

Addressing the Impacts of Climate Change In the World's Most Vulnerable Nations

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I would like to thank the Chair, Senator Menendez, the Ranking Member Senator Corker, and all the Senators on this Subcommittee, for the opportunity to comment on how climate change is already affecting people in developing countries, and on measures the United States Senate can take to help address their urgent needs.

ActionAid is an international anti-poverty agency working in 50 countries, taking sides with poor people to end poverty and injustice together. Our approach to climate change is informed by over 35 years of experience working alongside poor and excluded people in Africa, Asia and Latin America. Climate change has become an institutional priority in recent years because of ActionAid's focus on agriculture and disaster risk reduction. Our field work has confirmed the urgent need for adaptation strategies and for significant financial commitments to avert catastrophic famine and loss of life from increased vulnerability to extreme weather events in the poorest countries.

The good news on climate is that the government of the United States is now focused on the problem. The Obama Administration has recognized the need for real negotiations on emissions reductions and the transition to a clean energy economy. And after passage of the American Clean Energy and Security Act in the House in June, the Senate now takes up legislation that could improve the House bill and strengthen US contributions to resolving this global challenge.

But the bad news is that the impacts of climate change are already wreaking havoc on food production, poverty eradication programs and emergency response systems in developing countries. And no matter how much progress the Congress, the President and the international negotiators at December's United Nations Framework Convention on Climate Change achieve on emissions reductions and clean technologies, global temperatures will continue to rise throughout this century, making the climate consequences worse.¹ There is therefore no viable alternative to investing in climate adaptation: helping people, communities and entire countries face these consequences must be a central pillar of US foreign policy.

¹ A new UNEP report, the 'Climate Change Science Compendium 2009,' offers an overview of recent global warming research and concludes with increased projections of temperature rises expected by 2100. Scientific assessments now outstrip worst case scenarios foreseen by the Intergovernmental Panel on Climate Change in 2007. See <http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=596&ArticleID=6326&l=en>

1. The Poorest People are the Most Vulnerable to Climate Impacts

Perhaps the cruelest irony of the unfolding climate emergency is that those most intensely and immediately affected are least responsible for the greenhouse gas emissions that are driving global warming. The response to climate change can thus be framed as one of the gravest equity challenges of the twenty-first century. The eight richest countries in the world, which represent just 13 percent of the world's population, are responsible for generating over 40 percent of the greenhouse gas emissions that cause global warming.

Although projections suggest that climate impacts will vary geographically, analyses by the Food and Agriculture Organization of the United Nations (FAO) and the International Institute of Applied Systems Analysis (IIASA) have attempted to pinpoint likely regional impacts of climate change on agricultural productivity and on food security. Their work suggests that, on balance, developing countries will lose out due to an increase in arid areas in coming decades:

“The FAO/IIASA study indicates that the developing world would experience an 11% decrease in cultivable rain-fed land, with consequent decline in cereal production. Sixty-five developing countries, representing more than half the developing world's total population in 1995, will lose about 280 million tons of potential cereal production as a result of climate change. This loss, valued at an average of US \$200 per ton, totals US \$56 billion, equivalent to some 16% of the agricultural gross domestic product of these countries in 1995. Some 29 African countries face an aggregate loss of around 35 million tons in potential cereal production.

“In the case of Asia, the impact of climate change is mixed: India loses 125 million tons, equivalent to 18% of its rain-fed cereal production; China's rain-fed cereal production potential of 360 million tons, on the other hand, increases by 15%. Among the cereals, wheat production potential in the sub-tropics is expected to be the worst affected, with significant declines anticipated in Africa, South Asia, and Latin America.”²

The Intergovernmental Panel on Climate Change (IPCC) also identifies agriculture as a sector particularly vulnerable to climate change. Seventy per cent of the world's extreme poverty is found in agricultural areas³ where subsistence farmers depend on rain for their harvests. In some countries in Africa, yields from rain-fed agriculture could be reduced by up to 50 percent by 2020,⁴ and in Central and South Asia, crop yields could fall by up to 30 percent by 2050⁵ because of climate change.

Further to these official statistics, participatory vulnerability analyses (PVA) conducted by ActionAid have revealed that poor and excluded people themselves identify loss of crops due to

² FAO and IIASA. *Impact of Climate Change, Pests and Diseases on Food Security and Poverty Reduction*, 31st Session of the Committee on World Food Security 23-26 May 2005, FAO, page 2.

³ <http://www.fao.org/DOCREP/004/ac349e/ac349e03.htm>

⁴ IPCC (2007): Summary for Policymakers. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22.

⁵ Prioritizing Climate Change Adaptation Needs for Food Security in 2030. David B. Lobell, Marshall B. Burke, Claudia Tebaldi, Michael D. Mastrandrea, Walter P. Falcon, Rosamond L. Naylor. *Science* 1 February 2008: Vol. 319. no. 5863, pp. 607 – 610. DOI: 10.1126/science.1152339.

climate change as a key factor increasing their vulnerability.⁶ ActionAid's field work shows that decreases in crop production are happening already. And to add to the stress of decreasing yields, poor people in developing countries (who typically spend 50–80 per cent of their income on food)⁷ have been doubly hit by recent volatility in food prices. While commodity prices began to decline in late 2008, many of the factors that led to high prices are still in place. This volatility, compounded by increasing climate variability, will therefore likely continue to be a serious problem for the foreseeable future.

Since women in the developing world are largely responsible for food production and provision, the impact of climate change on agriculture also means that women—who already constitute the majority of poor people—are most adversely affected. Women depend more than men on the fragile ecosystems that are threatened by climate change, yet lack adequate access to and control over the natural resources, technologies, and credit they need to produce food. As a result, they are more vulnerable to seasonal and episodic weather variations, and to natural disasters resulting from climate change.

The voices and experiences of those most affected must be considered in the deliberations of policy makers whose decisions will have life-or-death implications for them. In this testimony I would like to focus on two women farmers with whom ActionAid has worked closely in recent years. I hope that through their reflections on climate change in Malawi and Bangladesh, the Subcommittee might gain new insight into impacts of climate change in the developing world, and into the kinds of solutions in which we might invest on a larger scale to help them adapt.

2. Malawi: Joyce Tembenu

My name is JOYCE TEMBENU. I am 38 years old, the mother of three children, and a widow. I am the food security Officer of Salima Women's Network on Gender (SAWEG) and a member of Yamikani Women Farmers Group in the SALIMA district of Malawi in Southern Africa. With SAWEG, I work on issues of climate change adaptation, women's rights, and HIV and AIDS.

As you may know, Malawi is an agriculturalist society. We depend on agriculture for our livelihood. But we are being challenged by climate change. I am a farmer. My mother was a farmer. For my mother, the rains used to come from October until April. This would give our local indigenous varieties of seeds time to mature and grow. And we would have food on the table and for the market. Today, because of climate change, the rains come in December and end in March. Our local varieties do not have time to mature. We are forced to buy hybrid crops, which are much more input-intensive, and we cannot afford these inputs. We are poor. So we are starving in Malawi.

Because of Climate Change we see:

- *An increased frequency and intensity of floods and droughts which causes death of people, food crops, and animals.*
- *Houses, toilets, crops and household items collapse and are carried away by running water.*

⁶ International Institute for Applied Systems Analysis. Fischer, Günther; Shah, Mahendra; Van Velthuizen, Harrij; and Nachtergaele, Freddy O. Global Agro-ecological Assessment for Agriculture in the 21st Century

⁷ International Food Policy Research Institute. *High Food Prices: the What, Who, and How of Proposed Policy Actions*. Policy brief: May 2008.

- *Increased cases of water borne diseases, such as malaria, cholera, dysentery.*
- *Women engaged in unsafe sex just to buy food for their families. And girls as young as 13 years old are forced to get married, exposing them to greater risks of HIV and AIDS.*
- *Migration of men to urban areas in search of work, leaving women with extended families and the burden of feeding children whose parents have died of HIV & AIDS.*



As a woman farmer in Malawi, Joyce's challenges are familiar to a huge segment of the population there. Agriculture is the main driver of Malawi's economy, contributing up to 39 per cent of GDP and employing 80 per cent of the country's labor force. About 6.3 million Malawians live below the poverty line, the majority in rural areas. More than 90 per cent of them rely on rain-fed subsistence farming to survive. Climate change and weather extremes are having a huge impact on the country's agriculture sector, affecting productivity and therefore resulting in food shortages and chronic hunger. Crop losses related to natural disasters, such as drought and flash floods, as well as crop

failure due to erratic and unpredictable rainfall, pose a great danger to food security, especially for poor and marginalized communities.

Vulnerability and adaptation studies undertaken in Malawi predict that temperatures are likely to increase by 1°C, 2°C and 4°C for the years 2020, 2075 and 2100 respectively, and that rainfall will increase by up to 8 per cent by the year 2100.⁸ In these circumstances, the number and intensity of drought and floods will increase, with a negative impact on food production. If nothing is done to support poor and marginalized communities, their right to food will be severely undermined. Women, who represent the majority of full-time farmers, will be particularly adversely affected.

Rainfall data from 1990 to date shows that the Districts like Salima, where Joyce is from, have been subjected to climate change and weather extremes in most years. There were recorded droughts in Salima during the 1994-95, 1999-2000, 2001-02 and 2004-05 seasons, which resulted in total annual rainfall of less than 800mm, hardly enough to sustain crop production. Salima was also subjected to floods during the 1997-98, 2002-03 and 2005-06 seasons, causing losses of property; destruction of infrastructure; siltation of rivers; destruction of crops such as maize, sorghum, millet and rice; diseases like malaria and cholera; and malnutrition and hunger.

Climate-related hazards have a significant impact on human health. During years of drought, malnutrition becomes a major issue, especially amongst children and the elderly. Any fluctuation in climate leading to adverse weather conditions is likely to lead to significant malnutrition problems among the population as less food is consumed. Children, breastfeeding mothers, pregnant women, female-headed households and orphans are among the most vulnerable.

The dependence of Malawi's agricultural sector on the climate cannot be over-emphasized. Most of the crops and livestock are grown under rain-fed conditions; therefore any drought or flood has a direct impact on productivity and may result in country-wide food deficits and hunger, especially among small-holders, the most vulnerable groups. The increased severity of floods means increased risks of ruined crops, killed or injured livestock as well as submerged and destroyed infrastructure (roads, footpaths and buildings). People from Mbangi Village, for example, have suffered from floods that have caused extensive and severe damage to their assets and livelihood. They have also observed that the frequency and severity of the floods have increased over the last decade.

The drought experienced in the 2001-02 season resulted in low crop yields and a food deficit of 570,000 tons. More than 3.2 million people were affected and the World Food Program (WFP) spent \$87.5 million on emergency food aid, while the Malawian Government spent an additional \$67.4 million. Some elementary schools had to close down due to the hunger crisis, and a large number of children suffered from kwashiorkor (a dietary deficiency disease). Most people started eating wild fruits, roots and tubers and indigenous vegetables, while at the same time eating and harvesting premature maize to avert hunger.

In order to become more resilient to climate change, communities and households attempt to diversify their agricultural production and to intensify activities they can carry out when the weather is favorable. Communities have also begun to embrace methods to improve soil fertility, using

⁸ Environmental Affairs Dept. (2005). National Adaptation Programmes of Action (NAPA). Government Press, Zomba. Environmental Affairs Dept. (2008). Malawi's Second National Communication to the UNFCCC. Government Press, Zomba.

organic manure instead of chemical fertilizers. In Salima, for example, farmers use the ‘*chimoto*’ system where vegetative material is composted in special mud structures. The cultivation of winter crops using the residual soil moisture from river banks or flooded areas is also a way to cope. Farming communities living along rivers, the lakeshore and the Shire valley are successfully adapting to changing climatic conditions by growing a second crop of maize that is planted at the end of the rains in March and is harvested in winter.

As part of the adaptation programs, many clubs and communities from Malawi are engaging in activities to diversify their livelihood. In many cases, women are leading in this effort. For example, the Salima Women’s Network on Gender (SAWEG), of which Joyce Tembenu is food security officer, has started various income-generating activities in order to empower themselves economically. Women and girls in Salima realized that in times of hunger they were vulnerable because their husbands often controlled the money they would need to buy more food. Now women are involved in various activities such as selling cakes and scones (‘*zitumbuwa*’), brewing beer, making traditional pots or weaving baskets.

Small-holder farmers produce about 80 per cent of Malawi’s food. Most of them are poor and depend on rain-fed agriculture, so they lack resources to adapt to climate change sufficiently. There is a need for concerted efforts from funding agencies to assist the farmers to implement adaptation programs. Governments must play a key role in providing a policy framework to guide and support effective adaptation strategies for individuals and communities. Some key recommendations from ActionAid partners include the need for:

- High-quality climate information and tools for risk management that help to improve climate predictions. These will be critical, particularly for rainfall and storm patterns.
- Land-use planning and performance standards that encourage both private and public investment in buildings and other long-term infrastructure to take into account the vulnerability of different elements in the community systems.
- Governments that can contribute through long-term policies for natural resources protection and emergency preparedness.
- A financial safety net. This may be required for the poorest people who are often most vulnerable to the impacts of climate change and least able to afford protection.

The case of Malawi illustrates how women are leading adaptation efforts in their communities. For adaptation to be effective, funding must therefore support women’s efforts to reduce their vulnerability to the impacts of climate change, and build their capacity to become leaders in their communities.

3. Bangladesh: Asiya Begum

Asiya Begum, a widow, lives with her elderly mother and two sons in the village of Charipara located on the river delta on Bangladesh’s southern tip. Over the past decade, the river has eroded land and forced one hundred families to find another place to live. “*Our poverty is caused by river erosion; people of two villages are now living in one,*” says Asiya. In 2007, Asiya’s family lost all their crops when Cyclone Sidr hit Bangladesh. The storm also increased the salinity of their land, making it more difficult to grow food. To supplement their family’s income, Asiya’s sons Mohibur (14) and Habibur (12) have quit school so that they can work.



Because of the impacts climate change is having on communities like Charipara, ActionAid is working in Bangladesh to help poor people adapt to changing weather patterns. In Asiya's village, the community identified declining food production as one of their greatest struggles, and decided to try new seed varieties and farming methods to produce better yields.

Asiya volunteered to participate in an ActionAid project in which the Bangladesh Rice Research Institute in Dhaka provided farmers with three seed varieties to test, and taught them how to use the seeds to produce better yields. *"Now we are doing Boro (a variety of rice) cultivation, which was not practiced in this village,"* says Asiya. *"We are going to harvest the rice in a few days, and we never had rice during this time of year. With the help of the project our poverty is getting reduced."* The new seeds, a better irrigation system, fertilizers and insect traps have nearly doubled crop yields in Charipara. *"We couldn't have vegetables before,"* Asiya adds. *"Now with ActionAid's support, we can even sell them. From every aspect, things are now getting better."*

Today, Asiya is urging her government and other agencies to further support adaptation to climate change through projects that build the resilience of poor communities and improve food production. The challenges she faces are typical for many in her country. With a population of about 140 million living in an area covering 144,000 km², Bangladesh is one of the most densely populated countries in

the world.⁹ More than 75 per cent of its people live in rural areas and agriculture represented nearly 20 per cent of the country's GDP in 2006.¹⁰

People living near the rivers of Bangladesh and the Bay of Bengal are used to floods. In the past, yearly floods even contributed to agriculture by bringing moisture and nutrients to the soil. Nowadays, however, the intensity and severity of floods has sharply increased. Most climate models predict that 17 per cent of the total area of Bangladesh along the coastal belt may be under water by the end of the twenty-first century due to rising sea levels. This will increase salinity intrusion, which is already having a negative effect on soil fertility. Seasonal droughts in the northwestern region of Bangladesh are also causing serious damage to crops and food shortages. Extreme weather events put a huge strain on the country's economy, infrastructure and social systems. They bring with them loss of lives, destruction of houses and public buildings, disruption of education and loss of assets and livelihoods. Their intensification will have a disastrous effect on poor people.

While disasters and food insecurity induced by climate change affect both women and men in Bangladesh, the burden of coping with disasters falls heavily on women's shoulders. The division of labor between men and women becomes critical, as disasters bring additional work and changes in environment that often reinforce and even intensify gender inequity. Because women are culturally perceived as having a lower social status, they suffer more than men from poverty, hunger, malnutrition, economic crises, environmental degradation, health-related problems and insecurity. ActionAid's field work shows that women are often forced to sell their assets, such as hens, chickens or goats, in order to feed their families, and when food support is insufficient to feed all family members, women are generally the ones who do not eat.

Climatic events such as changes in rainfall patterns, floods, storms, river bank erosion, salinity intrusion and drought have exacerbated the problems faced by Bangladesh's agricultural sector and increased the risks of food shortages. Cyclones also prevent fishermen from going to the coast or the rivers to bring back fish or crabs. Researchers from the Asian Disaster Preparedness Centre (ADPC) and the FAO have pointed out that agriculture in Bangladesh "is already under pressure from increasing demands for food and the parallel problems of depletion of agricultural land and water resources from overuse and contamination. Climate variability and projected global climate change makes the issue particularly urgent."¹¹

The associated decline in crop production, loss of assets and reduced employment opportunities contribute to household food insecurity. Food consumption falls, along with the ability of households to meet their nutritional needs on a sustainable basis. Vegetables and roots are in short supply during natural hazards. Acute shortage of pure drinking water makes the situation even more critical, as most women from rural areas have to carry water over long distances.

In Bangladesh, many communities are doing what they can merely to cope with the impacts of climate change. For example, farmers have started to change the way they cultivate their land; some of them raise the bed of their vegetable fields, while others are modifying their cropping patterns, harvesting water from canals and ponds, improving soil moisture retention through mulching, and

⁹ Bangladesh Bureau of Statistics (2006).

¹⁰ Ibid.

¹¹ R. Selvaraju et al. *Livelihood Adaptation to Climate Variability and Change in Drought Prone Areas of Bangladesh*, ADPC, FAO, 2006.

increasing the amount of organic matter in their soil. In rural areas of Sirajganj district (where feeding animals can be highly problematic in times of hardship) farmers are now preserving fodder for their cattle. And in areas where water logging is a common problem, farmers are practicing hydroponic agriculture for vegetable production. In south-west Bangladesh it is becoming a popular adaptation strategy that increases households' food security.

In some rural areas, women also dry food in order to preserve it for the lean season. This practice is gaining increasing attention and has started to spread among poor households. Kitchen gardening by women also makes a contribution to household nutrition. It increases their resilience as well, since vegetable surpluses can be sold to provide extra income to the family and seeds can be dried.

The needs of Bangladesh's people are clearly overwhelming their ability to cope, much less to truly adapt to the mounting impacts of climate change. The damage from Cyclone Sidr (which lasted only one night) is estimated at up to \$4 billion. Given the increasing intensity and frequency of floods, cyclones and other extreme weather events, the amount of money that the country will need to adapt to these changing conditions is immense. However, money alone is not sufficient to respond to the needs. Knowledge and skills are also crucial to ensure that money is used effectively and in a manner that really addresses the needs of the most vulnerable groups.

While spontaneous and ingenious efforts to cope with the adverse impacts of climate change are noticeable at community and household levels, limited resources and capacities often hinder these initiatives. Changing planting dates and seed varieties, for example, could help to offset losses and increase yields – if people had access to the information, credit and seeds they would need to implement those changes. Climate change also has implications for justice and equity: poor households and small-holder farmers are more affected, yet support does not necessarily reach them. More attention to these questions is therefore needed.

4. Recommendations for United States Climate Adaptation Policy

Within the concept of “common but differentiated responsibility,” the United Nations Framework Convention on Climate Change (UNFCCC), to which the United States is a Party, states that it is the responsibility of developed nations to “*assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.*”¹² Although communities are already taking steps to adapt to climate change, their efforts will require a significant infusion of new resources to avoid the most disastrous consequences forecast by the IPCC. Rich countries, which are historically responsible for generating the lion's share of the greenhouse gases that cause climate change, should now provide the necessary funds to enable poor countries to adapt.

Developing nations highly dependent on agriculture are especially vulnerable to the impacts of climate change on food production. It is therefore critical that US legislation and the post-2012 international climate negotiations in Copenhagen protect the right to food by promoting measures to support small-holder farmers and the sustainable agriculture approaches they are embracing to combat the impacts of climate change. This support must include concrete financial contributions and

¹² UNFCCC at <http://unfccc.int/resource/docs/convkp/conveng.pdf>

the establishment of governance mechanisms for adaptation funds that are effective and accountable to people like Joyce Tembenu and Asiya Begum.

On the basis of consultations with community partners around the world, ActionAid sees the Senate's deliberations on a climate bill and the UNFCCC process through Copenhagen and beyond as crucial opportunities to link the global response to the climate emergency to the concrete needs of those most affected by and least responsible for the crisis. The Senate should therefore assure that:

a) There are substantial additional financial resources to fund climate change adaptation.

The absolute level of resources needed to adapt to the impacts of climate change remains a matter for debate, in part because too few formal adaptation projects and programs have been completed to provide an accurate assessment. The UNFCCC estimates that between \$28-67 billion will be needed annually by 2030 to help developing countries adapt. The 2007-08 UN Human Development Report estimates that \$86 billion will be needed annually by 2015. And the World Bank now estimates that \$75-100 billion will be needed annually between 2010 and 2050.¹³ If significant emissions reductions are not achieved in the short term, these figures will only increase as rising global temperatures generate worsening impacts.

Though these estimates may vary, it remains clear that the cost of adapting to climate change will be enormous. Developed countries may dismiss the need to generate \$86 billion per year as unrealistic, or point to fiscal deficits and the impact of the 2008 global financial crisis on their capacity to respond. But the fact remains that they are bound by the framework convention to respond to the adaptation needs described in this testimony, and that they can use a variety of innovative mechanisms to generate new and additional adaptation funding. ActionAid calls on the Senate to take on this challenge with the degree of political commitment it will require. In that vein, ActionAid encourages the Senate to significantly expand on the American Clean Energy and Security Act's commitment to funding climate adaptation, which starts at approximately \$750 million per year in 2012. The goal for the US ought eventually to reach \$30 billion per year for climate adaptation, to be generated through a variety of mechanisms.

b) Adaptation funds must be governed in a transparent and accountable manner

A vast increase in funding is only part of the solution to the developing world's adaptation needs. Even if developed countries were to announce massive new financial pledges tomorrow, *how* that funding is disbursed, managed and governed would determine whether it would truly meet the needs of poor and excluded communities. Essentially, adaptation funding will only be as effective as the institutions through which it is channeled. ActionAid has identified a core set of principles by which any adaptation funding mechanism should be assessed.¹⁴ Such mechanisms should:

1. demonstrate a broadly **representative governance** structure
2. ensure the **participation of affected communities**
3. provide **sustainable and compensatory funding** streams
4. avoid the imposition of **economic policy conditionality**
5. create **streamlined access** for countries seeking funds.

¹³ <http://siteresources.worldbank.org/INTCC/Resources/EACCFinalRelease.pdf>

¹⁴ These principles were established in ActionAid's 2007 report, *Compensating for Climate Change: Principles and Lessons for Equitable Adaptation Finance*. See http://actionaidusa.org/images/climate_change/CompensatingforClimateChange.pdf

There are currently two multilateral institutions primarily involved in adaptation finance: the World Bank, which manages the Pilot Program on Climate Resilience; and the Global Environment Facility (GEF), which manages the Least Developed Countries Fund. ActionAid's analysis of these funds and, in particular, their managing institutions, demonstrates the need for new approaches to the governance of climate adaptation funds.

The World Bank's role in climate finance must be challenged for a number of reasons. Its governance structure does not allow developing countries sufficient voice in how the institution is managed or how funds are disbursed. The World Bank has a poor track record in engaging affected communities and civil society in its work. The Independent Evaluation Group of the World Bank estimates that in 2003, 75% of World Bank projects did not involve community participation.¹⁵ Moreover, even as the World Bank is positioning itself as a major player in the response to climate change, it is worsening the problem through its fossil fuel lending. From 2006-08, coal lending at the World Bank Group increased by 648%, and in 2008 fossil fuel funding more than doubled.¹⁶

There are also significant concerns about the GEF's role as an operating entity for the UNFCCC's financial mechanism. These relate to its governance structure (which weights votes according to financial contribution) and the lack of access to funding for the most vulnerable countries and communities. Because of these and other concerns, ActionAid endorses the need for an enhanced financial mechanism under the authority of and accountable to the UNFCCC's Conference of Parties (COP), with an adaptation funding window.

The basic structure of this enhanced mechanism would include a board, appointed by and accountable to the COP, called the Executive Body (EB). It would establish and coordinate funding windows for areas such as climate adaptation, mitigation, reducing emissions from deforestation and degradation (REDD), and technology development, disbursement, and diffusion. The EB would be serviced by a secretariat and a trustee. Each funding window would be advised by a technical assessment panel. Other key structures could include National Multi-stakeholder Committees, a Women's Rights Desk, and a Monitoring and Evaluation Panel.¹⁷

c) Agriculture must be recognized as a sector that is particularly vulnerable to climate change

The United States should ensure adequate funding for adaptation strategies based on sustainable agricultural techniques that allow communities to combat hunger and realize their right to food. Given the particular impact that climate change has on agriculture, the Copenhagen outcome should recognize the responsibility of the international community and national governments to enhance the food security of vulnerable people. Furthermore, a significant portion of adaptation funding should be specifically dedicated to promote sustainable agriculture practices in the developing world. Such programs should build on the examples of adaptation strategies that have already increased food security. And in the face of such significant outstanding need, substantial adaptation funding should:

¹⁵ Independent Evaluation Group. *World Bank Support for Community-Based-and-Driven Development*. Overview. <http://web.worldbank.org/WBSITE/EXTERNAL/EXTOED/EXTEFFWBSUPCOMDRIDEV/0,,contentMDK:22228586~pagePK:64829573~piPK:64829550~theSitePK:4426144,00.html>

¹⁶ Bank Information Center. *World Bank Energy Sector Lending: Encouraging the World's Addiction to Fossil Fuels*. February 2009. <http://www.bicusa.org/en/Article.11033.aspx>.

¹⁷ For a full description for ActionAid's proposed enhanced mechanism, see ActionAid, "Equitable Adaptation Finance: The Case for an Enhanced Funding Mechanism Under the UN Framework Convention on Climate Change" at http://www.actionaidusa.org/assets/pdfs/climate_change/equitable_adaptation_finance.pdf

- Enhance farmers' ability to respond quickly and effectively to shocks in order to maintain food production, even under rapidly changing climatic conditions;
- Advance farmers' capacity to use organic matter and to employ multiple cropping strategies and livestock production systems that will enhance soil quality, increase food security and reduce exposure to climate shocks;
- Support innovative practices, especially farmer-controlled methods of agriculture based on local knowledge and traditional practices that reduce farmers' dependence on synthetic inputs and imports, in line with the recommendations of the 2008 International Agricultural Assessment of Science and Technology for Development;¹⁸
- Support community-level organization – especially of women – to implement creative solutions and hold duty-bearers accountable to implement policies that ensure their access to and control over natural and productive resources.

d) Climate adaptation measures must ensure the effective participation of poor and excluded communities

Many poor communities have been adapting to climate change for some time now, and already have ideas for adaptation strategies appropriate to their specific context. US adaptation programs and the adaptation financing mechanisms negotiated through the UNFCCC must increase the participation of the most vulnerable groups in decision-making around how adaptation funds are disbursed, managed, used, monitored and evaluated. Furthermore, representatives of affected communities must be meaningfully involved in the governance of multilateral adaptation funds to enhance their effectiveness through transparency, accountability and stakeholder participation.

e) Climate adaptation measures must support women's efforts to claim their rights.

Poor women are particularly vulnerable to the impacts of climate change, but are also potential leaders of change and innovation with respect to adaptation. Women must be acknowledged as a vulnerable social group in the Copenhagen outcome, and adaptation funding must be specifically directed towards addressing women's needs.

ActionAid thanks the Subcommittee on International Development and Foreign Assistance, Economic Affairs, and International Environmental Protection for the opportunity to express these views today. We stand ready to share the perspectives and experiences of our partners around the world as you set about the complex but necessary work of developing international climate adaptation policy to help achieve a more sustainable and equitable future for people around the world like Joyce Tembenu and Asiya Begum.

¹⁸ see <http://www.agassessment.org/>