



Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program

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Trip Report: Indonesia, Vietnam, and Philippines

January 13 – February 14, 2007

Theo Dillaha, Program Director
SANREM CRSP, Virginia Tech

Purpose of Trip:

1. Participate in and speak at the Global Event on Payments/Rewards for Environmental Services, January 22-27, 2007, Mataram, Lombok, Indonesia.
2. Visit field sites and partners of the Agroforestry and Sustainable Vegetable Production in Southeast Asian Watersheds SANREM CRSP Long-term Research Project (PI: Manuel R. Reyes, North Carolina Agricultural and Technical State University) to learn more about the project, observe progress to date, meet the project teams and their partners, learn about the implementation contexts, and develop linkages with USAID Missions.

Sites Visited:

- Global Event on Payments/Rewards for Environmental Services, Mataram, Lombok, Indonesia
- Bogor Agricultural Institute, Bogor, Indonesia
- USAID, Jakarta, Indonesia
- CIFOR/ICRAF SE Asia Headquarters, Bogor, Indonesia
- TMPEGS Indonesia Field Sites, Nanggung Subdistrict, West Java, Indonesia
- Nong Lam University, Ho Chi Minh City, Vietnam
- TMPEGS Vietnam Field Sites, Nghia Trung Village, Bu Dang District, Binh Phuoc Province, Vietnam
- University of Santo Tomas, Manila, Philippines
- ICRAF Field Office, Malaybalay City, Bukidnon, Mindanao, Philippines
- TMPEGS Philippine Field Sites, Municipality of Lantapan, Bukidnon, Mindanao, Philippines
- De La Salle University, Manila, Philippines
- USAID, Manila, Philippines
- Silliman University, Dumaguete, Negros, Philippines

Observations:

Global Event on Payments/Rewards for Environmental Services, January 22-27, 2007, Mataram, Lombok, Indonesia

This activity was a component of the SANREM CRSP Payments for Environmental Services Associate Award. SANREM contributions to the event included presentations by: Theo Dillaha, Program Director SANREM CRSP, entitled “[Monitoring Changes in Hydrologic Response Due to Land Management Changes at the Watershed Scale: Time Lag and Other Issues](#)”; Margie Huang, Winrock International, Inc., “[PES in Asia: Trends, Lessons Learned, Best Practices, and Knowledge Gaps](#)”; Paul Ferraro, Georgia State University, “[Payments for Hydrological Services in Africa](#)”; and Josefina Braña Varela, National Institute of Ecology, Mexico, “[Experiences with PES in Latin America](#)”. Josefina Braña Varela presented for Doug Southgate, who was unable to attend in the conference.

The PES event was particularly useful for the SANREM Payments for Environmental Services Associate Award. The event participants reached a consensus that (1) PES programs are a promising conservation tool, one of many such tools that are available to deal with environmental and livelihood issues and (2) PES programs are still new and experimental in nature and there are few if any documented cases of successful PES programs that meet the agreed upon definition of a PES program: (1) the PES transaction is *voluntary* transaction between well defined buyers and sellers; (2) there is a well defined environmental service that is being bought; and (3) the payments are conditional on delivery of the environmental services.

A meeting was held on January 24, 2007 between the SANREM PES Associate Award partners and the BASIS CRSP PES award participants (John Kerr, MSU and Rohit Jindal (MSU Ph.D. student) to discuss the joint production of the USAID PES Primer and the Washington PES Policy Seminar. It was agreed that:

- BASIS and John Kerr have primary responsibility for the development of the USAID PES Primer.
- SANREM will contribute the three regional PES synthesis papers to the primer and brief case studies from each region.
- The one-day policy seminar will be in the DC area in July and will have 15 to 30 participants invited by USAID.
- The Policy Seminar will include hands on discussion type activities (what is and is not PES, how can non-PES activities be modified so that they are PES, etc.).
- SANREM team will have a phone conference in February for additional coordination and planning.
- SANREM and BASIS teams will meet in May to compare products, develop synthesis products, and prepare final program for July seminar.

SANREM personnel and partners participating in this activity included:

- Theo Dillaha, Program Director SANREM CRSP, dillaha@vt.edu
- Mike Colby, USAID CTO for the SANREM CRSP Payments for Environmental Services (PES) Associate Award, mcolby@usaid.gov
- Margie Huang, Winrock International, MHuang@winrock.org

- Paul Ferraro, Georgia State University, pferraro@gsu.edu
- Josefina Braña Varela, National Institute of Ecology, Mexico, pin108@yahoo.com

Agroforestry and Sustainable Vegetable Production in Southeast Asian Watersheds SANREM CRSP Long-term Research Project

Meetings were held with key project personnel and the project field sites were visited in Indonesia, Vietnam, and the Philippines. Field activities were largely initiated in July and August 2006 after formal subawards were received by the project participants. Consequently, at the time of the visit, project activities had been on-going for only seven or eight months. Activities in Mindanao, Philippines build upon previous SANREM Phase I and II activities. Activities in Indonesia and Vietnam largely involve new partners. Baseline studies have now been completed at all sites and baseline condition reports have been completed or are in progress. Specific fields for experimental research have been identified in Indonesia and Vietnam and experimental treatments are or are nearly in place. In the Philippines, new fields for experimental treatments are being modified because some previously identified collaborating farmers have cut down trees required for the experimental treatments. As a result of the baseline surveys and other factors, the objective of the original project, to develop sustainable vegetable agroforestry production systems, have evolved in Indonesia and Vietnam. In Indonesia, research will address vegetable production in both agroforestry and non-forested (full sun) systems. For agroforestry systems, emphasis is also being placed on agroforestry production of high value indigenous plants species in addition to vegetables. In Vietnam, the primary focus of the research now seems to be establishment of cacao in cashew plantations, although vegetables are also being considered. The SANREM teams in Indonesia and the Philippines have strong gender components. This was not evident in Vietnam. Overall, the research seems to be progressing well. Experimental plots need to be implemented quickly in Indonesia and the Philippines. Project partners in all countries indicated that there was a need for more structured and formal communication between the project partners in the three different countries. The plan for dealing with next year's budget cuts, the need for success stories, and the upcoming EEP activity and program review in 2008 was also discussed.

Indonesia: Meetings were held with project partners from Bogor Agricultural Institute/ University (IPB) and the World Agroforestry Center and field sites in Nanggung Subdistrict, West Java were visited. Partners from IPB and the World Agroforestry Center gave formal presentations on activities to date. Baseline studies have been completed and reports are being finalized. Gender related activities, that were proposed and funded later in the project have been moved up and this is welcomed. Project seems to have evolved such that there is similar emphasis on full sun and agroforestry vegetable production. The full sun vegetable research/demonstration site is fully operational and experimental treatments are in place. Samples of high value indigenous plants have been collected for testing and possible inclusion in the agroforestry and full sun experiments. Agroforestry field sites have been prepared for planting vegetables and indigenous plants and planting should occur by the end of February 2007. Meetings are being held between producers and vegetable/fruit buyers in Nanggung to discuss quality and supply issues and to develop stronger seller-buyer relationships. Project is progressing well since it's initiation during the summer of 2006. A meeting was held with USAID in Jakarta. Project progress was reported and the likely impacts of next year's budget

cuts were discussed. A meeting was also held at the World Agroforestry Center in Bogor where potential collaborations between SANREM and ICRAF on identifying models for rapid and detailed hydrologic and other environmental assessments were discussed.

Vietnam: Met with project partners primarily during a day long tour of experimental field sites. Baseline surveys have been completed. Experimental field sites managed by IPB are established, cacao seedlings have been planted, and the sites are waiting planting of vegetables and installation of drip irrigation systems. Cacao seedlings seem to be doing extremely well in cashew tree plantations. The Mars International research site seems to have major problems due to lack of shade for cacao seedlings, inadequate irrigation water due to reservoirs that will not hold water, high erosion rates, and limited maintenance. Because of these problems, it is not clear whether the Mars International research site will be able to provide useful research data. A decision needs to be made quickly on the future of this site. Gender issues were addressed during the baseline survey. This involved a rapid gender survey and assessment of local women's organizations. The team is currently analyzing gender data and preparing a report on gender roles in agricultural production and local organizations. It was not possible to meet with USAID personnel in Hanoi because of scheduling problems.

Philippines: Meetings were held with ICRAF partners in Bukidnon, Mindanao, Philippine university partners in Manila, and USAID in Manila. In Bukidnon, ICRAF, led by Delia Catacutan (Philippines site coordinator) provided a half-day overview of the project and the history of SANREM in the Bukidnon and the Lantapan watershed. SANREM has been active in this area since the initiation of SANREM CRSP Phase I (~1992). Many other international development organizations, particularly ICRAF, are and have been active in the Lantapan watershed. Delia and Jun Mercado gave an overview of the accomplishments of the TMPEGS team at the site to date and an overview of the baseline survey. Delia mentioned that she was a little overwhelmed with the Site Coordinator responsibilities and the lack of SANREM resources to support coordination activities. She is the only PI on site, so the other PIs from Manila and Los Baños rely upon her and ICRAF for logistical support when they visit Bukidnon. Four potential field sites were visited in the Lantapan watershed. Problems were observed at some sites where cooperators had cut down trees required for the field experiments or had already planted crops that were not part of the planned field experiments. New experimental field sites will need to be identified quickly to initiate the field research.

The farm of Henry Binahon and his wife was visited. They are employing almost every imaginable conservation practice (except vegetable agroforestry). Most of their land is forested and in the forested areas they have a successful tree, flower, and native plants nursery. They also produce organic fruits and vegetables (in full sun) and have swine, bees, a catering business that uses his organically produced fruits and vegetables, and a lodge/conference facility. He also holds many field day type activities for various development organizations. Henry and his wife have been involved with SANREM for more than a decade and are a real success story. We should publicize their approaches and accomplishments in a research note and/or success story publication.

A meeting was held with all of the TMPEGS partners from the Manila area at the USAID Mission in Manila to update the Mission on project progress and discuss additional funding

possibilities. Plans for a publication on the history of SANREM involvement in the Lantapan watershed and on the Binahon farm were also discussed. The approach that will be used to distribute next years budget cuts was also discussed along with the need to quickly produce impact stories such as the success of the Binahon Farm. Now that the baseline studies are complete it is recommended that field experiments be quickly implemented so that SANREM will have preliminary results before the 2008 EEP review.

List of Contacts Made:

Name	Title/Organization	Contact Information
Indonesia		
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Suseno Budidarsono	Research Officer, World Agroforestry Center, Bogor	
Hadi Susilo Arafin	Professor and Department Head, Dept. of Landscape Architecture, Bogor Agricultural University	hsarifin@ipb.ac.id
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James Roshetko	Tree and Marketing Specialist, World Agroforestry Center and Winrock International	j.roshetko@cgiar.org
Vietnam		
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Philippines		
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Victor B. Ella	Dean and Associate Professor College of Engineering and Agro-Industrial Technology, University of the Philippines Los Baños	vbella@up.edu.ph
Narciso M. Rubio	Municipal Mayor, Municipality of Lantapan, Bukidnon	Tel: 0919-523-8437
Delia Catacutan	ICRAF Natural Resource Management Research Officer and Mindanao Programme Coordinator and SANREM Philippines Site Coordinator	delia_icraf@yahoo.com
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Detailed Trip Notes

Indonesia

January 29, 2007: Bogor Agricultural Institute/University (IPB), Bogor, Indonesia

- Hosted by Dr. Anas Susila, Associate Professor, Dept of Agronomy and Horticulture, Bogor Agricultural University, Indonesia, SANREM Indonesian Site Coordinator
- Initial meeting and welcome by Muhamad Ahmad Chozin, Vice-Rector for Research, Bogor Agricultural Institute, Indonesia. He will be visiting Virginia Tech on March 30 with Manuel Reyes. Provided overview of Bogor Agricultural Institute/University
- Project overview and progress reports by:
 - Gerhard Eli Sebastian Manurung, World Agroforestry Center, Bogor:
 - Bambang S. Purwoko, Professor and Department Head, IPB
 - Kusuma Wijaya, World Agroforestry Center, Bogor
 - Suseno Budidarsono, World Agroforestry Center, Bogor
 - Hadi Susilo Arafin, Professor and Department Head, Dept. of Landscape Architecture, Bogor Agricultural University

Project personnel gave overview of project and of progress to date. SANREM project has resulted in significant new collaboration between ICRAF and Bogor Agricultural Institute. Research question is whether vegetables and agroforestry make good economic sense. Indonesia team is looking at higher value indigenous crops that require shade and may be more suitable for agroforestry than conventional vegetables. Market studies are underway to identify products with significant market demand and potential profitability. Baseline socioeconomic studies complete. Need to request copies of PowerPoint presentations that were given. I also toured BPI research farms/facilities with Anas Susila.

- Theo Dillaha discussed important SANREM issues including:
 - Pending FY 2008 SANREM budget cut of almost 25% and the process that will be used to distribute budget cuts among long-term research activities.
 - Fall 2008 external review of SANREM that will be used by USAID to determine if SANREM will be renewed for another five years, terminated, re-competed, etc. Importance of conducting good research and documenting our findings and impacts so we will be ready for the review.
 - Importance of reducing pipelines and submitting timely and regular invoices
 - Importance of developing high impact success stories to highlight SANREM impacts and/or potential impacts was also stressed.

January 30, 2007:

- USAID, Jakarta, 9:00AM
Anas Susila and I met with Prijanto Santoso, USAID/Indonesia Program Specialist in the Water and Environment Office. Other Mission personnel we were scheduled to meet with did not attend because they have been reassigned to new missions. Almost the entire mission staff is turning over. We discussed project progress and coming SANREM FY2008 budget cuts and our plan for involving the Mission in the resources reallocation process.
- World Agroforestry Center, Bogor, 1:30 PM (project Co-PIs)
 - Meine van Noordwijk, ICRAF Southeast Asia Regional Coordinator, Bogor

- James Roshetko, Tree and Marketing Specialist, World Agroforestry Center and Winrock International

Had a general discussion on the TMPEGS project and progress to date. Also followed up on the PES workshop and discussed potential Virginia Tech/SANREM/ICRAF cooperation on the development of guidance to assist research and implementation teams in identifying appropriate tools for rapid and more detailed hydrologic assessments that could be used by projects to identify priority areas for implementation activities and to estimate long-term project impacts. Both sides will look for potential funding sources to fund this collaborative activity.

- Dinner with Muhamad Ahmad Chozin and Anas Susila

January 31, 2007: Site visit to Nanggung project site, Nanggung Subdistrict, West Java

The project area and field plot sites were visited. Due to heavy rains, we did not visit several field sites in the upper areas of the watershed. Visited one field site where under story has been cleared, the soil prepared, and vegetables/indigenous plants will soon be planted (Fig. 1).



Figure 1 Nanggung agroforestry field site

Second site is a demonstration site/farm where indigenous plants are being collected, propagated, and tested for nutrient and soil requirements (Fig. 2-2). Site is also set up as a training facility/demonstration farm and has a pavilion for meetings, electricity, and shade houses for propagation work. Field trials of conventional vegetables are also being conducted to identify varieties that are more suited for soil toxicity/fertility issues encountered in the region.



Figure 2 Nanggung field trial, demonstration, and propagation site

February 1, 2007: Nong Lam University, Ho Chi Minh City, Vietnam

- Welcoming meeting with Nong Lam University officials including:
 - Bui Cach Tuyen, Rector (visiting Virginia Tech on March 30, 2007)
 - Nguyen Hay, Vice Rector
 - Phan Thi Giac Tam, Deputy Dean, Economics Department
 - Bui Xuan An, Dean Faculty of Environmental Technology
 - Tran Tan Viet, Deputy Dean Faculty of Agronomy
 - Dang Thanh Ha, Agricultural Economics Department (SANREM Site coordinator and my host)
 - Alton Thompson, Dean of Agriculture, North Carolina Agricultural and Technical State University

Rector Tuyen welcomed Alton and I to Nong Lam University and then gave an overview of the University and their priorities. Nong Lam was founded in 1955 and has approximately 20,000 students. The largest department is agronomy. Current key program areas are food safety, avian flu, biotechnology. Extended an invitation for Virginia Tech Biological Systems Engineering department to participate in upcoming international agricultural engineering workshop they are hosting. Alton Thompson described NC A&T and their desire to form an educational exchange program with Nong Lam University. I then gave a brief overview of SANREM, Virginia Tech and the purpose of my visit. The meeting concluded with the formal signing of a MOU between Nong Lam University and NC A&T. Toured campus and biotechnology related laboratories.

- Had dinner with Rector Tuyen, Dang Thanh Ha, and Vice Rector Hay. Discussed Rector Tuyen's upcoming trip to the US and his interests, particularly how US universities generate external funding.

February 2, 2007: Cultural Day, Ho Chi Minh City

- Alton and I were taken on a half-day tour of the Cu Chi tunnels on the outskirts of Ho Chi Minh City, where the Viet Cong resisted the Americans during the “American War”. No project related activities. Would have been useful to meet with SANREM partners for formal presentations and discussions of project activities.

February 5, 2007: Field trip to research sites in Nghia Trung Village, Bu Dang District, Binh Phuoc Province

- Accompanied by:
 - Dang Thanh Ha, Vietnam Site Coordinator, Nong Lam University
 - Pham Hong Duc Phuoc, Cacao and drip irrigation expert, Nong Lam University
 - Nguyen Duc Thanh, International Programs Office, researcher in gender and rural sociology, Nong Lam University
 - Le Van Du, Soil and farming system specialist, Nong Lam University
 - Tran Van My, Agronomist, Nong Lam University
 - Do Duc Chien, Department of Agriculture and Rural Development, Binh Phuoc Province.
- Theo Dillaha discussed important SANREM issues including:
 - Pending FY 2008 SANREM budget cut of almost 25% and the process that will be used to distribute budget cuts among long-term research activities.
 - Fall 2008 external review of SANREM that will be used by USAID to determine if SANREM will be renewed for another five years, terminated, re-competed, etc. Importance of conducting good research and documenting our findings and impacts so we will be ready for the review.
 - Importance of reducing pipelines and submitting timely and regular invoices
 - Importance of developing high impact success stories to highlight SANREM impacts and/or potential impacts was also stressed.
- Visited the Mars International, Inc. research site, where there were replicated plots with fruit trees, cacao, bananas, and other treatments. Approximately two years ago the site was cleared of forest and graded and then planted on the contour. Three extremely large reservoirs were constructed to catch and store water from the wet season for drip irrigation during the dry season. Study site seemed to have serious problems including the following:
 - Very severe rill and gully erosion. Much of soil was bare, except where weeds were established, and numerous breaches of contour ridges.
 - Reservoirs were empty and they cannot hold water due to high infiltration rates. Suggest sealing with Bentonite or similar clay if available in Viet Nam or regarding side slopes to 1:2 slope or less so that liners can be installed. Lower slide slopes needed so that liner can be covered with soil that will be stable. As a temporary fix, a small ($\approx 10\text{m}^3$) ferrocement storage tank was constructed, which can be filled with water pumped from a nearby river. Unclear if this is adequate for the study site. Water stress may be a major problem.
 - Lack of shade for cacao seedlings. Shade trees were not much larger than the cacao seedlings they were supposed to be shading. Cacao seedlings were very small. They had presumably been replanted after almost total mortality of the first planting. Second planting does not appear to be faring well due to lack of shade (and water?) and competition from weeds. Some shade being provided by shade cloth around cacao seedlings but they still do not seem to be doing well.



Figure 3 Mars International research site



Figure 4 Cacao seedling with shade cloth

- Not clear if resources are available to perform the needed modifications at this site or if the site could be rehabilitated in time to provide meaningful data by the end of the study period. Young cacao tree at other sites that were planted later than first planting at the Mars site are two to three times larger.
- Agroforestry site with cacao planted in cashew plantation. As shown in Fig. 5, cacao seedlings appear to be doing well. Focus is on cacao but some vegetables are planned as an

intermediate crop. Since cacao is more valuable than cashew generally, cashew trees will be trimmed back as needed as the cacao trees mature. Seedlings at a portion of the study site will be drip irrigated along with vegetables. Drip irrigation system is in the process of being installed.



Figure 5 Cacao trees in cashew plantation

- Cacao and vegetables are in process of being planted at an additional site belonging to the local party chairperson.
- Several other sites exist that were not visited. Cacao has been replanted at one site due to high mortality due to termites. Vetiver is being planted around the new seedlings in an attempt to repel the termites.

February 6, 2007: University of Santo Tomas, Manila, Philippines

- Ernesto R. Gonzales, Director Social Research Center, University de Santo Tomas. Discussed possible collaborations between SANREM, Virginia Tech and University Santo Tomas. They have done considerable social science research related to the effects of mining on the environment, etc.

February 7, 2007: ICRAF Field Office, Malaybalay City, Bukidnon, Mindanao, Philippines

- Meeting with ICRAF staff associated with the TMPEGS project:
 - Delia Catacutan, ICRAF Natural Resource Management Research Officer and Mindanao Programme Coordinator and SANREM Philippines Site Coordinator
 - Agustin R. Mercado, ICRAF Associate Research Officer, Claveria, Mindanao and technology person on the SANREM TMPEGS team.
 - Caroline E. Duque, NRM Research Officer, ICRAF-Lantapan Research Site, Malaybalay City

- Dr. Anthony Penaso, Vice-President for Research and Extension, Central Mindanao University, and Grantee of SANREM's 2007 Beahrs Environmental Leadership Program.
- Delia Catacutan gave a very interesting presentation on the history of the SANREM CRSP in the Manupali watershed. SANREM activities were initiated here in 1992 and have continued to the present. Many other international development organizations, particularly ICRAF, are and have been active in the watershed. Delia gave an overview of the accomplishments of the TMPEGS team at the site to date and an overview of the baseline survey. She mentioned that she was a little overwhelmed with the Site Coordinator responsibilities and the lack of SANREM resources to support coordination activities. She is the primary PI on site, so the other PIs from Manila and Los Baños rely upon her and ICRAF for logistical support when they visit Bukidnon. Agustin (Jun) Mercado gave an overview of the technical and research questions the TMPEGS team is addressing and how they are being addressed.
- Theo Dillaha gave an overview of pending budget cuts to SANREM and the process of how decisions on budget cuts are likely to be distributed among long-term research activities. Also stressed the importance of developing high impact success stories to highlight SANREM impacts and/or potential impacts.
- Dinner with the following:
 - Rodel D. Lasco, Programme Coordinator, ICRAF-Philippines
 - Delia Catacutan, NRM Research Officer, ICRAF-Lantapan
 - Agustin R. Mercado, Associate Research Officer, ICRAF-Claveria
 - Dr Anthony Penaso, Vice-President For Research and Extension, Central Mindanao University

February 8, 2007: Field Trip to Manupali Watershed field sites, Lantapan, Bukidnon, Mindanao

Participants: Delia Catacutan, Jun Mercado, Dr. Anthony Penaso, Caroline Duque

- Narciso M. Rubio, Municipal Mayor of Lantapan, Bukidnon. Has been involved and supportive of SANREM and other agricultural development projects for past 6 to 8 years. Very interested in protecting the watersheds that supply municipal water. Currently expanding the municipal water supply system to most of his district. Not standing for reelection. Plans to become vice-mayor.
- Farm of Henry Binahon, "the perfect farmer and conservationist". This entrepreneur and his wife have implemented almost every imaginable conservation practice (except vegetable agroforestry) on the farm. Most of their land is forested and in the forested areas they have a successful tree, flower, and native plants nursery. Nursery area extensively irrigated. Vegetable production area has few trees but production is organic and many conservation practices are employed: terraces, strip cropping, crop rotation, etc. Does not use trees in main vegetable production areas because of shading. Does plant vegetables (ginger, etc.) in areas where he is establishing tree crops. Also has a swine operation, bees, catering business that uses his organically produced fruits and vegetables, and a lodge/conference facility. Views his farm as a model farm and holds many field day type activities for various development organizations. Originally, he had an agricultural extension type job. Decided to implement what he was teaching and has become very successful. His wife is a forester and he credits her with being the real farm manager. Henry and his wife are a real success story that we should publicize in a research note and/or success story publication.



Figure 6 Nursery area of Binahon Farm, Lantapan, Bukidnon

- Farm of Vic Bacadon, vegetable producer. Currently growing cabbage and Chinese cabbage on 2.4 ha of newly purchased land. Indicated that pesticide costs accounted for half of his production costs. Vegetable production currently very profitable. Expects to pay for his land from vegetable sales within two years of land purchase. Willing to plant some trees around field borders possibly. Very interested in expanding irrigation and possibly testing the drip irrigation system.
- Field of Edgar Yam-Oc, vegetable producer. Had recently severely pruned his field border trees so that along the road, there was only foliage in the upper 20% of his trees. He did not like his trees as their timber value was low because he had planted a poor variety of trees. Presumably pruned to reduce shading/competition with vegetables. Currently using small sprinkler irrigation system. Interested in drip irrigation.
- Farm of Carping Yabu, vegetable producer. Practices alley cropping and field borders with trees. Farm located in lowlands and believes that trees benefit vegetables and field crops by keeping temperatures lower. Also very pleased with his 5-year old alley and boundary trees, which are doing well and will be valuable as plywood logs (Figure 7). He purchased the seedlings from Alfonso Sagayan's household nursery in Sungco, a SANREM-cooperator from SANREM Phase I and II on ICRAF's tree domestication research. Another potential site for a success story.



Figure 7 Potential plywood logs nearing maturity and harvest on farm of Carping Yabu.

- Transported back to Cagayan del Oro with Jun Mercado (ICRAF). Had two hours to talk and learned a lot. He is the basis for a potential success story. He reported that he had started a farm on the side and was implementing many of the conservation practices he was working to promote in his ICRAF position. Because he works full time, he has relied on hired labor. His biggest problem now is that after local farmers work for him and learn the new and improved practices, they invariably quit working for him to spend more time implementing his practices on their farms. Consequently he must hire labor from increasing father away.

February 9, 2007: Manila, Philippines

- De La Salle University visit (SANREM partner)
 - Ma. Ellen Chiong-Javier, Graduate Program Coordinator and Behavioral Sciences Department, De La Salle University, Manila (host)
 - Cristina A. Rodriguez, Chair Behavioral Sciences DepartmentDe La Salle University contributions to the SANREM project and some of the baseline study results were discussed. Toured of De La Salle campus and had lunch with Department Chair and others.
- Visit to USAID/Philippines Mission
 - Oliver Agoncillo, USAID/Philippines/OEE
 - Paul Catalan, Don Bosco Technical College
 - Ma. Ellen Chiong-Javier, De La Salle University
 - Victoria Espaldon, University of the Philippines at Los Baños
 - Victor Ella, University of the Philippines at Los Baños

- Jean Saludadez, University of the Philippines-Open University
- ?

Discussed SANREM project activities and progress to date, upcoming cuts in FY 2008 funding, implications for the project and how the Mission will be involved in FY 2008 project allocations, SANREM technical assistance opportunities, etc. SANREM partners asked about potential USAID assistance opportunities.

- SANREM CRSP Partners meeting. Discussed important SANREM issues including:
 - Pending FY 2008 SANREM budget cut of almost 25% and the process that will be used to distribute budget cuts among long-term research activities.
 - Fall 2008 external review of SANREM that will be used by USAID to determine if SANREM will be renewed for another five years, terminated, re-competed, etc. Importance of conducting good research and documenting our findings and impacts so we will be ready for the review.
 - Importance of reducing pipelines and submitting timely and regular invoices. New NC A&T monthly invoicing requirements
 - Importance of developing high impact success stories to highlight SANREM impacts and/or potential impacts was also stressed.
 - No-till planter being developed at Don Bosco Technical College
 - Need to get project extensions in place before the end of the fiscal year to avoid disruptions in project activities.

February 9, 2007: Silliman University, Dumaguete, Negros, Philippines

- Janet S. Estacion, Assistant Director, Institute of Environmental and Marine Science, Silliman University (Phone: +63 35 225 4608, Biology Department, estacion@su.edu.ph) Discussed environmental and natural resource management issues and programs in Negros and at the university and how SANREM was interested in linking land use management to coastal water resources issues. Marine biology laboratories and facilities were toured.
- Meeting with Silliman University President and Vice President
 - Ben S. Malayang III, President, Silliman University, pres@su.edu.ph
 - Betsy Joy B. Tan, Vice President for Academic Affairs, Silliman University, vpaa@su.edu.ph

Met with President Malayang and Vice President Tan to discuss SANREM and explore opportunities for faculty and student exchanges between Silliman University and Virginia Tech. President Malayang knew about SANREM as he had been involved in SANREM's early phase in the Philippines when he was at the University of the Philippines – Los Baños. Silliman University is a comprehensive university with colleges of engineering, agriculture, arts and sciences, business, law, nursing and health sciences, and it has a medical school. All classes are in English and the community of Dumaguete, Negros seems very safe and secure. The President indicated that the University was started by the Presbyterian Church in the US in 1902 and that the university was still loosely affiliated with some US denominations. The University recently developed a new international strategic plan, which calls for increased linkages with US universities. They have modest funds to provide partial support for one visiting faculty member. They will put together a packet describing Silliman University and

forward it to me, which I will share with Steve Duke to see if this is a potential education abroad site.

Significant Observations and Trip Findings

- SE Asia partners are now aware of the importance of timely invoicing and the likely consequences of large pipelines to next year's budget. The consequence is that they will likely lose any pipeline amounts in excess of 10% of their FY 2007 budget.
- SE Asia partners are aware of next year's budget cuts and the need to prepare contingency plans to deal with budget cuts.
- Need a mechanism to promote better communications and cross-country collaborations between key SE Asian project partners in Indonesia, Vietnam, Philippines, and Taiwan. The partners expressed concern that had not communicated directly since their kickoff meeting in 2006. At a minimum, I would recommend that the project PI and representatives of each partner country (at least the site coordinators) have a quarterly teleconference (Skype might be a feasible way to do this) to update each other on progress, difficulties encountered and corrective actions taken, share success stories, develop regional success stories, and promote cross-region collaboration.
- Some of the partners have a problem with timely invoicing, other do not. NC A&T should consider relaxing its monthly invoicing requirement for partners that are invoicing quarterly. Theo will discuss with Manuel Reyes.
- The Philippines site coordinator may need additional support to provide logistical services for all the Philippine partners. This should be considered in next year's SE Asia budget allocations.
- We should promote some of the following as SANREM and/or NRM success stories:
 - Story of SANREM and other development/research programs on livelihoods and natural resources protection in the Manupali Watershed in Bukidnon, Mindanao, Philippines. I believe that Vicky Espaldon, University of the Philippines at Los Baños is working on this. Delia Catacutan also has an excellent knowledge of the history of the site and they can hopefully work together on this.
 - Story of Henry Binahon, "the perfect farmer and conservationist"
 - Story of Jun Mercado and his difficulty in retaining farm laborers once they learn his improved management practices.
- Need to decide whether further investments in the field research at the Mars International field site in Vietnam is justified.
- SE Asia project initially focused on agroforestry systems for vegetable production. Because of the participatory involvement of farmers (some of whom do not seem to be convinced that vegetables and shade are viable) and for other reasons (Vietnam government focus on cacao rather than vegetables), the TMPEGS project seems to be moving in new directions and may need to update/reformulate its mission and goals. Need to find out more about the AVRDC work and how it relates to the project sites.
- There is a potential for increased collaboration between SANREM and ICRAF in the identification and/or development of modeling and monitoring tools for rapid and more detailed hydrologic and ecosystem assessment tools. Theo Dillaha and Meine van Noordwijk should follow up on potential funding opportunities for this collaboration.
- Meet with people in Indonesia and Vietnam that seem to be working on the project but who are not listed in the SANREM directory or as cooperators on the TMPEGS project. Need to

update partners list and include them on SANREM email list. Ask Manuel to update his partners list.

The PES Event revealed that there are fewer PES program success stories that we can use to develop PES case studies for the PES Associate Award. We need to act quickly to identify the best available case studies and develop them.