

Final Bridging Activity Report

Globalization, Agricultural Growth, and the Environment: Consolidation and Continuity of SANREM Research in Southeast Asia

PIs: Ian Coxhead, Agricultural and Applied Economics, University of Wisconsin-Madison; and Gerald Shivley, Agricultural Economics, Purdue University.

Partners: University of the Philippines Los Banos; Hue University, Vietnam; Nong Lam University, Vietnam.

I. Executive Summary

This work aimed to bring to fruition several activities initiated in SANREM II, and to provide continuity for ongoing initiatives in what has become a highly visible research program in the region. We had three main activities: (1) continuation of empirical research focused on economic and environmental features of commercial tree crops, especially coffee, in Vietnam, and refinement of tools for SA & NRM policy analysis at landscape and national scales; (2) consolidation of research lessons from the Philippines into a new book; and (3) transfer to the ME of relevant metadata from SANREM SE Asia, particularly data from the Philippines.

PI Coxhead of the University of Wisconsin (UW) and Co-investigator Bui Dung of the University of Hue coordinated the collection of commune-level and district-level data on land use and aquaculture activity in Central Vietnam, and undertook econometric analysis of the aquaculture area response to prices, as the key indicators of increasing globalization of the industry. This work is now being written up as a manuscript in preparation.

An applied general equilibrium model of trade, development policy, resource allocation, and the use of environment and natural resource assets was constructed for Vietnam. It is now in the testing and validation stage at UW and the National Economics University (Hanoi). A training session for the model and software was held in Hanoi in July 2006. This work became the basis for a successful application for grant funding to the Ford Foundation. A grant for 3.5 years work, starting mid-2006, was issued in February 2006. The draft book on research lessons from the Philippines is almost complete; an authors' meeting in July 2006 assembled a 95 percent complete draft. The completion is scheduled for December 2006.

II. Research Outputs, Results, and Impacts by Objective

Objective 1. Policy-oriented research in Vietnam directed at contributing to knowledge regarding globalization, vulnerability, and risk.

One focus of our efforts is to build a framework for understanding economy-environment linkages at the level of the national economy. In working toward this, we recognize that field-level, sectoral, spatial, and regional issues are very important in the context of globalization.

Accordingly, we conducted highly focused empirical research on economic and environmental features of commercial tree crops, especially coffee (an important crop in Vietnam's ecologically fragile highland areas), while at the same time refining tools to build capacity for policy analysis at a landscape and national scale. In this area, there are three major issues: on-site economic viability and environmental sustainability of commercial agricultural activities undertaken by poor farmers in ecologically fragile areas; off-site environmental and economic impacts of their decisions, especially with respect to land use; and the evolution of the broader market and policy setting which guides their decisions. In previous SANREM work, Ha and Shively (2004) investigated smallholder response to declining coffee prices in Vietnam. In the bridging activity, they continued this work, undertaking parametric and non-parametric analysis of the efficiency of smallholder coffee production and then extending their methodology to allow cross-country comparisons using data from smallholder coffee farmers in Latin America. In the second strand of this activity, building on the site-specific work, we collected and analyzed secondary data in Thua Thien Hue province. These data cover agricultural land use in lowlands and uplands, and the use of aquaculture area in the ecologically important coastal lagoon, the drainage area for several key rivers covered by the data set. The third strand of this work related land use decisions to the globalization and growth of the Vietnamese economy. The coffee boom was a product of Vietnam's opening to the world economy in the late 1980s, and many more changes in policy and in global markets will bear strong influence on future land use decisions. Understanding how globalization affects land use and farm incomes and their broader environmental and economic consequences requires a national-scale, economy-environment predictive model. We constructed a prototype model, validated its structure and data at a workshop in Hanoi (July 2006), and began research with the model as a simulation tool late in 2006.

Objective 2. Consolidation and dissemination of lessons from SANREM II research in the Philippines.

A decade of SANREM research in the Philippines produced a rich set of findings on the causes and consequences of land use change, especially arising from decisions made by poor commercial farmers. Much more remains to be learned by continued analysis of the Philippine data, and the lessons learned can be very profitably disseminated through the professional, academic, and policy communities of which we are a part. During the bridging activity, we completed a technical volume reviewing a decade of research in the SANREM II Philippine site, the Manupali River watershed (Coxhead and Shively, 2005). We are close to completion of new and additional research lessons from Manupali in a new book authored by Coxhead and Rola. The final manuscript is scheduled for completion in December 2006.

Both Coxhead and Shively presented papers at the Third World Congress of Environmental and Resource Economists (Kyoto, July 2006) based on SANREM-funded work in SE Asia.

Objective 3. Provide SANREM SE Asia metadata to the ME.

A natural and deliberate by-product of our work is the accumulation of metadata for the SANREM III knowledge base. Relevant metadata from SANREM II SE Asia were consolidated and supplied to the ME.

III. Degree and Non-Degree Training Activities

See table below.

IV. Publications, Presentations, and Other SANREM CRSP Products

See table below.

V. Networking Activities

The UW team undertook formal and informal training activities, based on seminars and some more technical approaches, at several locations in Vietnam between 2004 and 2006 (Hue University College of Economics; Thai Nguyen University; Hanoi National Economics University).

Papers were presented at international conferences in Kyoto, Japan and in the U.S. at the Midwest Conference on Development Economics (April 2005, April 2006).

VI. Project Impact Highlights

- The Coxhead and Shively volume, *Land Use Changes in Tropical Watersheds: Causes, Consequences and Policy Options* appeared in late 2005. Several other publications from SANREM Phase II also appeared in print.
- Additional human resources: Two additional Vietnamese scholars were in residence at UW during 2005-06 under the auspices of the Fulbright-Hayes program—one from the National Institute for Science and Technology Policy and Strategy Studies, the other from the Hanoi National Economics University (NEU), one of the partners in this project. A post-doctoral fellow with expertise in agricultural growth and land tenure in Vietnam joined UW in November 2005. Two graduate students from Vietnam were undertaking graduate training at UW by 2006.
- Additional financial resources: counterpart project funding won from UW Business School (Center for Int'l Business Education and Research), UW Center for SE Asian Studies, and UW Center for World Affairs and the Global Economy, total about \$25,000. A research proposal based upon SANREM research was submitted to Ford Foundation and funded in February 2006. This grant is for 3.5 years, and a total of \$440,000 to conduct collaborative research and train students on “Globalization, Poverty and the Environment in Vietnam.”

SANREM CRSP Degree Training Participants

Student Name	Sex (M/F)	Nationality	Discipline	SANREM thesis/research	Country(s) Supported	Sandwich Program (Y/N)	Program		Completion		Funding (\$)		SANREM CRSP Advisor/PI	Degree Granting University
							Start Date	End Date	Degree	Graduation Date	SANREM CRSP	Non-SANREM CRSP		
Diep Phan	F	VN	Ag. & Applied Economics	Economy & environment - Vietnam	Vietnam	N	Sep-02	Dec-07	PhD	Dec-07	Y	N	Coxhead	Wisconsin
Aksarapak Wongcharoen	F	Thailand	Ag. & Applied Economics	Economy & environment - Vietnam	Vietnam	N	Sep-04	Aug-06	M.A.	Dec-06	Y	N	Coxhead	Wisconsin

Non-degree Training

Program type (workshop, seminar, field day, short course, etc.)	Date	Audience	Number of Participants	Training Provider (US university, host country institution, etc.)	Training Objective
Short course	Aug 05	Faculty staff and students	20	UW	Lectures on poverty and income distribution in context of NR management
Fulbright exchanges	2005-06	Dr. Le Quoc Phuong	1	UW	Research and capacity building in economic analysis of Vietnamese economic development and policy
Fulbright exchanges	2005-06	, Dr. Phan Thi Nhiem	1	UW	Research and capacity building in economic analysis of Vietnamese economic development and policy

Publications, Presentations and Other Products

Category	Bibliographic Citation*
Articles Published in Refereed Publications	<p>Coxhead, Ian, and Bayou Demeke (2004). "Panel data evidence on upland agricultural land use in the Philippines: can economic policy reforms reduce environmental damage?" <i>American Journal of Agricultural Economics</i> 86(5), December: 1354-1360.</p> <p>Shively, Gerald E., and Ian Coxhead (2004). "Conducting economic policy analysis at a watershed scale: examples from a Philippine watershed", <i>Agriculture, Ecosystems and the Environment</i>, 104(1) pp. 159-170.</p> <p>Coxhead, Ian, and Sisira Jayasuriya (2004). "Development strategy, poverty, and deforestation in the Philippines". <i>Environment and Development Economics</i> 9(5), October, pp. 613-644.</p>
Books/Book Chapters	<p>Coxhead, Ian, and Gerald E. Shively, eds (2005). <i>Land Use Changes in Tropical Watershed: Causes, Consequences and Policy Options</i> (Wallingford, Oxon: CAB International).</p> <p>Coxhead, Ian (2006). "Globalization and the poverty–environment link in Asian agriculture." In A. Balisacan and N. Fuwa (eds): <i>Agricultural Development in Asia: Ideas, Paradigms and Policies</i> (Singapore: ISEAS, in press).</p> <p>Coxhead, Ian (2005). "International trade and the natural resource 'curse' in Southeast Asia: does China's growth threaten regional development?" in B. Resosudarmo, ed.: <i>The Politics and Economics of Indonesia's Natural Resources</i> (Singapore: ISEAS), pp. 77-91.</p> <p>Coxhead, Ian (2004). "Interactions between economic policies and institutions in water allocation and use: theory and evidence from a Philippine watershed", in A.C. Rola, H.A Francisco and J.P.T. Liguton (eds). <i>Winning the Water War: Watersheds, Water Policies and Water Institutions</i>. Makati, Philippines: PIDS/PCARRD, pp. 153-78.</p>
Theses and Dissertations	<p>Demeke, B., "Essays on Environmental and Development Policy Analysis in Developing Countries". University of Wisconsin-Madison, Department of Agricultural and Applied Economics, PhD. Dissertation (2005).</p>
Extension Publications (large)	<p>Coxhead, Ian, and Bayou Demeke (2005). "Poverty and environmental damage in Philippine agriculture: do trade policies matter?" Philippine Institute for Development Studies, <i>Development Research News XXII</i> (4) (July-August), pp. 1-6.</p> <p>Rola, Agnes C., and Ian Coxhead (2004). "On development policies, institutions and upland environment of Southeast Asia." Philippine Institute for Development Studies, <i>Development Research News XXII</i> (2) (May-June), pp. 1-9.</p>

<p>Conference Proceedings</p>	<p>Rola, Agnes C., and Ian Coxhead (2005). "Economic development and environmental policy in the uplands of Southeast Asia: challenges for policy and institutional development." in D. Colman and N. Vink, eds, <i>Reshaping Agriculture's Contribution to Society: Proceedings of the Twenty-Fifth International Conference of Agricultural Economists</i> (Malden, MA and Oxford, UK: Blackwell), pp. 243-256.</p>
<p>SANREM CRSP Working Papers</p>	<p>Demeke, Bayou, and Ian Coxhead (2006). "Modeling spatially differentiated environmental policy in a Philippine watershed: tradeoffs between environmental protection and poverty reduction." Manuscript, Penn. State U. and U. Wisconsin-Madison.</p>
<p>Papers/Seminars Presented</p>	<p>Coxhead, Ian (2006). "Globalization and the poverty–environment link in Asian agriculture: Theoretical exploration and a Vietnam case study", Paper presented at 3rd Annual Midwest Conference on Development Economics, U. Minnesota, April 28-29, 2006, and at World Congress of Environmental and Resource Economists, Kyoto, July 3-7 2006.</p> <p>Demeke, Bayou, and Ian Coxhead (2006). "The effect of national policies and labor markets on land use decisions in developing countries: an application of maximum simulated likelihood to a system of censored acreages with panel data." Paper for presentation at American Agricultural Economics Association annual meetings, Long Beach, CA, July 2006.</p>

