

Final Technical Report: Improving Food Security Research and Analysis Capacity in Burma

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I. PROGRAM DESCRIPTION/SCOPE OF WORK SUMMARY

The goal of this program was to provide information to USAID Burma and key partners and stakeholders to address food security in Burma, including agriculture sector growth and other related issues. The objectives of this program were to 1) carry out a food security and agricultural sector diagnostic in Burma; 2) conduct research and analysis to inform and support a USAID food security program for Burma aiming to address food shortages through broad-based, equitable and sustainable growth in agriculture; and 3) conduct additional analyses and research based on the findings and recommendations of the initial diagnostic, subject to the availability of funding. The project activities described in the this proposal were designed and implemented in close collaboration with the Myanmar Development Resources Institute Centre for Economic and Social Development (MDRI-CESD) and other local partners to build a coalition of partners for food security, build the capacity of public and private institutions to conduct research and analysis, and expand the knowledge base of food security related issues in Burma.

The first phase of project activities involved an agricultural sector diagnostic by a multi-disciplinary blended team of MDRI-CESD staff, MSU faculty and international consultants. This team was supplemented, by USAID/USG staff and other international technical staff with relevant contributions to the diagnostic scope of work. The diagnostic report was presented at a workshop with representatives of Government, private sector, civil society and donor representatives. The diagnostic phase clarified and promoted consensus on top level objectives for agricultural sector development, the current performance, opportunities and constraints faced by the agricultural sector in achieving those objectives, the key issues that need to be resolved to improve performance, as well as critical knowledge and capacity gaps that must be overcome to plan and implement improved programs (investments) and policies.

The second phase of project activities focused on priority issues and knowledge or capacity gaps identified in the diagnostic phase. Such activities included capacity building needs assessments, studies of key policy issues, and short course training for government staff and local collaborators.



The outputs of this project include a diagnostic report on the agricultural sector, a stronger coalition of public, private and civil society stakeholders in support of a food security strategy that promotes broad based economic growth and poverty reduction, and an improved knowledge and capacity base on which to build future food security programs. All working papers and presentations are archived online at: <http://fsg.afre.msu.edu/Myanmar/index.htm#pp>

II. PHASE 1: INITIAL FOOD SECURITY DIAGNOSTIC

Approach

MSU worked closely with the Myanmar Development Resource Institute Centre for Economic and Social Development (MDRI-CESD). MDRI-CESD was believed to have strong leadership and effective linkages with government, private sector and civil society. MSU engaged in an active dialog with MDRI-CESD about the proposed activities. MSU jointly developed scopes of work and detailed budgets for MDRI-CESD participation in successive phases. Although MSU was fully responsible for local partner selection and contractual arrangements, we anticipated that the USAID/Burma AOR would be closely involved in the development and review of all scopes of work and budgets for MDRI-CESD prior to finalization of contracts.

Background papers and synthesis paper

- [A Strategic Agricultural Sector and Food Security Diagnostic for Myanmar](#). MSU/MDRI-CESD. Working Paper. July 2013.
- [Strategic Choices for the Future of Agriculture in Myanmar: a Summary Paper](#). Prepared for USAID/Burma by Michigan State University (MSU) and the Myanmar Development Resource Institute's Center for Economic and Social Development (MDRI-CESD/CESD) July 2013.
- [Background Paper No.1. Myanmar Bio-Physical Characterization: Summary Findings and Issues to Explore](#). Kye Baroang. Center on Globalization and Sustainable Development, Earth Institute at Columbia University. May 2013.
- [Background Paper No. 2. Rice Productivity Improvement in Myanmar](#). Glenn Denning, Kye Baroang, Tun Min Sandar and other MDRI-CESD and MSU colleagues. July 2013.
- [Background Paper No. 3. Rural Finance in Myanmar](#). Renate Kloepfinger-Todd and Tun Min Sandar. July 2013.
- [Background Paper No. 4. Food and Nutrition Security in Myanmar](#). Shannon Wilson and Naw Eh Mwee Aye Wai. March 5, 2013
- [Background Paper No. 5. Current Situation and Future Opportunities in Agricultural Education, Research and Extension in Myanmar](#). Khin Mar Cho. July 2013.
- [Background Paper No. 6. Rapid Value Chain Assessment: Structure and Dynamics of the Rice Value Chain in Myanmar](#). Larry C.Y. Wong and Eh Mywe Aye Wai. March 2013.

Summary of key findings and recommendations

- Why has Myanmar's agricultural sector under-performed?
 - Highly skewed land distribution.
 - Underinvestment in agricultural research.
 - Weak links between extension staff, researchers and farmers.
 - Poor water control in the presence of global climate change.
 - Weak agricultural finance institutions and rural household indebtedness.

- High transport and communication costs.
- Unpredictable policies.
- Recommendations

The Long Game

In order to match the impressive agricultural performance of its regional peers, Myanmar will need to undertake a series of key institutional and policy reforms. Currently, Myanmar invests only 20% as much in agricultural research (per \$100 in agricultural output) as its regional counterparts. Not only will Myanmar need to substantially boost the resources it allocates to agriculture, it will also need to restructure its line ministries and departments in order to better support the core public goods and services that drive productivity growth in agriculture. Many decades of socialist command and control systems have left a legacy of over-staffed departments designed to supervise and control farmer decisions. Yet service-oriented systems for listening to farmers, diagnosing problems and finding practical, scientific solutions have atrophied.

Movement towards a highly productive, competitive, broad-based agricultural growth trajectory will require a further restructuring of agricultural support institutions in the three key areas. First are the public goods that drive broad-based agricultural productivity growth: • agricultural research, through the creation of a market-oriented, farmer-centered research system, • extension system modernization and reform, • agricultural education, • irrigation and improved water management systems, • land administration and access, • deepening of rural financial systems, • improved rural communications and transport, • support for farmer-based organizations and • a transparent, predictable policy environment, particularly in areas governing land use decisions, input quality and cross-border trade. Second is an accurate, objective statistical data collection and dissemination system. Currently, few stakeholders express confidence in Myanmar's official production statistics -- even for rice, where alternate estimates differ by as much as 50%. Yet transparent, effective policies require a firm empirical grounding, as do private sector investment decisions. As part of an overall effort to improve agricultural data, MOAI's detailed cadastral map library could quickly be digitized, geo-referenced and combined with best practice survey methods to lower data collection costs, increase speed and improve precision, early warning and forecasting capacity. Third, is a long-range reengineering of the organization and funding for education, health and nutrition institutions that promote long-term human capital formation among rural children, particularly the children of landless households and other disadvantaged groups.

To successfully implement a restructuring of agricultural support institutions there is an urgent need for investment in graduate training in a wide range of technical and social sciences. For example, not only is the number of scientists in the agricultural research system very small, but many experienced researchers are approaching retirement. In some technical areas, such as soil and water management, post-harvest technology, and policy analysis, there is almost a complete gap. Formal graduate training should be complemented by exchange visits to see how other countries in the region are tackling the challenges facing Myanmar.

The Short Game

Options for improving agricultural performance without further institutional or policy reforms center on four strategic axes. The first involves improving the productivity of monsoon rice

through improved seed quality, better agronomic practices, improved water control, optimized fertilizer and input use, and integrated pest management. As a rough order of magnitude, our discussions with local stakeholders suggest that improved practices among rice farmers could increase productivity and earnings from paddy farming on the order of 25% to 50% over the next 5 to 7 years, even under current conditions. Updating and enforcing pesticide regulations, such as the 1991 requirement to print instructions in Myanmar language, offers an additional quick opportunity to reduce pesticide misuse. Second, promoting diversification into high-value horticulture, poultry, fisheries and small livestock offers prospects for raising returns per acre by a factor of two to ten for both small farmers and landless. A third set of interventions revolves around post-harvest opportunities for reducing losses and increasing market access for Myanmar farmers. The fourth major axis under a Short Game would focus on landless and other vulnerable rural households. One segment of this effort will focus on preparing children of landless and near landless for productive career trajectories in high-productivity agriculture, agribusiness and nonfarm professions by building up their human capital through nutrition programs and enhanced access to improved rural education. Related efforts involve improving safety nets for vulnerable members of the population.

Key Decisions Going Forward

The team strongly advocated a strategy focused on the Long Game, particularly a set of early actions necessary for enabling necessary structural reforms, but complemented by Short Game interventions that help to increase incomes, assets, farmer skills and water management systems that expand productive potential in the Long Game. By piloting models for effective bottom-up research and extension, actions in a Short Game can help to set up a successful Long Game. A balanced attack, centered on the Long Game but complemented by Short Game interventions, will likewise help to demonstrate to rural communities that the GOM and its development partners are seriously committed to improving the agriculture sector. This multi-pronged approach addresses the needs of rural communities for early visible change while at the same time remaining committed to necessary structural re-engineering of institutions and policies. Myanmar's neighbors and competitors in Thailand, Vietnam, Bangladesh, Malaysia, India and China have all committed to a Long Game involving strong public investments in agricultural research, extension and in the public goods required to support agricultural productivity growth, especially among small farmers. Without similar commitment in Myanmar, we find it difficult to see how the country's farmers will be able to compete in increasingly competitive regional and global markets – including those at home.

Policy reforms begun in Myanmar at the end of the 1980s have moved in this direction, though slowly and at sometimes variable speeds. Continued reforms, coupled with increased resource allocations for agriculture and improved policy implementation capacity will be required to translate these still-unfolding policy changes into sustained, improved conditions on the farm. Promulgating new laws -- as difficult as that appears -- is often the easiest part of a reform process. Mobilizing the political will to increase budget resources, in the presence of many competing constituencies, frequently proves more difficult, as does institutional restructuring, which by definition alters the power base of many vested interests. Myanmar has reached the stage in its agricultural reform process where substantial resource increases and significant institutional restructuring are required to advance an effective reform agenda. Because two-thirds of Myanmar's population and three-fourths of its poor live and work in rural areas, broad-based agricultural growth offers a uniquely powerful instrument for accelerating economic

growth and improving the welfare and food security of vulnerable households. Myanmar's current highly skewed distribution of land, its growing levels of landlessness and increasingly contentious disputes over land access not only pose dangers to vulnerable household welfare but also risk inflaming social tensions and conflict. As a result, we consider the Long Game reforms outlined here imperative for agricultural productivity growth and poverty reduction, as well as long-term political stability.

Outreach events

- [Preliminary Observations of the USAID Agricultural and Food Security Diagnostic Team](#). Michigan State University (MSU) and Myanmar Development Resource Institute, Center for Economic and Social Development (MDRI-CESD/CESD). Yangon. November 16, 2012.
- [Preliminary Findings of the MSU/MDRI-CESD Agriculture and Food Security Diagnostic Team](#). MSU/MDRI-CESD. Presented to NGO and private sector stakeholders. Yangon. February 22, 2013
- Workshop with senior government officials hosted by Ministry of Agriculture and Irrigation. Nay Pyi Taw. June 2013.

Impacts

The primary impacts of the diagnostic phase were to reveal the importance of the agricultural sector for broad-based economic growth and poverty reduction. USAID Burma subsequently included agricultural development as a major component of its economic growth program. The lead counterpart for MDRI-CESD, Dr Zaw Oo, was appointed a Presidential Economic Advisor and continued to advocate for agriculture as a key sector within the governments framework for economic and social reform. Prior to collaboration on this USAID Burma funded initiative, MDRI-CESD had not undertaken any work on the agricultural sector.

III. PHASE 2: FOLLOW UP DIAGNOSTIC ON KEY SECTORS

Land and Agribusiness

- Motivation in relation to diagnostic findings
 - The goal of this program was to provide information and analysis to USAID/Burma, partners and stakeholders on key issues affecting agricultural growth and food security in Burma. The objectives were to 1) carry out a food security and agricultural sector diagnostic in Burma; 2) conduct research and analysis to inform and support a USAID food security program for Burma aiming to address food shortages through broad-based, equitable and sustainable growth in agriculture; and 3) conduct additional analyses and research based on the findings and recommendations of the initial diagnostic. Objective 1) was largely completed in April 2013 with the approval of the draft diagnostic report and its associated background papers. Only the formal workshops soliciting input on the full draft report remained to be completed. Objectives 2) and 3) formed the focus of the post-diagnostic activities.
- Summary of key findings and recommendations
 - Tapping private investment
 - Key elements for attracting 'good investors' and screening for due diligence. Role of investment promotion agencies in screening proposals. Judicious use of incentives but avoiding price distortions such as cheap land.

- Coordination with public investments in infrastructure
 - Priority on investing along the value chain rather than in farming itself.
 - Managing land concessions
 - Only for specific crops such as oil palm and perhaps sugar
 - Suggested good practice on transparency, contracting, land pricing, monitoring, dispute resolution, dealing with failures.
 - Strengthening land governance
 - Implementing land registration to secure existing rights
 - Identifying and delimiting state land and improving its governance (e.g. forests)
 - Land taxation for local development
- Background papers
 - [Winds of Change: A Rapid Appraisal of Four Pulse Value Chains in Myanmar](#). Steven Haggblade, Duncan Boughton, L Seng Kham and Myo Thaug. October 31, 2014.
 - [Agribusiness Models for Inclusive Growth in Myanmar: Diagnosis and Ways Forward](#). Derek Byerlee, Dolly Kyaw, U San Thein, and L Seng Kham. IDWP 133. May 2014.
- Outreach events
 - [Role of Food security Networks in the Policy Process: Lessons from Developing Countries](#). Suresh Babu, Adam Kennedy and Oyinkan Tasie. Food Security Working Group. Yangon, Myanmar. 10 December 2014.
 - [Rapid Transformation of Agrifood Value Chains in Asia](#). Thomas Reardon. Speech at the International Conference of the Indonesian Society of Agricultural Economics. Bogor. 28 August 2014.
 - [Webinar | Transformation of Food Supply Chains: What Every Agricultural Banker Should Know](#). Thomas Reardon. World Bank AGRIFIN. Wednesday, July 9, 2014.
 - [Agribusiness Investment Models for Inclusive Growth in Myanmar - Diagnosis and Ways Forward](#). Derek Byerlee. Presentation to USAID. 8 April 2014.
 - [Myanmar at a Cross Road: Small and Medium-scale Farmers \(SMFs\) or Large-scale Land concessions?](#) L Seng Kham. World Bank Land and Poverty Annual Conference. Washington D.C. 2014.
 - [Prospects for Agricultural Value Chains in Myanmar](#). Thomas Reardon. Talk for “A Dialogue for Enhancing the Competitiveness of Agribusiness in Myanmar” Organized by: UMFCCI, USAID, & IFC. UMFCCI Office, Yangon. March 21, 2014. [Audio version](#).
 - [Success Strategies for Poverty-Alleviating Rural Development for Myanmar: Lessons from Asian Experience](#). Thomas Reardon. Brief Prepared for National Workshop on Rural Development Strategic Framework Agenda, Naypyitaw, Myanmar, November 18, 2013, final version January 2014

Pulse Sector

- Motivation in relation to diagnostic findings

Pulse exports from Myanmar have grown into a \$1 billion export industry in the 25 years since liberalization. As the first major agricultural sector to be liberalized, in 1988, pulses offered uniquely attractive returns to both farmers and traders. Farmers and traders responded with alacrity to these new opportunities, propelling pulse production and exports rapidly upwards for several decades. By 1991, pulses surpassed rice to become Myanmar’s most valuable agricultural export. From less than 100,000 tons in 1980, exports have increased to nearly 1.5 million tons in 2010.

Punctuating several decades of rapid growth, a series of sharp pullbacks in pulse exports occurred in 2005 and 2011, triggered largely by changes in the Indian market which serves as destination for the majority of Myanmar's pulse exports. Since then, export performance has proven choppy. Industry watchers and policy makers wonder if Myanmar's potential has plateaued or whether growth can resume.

Three key research objectives were pursued:

- To understand factors driving the long first wave of growth in Myanmar's pulse production and exports
 - To analyze the current organizational structure, incentives and performance of Myanmar's four most important pulses value chains
 - To assess stakeholder observations about prospects for future growth in pulse value chains.
- Summary of key findings and recommendations
 - Private sector initiatives by Myanmar's traders and farmers have grown the country's pulses into a billion dollar export industry over the past 25 years. The fortuitous historical convergence of multiple favorable stimuli – the opening of the Indian market, rising domestic pulse prices, and simultaneously falling oilseed prices – favored and enabled this growth, which occurred with limited government interference or involvement.

A second wave of pulse expansion appears possible, although it will require more active public support, particularly in breeding and agronomic research. Unlike hybrids, closed-pollinating crops such as pulses enable farmers to recycle seeds from one year to the next. As a result, while private seed companies often invest heavily in developing hybrid varieties, which require annual seed purchases by farmers, they have little incentive to invest in varietal development for closed-pollinating crops such as pulses. Public research, therefore, becomes critical in both breeding and agronomic research. Moreover, clean seed supplies and certification systems will require ramped-up government capacity in this area.

Finally, diversification into high value new export markets requires encouragement of foreign direct investment into the processing sector, which in turn requires allowing foreign countries to purchase raw material domestically in local currency. This will increase liquidity at peak marketing times and provide stronger incentives for quality. To ensure that local traders and processors can compete on a level playing field they should also have access to bank credit and export guarantee services. While exploration and access to new international markets may well require diplomatic involvement, this will be especially important in the case of the Indian market, to support private sector overtures and efforts at expanding quantities and value added in pulse exports to that country from Myanmar.

- Outreach events
 - [Findings of the MSU/MDRI-CESD Pulses and Beans Diagnostic Team](#). Presentation to the Myanmar Pulses and Beans Association and Ministry of Commerce officials. Yangon. March 2015.

IV. CONCLUSION

Implications for future AID programs

The importance of agriculture for broad-based economic growth and poverty reduction, and the potential for smallholder income growth through increases in productivity and diversification into high value crops, justifies continuing USAID engagement in the agricultural sector. Given the dearth of accurate and timely information, additional investment in understanding agriculture and rural economy dynamics is warranted to guide improved policies.

Implications for capacity building in applied policy research

Burma's human and organizational capacity for applied policy research is weak. Despite resistance of the current political leadership in the Ministry of Agriculture and Irrigation (MOAI) it is essential to build capacity for applied policy research to inform improved policies under a more enlightened leadership.