

# Invest in Women to Tackle Climate Change and Conserve the Environment

Prepared by: Nicholas Wedeman and Tricia Petruney, FHI 360

Reviewed by: Genine Babakian, Consultant; Juliana Bennington, Women Deliver; Eleanor Blomstrom, Women's Environment and Development Organization (WEDO); Mary Crippen, Women Deliver; Maria DeVoe, Women Deliver; Tatiana DiLanzo, Women Deliver; Louise Dunn, Women Deliver; Katja Iversen, Women Deliver; Jessica Malter, Women Deliver; Susan Papp, Women Deliver; Savannah Russo, Women Deliver; Liuba Grechen Shirley, Consultant; Petra ten Hoop-Bender, Women Deliver

## OVERVIEW

Climate change and environmental degradation represent a great threat to poverty reduction and to achieving the SDGs. They impact health, food security, nutrition, production, and people's earnings. Yet given their traditional roles in agricultural production, and as the procurers of water, cooking fuel, and other household resources, women are not only well suited to find solutions to prevent further degradation and adapt to the changing climate – they have a vested interest in doing so. The first step towards tackling the challenges of climate change is empowering women to safeguard the environment. This brief examines some useful strategies to promote the inclusion of women in climate change mitigation, adaptation, and negotiations – and to have their voices be heard.

## SECTION 1: FRAMING THE ISSUE

Climate change is increasing temperatures and affecting weather patterns, resulting in environmental degradation and heightened competition for natural resources.<sup>1</sup> Impediments to agricultural production caused by environmental hazards such as flooding, droughts, and landslides in turn heighten community vulnerability, decrease food security, force students to drop out of school, and increase poverty rates.<sup>2</sup>

While climate change impacts everyone, girls and women bear the greatest burden, are most vulnerable to environmental degradation,<sup>3</sup> and are disproportionately affected by climate change compared to men for a variety of reasons.<sup>4</sup> Women are responsible for 60 to 80% of food production in the global south, and thus are more impacted by any strains on agricultural production.<sup>5</sup> During periods of drought and erratic rainfall, women must work harder to secure food and water for their families.<sup>6</sup> This puts added pressure on the girls within households, who may be forced to drop out of school to help their mothers manage the heavier burden.<sup>7</sup> In some parts of Africa, girls and women spend up to eight hours per day collecting water.<sup>8</sup> This undermines productivity and fuels a cycle of poverty that limits the economic and social capital that could be generated to combat climate change.<sup>9</sup>

Of the 60 million people displaced around the world, it is estimated that 26 million of those people are climate displaced.<sup>10,11</sup> Each year, weather related disasters due to climate change are estimated to displace 1 million people.<sup>12</sup> Climate disasters have also been shown to increase gender-based violence (GBV), including sexual harassment and violence,<sup>66</sup> domestic violence,<sup>67</sup> sexual exploitation of children,<sup>68</sup> and human trafficking.<sup>69</sup> Displacement and migration following a disaster can result in overcrowding and unsafe living conditions in evacuation centers, temporary housing, and other shelters.<sup>70</sup> Girls and women become more vulnerable to harassment and violence, and increased poverty and loss of community likewise increase the propensity for violence.<sup>71</sup> In turn, the heightened risk of violence makes women fearful of venturing out; in Papua New Guinea, this resulted in women and infants dying in childbirth because they were unable to safely access medical care for fear of being attacked.<sup>72</sup>

Recognizing the burdens environmental challenges impose on them, women have a key role to play when it comes to climate change mitigation and adaptation. Yet women experience barriers – social, political, and economic – that restrict their ability to take an active seat at the table in climate change negotiations, further limiting their coping capabilities when it comes to mitigating, adapting, and coping with the effects of climate change.<sup>13,14</sup> Women must be recognized as vital agents of change so that their needs and their contributions will be a part of the solution.

The United Nations has recently prioritized safeguarding the rights of people whose lives are most impacted by climate change, recognizing the direct role the environment plays in shaping the economic and social rights of so many individuals.<sup>15</sup> Yet despite the steadily growing body of evidence that links climate change to a rise in gender inequality, the vulnerability of women, and obstacles to sustainable development, the United Nations Framework Convention on Climate Change (UNFCCC) largely



**Empowering women to respond to the challenges posed by climate change is linked to the achievement of several of the Sustainable Development Goals (SDGs) and targets, including:**

**SDG Goal 1: End poverty in all its forms everywhere**

- **1.5** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters

**SDG Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**

- **2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality

**SDG Goal 3: Ensure healthy lives and promote wellbeing for all at all ages**

- **3.7** By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information, and education, and the integration of reproductive health into national strategies and programmes
- **3.9** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination and affordable essential medicines and vaccines for all

**SDG Goal 5: Achieve gender equality and empower all women and girls**

- **5.1** End all forms of discrimination against all women and girls everywhere
- **5.2** Eliminate all forms of violence

Disclaimer: The views and opinions expressed in this technical paper are those of the authors and do not necessarily reflect the official policy or position of all partnering organizations.



neglected to outline any gender dimensions in its early years.<sup>16</sup> That began to change in 2007 with the release of the UNFCCC Bali Action Plan and the establishment of the Global Gender and Climate Alliance (GGCA).<sup>17</sup> However, it remains to be seen whether gender issues and the critical role women play in addressing climate change are now will gain traction in international negotiations.<sup>18</sup>

➔ *For more, please reference the brief focused on respecting, protecting, and fulfilling sexual health and rights.*

This trend needs to gain ground in the era of the SDGs. Women's leadership and political participation is a crucial element to any discussions on climate change. They must be at the table during all stages and at all levels of decision-making that seeks to find solutions to current and future environmental realities. Yet at the local, regional, national, and international levels, women are still fighting for a leadership role in the climate change dialogue and a place at the negotiation tables.

## SECTION 2: SOLUTIONS AND INTERVENTIONS

The evidence-based solutions presented below are underutilized, but they have vast potential to ensure that women claim their roles in all efforts to conserve the environment and tackle climate change:

- Include women within all climate change mitigation and adaptation efforts
- Improve and enforce secure land rights and inheritance rights for women
- Promote and fund women-led and women-focused sustainable food production strategies, including fair trade, and resource management activities
- Integrate environmental conservation and climate change adaptation with women's health programming
- Invest in and promote technologies that enhance renewable and clean energy sources

➔ *For more, please reference the brief focused on accelerating access to resources –land, clean energy, water and sanitation.*

### Include Women within All Climate Change Mitigation and Adaptation Efforts

Women have a unique understanding of the impact climate change is having on the productive assets they depend upon. This must be acknowledged, valued, and incorporated into the development of sustainable approaches to climate change adaptation and mitigation.

Women often show more concern for the environment by supporting pro-environmental policies and leaders. Increasing their influence in politics and decision-making forums, therefore, could contribute towards environmental goals.<sup>19</sup> Yet while progress has been made in the last five years boosting women's representation in political and decision-making bodies, the gender gap remains significant; as of 2015, only 22% of parliamentarians were women.<sup>20</sup>

➔ *For more, please reference the brief focused on strengthening women's political participation and decision-making power.*

To adapt to the negative impacts of climate change, women must have a voice and be engaged in leadership and decision-making roles – not only by assuming political office, but by participating in the planning and implementation of sustainable natural resource management practices, as well as climate mitigation and adaptation interventions. Disaster Risk Reduction—the practice of systematic analysis and mitigation of the causes of disasters, including reducing exposure to hazards, lessening the vulnerability of people and property, wise management of land and environment, and improving preparedness and early warning for adverse events—is only effective when women and girls are involved.<sup>73,74</sup> And they must share in the fruits of these efforts. Current research has shown that when women are in decision-making and leadership roles there is a positive impact on sustainable natural resource management and climate adaptation activities.<sup>21</sup> Since adapting to a changing climate is an inescapable reality – even if emissions are halted today – advocacy and decision-making efforts must also include the voices of adolescents and youth, as they have an essential role to play in future efforts related to climate mitigation and adaptation.<sup>22</sup>

#### Case Study: The Africa Adaptation Program (AAP)

*The Africa Adaptation Program (AAP) addressed women's roles in climate change in Nigeria by boosting their skills and knowledge with regard to climate change impacts, policy, financing, and negotiations. They focused on developing women's leadership in key government ministries as it relates to climate change. Many of the countries involved in the AAP program from 2008-2012 worked to revise budgeting processes so that they included funding focused specifically on the gender-specific needs of many women regarding climate change mitigation and adaptation.<sup>23</sup>*

### Improve and Enforce Secure Land Rights and Inheritance Rights for Women

Land is an important resource for women. It can improve their ability to access capital, derive income, and



against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

- **5.3** Eliminate all harmful practices, such as child, early, and forced marriage and female genital mutilation
- **5.5** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life
- **5.6** Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- **5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws
- **5.b** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

### SDG 6: Ensure availability and sustainable management of water and sanitation for all

- **6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- **6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- **6.4** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and



protect household food security, and it offers them security in times of hardship. Research shows that when women own land they not only have more secure livelihoods, but they are less likely to experience domestic violence and have greater bargaining power within the household.<sup>24</sup> Yet land tenure systems often favor men through laws and practices that dictate unequal ownership and control.<sup>25</sup> In order to address the challenges imposed by climate change — and to find effective, sustainable solutions — it is critical to secure land and tenure rights for women. For example, through the provision of legal land rights, poor and marginalized populations are able to access new funding sources and opportunities, which can promote efforts to curb climate change.<sup>26</sup> Enforceable tenure rights will improve the management of natural resources while boosting the economic status of women.<sup>27</sup>

➔ For more, please reference the brief focused on boosting women's economic empowerment.

### Promote and Fund Women-led and Women-focused Sustainable Food Production Strategies, Including Fair Trade, and Resource Management Activities

As women are often responsible for collecting fuel, as well as growing and preparing food, it is important that their expertise in resource management be recognized and valued. Much of the natural resource base in rural areas is located on common lands; and often times, stemming from weak tenure rights, women can be barred from making decisions concerning the use and management of these resources.<sup>28</sup> For example, women produce between 45-80% of the world's food, but have less ownership of land compared to men.<sup>29</sup> Despite this legal barrier, as the key providers of food at the household level, women frequently have greater understanding of the impact climate change is having on the local environment. They are often the knowledge-keepers of traditional and sustainable methods of natural resource management; when applied, these methods result in more resilient communities and improved livelihoods.<sup>30</sup> Thus, it is critical that any discussion on climate change mitigation, impacts, and adaptation not only include women, but give them an active decision-making role in the process and implementation.

One way in which women have the potential to support sustainable food production is through participation in fair trade organizations. Research from the Fairtrade Foundation shows that enabling women to join organizations that grow produce could benefit businesses, support global development, and bring gains for women.<sup>75</sup> As of 2015, women accounted for only 22% of the farmers registered as members of certified fair trade small producer organizations.<sup>76</sup> In order to better equalize this gender divide, businesses should conduct gender analyses of their supply and value chains and develop a gender equality policy and action plan that they can also share with their producer organizations.<sup>77</sup> Governments in producer countries can provide women with agronomy training programs and ensure that there are loans and other support for people who do not own land, especially women.<sup>78</sup> Some organizations have taken it upon themselves to encourage women's participation and support women's voices in decision-making, such as Kuapa Kokoo, the Ghanaian cocoa cooperative, which has formed district level gender committees; nearly half its National Executive Council members, including the President, are women.<sup>79</sup>

Women who are dependent on the natural environment for food and income constitute 60% of the world's poorest and most vulnerable people.<sup>31</sup> On average in the developing world, women constitute about 43% of the agricultural labor force<sup>32</sup> and are thus extremely vulnerable to failing agricultural production.<sup>33</sup> Further, a drop in production exacerbates vulnerabilities, as women do not have the same access to financial and other resources as men do to cope with the impacts of climate induced natural resource depletion.<sup>34</sup> The agricultural sector is also one of the leading emitters of greenhouse gases.<sup>35</sup> Therefore it is important for women working in agriculture be involved with climate change mitigation. Once engaged, these women can incorporate Climate-Smart Agricultural (CSA) practices and sustainable farming into their daily lives, thus increasing food security for themselves and their families. Some of these practices include water management, terracing, composting, incorporating high-yielding and stress-tolerant varieties of crops, and pasture management.<sup>36</sup>

➔ For more, please reference the brief focused on boosting women's economic empowerment.

Indigenous women — who often play vital roles as stewards of nature — are particularly impacted by the effects of climate change.<sup>37</sup> In most cases, indigenous women are responsible for their families' food security and survive off of the land; as such, they feel the impacts of climate change on a daily basis.<sup>38</sup> In order to protect biodiversity and reduce degradation of the environment, indigenous women need to take a leadership role to mitigate the devastating effects of climate change and facilitate climate change adaptation efforts.<sup>39</sup>

#### Case Study: Climate-Smart Agriculture in Kenya

In 2011, a pilot project in Kenya focusing on female small-scale farmers and dairy farmers incorporated Climate-Smart Agriculture (CSA) as a means of improving yields, income, and wellbeing. Women in the Kamotony region, who were concerned about their economic stability, were trained in CSA practices and decided collectively to start a tree nursery. This tree nursery provided a new source of income from the sale of seedlings and tree cuttings; the women were able to invest in dairy production with the profits. By applying the CSA techniques, such as feed storage and fodder production, the women were able to increase dairy production. The women now report that their household food security, nutrition, and income have increased due to CSA practices. They also are able to fund their children's education and healthcare without the economic difficulty that they previously faced.<sup>40</sup>



substantially reduce the number of people suffering from water scarcity

- **6.5** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- **6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes
- **6.a** By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies

#### SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable

- **11.6** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
- **11.7** By 2030, provide universal access to safe, inclusive, and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

#### SDG 13: Take urgent action to combat climate change and its impacts

- **13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- **13.2** Integrate climate change measures into national policies, strategies, and planning
- **13.3** Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning



### Case Study: Crop Diversification in Nicaragua

With resources from a community fund, local women in Jinotega, Nicaragua conducted a risk mapping exercise to identify new solutions for improving food production. They then received training, seeds, and tools, and collectively decided how the agricultural land could be used differently. After five years the number of diversified plots in the community quadrupled, and crop production for household use increased five-fold. Within the same period, each farmer's annual net earnings increased roughly six-fold.<sup>41</sup>

### Case Study: Applying Local Knowledge to Crop Production

A UN-funded project in the high plains of Bolivia relied upon traditional community knowledge of weather to improve crop production and avert risks imposed by climate change. The emphasis on applying women's knowledge of the environment – with regard to proper crop and seed storage, for example – was key to the project's success. As a result of this gender-sensitive collaboration, more than 100 context-specific agricultural technologies and practices were either introduced or re-introduced to the community to lessen the potential effects of climate change.<sup>42</sup>

## Integrate Environmental Conservation and Climate Change Adaptation with Women's Health Programming

Countries with the highest unmet need for contraception also tend to have the fastest growing populations, the highest projected declines in agricultural production, and the greatest vulnerability to climate change.<sup>43</sup> Without boosting investments to meet the current demand for sexual and reproductive health services, nations could erase important gains made in environmental and biodiversity conservation, impede adaptation for climate change, and roll back recent improvements in health, education, and gender equality. Despite ample recognition of the importance of voluntary family planning's role in climate change adaptation, family planning does not often receive climate change adaptation funding.<sup>80,81</sup> Adaptation strategies should reflect multi-sectoral approaches and provide funding to known, effective approaches, especially those that effectively meet the current unmet demand for contraception.<sup>82,83</sup> Importantly, all of these efforts should be rooted in rights-based approaches to voluntary family planning and sexual and reproductive health and rights.

One promising strategy is the population, health, and environment (PHE) approach, which involves linking efforts to improve environment and climate adaptation efforts with family planning and women's health. Projects have shown that the integrated nature of population, health, and environment – particularly the emphasis on family planning – has increased women's participation in natural resource management and uptake of voluntary family planning.<sup>44</sup> PHE operates under a rights-based approach, asserting the right of all people to have a satisfying and safe sex life, the choice to reproduce, and the freedom to decide if, when, and how often to do so.<sup>84</sup> One example, the *Sustaining Partnerships to Enhance Rural Enterprise and Agribusiness Development* (SPREAD) project in Rwanda incorporated technical assistance to communities who make their livelihoods from the coffee sector. This approach also included an integrated health component which incorporated health education aimed at reaching farmers. Preliminary reports pointed to the project's impact on greater support and demand for voluntary family planning and its links to family-wide health and economic benefits.<sup>45</sup> And a 2015 synthesis of multiple assessments of PHE programming suggests that, given the clear linkages and significant potential, more efforts are needed to rigorously document the impact of dually addressing voluntary family planning services and climate change adaptation.<sup>46</sup>

### Case Study: Blue Ventures in Madagascar

Blue Ventures has been working in Madagascar to incorporate sexual and reproductive health services with sustainable coastal livelihood and resource management initiatives. This integrated approach addresses the interconnected challenges of poor health, unmet family planning needs, environmental degradation, and food insecurity in a holistic way. It enables communities to manage their resources sustainably, both now and for the future. These approaches enable couples to better provide for their families by decreasing crude birth rates, improving food security, and empowering women to play an impactful role in resource management. Since Blue Ventures began in 2007, it is estimated that over 1,125 unintended pregnancies have been averted within a population of 20,000.<sup>47</sup>

### Case Study: The Watershed Management Project in Ethiopia

The Watershed Management Project in eastern Ethiopia ran between 2005 and 2007 and aimed to sustainably improve crop production and limit biodiversity loss in a region of 3000 rural households.<sup>85</sup> The project strategy was threefold: train inhabitants and local organizations in sustainable land management practices and ecosystem awareness; rehabilitate uplands and wetlands through reforestation; and promote modern, voluntary family planning methods and HIV/AIDS awareness by inviting health professionals to participate in environmental training.<sup>86</sup> After four years the Project showed tangible results, such as improved irrigation, compost, and tree-planting methods that have reversed soil degradation trends and improved nutritional levels, thus reducing the need to cut back the forest.<sup>87</sup> By integrating family planning and HIV/AIDS awareness, the Project has helped to ensure that these environmental benefits are sustainable, even in the event of rapid population growth, and are complemented by improved sexual and reproductive health.<sup>88</sup>

## Invest In and Promote Technologies That Enhance Renewable and Clean Energy Sources

Close to 2.9 billion people in the developing world still use solid fuels to heat and cook, which is directly linked to emissions that cause climate change.<sup>48</sup> Such polluting fuels include wood, coal, and charcoal, and the negative health effects of their use are dire.<sup>49</sup> In 2012, 4.3 million people died prematurely in low and middle-income countries from household air pollution.<sup>50</sup> The economic, health, and environmental cost of inaction around cooking with solid fuels and a lack of access to modern cooking fuels is a staggering \$123 billion per year.<sup>51</sup>

Around the world, women are more adversely affected by energy poverty – the cumulative impact of higher health and safety risks stemming from inefficient lighting, household air pollution, and unclean cooking fuels.<sup>52</sup> Yet if women had the power to make energy choices – including the purchase and use of clean energy sources such as cookstoves and high-efficiency fuels – it would help turn the tide of climate change.<sup>53</sup> Technology justice asserts the right of groups who are in greatest need of technological innovation to have access to technological advances, such as women living in poverty.<sup>89</sup> Technological research tends to focus on the wealthy and lack a regard for social and environmental costs on other people and the environment; these trends need to be reversed so that all people can access environmentally-friendly technologies that enhance wellbeing.<sup>90</sup>

Currently women make up only 20% of the renewable energy sector work force.<sup>54</sup> Bringing them into the workforce is a win-win. Female entrepreneurs would then have access to consumers and could promote new solutions, innovative technologies, and clean energy products.<sup>55</sup> This enables household consumers to choose safe, clean energy. Gender inclusivity within the energy sector is crucial to driving climate mitigation and adaptation.

### Case Study: Solar Sisters Harnesses the Power of Women to Promote Clean Energy

By creating a woman-centered sales network that brings clean energy technology to rural Africa, Solar Sisters is working to eradicate energy poverty and economically



empower women through a direct sales network to sell solar energy products. Solar Sisters currently works in Nigeria, Uganda, and Tanzania, and their programming boasts over 2,000 female entrepreneurs; their efforts to promote clean energy are reaching 300,000 beneficiaries.<sup>56</sup>

## SECTION 3: THE BENEFITS OF INVESTMENT

In order to mitigate the effects of climate change, women's involvement in decision-making is critical. For example, one study found that countries with higher female parliamentary representation are more prone to ratify international environmental treaties,<sup>57</sup> underscoring the reality that women are key changemakers in the fight for a clean, healthy world.

Energy deficiencies and related economic challenges will increase over the next twenty years unless the international community empowers women and includes them in climate change mitigation and adaptation efforts.<sup>58</sup> The social and environmental determinants of health — clean air, safe drinking water, sufficient food, and secure shelter — are directly affected by climate change.<sup>59</sup> The toll climate change takes and can continue to exact on human life alone is staggering. It is anticipated that poor health outcomes related to climate change will claim approximately 250,000 lives every year between 2030 and 2050.<sup>60</sup> These deaths will stem from malnutrition, malaria, diarrhea, and heat stress.<sup>61</sup>

Yet current research suggests there is a correlation between women's involvement in climate change mitigation and adaption and the reduction of greenhouse gases. For example, the Environment and Gender Index reports that in 2012 the 55 parties that include gender in their 2015 Intended Nationally Determined Contributions or INDCs accounted for only 17% of greenhouse gases emitted, but 83% of emissions were from other parties that do not specifically mention gender in their INDCs.<sup>62</sup> This division highlights the importance of understanding gender-climate linkages and the need for gender-responsive climate action.<sup>63</sup> A United Nations Food and Agriculture study also found that if women farmers were given the same agricultural inputs, tools, and financial resources as men, their agricultural yields would increase by 20 to 30%; national agricultural production could rise by up to 4%; and the number of malnourished people could drop by between 12 and 17%.<sup>64</sup> Evidence suggests that when women have secure rights and land access, they utilize resources sustainably.<sup>65</sup> Furthermore, small local farmers, including women, should be allowed to retain control over their farming methods and should be included in decision-making regarding agricultural investment.<sup>90</sup>

## SECTION 4 - CALLS TO ACTION

It stands to reason that the people who suffer the most from the impacts of climate change should not only have a say in global efforts to mitigate its effects, but also claim a leadership role. Women bear the greatest impact of climate change — as gatherers of shrinking resources, food producers, cooks, and caregivers. But their connection to the land makes them not only more vulnerable, but also more valuable in terms of finding solutions to climate change. In order to power progress for all, many different constituencies must work together — governments, civil society, academia, media, affected populations, the United Nations, and the private sector — to take the following actions for girls and women:

- Ensure female involvement, including indigenous women and grassroots groups, in climate change negotiations and resource management. *(Most relevant for: governments, civil society, academia, media, affected populations, the United Nations, and the private sector)*
- Strengthen opportunities for women's participation in climate change mitigation and adaptation processes. *(Most relevant for: civil society, governments, and the private sector)*
- Develop policies to address climate change that recognize gender-sensitive impacts, provide women with access to resources, and give them opportunities to participate in mitigation and adaptation processes. *(Most relevant for: governments, civil society, the United Nations, and the private sector)*
- Ensure key decision-makers understand how environmental degradation and climate change affect women differently than men. *(Most relevant for: governments, civil society, academia, media, affected populations, the United Nations, and the private sector)*
- Invest in technologies and initiatives to enhance renewable energy sources that reflect women's knowledge, needs, and roles, while incorporating indigenous expertise and traditional practices. *(Most relevant for: governments and the private sector)*
- Integrate environmental conservation strategies within women's health programming. *(Most relevant for: civil society, governments, and NGOs)*
- Include women in the creation of policies and strategies around environmental protection; building resilience; securing land and inheritance rights, food insecurity, and resources; and ending energy poverty. *(Most relevant for: governments, civil society, the United Nations, and the private sector)*

## ENDNOTES

<sup>1</sup> Beniston, Martin. "Climate Change and Its Impacts: Growing Stress Factors for Human Societies." *International Review of the Red Cross*. Sept. 2010. Web. 13 Apr. 2016. <<https://www.icrc.org/eng/assets/files/review/2010/irrc-879-beniston.pdf>>.

<sup>2</sup> "Women, Natural Resource Management, and Poverty: A Review of Issues and Opportunities." New Course. 2010. Web. <<http://anewcourse.org/wp-content/uploads/2014/04/women-natural-resource-management-and-poverty-PEW.pdf>>.

<sup>3</sup> Lake, Osprey Orielle. "Why Women Are Central to Climate Justice and Solutions." 24 Sep. 2015. Web. 1 Apr. 2016. <<http://ecowatch.com/2015/09/24/women-climate-change/>>.

<sup>4</sup> "Women, Natural Resource Management, and Poverty: A Review of Issues and Opportunities." New Course. 2010. Web. <<http://anewcourse.org/wp-content/uploads/2014/04/women-natural-resource-management-and-poverty-PEW.pdf>>.

<sup>5</sup> "Why Women Are Key." Women's Earth & Climate Action Network, International. 2016. Web. <<http://wecaninternational.org/why-women-are-key>>.

<sup>6</sup> "How the drought affects women." 6 Jul. 2011. Web. 1 Apr. 2016. <<http://www.actionaidusa.org/2011/07/how-drought-affects-women>>.

<sup>7</sup> Ibid.

<sup>8</sup> "Why Women Are Key." Women's Earth & Climate Action Network, International. 2016. Web. <<http://wecaninternational.org/why-women-are-key>>.

<sup>9</sup> Alam, Mayesha, Rukmani Bhatia, and Briana Mawby. "Women and Climate Change: Impact and Agency in Human Rights, Security, and Economic Development." Washington: Georgetown Institute for Women, Peace and Security, 2015. Web. 1 Apr. 2016. <<https://giwps.georgetown.edu/sites/giwps/files/Women%20and%20Climate%20Change.pdf>>.



- <sup>10</sup> "UNHCR Mid-Year Trends 2015." New York: UNHCR, 2015. Web. 1 Apr. 2016. <<http://www.unhcr.org/56701b969.html>>.
- <sup>11</sup> Yonetani, Michelle. "Global Estimates 2015: People Displaced by Disasters." Geneva: Internal Displacement Monitoring Centre, 2015. Web. 1 Apr. 2016. <<http://www.internal-displacement.org/assets/library/Media/201507-globalEstimates-2015/20150713-global-estimates-2015-en-v1.pdf>>.
- <sup>12</sup> "The Anatomy of a Silent Crisis." *Human Impact Report Climate Change*. Global Humanitarian Forum, 2009. Web. 30 Mar. 2016. <<http://www.ghf-ge.org/human-impact-report.pdf>>.
- <sup>13</sup> "Gender and Climate Change." n.d. Web. 1 Apr. 2016. <[http://unfccc.int/gender\\_and\\_climate\\_change/items/7516.php](http://unfccc.int/gender_and_climate_change/items/7516.php)>.
- <sup>14</sup> "Gender equality & climate change." Apr. 2010. Web. 1 Apr. 2016. <<http://www.norden.org/en/news-and-events/articles/gender-equality-climate-change>>.
- <sup>15</sup> "Climate Change: Tackling the Greatest Human Rights Challenge of Our Time - Recommendations for Effective Action on Climate Change and Human Rights." CARE International and the Center for International Environmental Law. Feb. 2015. Web. <[https://www.care.at/images/Advocacy/CARE\\_and\\_CIEL\\_-\\_Climate\\_Change\\_and\\_Human\\_Rights.pdf](https://www.care.at/images/Advocacy/CARE_and_CIEL_-_Climate_Change_and_Human_Rights.pdf)>.
- <sup>16</sup> Aguilar, Lorena. "Training Manual on Gender and Climate Change." International Union for Conservation of Nature (IUCN) and the United Nations Development Programme (UNDP). 2009. Web. <<https://portals.iucn.org/library/efiles/documents/2009-012.pdf>>.
- <sup>17</sup> Pearl-Martinez, Rebecca. "The Art of Implementation: Gender Strategies Transforming National and Regional Climate Change Decision Making." Global Gender and Climate Alliance and International Union for Conservation of Nature. 2012. Web. <[https://cmsdata.iucn.org/downloads/the\\_art\\_of\\_implementation.pdf](https://cmsdata.iucn.org/downloads/the_art_of_implementation.pdf)>.
- <sup>18</sup> Aguilar, Lorena, et al. "Roots for the Future: The Landscape and Way Forward on Gender and Climate Change." Global Gender and Climate Alliance and International Union for Conservation of Nature. 2015. Web. <<http://genderandenvironment.org/wp-content/uploads/2015/12/RFTF-CH-2.pdf>>.
- <sup>19</sup> "Asia-Pacific Human Development Report: Power, Voice, and Rights." UNDP. 2011. Web. <[http://www.asia-pacific.undp.org/content/rbap/en/home/library/human\\_development/asia-pacific-hdr-2010/](http://www.asia-pacific.undp.org/content/rbap/en/home/library/human_development/asia-pacific-hdr-2010/)>.
- <sup>20</sup> "Women in National Parliaments." Inter-Parliamentary Union. Feb. 2016. Web. <<http://www.ipu.org/wmn-e/world.htm>>.
- <sup>21</sup> Huyer, Sophia, et al. "Supporting women farmers in a changing climate: five policy lessons." Policy Brief no. 10. Copenhagen: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), 2015. Web. 1 Apr. 2016. <<http://www.wocan.org/resource-keywords/womens-leadership-0#>>.
- <sup>22</sup> Frölicher, Thomas Lukas, et al. "Continued Global Warming After CO2 Emissions Stoppage." *Nature Climate Change* 4 (2014): 40–44. Web. <<http://www.nature.com/nclimate/journal/v4/n1/full/nclimate2060.html>>.
- <sup>23</sup> Laddey, Ryan, et al. "Africa Adaptation Programme Experiences Gender and Climate Change: Advancing Development Through an Integrated Gender Perspective." UNDP. Mar. 2011. Web. <[http://www.undp.org/content/dam/aplps/publication/en/publications/environment-energy/www-ee-library/climate-change/africa-adaptation-programme-experiences-gender-and-climate-change/AAP\\_Discussion\\_Paper1\\_English.pdf](http://www.undp.org/content/dam/aplps/publication/en/publications/environment-energy/www-ee-library/climate-change/africa-adaptation-programme-experiences-gender-and-climate-change/AAP_Discussion_Paper1_English.pdf)>.
- <sup>24</sup> "Securing Women's Land and Property Rights: A Critical Step to Address HIV, Violence, and Food Security." Open Society Foundations. 2014. Web. <<http://www.icrw.org/sites/default/files/publications/Securing-Womens-Land-Property-Rights-20140307.pdf>>.
- <sup>25</sup> Giovarelli, Renee, Beatrice Wamalwa, and Leslie Hannay. "Land Tenure, Property Rights, and Gender Challenges and Approaches for Strengthening Women's Land Tenure and Property Rights." USAID. July 2013. Web. 13 Apr. 2016. <[http://www.usaidlandtenure.net/sites/default/files/USAID\\_Land\\_Tenure\\_Gender\\_Brief\\_061214.pdf](http://www.usaidlandtenure.net/sites/default/files/USAID_Land_Tenure_Gender_Brief_061214.pdf)>.
- <sup>26</sup> "Land Rights and Climate Change." UNDP. 2016. Web. <[http://www.undp.org/content/undp/en/home/ourwork/democraticgovernance/focus\\_areas/focus\\_justice\\_law/legal\\_empowerment/focus\\_areas/property\\_rights\\_tenuresecurity/land\\_rights\\_and\\_climatechange/](http://www.undp.org/content/undp/en/home/ourwork/democraticgovernance/focus_areas/focus_justice_law/legal_empowerment/focus_areas/property_rights_tenuresecurity/land_rights_and_climatechange/)>.
- <sup>27</sup> "Women and Natural Resources Unlocking the Peacebuilding Potential." United Nations Environment Programme, United Nations Entity for Gender Equality and the Empowerment of Women, United Nations Peacebuilding Support Office and United Nations Development Programme, 2013. Web. 13 Apr. 2016. <[http://www.undp.org/content/dam/undp/library/crisis\\_prevention/WomenNaturalResourcesPBreport2013.pdf](http://www.undp.org/content/dam/undp/library/crisis_prevention/WomenNaturalResourcesPBreport2013.pdf)>.
- <sup>28</sup> Lee, David R., and Bernardete Neves. "Background Paper for IFAD 2009 Rural Poverty Report: Rural Poverty and Natural Resources: Improving Access and Sustainable Management." IFAD. 2009. Web. 18 Apr. 2016. <<https://www.ifad.org/documents/10180/122db54c-27d1-4cd7-9d57-f4b3e607c263>>.
- <sup>29</sup> "Women, Gender Equality and Climate Change." *UN WomenWatch*. Web. 18 Apr. 2016. <[http://www.un.org/womenwatch/feature/climate\\_change/downloads/Women\\_and\\_Climate\\_Change\\_Factsheet.pdf](http://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf)>.
- <sup>30</sup> Climate Change and Natural Disasters Affecting Women, Peace and Security." Asia Pacific Forum on Women, Law and Development (APWLD). 2015. Web. <<http://apwld.org/wp-content/uploads/2015/03/Climate-change-Natural-disasters-Conflict.pdf>>.
- <sup>31</sup> "Gender and Climate Change." UNDP. 2016. Web. <[http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate\\_change/gender/africa-adaptation-programme-experiences-gender-and-climate-change.html](http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/gender/africa-adaptation-programme-experiences-gender-and-climate-change.html)>.
- <sup>32</sup> "Women's Key Role in Agricultural Production Emphasized." UN Women. Oct. 2014. Web. <<http://www.unwomen.org/en/news/stories/2014/10/sharefair-rural-women-technologies>>.
- <sup>33</sup> Chakrabarti, Soma. "The Gender Advantage: Women on the Front Line of Climate Change." International Fund for Agricultural Development. 2014. Web. <[http://reliefweb.int/sites/reliefweb.int/files/resources/gender\\_0.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/gender_0.pdf)>.
- <sup>34</sup> "Women's Climate Action Agenda." Women's Earth and Climate Action Network, International. 2014. Web. <[http://wecaninternational.org/content\\_documents/WECAN-Agenda-web2.pdf](http://wecaninternational.org/content_documents/WECAN-Agenda-web2.pdf)>.
- <sup>35</sup> "Gender in Climate Smart Agriculture." *Agriculture Global Practice*. World Bank Group and the Food and Agriculture Organization of the United Nations and the International Fund for Agricultural Development, 2015. Web. 31 Mar. 2016. <<http://www.fao.org/3/a-az917e.pdf>>.
- <sup>36</sup> Ibid.
- <sup>37</sup> "Enhancing the Role of Indigenous Women in Sustainable Development: IFAD Experience with Indigenous Women in Latin America and Asia." IFAD. Web. 18 Apr. 2016. <<https://www.ifad.org/documents/10180/3629656a-70f3-4c94-b58f-fd1e7ea2f4dc>>.
- <sup>38</sup> "Shifting Cultivation, Livelihood, and Food Security: New and Old Challenges for Indigenous Peoples in Asia." Bangkok: Food and Agriculture Organization of the United Nations, International Work Group for Indigenous Affairs, and Asia Indigenous Peoples Pact, 2015. Web. 1 Apr. 2016. <<http://www.fao.org/3/a-i4580e.pdf>>.
- <sup>39</sup> Land, Graham. "CLIMATE CHANGE, INDIGENOUS WOMEN AND THE FIGHT TO SAVE THE AMAZON." 28 Feb. 2016. Web. 1 Apr. 2016. <<http://wafmag.org/2016/02/climate-change-indigenous-women-fight-save-amazon/>>.
- <sup>40</sup> Ibid.
- <sup>41</sup> Flores, Ana Liz, et al. "Community Resilience at Scale: Grassroots Women Demonstrating Successful Practice." Huairou Commission. 2015. Web. <[https://huairou.org/sites/default/files/Successful%20Practices%20LuLu%20baja-min\\_0.pdf](https://huairou.org/sites/default/files/Successful%20Practices%20LuLu%20baja-min_0.pdf)>.
- <sup>42</sup> "Gender, Climate Change, and Health." Geneva: World Health Organization, 2014. Web. <[http://apps.who.int/iris/bitstream/10665/144781/1/9789241508186\\_eng.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/144781/1/9789241508186_eng.pdf?ua=1)>.
- <sup>43</sup> De Souza, Roger-Mark. "Resilience, Integrated Development and Family Planning: Building Long-Term Solutions." *Reproductive Health Matters* 22.43 (2014): 75–83. Web. <[http://www.rhm-elsevier.com/article/S0968-8080\(14\)43773-X/pdf](http://www.rhm-elsevier.com/article/S0968-8080(14)43773-X/pdf)>.
- <sup>44</sup> Yavinsky, Rachel Winnik, et al. "The Impact of Population, Health, and Environment Projects: A Synthesis of Evidence." USAID and the Population Council. Jun. 2015. Web. <<http://evidenceproject.popcouncil.org/wp-content/uploads/2015/06/PHE-Synthesis-Report1.pdf>>.
- <sup>45</sup> Ibid.
- <sup>46</sup> Ibid.
- <sup>47</sup> "Working Holistically: Making the Connections, Sustaining Real Change." Blue Ventures Conservation. 2015. Web. <<https://blueventures.org/wp-content/uploads/2015/10/BV-Working-Holistically-PHE-Factsheet-2015.pdf>>.
- <sup>48</sup> "Unlocking Clean Cooking and Heating Solutions Key to Reaching Sustainable Energy Goals." The World Bank. 19 May 2015. Web. <<http://www.worldbank.org/en/news/feature/2015/05/19/unlocking-clean-cooking-and-heating-solutions-key-to-reaching-sustainable-energy-goals>>.
- <sup>49</sup> Ibid.
- <sup>50</sup> "Burden of Disease from Household Air Pollution for 2012." World Health Organization. 2012. Web. <[http://www.who.int/phe/health\\_topics/outdoorair/databases/FINAL\\_HAP\\_AAP\\_BoD\\_24March2014.pdf?ua=1](http://www.who.int/phe/health_topics/outdoorair/databases/FINAL_HAP_AAP_BoD_24March2014.pdf?ua=1)>.
- <sup>51</sup> "THE STATE OF THE GLOBAL CLEAN AND IMPROVED COOKING SECTOR." Energy Sector Management Assistance Program and the Global Alliance for Clean Cookstoves. The International Bank for Reconstruction and Development / THE WORLD BANK GROUP, 2015. Web. 31 Mar. 2016. <<https://openknowledge.worldbank.org/bitstream/handle/10986/21878/96499.pdf?sequence=1&isAllowed=y>>.
- <sup>52</sup> "Women's Entrepreneurship for Sustainable Energy." UNEP and UN Women. 2015. Web. <<http://www2.unwomen.org/~media/headquarters/attachments/sections/library/publications/2015/fpi%20briefenergy%20globalusv3.pdf?v=1&d=20160211T155645>>.
- <sup>53</sup> Miller, Grant and A. Mushfiq Mobarak. "Intra-Household Externalities and Low Demand for a New Technology: Experimental Evidence on Improved Cookstoves." Stanford University. Nov. 2011. Web. <[http://cleancookstoves.org/resources\\_files/intra-household-externalities.pdf](http://cleancookstoves.org/resources_files/intra-household-externalities.pdf)>.
- <sup>54</sup> Ferroukhi, Rabia, et al. "Renewable Energy and Jobs." International Renewable Energy Agency. 2013. Web. <<http://www.irena.org/rejobs.pdf>>.
- <sup>55</sup> "Women's Entrepreneurship for Sustainable Energy." UNEP and UN Women. 2015. Web. <<http://www2.unwomen.org/~media/headquarters/attachments/sections/library/publications/2015/fpi%20briefenergy%20globalusv3.pdf?v=1&d=20160211T155645>>.
- <sup>56</sup> Lambe, Fiona, et al. "Africa: Women Can Power Alternative Energy Solutions for Africa." AllAfrica. Mar. 2016. Web. <<http://allafrica.com/stories/201603130013.html>>.
- <sup>57</sup> Norgaard, Kari and Richard York. "Gender Equality and State Environmentalism." *Gender & Society* 19.4 (2005). Web. <<http://pages.uoregon.edu/norgaard/pdf/Gender-Equality-Norgaard-York-2005.pdf>>.
- <sup>58</sup> "Energy Poverty: How to Make Modern Energy Access Universal? Special Early Excerpt of the World Energy Outlook 2010 for the UN General Assembly on the Millennium Development Goals." International Energy Agency. 2010. Web. <[http://www.se4all.org/sites/default/files/l/2013/09/Special\\_Excerpt\\_of\\_WEO\\_2010.pdf](http://www.se4all.org/sites/default/files/l/2013/09/Special_Excerpt_of_WEO_2010.pdf)>.
- <sup>59</sup> Hales, Simon, et al. "Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s." World Health Organization. 2014. Web. <[http://apps.who.int/iris/bitstream/10665/134014/1/9789241507691\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/134014/1/9789241507691_eng.pdf)>.



- <sup>60</sup> Ibid.
- <sup>61</sup> Ibid.
- <sup>62</sup> "Gender in Mitigation Actions." EGI Brief. Washington: IUCN, 2016. Web. <[https://portals.iucn.org/union/sites/union/files/doc/gender\\_in\\_mitigation\\_actions\\_feb\\_2016.pdf](https://portals.iucn.org/union/sites/union/files/doc/gender_in_mitigation_actions_feb_2016.pdf)>.
- <sup>63</sup> Ibid.
- <sup>64</sup> "The State of Food and Agriculture." Food and Agriculture Organization of the United Nations. 2011. Web. <<http://www.fao.org/docrep/013/i2050e/i2050e.pdf>>.
- <sup>65</sup> "Women's Land Rights and Climate Change." Asia Pacific Forum on Women Law and Development, Global Initiative for Economic, Social and Cultural Rights and Landesa Center for Women's Land Rights, 24 Feb. 2016. Web. 13 Apr. 2016. <<http://globalinitiative-escr.org/wp-content/uploads/2016/02/160224-CEDAW-written-submission-day-of-discussion-gender-climate-change-final.pdf>>.
- <sup>66</sup> "Solomon Islands: Flash Floods." Situation Report No. 9. 2014. Web. 10 Aug. 2016. <[http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA\\_SLB\\_FlashFloods\\_Sitrep9\\_20140529\\_FINAL.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA_SLB_FlashFloods_Sitrep9_20140529_FINAL.pdf)>.
- <sup>67</sup> "Family violence could treble after quake." 10 Sep. 2010. Web. 11 Aug. 2016. <[http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10672475](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10672475)>.
- <sup>68</sup> "The 2012 Fiji Floods: Gender Sensitivity in Disaster Management." A Qualitative Review of Gender and Protection Issues in Disaster Response. Suva: UN Women, 2012. Web. 10 Aug. 2016. <[http://www.pacificdisaster.net/pdnadmin/data/original/FJI\\_FL\\_UNWomen\\_2012\\_gender\\_sensitivity.pdf](http://www.pacificdisaster.net/pdnadmin/data/original/FJI_FL_UNWomen_2012_gender_sensitivity.pdf)>.
- <sup>69</sup> Nellemann, C., Verma, R., and Hislop, L. "Women at the forefront of climate change: Gender risks and hopes." A Rapid Response Assessment. 2011. Web. 10 Aug. 2016. <[http://www.unep.org/pdf/rra\\_gender\\_screen.pdf](http://www.unep.org/pdf/rra_gender_screen.pdf)>.
- <sup>70</sup> "Climate Change, Disasters and Gender-Based Violence in the Pacific." Suva: UN Women, n.d. Web. 10 Aug. 2016. <<http://www.unclearn.org/sites/default/files/inventory/unwomen701.pdf>>.
- <sup>71</sup> Ibid.
- <sup>72</sup> "Protecting the Human Rights of Internally Displaced Persons in Natural Disasters: Challenges in the Pacific." Discussion Paper. 2011. Web. 10 Aug. 2016. <[http://pacific.ohchr.org/docs/IDP\\_report.pdf](http://pacific.ohchr.org/docs/IDP_report.pdf)>.
- <sup>73</sup> "Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation." Good Practices and Lessons Learned. 2008. Web. 11 Apr. 2016. <[http://www.unisdr.org/72files/3391\\_GenderPerspectivesIntegratingDRRCCGood20Practices.pdf](http://www.unisdr.org/72files/3391_GenderPerspectivesIntegratingDRRCCGood20Practices.pdf)>.
- <sup>74</sup> "What is Disaster Risk Reduction?" n.d. Web. 11 Aug. 2016. <<https://www.unisdr.org/who-we-are/what-is-drr>>.
- <sup>75</sup> "Equal Harvest: Removing the Barriers to Women's Participation in Smallholder Agriculture." A Fairtrade Foundation Report. London: Fairtrade Foundation, 2015. Web. 16 Aug. 2016. <<https://www.fairtrade.org.uk/Download.ashx?id=%7B4B4DA990-0F13-4C54-813F-812A1BE454D1%7D>>.
- <sup>76</sup> "GENDER EQUALITY GOOD FOR WOMEN, BUSINESS AND DEVELOPMENT." 4 Mar. 2015. Web. 16 Aug. 2016. <<http://www.fairtrade.org.uk/en/media-centre/news/march-2015/gender-equality-good-for-women-business-and-development>>.
- <sup>77</sup> Ibid.
- <sup>78</sup> Ibid.
- <sup>79</sup> Ibid.
- <sup>80</sup> Mutunga, C. and Hardee, K. "Population and reproductive health in National Adaptation Programmes of Action (NAPAs) for climate change in Africa." *Afr J Reprod Health* 14.4 (2010): 127-39. Web. 11 Aug. 2016. <<http://www.ncbi.nlm.nih.gov/pubmed/21812206>>.
- <sup>81</sup> "Population and Reproductive Health in National Adaptation Programmes of Action." Executive Summary. Washington: Population Action International, 2009. Web. 11 Aug. 2016. <[http://pai.org/wp-content/uploads/2011/12/NAPA\\_Exec\\_Summary.pdf](http://pai.org/wp-content/uploads/2011/12/NAPA_Exec_Summary.pdf)>.
- <sup>82</sup> Mutunga, C. and Hardee, K. "Population and reproductive health in National Adaptation Programmes of Action (NAPAs) for climate change in Africa." *Afr J Reprod Health* 14.4 (2010): 127-39. Web. 11 Aug. 2016. <<http://www.ncbi.nlm.nih.gov/pubmed/21812206>>.
- <sup>83</sup> "Population and Reproductive Health in National Adaptation Programmes of Action." Executive Summary. Washington: Population Action International, 2009. Web. 11 Aug. 2016. <[http://pai.org/wp-content/uploads/2011/12/NAPA\\_Exec\\_Summary.pdf](http://pai.org/wp-content/uploads/2011/12/NAPA_Exec_Summary.pdf)>.
- <sup>84</sup> "Linking Population and Sexual and Reproductive Health and Rights to Sustainable Development & Climate Change." 2015. Web. 16 Aug. 2016. <<http://psda.org.uk/wp-content/uploads/2015/12/PSDA-COP-briefing.pdf>>.
- <sup>85</sup> Deribe, Shewaye. "Wichi Integrated Wetland-Watershed Management Project." Ethio Wetlands and Natural Resources Association (EWNRA). Addis Ababa: International Conference on Population, Health, and Environment (PHE): Integrated Development for East Africa, 2007. Web. 16 Aug. 2016. <<http://www.ehproject.org/PDF/phe/deribe-wichi.pdf>>.
- <sup>86</sup> Bryant, Leo, et al. "Climate change and family planning: least-developed countries define the agenda." *Bull World Health Organ* 87 (2009): 852-857. Web. 16 Aug. 2016. <<http://www.who.int/bulletin/volumes/87/11/08-062562.pdf>>.
- <sup>87</sup> Ibid.
- <sup>88</sup> Ibid.
- <sup>89</sup> "Technology Justice." n.d. Web. 16 Aug. 2016. <<http://policy.practicalaction.org/policy-themes/technology-justice>>.
- <sup>90</sup> Ibid.
- <sup>90</sup> "The New Alliance: A New Direction Needed Reforming the G8's Public-private Partnership on Agriculture and Food Security." OXFAM, GROW, Sept. 2013. Web. 31 Aug. 2016. <<https://www.oxfam.org/sites/www.oxfam.org/files/bn-new-alliance-new-direction-agriculture-250913-en.pdf>>.

