



FEED THE FUTURE

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Food Security Policy Project (FSPP)

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FINAL TECHNICAL REPORT

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List of Acronyms

ADS	Agricultural Development Strategy
AFVCs	Agrifood value chains
APU	Agricultural Policy Unit
ARDSCG	Agricultural and Rural Development Sector Coordination Group
CESD	Centre for Economic and Social Development
COVID-19	Coronavirus disease 2019
DAR	Department of Agricultural Research
FSP-IL	Feed The Future Innovation Lab for Food Security Policy
FSPP	Food Security Policy Project (Burma)
IFPRI	International Food Policy Research Institute
LIFT	Livelihoods and Food Security Trust Fund
MOALI	Ministry of Agriculture Livestock and Irrigation
MSU	Michigan State University
NESAC	National Economic and Social Advisory Council
USAID	United States Agency for International Development
YAU	Yezin Agricultural University

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Overview of project goal, objectives and activities

The USAID Burma funded Food Security Policy Project (FSPP) was an Associate Award under the [Feed the Future Innovation Lab for Food Security Policy](#) (FSP-IL). It began in September 2014 and completed its final year of fully funded activities in September 2019. The award was extended to support specific capacity building initiatives through September 2020, later extended to June 2021 due to COVID-19, but field activities were suspended following the military coup in February 2021.

The overall goal of FSPP was to promote inclusive agricultural productivity growth, improved nutritional outcomes, and enhanced livelihood resilience through an improved policy-enabling environment. Taking a broad view of agriculture, including the farm and off-farm parts of the food system, this goal was pursued by developing increased capacity to generate policy-relevant evidence and gender-sensitive analysis that is used by stakeholders throughout the food system to improve policy formulation and implementation. This goal was pursued through two integrated objectives that mirror the leader award, namely: (1) to address critical evidence gaps for informed policy debate and formulation and (2) to foster credible, inclusive, transparent, and sustainable policy processes.

The project focused on laying the foundation for evidence-based policy analysis through key pieces of empirical research on agricultural value chains and rural livelihoods and putting in place essential missing elements in policy architecture. After the National League for Democracy-led government took office in April 2016 the focus of the project expanded to work closely with Ministry of Agriculture, Livestock and Irrigation (MOALI). A new Agricultural Policy Unit (APU) was established in MOALI's Department of Planning. The APU served as a critical entry point for introducing evidence-based policy analysis, prioritizing public investment, and to support MOALI's transition to a facilitator/enabler of the private sector.

MSU faculty supporting the project included Professor Duncan Boughton (Chief of Party), Associate Professor Ben Belton, Research Specialist Ellen Payongayong, Professor Mywish Maredia, Professor Tom Reardon, Professor Steven Haggblade, Professor Eric Crawford and Associate Professor David L. Ortega. IFPRI staff supporting the project included Dr Paul Dorosh, Dr. Mateusz Filipowski, Dr Isabel Lambrecht, Dr Xiaobo Zhang and Dr. Xinshen Diao. Special thanks are due to the research team leaders of the Centre for Economic and Social Development: Aung Hein (currently pursuing a PhD at Oxford University, and Kyan Htoo, currently pursuing a PhD at Massey University).

Accomplishments, Major Outcomes/Utilization of Research Outputs

At the beginning of FSP-IL, there was a clear consensus that Myanmar was a country with high food policy stakes. The initial core award-funded work, complementing the larger work under the Mission-funded AA, took place at a pivotal moment in policy affecting agricultural, rural development and rural poverty in Myanmar. Longstanding but erroneous “beliefs” on the part of almost all policymakers about the extent of markets and trade, the limited importance of “minor” commodities such as pulses and fish, and that rice production was the only important crop opportunity, drove earlier government policy decisions. As a result, Myanmar farmers and agribusiness investors were restricted in their options to exploit profitable opportunities in agriculture, and to contribute to improved nutrition and to inclusive economic growth. To the extent that growth took place it often did so “under the radar” rather than by

design. By providing a continuous stream of evidence, and building capacity to utilize that evidence, the FSPP demonstrated that government assumptions were wildly off-base, leading to a new and much more constructive set of agricultural and rural policies, culminating in a paper laying these out in lay terms for the incoming government.

FSPP undertook household- and community-level survey research in four major agro-ecological zones of the country and studied eight value chains. The research documented the composition of rural household income, as well as trends in migration, infrastructure, rural financial access, technology adoption and input use, off-farm enterprises and farm and non-farm employment. The project also undertook studies related to gender and nutrition, confirming that the high cost of a nutritious diet relative to household food expenditures meant that less than half of Myanmar households could afford a nutritious diet.

The results were communicated in 64 project publications (14 journal articles, 26 Research Reports, 2 IFPRI Discussion Papers, 17 project Research Highlights, and 5 Policy Briefs). A complete list of publications, together with website links for download, can be found in Appendix A of this report. Regular outreach events to communicate results were held in Yangon, Nay Pyi Taw and regional capitals. In addition, 17 survey-based data sets were made publicly available (see Appendix B for access details). In the course of survey implementation, the project significantly strengthened the capacity of its primary civil society partner and a private sector data collection service provider. In addition to regular outreach events the project organized a one-week workshop for researchers and graduate students from Yezin Agriculture University and the Ministry of Agriculture, Livestock and irrigation to make available and familiarize them with the data.

Following the November 2015 elections, FSPP staff worked together with Nathan Associates and USAID Burma staff under the leadership of the Chair of the National Economic and Social Advisory Council (NESAC) to prepare an agricultural strategy paper entitled “From Rice Bowl to Food Basket” to engage with the NLD-led government. As one of the follow up steps, the Ministry of Agriculture, Livestock and Irrigation (MOALI) agreed to establish an Agricultural Policy Analysis Unit (APU) in the Department of Planning and accepted international policy advisers for the first time. The project chief of party was one of three international advisers appointed to support the Department of Planning. The APU organized regular monthly policy talks attended by representatives of all MOALI departments. Other outcomes included:

- In early 2017 MOALI revised its agricultural policy and, in 2018, published a new agricultural development strategy, based in part on project recommendations.
- In 2018, in response to a study undertaken in collaboration with the APU, the Department of Agricultural Research, responsible for crops research in the country, undertook a pilot decentralization program in Sagaing region to strengthen linkages between farmers, extension and research. The pilot program is now being extended to Shan State and the World Bank will support further expansion.
- In 2019, partly in response to project studies of the pulses and beans sector, the Ministry of Commerce lifted the ban on international firms purchasing agricultural products on the domestic market so long as those products are subject to value added processing in-country prior to export. Previously only domestic companies could purchase on the local market.
- In 2019, in response to project analysis and advocacy for increased investment in agricultural research, at the Agricultural and Rural Development Sector Coordination (ARDSCG) meeting, MOALI prioritized an agricultural research master plan to establish livestock and fisheries research programs and strengthen the role of biotechnology in research. Through a costed extension the project enabled MOALI to complete a masterplan roadmap and initiate detailed preparations.

- In 2019, at the initiative of the US Ambassador, the project organized a team of international experts to organize a workshop for the Department of Agriculture and representatives of the private sector to develop a strategy for monitoring and mitigating the potential impacts of a new pest, Fall Armyworm.
- In 2020, in response to project analysis of low adoption of improved varieties and quality seed, MOALI again advocated through the ARDSCG for greater attention to farmer access to improved seed.
- In 2020, also under the costed extension, MSU brought together a highly experienced team to support MOALI consultations on a draft Biosafety Framework. The initial consultation with parliamentarians was completed but those planned for other stakeholder groups could not be undertaken due to the military coup.

In response to project research on the profitability of aquaculture compared to paddy production in the Delta, the Agriculture, Livestock and Rural Development parliamentary affairs committee of the lower house, in collaboration with three other related parliamentary committees, decided to submit an amendment to the Farmland Law to allow smallholders farmers (15 acres or less) to convert up to one-third of their paddy land to permanent alternative agricultural use (i.e., high-value enterprises such as aquaculture, livestock raising, fruit orchards). Currently this is only possible if a small farmer obtains approval at local, regional and union Minister levels. Unfortunately, the amendment was not voted on prior to the end of the parliamentary session.

Project findings and outreach had a significant effect on the composition of portfolio of the USAID/Burma Office of Economic Growth (more than 80% agriculture related), the strategy of the Livelihoods and Food Security (LIFT) Fund, the agricultural investment lending portfolio of the World Bank, as well as the bilateral programs of LIFT Fund Board members (e.g., Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ] investments in aquaculture).

The project trained more than 20 researchers from its local partner, the Center for Economic and Social Development. Of these 8 have been awarded scholarships for graduate training, 5 at the PhD level (one each in Australia, New Zealand, Thailand, the United Kingdom and the USA) and 3 at the MS level (in Australia, Italy and New Zealand). The project provided short courses in collaboration with Yezin Agricultural University and MOALI on Cost-Benefit Analysis, Policy Analysis, and Research Data Analysis.

Lessons Learned, Challenges and Opportunities

- History, culture, geography, ethnicity and political economy are of enormous importance in policy reform for transition and post-conflict countries. Effective policy reform projects need to understand this context. Project managers sought out national and expatriate mentors to guide them, as well as reading extensively on the history of the country.
- Having a “ramp” like the two-year diagnostic phase under the USAID/W funded Food Security III Co-operative Agreement prior to an Associate Award was enormously helpful to understanding the above dimensions, as well as for building organizational and personal relationships and trust. Myanmar was also included as one of two case study countries for the independent mid-term evaluation of FSP-IL, saving mission funds (see [Mid-Term Performance Evaluation of the Feed The Future Innovation Lab For Food Security Policy](#)).

- The values of the implementing institutions matter. A commitment to capacity building is essential and highly valued by national stakeholders in a context of human capital deprivation due to decades of isolation, sanctions, and political oppression.
- Empirical data collection on complex and diverse household and value chain realities requires major investment. This is especially challenging when the extended monsoon season restricts scoping and household data collection activities to very specific months of the year.
- A reliable database on agriculture and rural livelihoods can be very helpful in dealing with national emergencies. The databases collected by FSPP were used by the USAID funded Myanmar Agricultural Policy Support Activity (MAPSA) to anticipate the impact of the COVID-19 pandemic on agriculture and rural communities and make specific recommendations that were adopted by the government’s COVID-19 Economic Recovery Task Force.
- Flexibility in program design and implementation is essential in transition economies. While the timing of opportunities for policy innovation or public sector organizational reform cannot be predicted the possibility must be anticipated. Since opportunities cannot be predicted M&E systems must allow for this flexibility or else they can become a straitjacket.
- Leveraging funding from non-USAID sources, in this case the UNOPS implemented Livelihoods and Food Security Fund, has the benefit of expanding the funding envelope but also increases the administrative and reporting burden due to different reporting systems.
- Frequent changes of USAID project manager (AOR) – FSPP had four over its life – has the benefit of injecting new ideas but can also lead to loss of “institutional memory”. Joint handover meetings with the project implementing team and incoming/outgoing could mitigate downside effects.
- Engaged leadership from USAID Burma and the US Embassy Rangoon was very helpful to project staff in creating networking opportunities and prioritizing research and outreach topics. USAID’s co-leadership of the agricultural sector donor community expanded the reach of FSPP’s audience. The presence of the Ambassador and his personal words of encouragement to national and expatriate staff were very helpful to sustaining morale.

FTFMS Indicators:

The FSPP project reported on one indicator, EG 3.2.1: Number of individuals who have received USG-supported agricultural training. During the course of the project a total of 721 individuals received training, including private sector and civil society research entities, MOALI and YAU staff. Gender disaggregation is available for 89% of trainees, amongst whom 60% were female and 40% were male.

Year	Gender			Total
	Male	Female	Unknown	
2019	62	119		181
2018	47	91		138
2017	38	75		113
2016	110	97	6	213
2015			76	76
Total	257	382	82	721

Appendix A: List of Project Publications

Research Highlights

1. [Agricultural Land in Southern Shan State. Research Highlights 17.](#) Research Highlights, Myanmar 17: Khin Zin Win and A Myint Zu, February 2019.
2. [Agricultural Mechanization Southern Shan State. Research Highlights 16.](#) Research Highlights, Myanmar 16: Khaing Wah Soe and Sithu Kyaw, February, 2019.
3. [Off-Farm Employment in Southern Shan State. Research Highlights 15.](#) Research Highlights, Myanmar 15: Zin Wai Aung, Hnin Ei Win, Zaw Min Naing and Soe Thu Lin, February 2019.
4. [Mechanization and Crop Productivity, Profitability and Labor Use in Myanmar's Dry Zone. Research Highlights 14.](#) Research Highlights, Myanmar 14: David Mather and Ben Belton, July 2018
5. [Community Perceptions of the Impacts of Climate Change on Agriculture in Myanmar's Central Dry Zone.](#) Research Highlights, Myanmar 13: Aung Tun Oo. 2018.
6. [Agricultural Mechanization in the Dry Zone.](#) Research Highlights, Myanmar 12: Mateusz Filipiński, Ben Belton, Joanna Van Asselt. 2018.
7. [Ten Years of Technological Change in Dry Zone Agriculture.](#) Research Highlights, Myanmar 11: Zaw Min Naing. 2017.
8. [Rural Off-Farm Incomes in Myanmar's Dry Zone.](#) Research Highlights, Myanmar 10: Aye Myint Zu, Htet Htet Khine, Khin Zin Win, Sithu Kyaw. 2017.
9. [Agricultural Credit Access and Utilization in Myanmar's Dry Zone.](#) Research Highlights, Myanmar 9: Khun Moe Htun and Myat Su Tin. 2017.
10. [Agricultural Land in Myanmar's Dry Zone.](#) Research Highlights, Myanmar 8: Aung Hein, Isabel Lambrecht, Kyaw Lwin & Ben Belton. 2017.
11. [Rural Economic Spillovers from Fish Farming and Agriculture in the Ayeyarwady Delta.](#) Research Highlights, Myanmar 7: Mateusz Filipiński & Ben Belton. 2017.
12. [Supply Side Evidence of Myanmar's Growing Agricultural Mechanization Market.](#) Research Highlights, Myanmar 6: Myat Thida Win, Aye Mya Thinzar, and A Myint Zu. 2016.
13. [Rural-Urban Migration around Yangon City, Myanmar.](#) Research Highlights, Myanmar 5: Kyan Htoo and A Myint Zu. 2016.
14. [Off-farm Employment and the Transforming Rural Non-farm Economy around Yangon.](#) Research Highlights, Myanmar 4: Aung Htun. 2016.
15. [Credit Access and Utilization in Agriculture and Aquaculture in the Ayarwady Delta.](#) Research Highlights, Myanmar 3: Lu Min Lwin and Khun Moe Htun. 2016.
16. [Agricultural Mechanization and Structural Transformation in Myanmar's Ayeyarwady Delta.](#) Research Highlights, Myanmar 2: Myat Thida Win and Aye Mya Thinzar. 2016.
17. [The Myanmar Aquaculture-Agriculture Survey 2016.](#) Research Highlights, Myanmar 1: Ben Belton and Ellen Payongayong, 2016.

Research Papers

1. [Variety Adoption and Demand for Quality Seed in the Central Dry Zone of Myanmar.](#) Duncan Boughton, Simrin Makhija, Mywish Maredia, David Mather, David Megill, David L. Ortega, Ellen Payongayong, Lavinia Plataroti, David J. Spielman, Marja Thijssen, and Myat Thida Win 2020. Feed the Future Innovation Lab for FSP Research Paper 179. East Lansing: Michigan State University.
2. [Commercial Poultry and Pig Farming in Yangon's Peri-Urban Zone.](#) Ben Belton, Ame Cho, Ellen Payongayong, Kristi Mahrt, Eric Abaidoo, 2020. FSP Research Paper 174.
3. [Maize and Pigeon Pea Production, Profitability, and Tied Credit in Southern Shan State.](#) Peixun Fang and Ben Belton, 2020. FSP Research Paper 173.
4. [Growth and Transformation in Off-Farm Segments of the Maize Value Chain in Shan State.](#) Ame Cho and Ben Belton, 2019. FSP Research Paper 156.

5. [Agricultural Machinery Business Development in Shan State: A Comparative Analysis](#) Eric Abaidoo, Ben Belton 2019. FSP Research Paper 149. East Lansing: Michigan State University.
6. [Aquaculture in Transition: Value Chain Transformation, Fish and Food Security in Myanmar](#). Belton, B., Hein, A., Htoo, K., Kham, L.S., Nischan, U., Reardon, T., Boughton, D. 2015. International Development Working Paper 140. Michigan State University
7. [The Edible Oil Milling Sector in Myanmar's Dry Zone](#). Ben Belton and Myat Thida Win, 2019. FSP Research Paper 138. East Lansing: Michigan State University.
8. [Migration in Southern Shan State: Characteristics and Outcomes](#). Thu, E.T.T., Htun, K.M., Belton, B. 2019. Research Paper 136. July 2019. East Lansing: Michigan State University.
9. [Household Dietary Patterns and the Cost of a Nutritious Diet in Myanmar](#). Kristi Mahrt, David Mather, Anna Herforth, and Derek Headey, 2019. FSP Research Paper 135. East Lansing. Michigan State University
10. [Agricultural Research Capacity and Extension Linkages in Myanmar: Assessment and Recommendations](#). Duncan Boughton and Su Su Win, 2019. FSP Research Paper 131. East Lansing, Michigan State University.
11. [Rural Transformation in Southern Shan State: Results from the community component of the Shan agriculture and rural economy survey](#). Lambrecht, I. and Belton, B. 2019. Research Paper 120. East Lansing: Michigan State University.
12. [Agricultural Machinery Supply Businesses in Myanmar's Dry Zone: Growth and Transformation](#). Belton, Fang, Abaidoo, 2019. FSP Research Paper 119. East Lansing: Michigan State University.
13. [Pulse & Oilseed Traders in Central Myanmar: Value Chain Structure and Conduct](#). Ben Belton, David Mather, 2018. FSP Research Paper 118. East Lansing: Michigan State University.
14. [Mechanization Outsourcing Services in Myanmar's Dry Zone](#). Ben Belton, Peixun Fang, and Thomas Reardon, 2018. Mechanization Outsourcing Services in Myanmar's Dry Zone, FSP Research Paper 110. East Lansing: Michigan State University
15. [The Challenge of Export-led Agricultural Growth with Monopsonistic Markets](#). Duncan Boughton, Steven Haggblade, and Paul Dorosh, 2018. Feed the Future Innovation Lab for Food Security Policy Research Paper 105. East Lansing: Michigan State University
16. [Myanmar's Rural Economy: A Case Study in Delayed Transformation](#). D. Boughton, N. Aung, B. Belton, M. Filipski, D. Mather, E. Payongayong, 2018. FSP Research Paper 104. East Lansing: Michigan State University
17. [Mechanization and Crop Productivity, Profitability and Labor Use in Myanmar's Dry Zone - RP103](#). David Mather and Ben Belton, 2018. FSP Research Paper 103. East Lansing: Michigan State University.
18. [Crop Production and Profitability in Myanmar's Dry Zone](#). David Mather, Nilar Aung, Ame Cho, Zaw Min Naing, Duncan Boughton, Ben Belton, Kyan Htoo, and Ellen Payongayong, 2018. FSP Research Paper 102. East Lansing: Michigan State University
19. [Rural Transformation in Central Myanmar: Results from the Rural Economy and Agriculture Dry Zone Community Survey](#). Ben Belton, Mateusz Filipski, Chaoran Hu, Aung Tun Oo, Aung Htun. 2017. FSP Research Paper 64. East Lansing: Michigan State University
20. [Aquaculture in Myanmar: Fish Farm Technology, Production Economics and Management](#). Ben Belton, Mateusz Filipski and Chaoran Hu. 2017. FSP Research Paper 52. East Lansing: Michigan State University
21. [Prospects for the Myanmar Rubber Sector: An Analysis of the Viability of Smallholder Production](#). Joanna van Asselt, Kyan Htoo, and Paul Dorosh. 2016. FSP Research Paper 35. East Lansing: Michigan State University
22. [Revitalized Agriculture for Balanced Growth and Resilient Livelihoods: Toward a Rural Development Strategy for Mon State, Myanmar](#). CESD, IFPRI, and MSU, 2016. FSP Research Paper 20B. East Lansing: Michigan State University
23. [Rural Livelihoods in Mon State: Evidence from a Representative Household Survey](#). Aung Hein, et al. 2016. Feed the Future Innovation Lab for Food Security Policy Research Paper 20A

24. [A Quiet Revolution Emerging in the Fish-farming Value Chain in Myanmar: Implication for National Food Security](#). Ben Belton, Aung Hein, Kyan Htoo, L. Seng Kham, Ulrike Nischan, Thomas Reardon, and Duncan Boughton. 2015. Feed the Future Innovation Lab for Food Security Policy Research Brief 9.
25. [Aquaculture in Transition: Value Chain Transformation, Fish and Food](#). B. Belton, A. Hein, K. Htoo, L. Seng Kham, U. Nischan, T. Reardon, and D. Boughton. 2015. Feed the Future Innovation Lab for Food Security Policy Research Paper 8.
26. [Promoting Agricultural Growth in Myanmar: A Review of Policies and an Assessment of Knowledge Gaps](#). Than Tun, Adam Kennedy, and Ulrike Nischan. 2015. FSP Research Paper 4. East Lansing: Michigan State University

Policy Research Briefs

1. [Fish Farms and Land Confiscation in the Ayeyarwady Delta: History, Impact and Prospects for Restitution](#). SiuSue Mark. 2017. Feed the Future Innovation Lab for Food Security Policy Research Brief 44.
2. [Aquaculture in Myanmar: Fish Farm Technology, Production Economics and Management](#). Ben Belton, Mateusz Filipski and Chaoran Hu. 2017. FSP Research Brief 37. East Lansing: Michigan State University
3. [Improving Land Governance for More Equitable Fish Farm Development in Myanmar](#). Ben Belton. 2017. FSP Research Brief 33. East Lansing: Michigan State University
4. [Revitalized Agriculture for Balanced Growth and Resilient Livelihoods](#). CESD, IFPRI and MSU. 2016. Feed the Future Innovation Lab for Food Security Policy Research Brief 17.
5. [A Quiet Revolution Emerging in the Fish-farming Value Chain in Myanmar: Implication for National Food Security](#). Ben Belton, Aung Hein, Kyan Htoo, L. Seng Kham, Ulrike Nischan, Thomas Reardon, and Duncan Boughton. 2015. FSP Research Brief 9. East Lansing: Michigan State University

Professional Papers

1. Belton, B., Win, M.T., Zhang, X., Filipski, M. 2021. The Rapid Rise of Agricultural Mechanization in Myanmar. *Food Policy*. 101: 102095. <https://doi.org/10.1016/j.foodpol.2021.102095>
2. [Agriculture and the Rural Economy: The Struggle to Transform Rural Livelihoods](#). Boughton, D., Okamoto, I., Mark, S.S., Oo, H.T., Myint, T., & Thawngmung, A.M. (2020). In A. Simpson, & N. Farrelly (Eds.), *Myanmar: Politics, Economy, and Society* (Ch. 10).
3. [Emigration and Rising Wages in Myanmar: Evidence from Mon State](#). Filipski, Mateusz, Hak Lim Lee, Aung Hein, and Ulrike Nischan. *The Journal of Development Studies* (2019): 1-18.
4. [Fisheries Development, Labour and Working Conditions on Myanmar's Marine Resource Frontier](#). Belton, B., Marschke, M., Vandergeest, P. 2019. *Journal of Rural Studies*. 69: 204-213
5. [Rural Transformation in Central Myanmar: By how much and for whom?](#) Belton, B. and Filipski, M. 2019. *Journal of Rural Studies*. 67:166-167
6. [Emigration and rising wages in Myanmar: Evidence from Mon State](#). Mateusz J. Filipski, Hak Lim Lee, Aung Hein, Ulrike Nischan. 2019. *Journal of Development Studies*. <https://doi.org/10.1080/00220388.2019.1626834>
7. [Resilience through Risk Management: Cooperative Weather Insurance in Small-holder Aquaculture Systems](#). Watson, J., Armerin, F., Klinger, D., Belton, B. 2018. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2018.e00799>
8. [Give a Man a Fishpond: Modelling the impacts of aquaculture in the rural economy](#). Filipski, M. and Belton, B. 2018. *World Development*. 110:205-223
9. [Emerging Trends in Aquaculture Value Chain Research](#). Simon R. Busha, Ben Belton, David C. Little, Md Saidul Islam, 2018. *Aquaculture* 498 (2019) 428–434
10. [Myanmar's Rural Revolution: Mechanization and Structural Transformation](#). Myat Thida Win, Ben Belton, and Xiaobo Zhang, 2018. Chapter in *Myanmar Transformed? People, Places and*

Politics, edited by Justine Chambers, Gerard McCarthy, Nicholas Farrelly, and Chit Win (Singapore: ISEAS - Yusof Ishak Institute, 2018)

11. [Myanmar's Fisheries in Transition: Current Status and Opportunities for Policy Reform](#). Xavier Tezzo, Ben Belton, Gareth Johnstone, Martin Callow, 2018. Myanmar's fisheries in transition: Current status and opportunities for policy reform, *Marine Policy* 97 (2018) 91-100
12. [The Emerging Quiet Revolution in Myanmar's Aquaculture Chain](#). Ben Belton, Aung Hein, Kyan Htoo, L. Seng Kham, Aye Sandar Phyoe, Thomas Reardon. 2017. The Emerging Quiet Revolution in Myanmar's Aquaculture Chain. *Aquaculture*. June 21, 2017
13. [Aquaculture in transition: value chain transformation, fish and food security in Myanmar](#). Belton, B., Hein, A., Htoo, K., Kham, L. S., Nischan, U., Reardon, T., & Boughton, D. (2015). *AgEcon Search* (No. 1879-2017-1653).
14. [Strategic Choices Shaping Agricultural Performance and Food Security in Myanmar](#). Haggblade, Steven, Duncan Boughton, Khin Mar Cho, Glenn Denning, Renate Kloeppinger-Todd, Zaw Oo, Tun Min Sandar, Tin Maung Than. 2014. *Journal of International Affairs*, Spring/Summer 2014, Vol. 67, No. 2.

Appendix B: List of Project Datasets Published

#	Data Set Title	Status	Published Date	Links
1	Dry Zone Value Chain Off-Farm Value Chain Surveys: Traders Component	Published	8/19/2020	Food Security Policy Project,, 2020, "Dry Zone Value Chain Off-Farm Value Chain Surveys: Traders Component", https://doi.org/10.7910/DVN/GPJDY6 , Harvard Dataverse, V1, UNF:6:iLdBZnbJr3R25T2GHApOCA== [fileUNF]
2	Shan Household, Agriculture and Rural Economy: Household Survey – May-October 2018	Published	8/18/2020	Food Security Policy Project,, 2020, "Shan Household, Agriculture and Rural Economy: Household Survey – May-October 2018", https://doi.org/10.7910/DVN/HLJRHJ , Harvard Dataverse, V1, UNF:6:7s2BEIMmkd8ysi7ht1iCaw== [fileUNF]
3	Shan Household, Agriculture and Rural Economy: Community Survey – May-October 2017	Published	8/11/2020	Food Security Policy Project,, 2020, "Shan Household, Agriculture and Rural Economy: Community Survey – May-October 2017", https://doi.org/10.7910/DVN/EP6CCD , Harvard Dataverse, V1, UNF:6:TohTsHAUIj5wj1PMsV1EGw== [fileUNF]
4	Myanmar Aquaculture Agriculture Survey: Community component	Published	8/10/2020	Food Security Policy Project,, 2020, "Myanmar Aquaculture Agriculture Survey: Community component", https://doi.org/10.7910/DVN/ACFLWZ , Harvard Dataverse, V1, UNF:6:CFV8sSFT3clIA1y323yYcQ== [fileUNF]
5	Mon State Rural Community Survey 2014	Published	7/16/2020	Food Security Policy Project, 2020, "Mon State Rural Community Survey 2014", https://doi.org/10.7910/DVN/B1KGWQ , Harvard Dataverse, V1, UNF:6:Vev8OuL7yIZvbKo0cmC+fA== [fileUNF]
6	Mon State Rural Household Survey, Hope Module April-May 2017	Published	7/16/2020	Food Security Policy Project, 2020, "Mon State Rural Household Survey, Hope Module April-May 2017", https://doi.org/10.7910/DVN/PIGTAL , Harvard Dataverse, V1, UNF:6:NcAMTFRJUm/ErnPZiisIjQ== [fileUNF]

#	Data Set Title	Status	Published Date	Links
7	Dry Zone Value Chain Off-Farm Value Chain Surveys : Dealerships, December 2017	Published	7/10/2020	Food Security Policy Project, 2020, "Dry Zone Value Chain Off-Farm Value Chain Surveys : Dealerships, December 2017", https://doi.org/10.7910/DVN/DV5HRQ , Harvard Dataverse, V1, UNF:6:guZLuHslBg7cmUjOqIBTVw== [fileUNF]
8	Mon State Rural Household Survey, May-June 2015	Published	7/10/2020	Food Security Policy Project,, 2020, "Mon State Rural Household Survey, May-June 2015", https://doi.org/10.7910/DVN/LF7QTU , Harvard Dataverse, V1, UNF:6:Mam3X/MiajflAWEzsoufvg== [fileUNF]
9	Myanmar Aquaculture Agriculture Survey: Household component, April-May 2016	Published	7/10/2020	Food Security Policy Project,, 2020, "Myanmar Aquaculture Agriculture Survey: Household component, April-May 2016", https://doi.org/10.7910/DVN/JKXZXA , Harvard Dataverse, V1, UNF:6:SYEvYWjv+y5Uqd+K7dBQIA== [fileUNF]
10	Rural Economy & Agriculture Dry Zone Survey - April-May 2017	Published	7/10/2020	Food Security Policy Project,, 2020, "Rural Economy & Agriculture Dry Zone Survey - April-May 2017", https://doi.org/10.7910/DVN/560WK8 , Harvard Dataverse, V1, UNF:6:iLdBZnbJr3R25T2GHApOCA== [fileUNF]
11	Yangon Mechanization Cluster Survey	Published	7/10/2020	Food Security Policy Project,, 2020, "Yangon Mechanization Cluster Survey", https://doi.org/10.7910/DVN/WHJR19 , Harvard Dataverse, V1, UNF:6:tTj2A+uFYxmwbz1S9Dt+Sg== [fileUNF]
12	Dry Zone Value Chain Off-Farm Value Chain Surveys: Mills Component	Published	5/22/2020	Food Security Policy Project, 2020, "Dry Zone Value Chain Off-Farm Value Chain Surveys: Mills Component", https://doi.org/10.7910/DVN/WDRVBS , Harvard Dataverse, V1, UNF:6:qRYuVR9JOMkxXmnREKG91g== [fileUNF]
13	Dry Zone Value Chain Off-Farm Value Chain: Rental Service Component	Published	5/22/2020	Food Security Policy Project, 2020, "Dry Zone Value Chain off-farm value chain: Rental Service Component", https://doi.org/10.7910/DVN/XHZJ7G , Harvard Dataverse, V1, UNF:6:lmnoBkn24CkzZcBRu51FwQ== [fileUNF]
14	Rural Economy & Agriculture Dry Zone Survey: off-farm value chain surveys: Traders	Published	5/22/2020	Food Security Policy Project, 2020, "Rural Economy & Agriculture Dry Zone Survey: off-farm value chain surveys: Traders", https://doi.org/10.7910/DVN/Z1ERZM , Harvard Dataverse, V1, UNF:6:iLdBZnbJr3R25T2GHApOCA== [fileUNF]
15	Rural Economy & Agriculture Dry Zone Community Survey	Published	5/21/2020	Food Security Policy Project,, 2020, "Rural Economy & Agriculture Dry Zone Community Survey", https://doi.org/10.7910/DVN/DFEVNK , Harvard Dataverse, V1, UNF:6:LBL6x4Y1DoJP7Qb6cOy8LQ== [fileUNF]

#	Data Set Title	Status	Published Date	Links
16	Rural Economy & Agriculture Dry Zone Household Survey	Published	5/20/2020	Food Security Policy Project,, 2020, "Rural Economy & Agriculture Dry Zone Household Survey", https://doi.org/10.7910/DVN/W68BPF , Harvard Dataverse, V1, UNF:6:I096pG7johbzvyM+MESOAg== [fileUNF]
17	Farmer demand for quality seed and adoption of improved varieties: The case of rice, legumes and oilseeds in the dry zone of Myanmar	Published	5/14/2020	Food Security Policy Project, 2020, "Farmer demand for quality seed and adoption of improved varieties: The case of rice, legumes and oilseeds in the dry zone of Myanmar", https://doi.org/10.7910/DVN/FPKW5K , Harvard Dataverse, V1, UNF:6:HIOWUV2uzRh3q0+DQzGHeg== [fileUNF]
18	Shan Household, Agriculture and Rural Economy: Machinery Dealership Survey			Cannot be made public as no way to anonymize data
19	Shan Household, Agriculture and Rural Economy: Maize Trader and Input Supplier Survey			Cannot be made public as no way to anonymize data

