

Enhancing Program Impact to Address Climate Game Changers

Climate Change Foresight Research

The United Nations Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) makes clear that the impacts of climate change on lives and livelihoods in many areas of the world are both more immediate and, without large efforts in adaptation and mitigation, likely to be more pronounced than estimated in previous reports. Many communities are already experiencing “game changing” situations, such as precipitation changes, temperature changes, storms, sea-level rise, soil quality, and desertification, in which they face or will soon face substantial and sustained effects of climate change resulting in large-scale impacts on lives and livelihoods. Based on an extensive review of available literature and discussions with experts in climate change and development, this brief provides findings and actions to consider that advance the efficiency and effectiveness of the development response to impacts of climate change.

Main Findings

The report develops four key areas of findings:

- 1. The current state of identifying, modeling, and measuring impact in the realm of climate adaptation significantly lags behind what is necessary for prioritization of the development response both within and across countries.** Analysis of a broad set of literature determined that climate adaptation agendas suffer from a lack of common and sufficient definitions, metrics, and methodologies to guide programming and assess results. Monitoring and evaluation of adaptation projects most often focuses on easily measurable short-term outputs, such as people supported or assets improved. Impact evaluations rarely quantify changes in vulnerability or risks and do not generally account for cascading impacts on the broader community or country, particularly over time. A recent global review of academic literature on climate adaptation programs found that only 3.4 percent of programs contained formal assessment of risk reduction after implementation. USAID climate risk assessments show a strong grasp of current regional climate risks. Incorporating estimates of potential and realized impacts based on forecasted and realized risk reduction would be a valuable tool for prioritizing development interventions and comparing results across different types of programs and different localities, which is generally lacking.
- 2. Innovation in scaling out effective adaptation techniques is needed to reach hundreds of millions of household-level actors on the frontlines of implementation.** Knowledge and necessary resources often fail to reach the audience that will carry out implementation. This is particularly true in sectors where scaling frontline implementation relies on adoption of innovations by hundreds of millions of individual households or small businesses. New techniques, including those incorporating insights from behavioral science, are needed to scale out knowledge sharing and to facilitate rapid and accurate knowledge cascades within and across communities. These can create low cost/high impact scenarios in sectors where the constraint is knowledge diffusion rather than cost or lack of technical solutions. There is currently little testing for cascading impacts of knowledge sharing in climate programming at the community level. Insights from behavioral science have not been sufficiently incorporated and evaluated in the climate change-development landscape.
- 3. Human migration will grow as an adaptive response to climate change, but there is insufficient data and modeling to confidently incorporate migration into planning.** Migration is one response to the game changing situation people and families find themselves in when confronting the impacts of climate change. Most climate-related migration happens within a country,

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often to nearby cities. Some cities are already struggling to provide necessary levels of infrastructure and services, leading to precarious living conditions for migrants. Increased stress on urban systems can lead to further migration, growing economic inequality, and/or political unrest or conflict. Mayors and national governments in developing countries often lack data of sufficient quality and frequency about population movement to be useful for planning. Advances in the use of mobile-phone data and machine learning offer promising avenues for improving migration modeling that are currently in their infancy. Such data and analysis could improve targeting of adaptation assistance in origin areas and effective building of resilience capacity in likely destinations.

- 4. Allocation of aid resources by sector is not proportional to need, particularly with regard to game changing situations.** For example, smallholder farmers are disproportionately affected by multiple climate impacts, yet receive less than two percent of tracked climate finance. Prioritization of programs based on potential reduction of risk to human lives and livelihoods, including attention to impacts on particularly vulnerable and marginalized communities, could improve the overall impact for a given level of funding.

Opportunities for USAID Programming

The global community is lagging behind what is needed to inform and implement effective development policy in response to climate impacts. This creates opportunities for USAID to be a global leader at the forefront of deploying new modeling, analysis, and implementation techniques. Actions to consider include the following:

- 1. Invest in data collection and modeling to capture both direct impacts of climate programming and broader estimates of societal impact based on risk reduction.** Increase capacity for modeling baseline climate risks and bolster the data collection capacity of local, regional, and national governments to measure outcomes. Include demographic data to monitor impacts on marginalized communities. Bolster efforts to standardize metrics and methods for quantifying climate adaptation impacts.
- 2. Partner with private companies and external researchers to develop (near) real-time estimates of internal population movements and models of likely future migration patterns.** Provide these data to local and national leaders and work with them to enhance urban preparedness and resilience for population growth. Consider the feasibility and desirability of programs that encourage movement to secondary cities or towns better able to absorb and benefit from population increases.
- 3. Incorporate insights from behavioral science and local communities to inform strategy for scaling out climate interventions through knowledge diffusion.** Pilot and test behavioral interventions to assess impact and adapt techniques to local contexts.
- 4. Use information from the suggested modeling and data collection to inform prioritization of both adaptation-specific programs and broader development programs.** Assess adaptation potential of proposed programs based on measures of adaptation impact quantified as risk reduction relative to a non-adaptation baseline. This shift can help redefine the concept of “adaptation funding” to focus on adaptation impact rather than prior classification as a climate adaptation project or program. This could direct adaptation funds to sectors seen by country governments as crucial to adaptation, such as infrastructure and healthcare, even when they are not specific to adaptation.
- 5. Ensure resources are allocated across sectors proportional to the magnitude of climate “game changing” impacts.** Modeling can be used to forecast the sectors and areas most at risk of negative climate impacts and the likely risk reduction from proposed programs, allowing an allocation of resources to where they are most needed and likely to have significant impact.