Women and Political Participation in India, Indonesia, Thailand, and Vietnam:
A Preliminary Analysis of the Local Impact of Transnational Advocacy Networks in Climate Change Adaptation

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Abstract

Our study examines the various ways transnational advocacy networks (TANs) may impact the ability of women to increase their social standing in local communities in India, Indonesia, Thailand, and Vietnam through climate change adaptation (CCA) programs. We analyze programs in each of the four nations and interview data from non-governmental organizers, local journalists, a social entrepreneur in India, one program manager who worked both in Vietnam and Thailand, and one strategic planner. While the programs we examine in this study are relatively new, and thus their long-term effects are as yet unknowable, our preliminary findings indicate that through technology and innovation, practical skills enhancements, and connections with local non-governmental organizations (NGO)-centered CCA projects, women have the potential to increase their political involvement and social status within their communities. While these experiences should provide women with more skills to enhance their social status, multiple structural factors in the regions on which we focused may impede women's political participation. We find that *work-around strategies* introduced in CCA programs may enable women to achieve greater autonomy. Correspondingly, NGO programs and interventions should be more successful when the state officially acknowledges gender equality and women's rights.

Introduction

It is widely recognized that the dangers of climate change are a reality in many areas of the world, including South and Southeast Asian nations (Barros, Field, & Dokken, 2014). High temperatures, inconsistent precipitation, extreme weather events, and the rise of sea levels continue to displace and destroy the livelihoods of millions of people in this region (World Bank, 2015). The countries of Asia and the Pacific account for 70% of the global population exposed to flood risk annually (United Nations ESCAP, 2015) where approximately 59.3 million people have been affected, the majority of whom are women and children (Anttila-Hughes & Hsiang, 2013).

Under the rubric of climate change adaptation (CCA), intergovernmental organizations have introduced multiple strategies to assist vulnerable nations with limited resources. These efforts include bilateral funding and supporting domestic non-governmental organizations (NGOs) at the national, state, and provincial levels. Gender mainstreaming is central in many of these programs (Aguilar, Granat, & Owren, 2015).

Our study offers a preliminary analysis of the development of what is referred to in the scholarly literature as transnational advocacy networks (TANs), defined below, in the context of NGO-generated climate change adaptation (CCA) programs. Our research question addresses the factors of CCA programs that may increase political participation and social status among women within their communities. We also seek to understand the structural factors that may impede their efforts. First, we place our study in the context of the scholarly literature, and then we present our evaluation of the characteristics of the CCA programs that were gathered from interviews with NGO activists and environmental journalists within each of the countries. We hope that by including both primary and secondary data sources, we will contribute to the discourse between scholars and policymakers.

Our study began with an examination of NGO programs that received awards under the United Nations Framework Convention on Climate Change (UNFCCC) *Momentum for Change (MfC)* initiative in 2014. We ini-

tially identified recipients of awards under the UNFCCC's MfC categories of *Women for Results* and *Urban Poor* because these programs identified women's leadership roles in our geographical region of study, Asia (specifically, India, Indonesia, Thailand, and Vietnam), and in the subject area of CCA.[1] The UNFCCC awards did not provide funding and, instead, focused on an information politics strategy. (See Table 1 for a full list of advocacy activities under this heading.) As our research on these programs progressed, we unfortunately were unable to connect with and interview program managers who worked on the specific MfC-awarded program in Vietnam. Thus, as an alternative strategy, we utilized the expertise of a program manager in Thailand who had had extensive experience in Vietnam; this enabled us to compare and contrast the different pathways taken in these countries and provide a preliminary assessment of the effectiveness of transnational activities for increasing women's agency in climate change programs.

Defining Characteristics of Transnational Advocacy Networks

Keck and Sikkink (1999) define transnational advocacy networks (TANs) as follows:
- They are *organic* and not hierarchically managed
- They are initiated from outside the country and promoted at the ground level inside the country
- They involve several different actors, and place both international and domestic NGOs at the center
- They form dense webs of connections that are redefined
- They facilitate the launching of mass media campaigns specifically to influence public opinion.

Interviews with NGO activists and journalists in each of the countries allowed us to speculate on whether TANs (resulting from *local* NGOs receiving support from *outside* institutions) increased women's visibility in their respective countries and communities. Within the context of the four regions in Asia under study, in this article we identify features of programs that may be applicable to other countries and in different contexts (See Table 2 for program information).

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1 See http://unfccc.int/secretariat/momentum_for_change/items/6648.php

Table 1.
UNFCCC's Momentum for Change Information Politics Strategy

Ⅰ. Engagement with policy makers
   - Recognition by the UNFCCC secretariat
   - Attendance to UN Climate Change Conferences
   - Opportunities to present work to policy makers during the UN Climate Change Conferences

Ⅱ. Public relations support
   - Concentrated media engagement effort prior to the UN Climate Change Conferences, including placement of opinion pieces and earned media
   - On-going digital campaign, including social media, email marketing and promotion on UNFCCC website

Ⅲ. Marketing support
   - High-quality promotional videos and podcasts
   - Dedicated webpage on the UNFCCC website
   - Publications such as annual reports and brochures
   - Graphic assets such as infographics and photography

Ⅳ. Capacity building
   - Professional media training during the United Nations Climate Change Conference

Source. http://momentumforchange.fluidreview.com/res/p/essential-information

Table 2.
Momentum for Change Communication Initiatives in Asia

Project (Country)	Videos	Podcasts
Bhungroo (India)	https://vimeo.com/125792111	https://soundcloud.com/momentumforchange/building-agricultural-resilience-by-harvesting-rainwater-in-india
Ibu Inspriasi (Indonesia)	https://vimeo.com/125884143	https://soundcloud.com/momentumforchange/empowering-women-with-green-jobs-and-clean-technologies-in-indonesia
Solar Power Company (Thailand)	https://vimeo.com/125797443	https://soundcloud.com/momentumforchange/powering-a-solar-energy-transformation-in-thailand
Storm-Resistant Houses (Vietnam)	https://vimeo.com/125892118	https://soundcloud.com/momentumforchange/building-storm-resistant-houses-in-vietnam

Literature Review

In the 1980s and 1990s, ecofeminists and other scholars examined women's roles as agents of social change, while at the same time documenting women's vulnerabilities in the environment, especially in the developing world where they were considered marginal actors and not recognized for the labor they perform (Agarwal, 1997; Davidson & Freudenberg, 1996; Evans, 1989; Mukhopadhyay, 1984). In addition, academic studies identified specific reasons why international environmental programs that targeted women were largely ineffective, in part because environmental programs were conceived within highly structured, hierarchical international organizations (Benschop & Verloo, 2006; Eveline & Bacchi, 2005; Hannan, 2002; Mehra & Gupta, 2006).

One watershed study by Keck and Sikkink (1999) shifts the research focus from the *activities* of international organizations to the *behavior* of TANs. According to Keck and Sikkink (1999), programs that combine two topics—such as the environment and gender mainstreaming—are ideal subject areas for TANs, which naturally integrate the work of domestic NGOs and intergovernmental organizations to enhance information gathering and dissemination.

In recent years, scholars have pointed out that women may serve as agents of social change in unconventional (i.e., non-hierarchical and loosely structured) ways. Lai (2010) finds that women generally participate in programs that 1) build community and a collective identity, 2) make visible agency and capabilities of enacting different subjectivities, and 3) visualize diversity and differences in unity. At the same time, women act within the context of socially accepted roles—as caregivers, subsistence food producers, water and fuel collectors, and reproducers of human life (Ergas & York, 2012). Owing to traditional resistance in women participating in public life (True, Niner, Parashar, & George, 2012), women are not likely to embody the same leadership qualities as their male counterparts (Wen, Xiaoming, & George, 2013). However, some researchers argue that connections to the environment and communities within which women work and live enable them to function as agents of social change (Pang, Zeng, & Rozelle, 2014). Earlier studies indicated that while relatively few women seek to hold political office (Iwanaga, 2008), they do create and implement a variety of cultural performance programs, which, for our study, may be

useful in considering how TANs operate to raise awareness about environmental and gender-mainstreaming issues (Lai, 2010; Zeng, 2014). Furthermore, at a structural level, when the government does take an active role through quotas and proportional representation in electoral systems, women's agency is increased (Joshi, 2015).

In order to identify programs in which women have the greatest potential to become agents of social change, we draw upon two theoretical studies, one that seeks to identify diverse features of political participation (Brady, Verba, & Schlozman, 1995) (including different levels of community involvement) and the other that lays out the specific functions of TANs (Keck & Sikkink, 1999). For the former, we are influenced by an article by Brady et al. (1995) entitled *Beyond SES: A resource model of political participation* and, for the latter, Keck and Sikkink's (1999) article entitled *Transnational advocacy networks in international and regional politics*.

Hypothesis

In this study, we aim to identify ways in which TANs empower women who seek to increase their social standing in their local communities by introducing CCA programs in India, Indonesia, Thailand, and Vietnam. Our overarching hypothesis is that local women who participate in NGO-based CCA projects do increase their agency—politically, socially, and economically—in their respective communities. Furthermore, the mass media is considered a vehicle for creating TAN linkages. In this context, there is a dynamic reciprocity. That is, TANs help raise awareness, attention, money, and general support for local NGOs, which can help increase their effectiveness on the ground. In turn, local NGOs inform TANs how they can better support women in local communities.

Methodology

In 2014, NGO programs in India, Indonesia, Thailand, and Vietnam received recognition through the UNFCCC's MfC initiative. To assess the effectiveness of TANs at local levels (of which the MfC initiative was one small part), one would need to track program initiatives over time and interview local women participants in their villages in India, Indonesia, Thailand, and Vietnam. For this preliminary study, we thus aim to lay the

groundwork to develop a plan for field research interviews that would allow us to test our hypothesis.

To identify potential connections between gender and climate change in the four countries, we contacted roughly 35 individuals, including policy-makers, field officers, social entrepreneurs, and journalists. These include 11 individuals for general information about international gender and climate change issues, as well as five individuals in India, eight in Indonesia, four in Thailand, and six in Vietnam. From this exercise, we were able to identi-fy key features of transnational advocacy networks that seem to influence women's empowerment at the local levels in the four regions under investigation.

We began with a high-level policymaker, Assistant Secretary-General of the United Nations and Assistant Administrator of the UN Development Program (UNDP), Izumi Nakamitsu, who publicly endorsed and discussed the need to involve local women in climate change crisis planning (Women's Foreign Policy Group, 2016). We also contacted journalists in the four countries to determine media coverage of environmental and gen-der issues.[2] Finally, we gathered information from individuals who were in-timately involved on the ground in implementing NGO programs in their respective countries.[3] Three in-depth interviews with women who had ex-tensive knowledge in the field—one social entrepreneur in India, one pro-gram manager who worked both in Vietnam and Thailand, and one strate-gic planner in Indonesia—provided us with rich information and specific examples with respect to the ways in which NGO-centered CCA projects increase women's agency within their respective communities.

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[2] We identified several environmental journalists through Elisa Tinsley, the Deputy Vice President-Programs in the International Center for Journalists as well as James Fahn, the direc-tor of Internews' environmental programs beginning on July 6, 2016.

[3] We began our interviews on June 29, 2016 by first contacting the team within the International Union for Conservation of Nature (IUCN) Global Gender Office, who wrote *Roots for the Future*, a report that showcased the MfC and other initiatives, and followed up on others in this network. In addition, to capture more information on NGO-based programs, we posted a re-quest for information through the Global Gender and Climate Change (GGCA) listserv on July 23, 2016.

NGO-Centered Programs in Asia

India

Technology and innovation were central to CCA projects in the West Indian state of Gujarat. For example, one social entrepreneur in our study informed us that as laws in this region of rural India (along the border of Pakistan) prevented women from owning land, her NGO helped circumvent these laws to ensure that women gained exclusive rights to the irrigation technology needed to farm the land. Prior to this innovation, the monsoon crop was becoming increasingly unpredictable because of climate changes, which in turn severely decreased food security in the area unless water was purchased from a private water supplier at very high, unaffordable rates. As a result, farmers with little land struggled to make a profit and pay their debts. The social entrepreneur in India, who helped establish a domestic NGO in 1998, discussed at length how the technology, referred to as *Bhungroo* technology, enabled women to overcome the male-based land laws existing in the area and improve water shortage issues simultaneously:

> We have been working as an NGO for 18 years in the village and we [recently] wondered why not give the rights to the Bhungroo technology to women only? Women will never have land rights but the unique feature of the Bhungroo technology is that the women get the rights to the technology. So, our NGO explained to the farmers that they will be able to use the Bhungroo technology on the condition that women hold the Bhungroo rights.

In this instance, circumventing women's lack of land rights was a key strategy in overcoming gender inequity in this area. Moreover, the training women received as a result of their new rights to this technology enabled them to bring what they had learned to other women. In addition, after women learned these skills, the NGO program focused on helping them increase their social position in their respective communities. The social entrepreneur describes the process of engaging women with the technology as follows:

Thus the roles of the women are [to]: a) identify the poorest poor women members in the village who needs Bhungroo, b) assess their land's technical conformity for Bhungroo erection, c) get them [to] agree to abide [by] standard operating protocols as well as socially acceptable norms for Bhungroo implementation, d) assess the water injected in each Bhungroo in each season. Based upon that assessment and water quantity they are also taking care of sharing the water to the members. Monitoring of each Bhungroo ownership group's performance gradually creates a collective bargain on gender-centric program implementation.

Therefore, women teach other women how to use the technology and the skills that come with it. According to the social entrepreneur quoted above, women found ways to leverage the technology to increase their political participation. Because only women control the technology, and the technology makes the land more productive, women are able to use these skills to increase their ability to make economic decisions in the household and take an active role in local government. The social entrepreneur spoke of how the technology enabled them to take seats in their local government or *panchayat,* which were already reserved for them. According to the social entrepreneur we interviewed, prior to the technology, "Inactive women members (generally family members of powerful male leaders) were put into the election process as the dummy candidates [⋯]" In short, these women were getting pushed out, and male leaders, primarily, were running the local government. However, the introduction of the Bhungroo irrigation technology altered this situation.

[As] all the beneficiaries are women, they were empowered to take the decisions at the household level. Gradually they created cohesive process[es] and thought why not also make decisions at the village level? [⋯] These women took the lead not only in Bhungroo but also put efforts in negotiating with local government machinery to find and implement appropriate government program within the village viz, the government programs focus on pond-digging work but the villagers know that that is not the right solution. So lots of money has been wasted. The women have seen this and now say that if they are in the panchayat, they can stop

these kinds of things and work on what is needed.

The success of the Bhungroo technology, which was started by a local NGO and supported by intergovernmental organizations, led to its implementation in other countries in Africa and Southeast Asia. With nearly 18,000 women benefiting from this technology in India, this work *presumably* increases the political participation and social position of women even if patriarchal land rights remain.

Although the media does report these projects, which can be a vehicle to establish more TAN linkages, these reports are not common. For example, one environmental journalist provided a nuanced view of journalistic accounts of climate change in the wider context of India (i.e., outside of Gujarat):

> The media does report this from time to time. But honestly, climate communication in general is in its infancy in India, so I think journalists are still struggling to understand what is really going on. Water, however, is an exception. The NGOs working on this do a lot of media outreach and so the media does report this issue a lot. Both *The Third Pole* (a part of *Internews*) and *India Water Portal* are doing excellent water reporting. But again, none of them have a significant focus on women.

Although CCA projects in India are widespread, engage women in climate change issues, and help raise women's political participation, the public media outreach domestically is limited, and may need to be expanded to create more TAN linkages. A similar situation was observed in Indonesia.

Indonesia

One domestic NGO, Kopernik, dedicates large numbers of its staff to programs in East and West Indonesia. This includes Nusa Tenggara (NTT) and the West Nusa Tenggara (NTB) islands in the eastern region of Indonesia, specifically Lombok, Flores, and West Timor; and Banda Aceh, Langsa, and Pekanbaru in the west. Kopernik's field officers work for extended periods of time introducing local women to new energy-saving tech-

nologies, including water filters, biomass cook stoves, and solar lamps, and providing technical training. In addition, Kopernik's field officers help Indonesian women develop civic and technological skills to address the effects of climate change and improve their day-to-day lives. According to one strategic planner:

> We work on distributing clean energy technologies and we focus on a few that change people's lives in the remote communities through social-micro-entrepreneurs [⋯]. These women are from the community. They live in the community and they would like to gain something from Kopernik's program—economic empowerment, extra income, or social empowerment [...]. The women got recruited and Kopernik provides training such as financial training, public speaking training, technology maintenance, and other types of training that then enable women to go out there and be confident to start their businesses.

Thus far, over 500 women have benefited from this training and new technologies. However, most of the women who are trained with the technology already are local leaders within their communities. These projects help them become more involved and take on a greater role in political participation and in their home lives.

Kopernik collects statistics and details their impact on local women and their communities. One such finding is that women find the technologies helpful for daily use; some women have been able to work for Kopernik to develop sustainable energy away from home. For example, one woman comments, "As a normal housewife in a rural community, I never thought I'd be able to travel outside of Indonesia and represent such a great organization" (Kopernik, 2014, para. 1). In this area, climate change technologies presumably enable women to go beyond the household and take a greater role in their community and local organizations.

Like in India, it is unclear whether media outlets fully document women's accomplishments in Indonesia. On the one hand, Indonesia seems to have captured the attention of the international community. For example, researchers outside of Indonesia have studied and documented the lives of rural women.[4] On the other hand, a journalist who covers environmental issues and is conducting doctoral work at the University of Indonesia notes

that local media usually are not concerned about gender issues. It is possible that media coverage will increase if women involved in NGO programs gain seats in local elections. One indication that this is a viable outcome of women's involvement in NGO-based CCA programs is the case of Aleta Baun, an Indonesian woman who received the international Goldman Environmental Prize in 2013 for organizing hundreds of local villagers to peacefully occupy marble-mining sites and stop the destruction of sacred forestland. Subsequently, Baun was elected to represent her district in the Indonesian Parliament.

Thailand

Unlike in India and Indonesia, NGO involvement in northeastern Thailand is strained by different understandings of gender. According to one program manager who focuses on on-the-ground interventions, introducing gender-mainstreaming initiatives in Thailand can be difficult to implement because they face resistance from the government. According to a report published by the International Union for Conservation of Nature (2015), one Thai woman effectively challenged the status quo:

> Women have taken a stand in challenging traditional investment patterns and increasing generation through use of RETs [renewable energy technologies]. One such pioneer is Ms. Wandee Khunchornyakon, founder and chief executive officer of Solar Power Company Group, which is the first company to develop a solar farm for commercial purposes in Thailand. Ms. Khunchornyakon began her investment plans in 2008, when the Thai Government announced its policy for energy production. Ms. Khunchornyakon was so determined to invest in clean technologies that after encountering the refusal of traditional banks, which considered the investment too risky particularly if led by a woman, decided to risk her own house and land to secure part of the initial investment capital. Ms. Khunchornyakon received support from

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[4] For example, see the video produced in May 2016 by Riza Aryani, Lia Cairone, and Cait O'Donnell, titled *Long Duhung: Gendered Impacts of Deforestation* (https://www.youtube.com/watch?v=y84jZWGVRyM)

multilateral banks to proceed with her investment and in 2010 she
began with a small solar farm [...]. By 2014, Ms. Khunchornyakon's
company owned 19 solar farms in Thailand [⋯] generating 20,000
new permanent and local jobs (Aguilar et al., 2015, pp. 236-237).

Perhaps challenging the status quo and the development of gen-
der-sensitive training together will encourage the participation of women;
however, state institutions may not be in line with INGO ideals and work-
ing within these may prove difficult. On the other hand, the journalists
we interviewed reported that local women are vocal and active in climate
change initiatives in expressing their political rights. For example, although
a prominent anchorperson for *Thai TV* (which has a large viewership in
Thailand and particularly in Bangkok) did not know of specific media re-
ports on women in climate change programs, when interviewed she de-
scribed the groundbreaking work of Ms. Khunchornyakon, "I once had a
chance to interview her at a seminar when I was a moderator. I admire
how Ms. Khunchornyakon is a pioneer in solar energy and tries to help
the local women as well."

Another journalist noted that between February 2014 and August 2015,
the *Bangkok Post's* arts and culture section published several human-interest
stories on women and the environment. Most of the women were de-
scribed as environmental activists who protested against government poli-
cies that threatened people's livelihoods and quality of life. The women
highlighted problems with coal-fired power stations, dam projects, waste-
water plant projects, excessive logging, and goldmines that destroy the fish-
ing industry. Some were identified as housewives who became activists;
others were professional scientists, conservationists, or law enforcement of-
ficers in wildlife sanctuaries. In a country where government censorship of
the media is common, it is significant that the *Bangkok Post* is allowed to
publish critical assessments of government programs. (It is important to
note that the *Bangkok Post* is published in English, and its readership targets
the urban middle class.)

Similarly, another journalist reported on research publications detailing
the work of NGOs, including those funded by the Rockefeller Foundation
and Oxfam that advocated for women's empowerment in Thailand's efforts
in CCA. Among the dozen publications, two were written in Thai, one was
published in *Prachatai*, and the other was published in *Thaipublica*. The pub-

lications prompted online comments from Thai readers who were critical of international involvement.

Vietnam

In Vietnam, we found that international NGOs (INGOs) typically work with local women's unions and government agencies in larger cities, such as Da Nang. Unfortunately, at the time of our research, detailed information on the storm-resistant house-building program that received the MfC innovation award was unavailable. Still, we were able to interview a program planner who described the structural relationship between INGOs and the Women's Union in Vietnam. Working closely with INGOs to develop solar farm technologies, the program planner found this type of network and process of engagement to be highly successful. Accordingly, she spoke about how women benefited from these technologies.

> I think that the trick was the technical aspect (alternatives to the wood-burning cook stoves or plants that yield growth in a short span of time for [···] fuel.) Plus, the facilitators helped groom their presentation skills, negotiations skills, and leadership skills so that they could address the technical issues. I think you don't get that until you determine that women are the ones that organize the campaigns and women do other things [so] that you get a sense of the silos. So we evaluated that whole intervention. One of the things that the leader of the Women's Union told me is that women were always tasked with campaigns but they were never asked about the technical issues such as what type of cook stove is good for them. So with this evaluation, women became at the center of the technical intervention and they felt that this technical intervention was respected more than what they had been doing, [in addition to] the ability to negotiate and other skill enhancements that they got.

These programs allowed over 300 women to build the skills needed to engage with their environment and help find further solutions to their lack of resources. Our informant discussed how the skills helped local women build confidence and participate in local meetings:

Knowing about climate change and information about disasters actually helps them position themselves better within the technical meetings. Because of these activities, the women were seen as more knowledgeable and serious by the state-run agencies. Next time there was a forestry or climate change meeting, women were invited to participate not only to the gender-tagged meetings but also because of their technical knowledge. Third, they bridged the gap: Instead of being tasked to do only women-related activities as part of the Women's Union, they provided legitimate input into the forestry decisions that were being made in their province. That was a big shift that they enjoyed the most. All of sudden they felt that they were important. You know like sometimes you may feel like what you know is marginalized. So when they bridged that gap, it was an acknowledgment of the skills that they had learned. It was more about legitimating that they know about these issues [⋯] recognition that they should be involved.

Anchoring women in these programs has provided them with tools to engage in the larger national debate around climate change. Women are integrated into this larger discussion through their mastery of technological knowledge and insight. However, although women are seen globally and locally as key players in Vietnam, gender awareness does not seem to be an appropriate topic for local media outlets. One Vietnamese environmental journalist provided the following insight:

I know that the participation of women in CCA and DRR [disaster risk reduction] plays an important role. The government, NGOs, UN agencies, and state agencies consider women as key players. Most projects and programs are requested to involve women in their activities. I used to write some articles to highlight the role of women in CCA and DRR and I also read some reports about this topic in the media [⋯]. Based on my personal observation, it is not a favorite topic [among readers] because gender awareness in Vietnam is still low even when the government has a lot of policies to support gender mainstreaming, Vietnam is still a patriarchal country with the strong influence [of] Confucianism and Buddhism, which do not value women's contribution.

Given Vietnam's patriarchal influences associated with religious traditions, TANs may develop pathways and channels that are unlike those of other countries. Furthermore, the case of Vietnam, like that of Thailand, seems to suggest that as NGO programs continue, the structural factors surrounding gender issues may change as women garner more political participation.

Cross-Country Comparisons

In this study, we found that involving women in CCA programs has significant challenges but that with increased local and transnational awareness, these programs may increase benefits for local women. Below are some cross-country comparisons that will be important to take into consideration in future studies (See Table 3 for summarized comparisons of national characteristics).

- Women's political participation in Indonesia seems to be influenced by transnational activities but has not led to structural changes. That is, the women in Indonesia who become part of the NGO programs already are local leaders within their communities; poor women at the margins are not integrated into the programs.
- Levels of democracy at the national level in India and Indonesia are considerably higher than for Thailand and Vietnam, which may account for higher levels of integration and a greater development of complex TANs.
- Indonesia is in a better position than Thailand to empower women because the Thai Government is not entirely focused on raising gender awareness, and has a complicated configuration of democratic norms and limited press freedom. On the other hand, Thailand's international media outreach on gender and climate change initiatives seems to surpass that of Indonesia.
- The anchoring of Vietnamese women in local NGO programs seems to have been more effective when compared to Thailand, and the Vietnam Women's Union is a powerful force at the central, provincial, district, and commune levels. Moreover, the numbers of Vietnamese women in parliament is the highest among the nations under investigation in this study, which perhaps provides for greater integration of women at other levels.

Table 3.
Cross-country Comparisons

	Status of Women[1]	Freedom of the Press[2]
	(% Women in Parliament)	(0=most free; 200=least free)
India	12	78 (partly free)
Indonesia	17	98 (partly free)
Thailand	6	141 (not free)
Vietnam	24	183 (not free)
	Political System[3]	Social Stratification[4]
India	Democratic republic with an often-amended 1950 constitution	Caste System
Indonesia	Mostly democratic, but only recently (1991-2004)	Unequal, uneven distribution of resources
Thailand	Unstable, quasi-democratic/military regime	Unequal, large amount of poverty
Vietnam	Communist rule (triumvirate with general secretary, prime minister, president)	Rich ruling class, relatively poor and repressed underclass

Note. Sources for Table 3 (corresponding to the superscripts) are as follows:
1 World Bank. (2015). DataBank. World Development Indicators;
2 Freedom House (2014) Press Freedom Rankings. Freedom House;
3 UNESCO. (2015). Adult literacy rate, population 15+ years. UNESCO Institute for Statistics. UNESCO;
4 Library of Congress country profiles (c2005) Country Profile. Library of Congress: Federal Research Division.

To be sure, there are differences between and among the countries in terms of who becomes involved in climate change programs and what determines the effectiveness of TANs. In India, for example, the role of the media is to spur the government into action and, while news reports do not focus on women as agents of social change, they do publicize programs related to water control and CCA. Of the four countries, only the press in Thailand ran human-interest stories on female environmental activists who criticized government policies—but mostly for an English-speaking audience.

Conclusions

In sum, involving local women in the NGO-centered CCA projects appears to increase their agency within their respective countries to varying degrees through different channels and pathways that may be affected by: 1) gender awareness at the national level, 2) press freedom and media outreach in which local NGOs showcase women involved in environmental programs, 3) women's organizations from local to national levels, and 4) women's political participation in legislative bodies. Still, according to our qualitative interviews, women in all four nations should benefit from TANs that are formed around climate change vulnerabilities.

Increased support from TANs may enable local NGOs to further impact the ability of women to increase their social standing in local communities in India, Indonesia, Thailand, Vietnam, and elsewhere through CCA programs. While TANs provide increased attention, awareness, and support for local NGOs, these organizations on the ground seem to benefit women by encouraging technology and innovation, teaching and enhancing skills, and enhancing connections with local governments. These three themes are deeply connected, as technology and innovation lead to skills that are considered to be "useful" for women and whole communities. This new power seems to increase women's connections and involvement with local government. Although there are multiple structural factors that may make women's political participation difficult, strengthening TANs may help increase the power and scope of local NGOs.

It may serve NGO organizers and practitioners to integrate technology and innovation with practical skills enhancements that connect women with local government. However, more emphasis needs to be placed on understanding whether local women benefit from NGO programs over the long term and how the benefits can be extended to all local women. Moreover, others regions that are experiencing issues such as land rights for women may aim to establish strategies that enable communities to adapt to climate change and women's power. As a result, integrative strategies may enable women to overcome challenging restrictions, and may have the potential to embed more women within local governments to eventually expand women's rights. These strategies may even carry over to other areas and, for example, help transform educational systems beginning with schools at the local level.

Because of our small sample size, and lack of geographical scope, care must be taken when making claims beyond the I/NGOs discussed and the specific regions in each of the four nations. Future research must include interviewing local women who have become involved in the NGO programs. Understanding how local women experience these technologies and respond to NGO involvement is key to fully understanding the factors that can lead to greater political participation among women, and helping to identify how to promote stronger linkages between local NGOs and TANs. Ethnographic surveys of these regions and areas beyond the focus of this study will help yield a better understanding of how these projects and programs can be most effective at meeting their goals and empowering women. Despite the limitations of this research, our study explores some of the main questions that can help raise the effectiveness of climate and gender projects, as well as introducing insights into how TANs, with the support of NGOs, could potentially increase the political participation of local women in the regions in which the programs were developed.

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