knowledgebase.php</u>.

News Notes

Program Director Named President of the Soil and Water Conservation Society

The Soil and Water Conservation Society (SWCS) has named Theo Dillaha, Program Director of the SANREM CRSP, as its president for the upcoming year. As president of the 5,000 member SWCS, Dillaha will work with the SWCS Board of Directors, chapters, and professional staff to be an advocate for conservation professionals and science-based conservation practices, programs, and policy, and will serve the professional development needs of SWCS members. Theo reports that the goals and objectives of SANREM and the SWCS are similar. "Both SWCS and SANREM seek to foster the science and art of natural resource conservation. Both strive to discover, develop, implement, and constantly improve land management practices that sustain the productive capacity of working lands. Both work to improve the livelihoods of those who depend on the land, and both seek to enhance the ecosystem services upon which all life depends." More information on the SWCS is available at http://www.swcs.org.

Research Briefs Online

SANREM is currently developing its latest set of research briefs for general publication, based on a variety of technical material, including peer reviewed journal articles and books published by our research partners. These briefs describe research findings and impacts in a way that quickly and effectively communicate ideas to development practitioners. Our goal is to support and disseminate the knowledge generated by our partners and to preserve and organize this knowledge in a way that can be easily accessed and shared. If you have ideas or materials that can be used in future briefs, please contact Keith Moore at keithm@vt.edu.

EcoAgriculture Assessment Released

Louise E. Buck, Thomas A. Gavin, David R. Lee, Norman T. Uphoff and associates have released their multi-disciplinary review titled *Ecoagriculture: a Review and Assessment of its Scientific Foundations*. This publication evaluates ecoagriculture strategies based on the results of published research and projects related to ecoagriculture interventions. This text can be accessed at: http://www.oired.vt.edu/sanremcrsp/documents/publications/EcoAgricultureReport.pdf.

Technical Committee Expanded

The SANREM CRSP Technical Committee has been expanded to include all new long-term research project lead PIs at the 2006 SANREM CRSP Annual Meeting. Current members of the Technical Committee include: Devona Bell, Winrock International; SANREM Gender/Equity Coordinator Maria Elisa Christie, Virginia Tech; Field Systems - Paul Mueller, NCSU; Chris Pannkuk, Washington State University; Saied Mostaghimi, Virginia Tech; Andrew Manu, Iowa State University; Gerald Shively, Purdue (Chairperson); CGIAR Representative Barry Shapiro, ICRISAT; Jeff Alwang, Virginia Tech; Elinor Ostrom, Indiana University; Manuel Reyes, North Carolina A&T; Alex Travis, Cornell University; Corinne Valdivia, University of Missouri; USAID CTO Chris Kosnik; Policy/Economics Coordinator Mike Bertelsen, Virginia Tech; Administrative PI S. K. De Datta, Virginia Tech; Program Director Theo Dillaha, Virginia Tech; and Associate Program Director Keith Moore, Virginia Tech.

Board of Directors Changes

SANREM CRSP would like to thank George Wilson of North Carolina State University for his service as a member of the SANREM CRSP Board of Directors. George resigned from the Board as required by his new employment agreement with USAID, where George will serve as the Senior Advisor for University Relations and Agricultural Research, Training and Outreach. The SANREM CRSP would like to welcome new board members Thomas Payne of the University of Missouri and Alice Pell of Cornell University). Tom Payne is the Vice Chancellor for Agriculture and Dean of the College of Agriculture, Food and Natural Resources at the University of Missouri. He is the author and co-author of more than 130 publications and is the founding co-editor of the Journal of Insect Behavior. Alice Pell is a professor of Animal Science at Cornell and the director of the Cornell International Institute for Food, Agriculture and Development.

Payments for Environmental Services Programs Associate Award

The SANREM CRSP is in the final phases of negotiating an Associate Award with USAID/EGAT to conduct a study of payments for environmental services (PES) programs in developing countries in collaboration with the BASIS CRSP. This study aims to:

- 1) expand the SANREM Knowledgebase to consolidate knowledge on PES projects in developing countries;
- develop regional reviews of approaches to PES in Africa, Latin America, and South Asia that will be presented at a PES workshop in Lombok, Indonesia in January 22-27, 2007. The regional review papers will characterize regional PES program objectives and illustrate how the objectives shape program design, contexts, and conditions across the region that shape PES regional program: design elements, challenges, and effectiveness;
- 3) develop a series of case studies on successful PES programs in the three regions;
- 4) fund participation of SANREM scientists in the Indonesia workshop;
- 5) publish the regional review papers and case studies and develop a series of Applied Research Briefs based on papers by SANREM and BASIS scientists that will be used to develop a primer/training manual for USAID personnel on PES programs; and
- 6) sponsor a policy seminar on PES Programs for USAID personnel during the summer of 2007.

Key SANREM researchers participating in this study include Paul Ferraro of Georgia State University, Jerry Shively of Purdue University, Doug Southgate of Ohio State University, and Theo Dillaha of Virginia Tech. Key BASIS scientists include John Kerr of Michigan State University, John Pender of IFPRI, and Michael Carter of the University of Wisconsin. The USAID CTO for this project is Mike Colby.

SANREM to Produce Development Book

SANREM System Coordinators and other partners are currently preparing a book for development practitioners entitled *Innovating for Sustainable Agriculture and Natural Resource Management: The Science of Adaptive Management.* Associate Program Director Keith Moore is the editor for the book. Slated for completion in late 2007, this book will describe how adaptive management techniques can be combined with the SANREM landscape systems (field, farm/enterprise, watershed, ecosystem, governance, and policy) approach to improve the effectiveness and sustainability of natural resource management activities. Case studies demonstrating the adaptive management approach to complex adaptive systems will also be included.

Partners to Participate in Agroecology Symposium

The SANREM CRSP Field System Coordinators will participate in the 4th International Symposium on Agroecology hosted by the University of Chapingo in Texcoco, Mexico, October 18 – 20, 2006.

Participants from educational institutions, research centers, and NGOs throughout Latin America will convene to discuss the development of agroecological research and education in the Americas, as well as the integration of agroecology in community development programs. The Field System Delegation is comprised of faculty and staff from North Carolina State University and the Rodale Institute. During the symposium, members of the delegation will offer presentations on agroecology research in the United States, SANREM CRSP activities, and the undergraduate agroecology education program at NCSU. Dr. Paul Hepperly will offer a special session on organic production research and international activities at Rodale. Following the symposium, the delegation will lead a field day on the management of demonstration and teaching farms for student and community education.

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