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Prioritizing Women's Knowledge in Climate Change: Preparing for My Dissertation Research in Indonesia

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The implications of climate change are serious for small-scale farmers, particularly those dependent on high value commodity crops, like cacao, to sustain their livelihoods. Of these small-scale farmers, women are disproportionately impacted by the risks and variability attributed to global climate change, yet they are often overlooked in strategy and policy developments for adaptation or mitigation. Local and indigenous women's voices and knowledges especially are missing from global conversations regarding climate change. Sarah Eissler, a PhD Candidate in Rural Sociology, will spend half of 2017 in Sulawesi, Indonesia, investigating and collecting women's voices, knowledge, and experiences, along with opinions in regards to climate change for small-scale cacao producers. This article discusses the preparation involved in conducting a six-month field stay in Indonesia as well as background literature and influences pertaining to a research project that prioritizes women's and indigenous knowledge.

Keywords: Women's Knowledge; Climate Change; Cacao; Indonesia; Small-scale Farmers

Sarah traveled to Indonesia and completed her research in March of 2017.

In August of 2016, I visited Indonesia for the first time, hopping around islands from Jakarta to Makassar and Bali in order to lay the groundwork for my data collection field stay starting in March of 2017. As a PhD candidate in Rural Sociology at Penn State University, I am interested in the complex challenges facing individuals in rural areas across the world—particularly those challenges impacting small-scale farmers. My dissertation research focuses on the gender dynamics of these farmers in response to climate change in Sulawesi, Indonesia. From previous research experiences, I have become interested in understanding climate change from the perspective of small-scale farmers. This focus on farmers is important because, surprisingly, farmers are often overlooked in global conversations regarding solutions and strategies for combatting climate change. I also believe that women's perspectives are absent, particularly those of small-scale farmers in rural areas. These women have a unique knowledge of and ties to natural resources that are often overlooked.

This article will chronicle my experiences and process of preparing to conduct a dissertation project in Sulawesi, Indonesia, with the International Center for Tropical Agriculture (CIAT) over the course of six-months. My master's research experience had a major influence over my decision to pursue a Borlaug Fellowship and helped to guide my decision-making during the preparation period. In the following sections, I discuss these influences, the background for my dissertation project, and how I've prepared to conduct this research in Indonesia.

Decision-Making and Coffee: How I Arrived at My Dissertation Topic

I received my MS in Rural Sociology and International Agriculture and Development (INTAD) from Penn State University. My thesis project focused on understanding what influences small-scale coffee farmers' decision-making in regards to their farming techniques. I traveled independently to Turrialba, Costa Rica, where I worked with scientists at the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), a member of the Consultative Group for International Agricultural Research (CGIAR). CGIAR is a global consortium that unites organizations engaged in research for food security. As a young researcher, this experience was invaluable because I gained an understanding of the process of conducting international research and learned that its results spark more questions than answers.

My master's thesis research emphasized an understanding of the ways in which small-scale coffee farmers in Turrialba, Costa Rica, made decisions about changing a technique, tool, or other aspect of their farm or farming practice. Drawing from Roger's (2003) theory of the diffusion of innovations, I assumed that small-scale coffee farmers would be slow and hesitant to adopt an innovation (defined as any new change—whether technique, tool, or idea) on their farm. My entire sample population consisted of family farmers whose coffee farming practices were rooted in tradition and familial history, despite recommendations from the Costa Rican agricultural extension agents (government representatives who provide farmers education, training, and technical support) with whom I had discussed. Climate change and gender relations were in the back of my mind while conducting the research, as I knew they are incredibly powerful and influential dynamics shaping the context of rural life. At the time, however, they were not integral concepts to my research study. After completing all interviews and leaving Costa Rica, I was struck by how often climate change and its impacts had come up in conversation, particularly as it changed the way farmers talked about their thought-process when adopting an innovation. Many farmers, in response to changing rain patterns or increased incidence of coffee diseases (for example, *la roya* is a coffee leaf rust that decimates farms) were quick to adopt an agricultural extension agent's or community member's suggestion for change. These events were more frequently reported than any other variables for why a farmer adopted a specific innovation. Additionally, I couldn't quite understand it at the time, but there were major differences between the ways head female farmers and head male farmers talked about their expertise or knowledge of the farm. After concluding this study, I aimed to convert my attention to investigating the intersection of these dynamics and understanding the gender differences in response to climate change for small-scale, high value commodity producers. This led to my dissertation topic, which seeks to investigate the different ways male and female small-scale cacao farmers are able to build adaptive capacity, vulnerability, and perception to the impacts and risks from climate change.

Description of Dissertation Research

Climate change has serious implications for the current and future state of agricultural production, particularly for high value commodity crops that are especially dependent on specific climatic conditions for optimal growth, such as cacao (IPCC 2014; Läderach et al. 2013; Schmidhuber and Tubiello 2007). More importantly, climate change has serious implications for the farmers that rely on cacao's production to sustain their families' livelihoods (Kelly and Adger 2000; McCarthy, Lipper, and Branca 2011; Morton 2007; Nelson, Adger, and Brown 2007).

These farmers generally rely on agriculture to meet their basic needs and will most likely experience the most severe impacts from climate change since they often lack the resources and capacity to adapt (Kelly and Adger 2000; McCarthy, Lipper, and Branca 2011; Morton 2007). Women, in particular, are the most marginalized and vulnerable groups, often limited in their ability to build adaptive capacity, gain access to necessary resources or opportunities, and are the least empowered (Agarwal 2001). Climate change amplifies the economic, cultural, and social constraints regarding their access to paid employment, asset distribution, opportunities, and resources, often limiting them to unpaid care tasks that depend on climatic factors, such as subsistence agriculture or water collection (Agarwal 2001; Jost et al. 2015; Skinner 2011). Women in general are viewed as vulnerable beneficiaries rather than capable change agents with skills, knowledge, and experience to contribute to solutions (Jost et al. 2015; Skinner 2011).

According to Bennett (2005), "Climate change has pervasive and far-reaching social, economic, political, and environmental consequences. The challenge cannot be met without the collective power and knowledge of women and men." Social factors, like cultural attitudes, religious practices, and the legal system, influence gender roles, responsibilities, and decision-making authority (Cornwall 2001). However, the nature of how social relationships and contexts shape climate change adaptation is less explored in the literature (Onta and Resurreccion 2011). It is essential to capture the voices and knowledge of local and indigenous peoples in order to truly understand the social impacts of climate change (Gbetibouo 2009).

As global demand for cacao continues to increase, and given smallholders, particularly women, are among the most vulnerable and impacted groups of people by climate change, there is a current and urgent need to address these issues at large (IPCC 2014; Skinner 2011; Wheeler and von Braun 2009). The future of climate change's impact on rural livelihoods requires more research, particularly on best mitigation and adaption practices for smallholder farmers, understanding the human dimensions of climate change—particularly the local and indigenous ways of knowing—and integrating it with development planning along with regional-specific climate change knowledge (IPCC 2014; Wheeler and von Braun 2009).

The overall research question to be studied is as follows: how are men and women involved in smallholder cacao production in South Sulawesi, Indonesia, impacted by, able to respond to, and perceive the risks of climate change differently? To appropriately investigate this research question, it is essential to integrate the perceptions, knowledge, and participation from cacao farmers, local community members, and government extension agents in South Sulawesi. To conduct this research project abroad, many months of preparation and logistical coordination needed to be done.

Research Plan

The data will be collected during a fieldwork experience lasting six months in Indonesia in collaboration with the International Center for Tropical Agriculture (CIAT), a member of the CGIAR Consortium, and Swisscontact, a non-governmental organization (NGO) based in Indonesia. This six-month research fieldwork experience is funded under the Borlaug Fellows in Global Food Security Graduate Research Grant, a program under the Feed the Future (FtF) initiative that prioritizes FtF areas and research themes. My project fits within these parameters by focusing on small-scale producers in response to climate change, particularly for women in rural areas. This fellowship is unique in that it requires each applicant to partner with a member of the CGIAR Consortium to do the research. I emailed Peter Läderach of CIAT about my project idea and we continued discussions of our overlapping research interests and plans to collaborate in the future. Once I had received the Fellowship, Dr. Läderach facilitated introductions to the gender and environmental specialists at Swisscontact, a Swiss NGO that operates across Indonesia through the Sustainable Cocoa Production Program (SCPP). During the first half of 2016, I communicated with these partners via email and Skype, and coordinated a scoping trip to Indonesia to meet everyone and discuss plans in person.

With the help of the Marjorie Whiting Student Indigenous Knowledge Research Award, I traveled to three islands of Indonesia during August 2016 to lay the groundwork for my project and to meet with local partners. I knew it was essential to visit Indonesia before finalizing my research proposal. I spent a few days in the capital, Jakarta, meeting with staff and leadership of Swisscontact. I learned about their operations, philosophical approaches to their work in Indonesia, and how they interact with government, corporations, and the local farmers. I then traveled to Makassar, located in Sulawesi, to meet with gender and environmental experts at Swisscontact who work directly with farmers across Indonesia. Due to major logistical constraints, I wasn't able to visit a farm in Sulawesi, but I was able to connect with farmers who had come to the city for training. We chatted as best we could through our language barriers. I lament that I wasn't able to get to a community outside the city, however, when conducting international work, unforeseen challenges arise and it is imperative to adapt and be flexible.

The final weeks of my scoping trip were spent in an intensive Bahasa Indonesia language course, working one-on-one with a teacher, Sidhi, each day for five hours. I have experience and skills in French, Spanish, and Portuguese and felt confident in my ability to at least get a handle in Bahasa Indonesia. Several words sound similar to English or a Romance language, but the language structure is completely different. By the end of my lessons with Sidhi, I was able to communicate basic phrases and explain my research with confidence, and I continue to practice each day in order to eliminate the language barrier. I took this language course because I feel it is essential to have communication skills with those I intend to work with for this project. The scoping trip, despite its challenges and setbacks, proved to be extremely important and beneficial for this project and my ability to be able to conduct my research in March of 2017.

Conclusion

Preparing for a six-month field experience is a long and intensive process, and one that I believe is an essential learning process for anyone planning on conducting international research in terms of securing grants, building partnerships and essential skills (i.e, language), and fostering relationships. I learned from preparing my master's research and focused my dissertation topic around the major residual questions I had since leaving Costa Rica. I look forward to collecting this data and more importantly, contributing to the preservation of local and indigenous women's knowledge in relation to adaptation strategies to climate change, a topic I find timely and about which I am extremely passionate.

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