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TECHNICAL REPORT

WORKING WITH MARGINAL POPULATIONS

AN ANNEX TO THE USAID CLIMATE-RESILIENT DEVELOPMENT FRAMEWORK



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AN ANNEX TO THE USAID CLIMATE-RESILIENT DEVELOPMENT
FRAMEWORK

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ACRONYMS

AIDS	acquired immune deficiency syndrome
ARCC	African and Latin American Resilience to Climate Change
HIV	human immunodeficiency virus
IFAD	International Fund for Agricultural Development
IPCC	Intergovernmental Panel on Climate Change
PSROI	Participatory Social Return on Investment
USAID	United States Agency for International Development
USG	U.S. Government

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EXECUTIVE SUMMARY

Climate change and development initiatives are likely to have varying impacts on different populations or members of a single population, even within a single geographical region where development assistance is undertaken. Marginal populations include people whose social, political, economic, ecological, or biophysical circumstances limit or prevent their access to resources, assets, and services. Marginality is not an essential characteristic of a person; rather, it occurs in the context of a particular development initiative; climate or non-climate stressor; or social, economic, or political situation. Compared to others in their households, communities, and countries, members of marginal populations are often exposed to different climate impacts, affected by the same climate impacts to a different degree, or have different resilience to climate and non-climate stressors. It is therefore particularly important to identify these populations when development initiatives are undertaken. Development initiatives include strategies, programs, projects, and activities.

Climate-resilient development is development that enables people to cope with current climate variability and adapt to future climate change. Development that considers climate impacts will help preserve development gains and minimize damages related to climate impacts. Climate risks cannot be eliminated, but negative effects on people and economies can be reduced or managed. Climate-resilient development is not about implementing development activities in a completely new way; rather, it is about considering climate-related risks during regular development planning and implementation to help minimize the consequences and costs of climate impacts so they do not hinder progress toward development goals. The United States Agency for International Development (USAID) has developed a framework for development practitioners and other relevant stakeholders to help them systematically include climate considerations in their development planning and implementation. This Climate-Resilient Development Framework (<https://goo.gl/SqxR7T>) takes a development-first approach and builds on the conventional project cycle management framework that development institutions use to manage their projects and programs.

The purpose of this annex is twofold. First, it serves to help development practitioners understand the importance of identifying and addressing the situations that influence marginal populations. Second, the annex helps development practitioners understand how to identify and incorporate the perspectives, needs, and capacities of marginal populations into each phase of the Climate-Resilient Development Framework.

IMPORTANCE OF IDENTIFYING AND ADDRESSING SITUATIONS THAT INFLUENCE MARGINAL POPULATIONS

Development initiatives often fail to produce equal outcomes across an entire population. This is especially true of initiatives that address climate change, because vulnerability to climate change is determined by a range of factors: **exposure** to a climate-related stressor, **sensitivity** of the individual or group to that stressor, and the **adaptive capacity** of that individual or group to adapt to or address the impacts of the stressor. Exposure, sensitivity, and adaptive capacity come together in the context of particular activities, stressors, and social roles that shape group and individual roles and responsibilities. Because marginal populations often have different access to livelihoods and other resources and play different roles within livelihoods, marginal populations can experience:

- ***Distinct exposure***, where the marginal population is uniquely exposed to a climate stressor. For example, members of a community that live in a floodplain will be uniquely exposed to flooding relative to the members of the community who live above that floodplain.
- ***Differentiated sensitivity***, where the marginal population shares exposure to a climate stressor with the rest of the population, but has a different sensitivity to that stressor. For example, among those living in the floodplain, sedentary agriculturalists are more sensitive to flooding than their pastoralist neighbors because while pastoralists can move herds to higher ground, farmers cannot move their crops out of the way of floods.
- ***Differentiated adaptive capacity***, where the marginal population shares exposure to a climate stressor with the rest of the population, may have the same or different sensitivity to that stressor, but has a different adaptive capacity to address the impacts of that stressor. For example, if flooding becomes a persistent challenge among the pastoralists who live in the floodplain, those who can obtain pastureland from upland relatives have a greater capacity to shift their herds permanently to higher ground compared to those without any such access.

These distinct exposures and differentiated sensitivities and adaptive capacities must be identified and addressed to ensure that the benefits of implemented actions do not exclude vulnerable groups within target populations. Furthermore, practitioners must ensure that the costs and unintended consequences of these actions do not fall solely or disproportionately on particular groups. Adaptation actions should not enhance existing inequalities that contribute to the current marginality and vulnerability of any group. The “do no harm” principle applies here as it does to all development interventions. Often, such exclusions and inequalities affect development inputs that can compromise the effectiveness of an initiative, not only for the marginal population but also for the target population in general. Historical, social, political, and economic inequalities that have created the marginal nature of certain groups can drastically shape their exposure, sensitive, and adaptive capacity leading to stark vulnerabilities. Therefore, when possible, adaptation actions should attempt to address and improve conditions that lead to inequalities.

Marginal populations may not always be the most vulnerable populations. They often have valuable assets for managing climate and other risks because of their particular livelihoods, roles and responsibilities, or knowledge of the local environment. In some cases, marginal populations may be better able to address climate-related stresses than the wider population. Identifying the specific capacities of marginal groups is critical to avoid harming them by inadvertently changing their exposure, sensitivity, or adaptive capacity to climate and non-climate stressors.

INCORPORATING PERSPECTIVES, NEEDS, AND CAPACITIES OF MARGINAL POPULATIONS INTO EACH PHASE OF THE CLIMATE-RESILIENT FRAMEWORK

A common theme throughout this annex is stakeholder engagement. Marginal populations often have a limited voice and are often not used to being engaged by authorities, and therefore development practitioners may find it difficult to identify and incorporate them into the design of initiatives. Marginal populations may sometimes be unable to or actively choose not to participate in a process because of its timing and setting, or out of concern for reprisals from other groups in the community. At all five stages of the climate-resilient development framework, practitioners must be sensitive to the ways in which certain groups could be marginalized and consider ways to better include them. Key activities at each stage are summarized below:

Scope

- Carefully consider whose development goals are represented in the framing of an initiative
- Identify potentially marginalized populations in the context of the initiative
- Consult with members of marginal populations to identify development inputs to ensure these populations' unique activities and needs are incorporated into the scoping process
- Consult with members of marginal populations to identify climate and non-climate stressors on these inputs to ensure that the scoping process addresses their vulnerabilities

Assess

- Identify whether a marginal population has a distinct exposure to a stressor, compared to the rest of the population
- Identify whether a marginal population has a differentiated sensitivity to the stressor, compared to the rest of the population
- Develop an understanding of the baseline adaptive capacities of the marginal population as well as their vulnerabilities to potential climate stressors with and without interventions, and identify any differences between the marginal group and the rest of the population

Design

- Engage with marginal populations to identify adaptation actions that might not otherwise be considered
- Ensure that criteria for evaluating options are designed to evaluate the effectiveness, feasibility, unintended consequences, and additional benefits of any proposed intervention for the population as a whole, and for marginal groups within that population
- When analyzing options and selecting a course of action, consider how to weight evaluation criteria, such as those that identify unintended negative consequences to marginalized populations. Such weighting, where possible, should reflect the thinking of the target population, including the associated marginal populations

Implement and manage

- Involve and engage representatives of marginal populations in implementing and managing initiatives, using culturally appropriate communication methods
- Select required indicators that are most likely to capture a range of intra-population experiences
- Develop custom indicators that capture the experience of marginal populations to facilitate monitoring members' experiences
- Develop and facilitate other non-indicator-based means of monitoring the implementation and impact of initiatives (e.g., using informal focus groups or interviews with representatives of the larger population and the marginal population)

Evaluate and adjust

- Evaluate monitoring data to specifically address the outcomes of marginal populations to ensure they are receiving expected initiative benefits
- Consider how any adjustments to implementing the initiative might have disproportionate or unintended effects on marginal populations

This annex is structured as follows:

Section 1 introduces readers to the annex and explains its purpose and relationship to other USAID documents

Section 2 introduces the concept of marginal populations and how marginality can lead to distinct exposure and/or differentiated sensitivity and adaptive capacity to climate change that can undermine development goals

Section 3 focuses explicitly on the climate-resilient development framework and how the needs of and concerns for marginal populations can be integrated into each stage of the framework

Section 4 suggests resources for further reading; many of these resources have been cited throughout this annex, but additional resources are included that may be of interest to development practitioners

Appendix A provides example questions to help development practitioners ensure that they consider marginal populations as they proceed through the climate-resilient development framework

I. INTRODUCTION



Floating market on the Mekong River, Vietnam. Photo credit: Michael E. Cote, Engility Corporation.

I.1 WHY SHOULD I BE CONCERNED ABOUT CLIMATE CHANGE AMONG SO MANY OTHER IMPORTANT ISSUES?

Climate change may seem like a low-priority issue for developing countries that face a range of other pressures. However, climate change affects human health, agriculture, urban development, and many other sectors – sometimes creating new challenges, and sometimes exacerbating existing challenges. Climate change can put development goals – such as increasing economic growth, reducing poverty, enhancing access to education, improving child health, combating disease, and sustaining the environment – at risk, both in the short- and long-term (USAID, 2012b). Because of this, incorporating climate considerations into development planning and implementation will help development practitioners make the best use of limited resources. Approaching climate change planning with this type of “development-first” or “mainstreaming” philosophy helps support development over the long-term by ensuring the enduring positive effects of contemporary investments.

I.2 WHY SHOULD I READ THIS ANNEX?

The Summary for Policymakers of the Intergovernmental Panel on Climate Change’s (IPCC’s) Fifth Assessment Report states, “People who are socially, economically, culturally, politically, institutionally, or otherwise marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses” (IPCC, 2014, p. 6). The impacts of climate variability and change can exacerbate or ameliorate the marginalization of people by affecting their economic and ecological circumstances. Therefore, it is particularly important to identify marginal populations, work with them to ensure that initiatives address unique opportunities and challenges, and assess the ways that development interventions could affect their lives and livelihoods. This ensures broad and enduring benefits from development interventions. This is why the United States Agency for International Development’s (USAID’s) Climate-Resilient Development Framework considers addressing marginal populations “critical for climate-resilient development” (USAID, 2014d, p. 6).

This annex complements USAID policies and resources and provides an important resource supporting USAID programming. The term “marginal populations” is used by USAID as much of its work requires engagement with traditionally marginalized populations such as women, and vulnerable populations whose vulnerability is often caused or increased by their marginalized status.

COMPLEMENTARY USAID POLICIES AND DIRECTIVES

Gender Equality and Female Empowerment Policy: USAID investments are aimed at three overarching outcomes that are especially important for people who are marginalized or excluded due to ethnicity, gender identity, sexual orientation, lack of income, disability, or other factors and reflect the gamut of activities that USAID undertakes across multiple sectors and fields:

1. Reduce gender disparities in access to, control over, and benefit from resources, wealth, opportunities, and services – economic, social, political, and cultural
2. Reduce gender-based violence and mitigate its harmful effects on individuals and communities
3. Increase the capability of women and girls to realize their rights, determine their life outcomes, and influence decision-making in households, communities, and societies

Source: USAID, 2012d.

ADS Chapter 205 – Integrating Gender Equality and Female Empowerment in USAID’s Program Cycle: This directive provides guidance on conducting gender analyses and integrating gender equality and women’s empowerment in all phases of programming, budgeting, and reporting.

Source: USAID, 2013.

ADS Chapter 201 – Planning: This directive identifies social soundness analysis as an important tool to analyze:

1. The compatibility of the project with the socio-cultural environment in which it is to be introduced (its socio-cultural feasibility)
2. The likelihood that the new practices or institutions introduced to the initial project target population will be diffused among other groups (the spread effect)
3. The social impact or distribution of benefits and burdens among various groups, both within the initial project population and beyond (the incidence).

Source: USAID, 2014a.

Policy and Program Guidance on Building Resilience to Recurrent Crisis: This policy specifically states, “Our efforts to build resilience will contribute to a sustainable reduction in vulnerability and more inclusive growth. In this pursuit and in the areas where we apply this policy and program guidance, we intend that our efforts will result in:

- Increased adaptive capacity
- Improved ability to address and reduce risk
- Improved social and economic conditions of vulnerable populations.”

Source: USAID, 2012a.

Assistance to Internally Displace Persons Policy: This policy ensures USAID advocates for and takes an integrated approach to reduce the human costs of population displacement and that long-term development is not reversed. It emphasizes protection measures for IDPs and other vulnerable populations; and directs the Agency to coordinate with appropriate U.S. government entities, UN agencies, host governments, local institutions, and relevant organizations.

Source: USAID 2004.

Continued...

Vision for Ending Extreme Poverty: This major Vision document defines USAID's role in the global effort to end extreme poverty. Broadly, extreme poverty is defined as earning below the international poverty line of \$1.25 per day. To achieve this goal USAID will:

- Focus and integrate existing efforts
- Enhance work in fragile contexts and prioritize resilience
- Invest in science, technology, and innovation
- Expand partnerships

Source: USAID 2015.

Disability Policy Paper: This paper presents USAID's commitment to the inclusion of both people with, and advocates for, disabilities. It aims to avoid discrimination in programs, and stimulate engagement of stakeholders to promote equal opportunities for people with disabilities. The objectives are to:

- Enhance the attainment of United States foreign assistance program goals by promoting the participation and equalization of opportunities of individuals with disabilities
- Increase awareness of issues of people with disabilities within USAID programs and in host countries
- Engage other U.S. government agencies, host country counterparts, governments, implementing organizations, and other donors in fostering a climate of nondiscrimination against people with disabilities
- Support international advocacy for people with disabilities.

Source: USAID 1997.

I.3 WHAT IS CLIMATE-RESILIENT DEVELOPMENT?

Climate-resilient development is development that enables people to cope with current climate variability and adapt to future climate change. Development that considers climate impacts will help preserve development gains and minimize damages related to climate. Development practitioners cannot eliminate climate risks, but they can help reduce negative effects on people and economies. Climate-resilient development is not about implementing development activities in a completely new way; it is about considering climate-related risks during regular development planning and implementation to help minimize the consequences and costs of climate impacts so they do not hinder progress toward development goals.

I.4 WHAT IS THE USAID CLIMATE-RESILIENT DEVELOPMENT FRAMEWORK?

USAID has developed a framework for development practitioners and other relevant stakeholders to help them systematically include climate considerations in their development planning and implementation. This Climate-Resilient Development Framework takes a development-first approach and builds on the conventional project cycle management framework that development institutions use to manage their projects and programs. The framework consists of five stages: (1) scope, (2) assess, (3) design, (4) implement and manage, and (5) evaluate and adjust (Exhibit 1). For more information on the framework, its stages, and the

tasks involved in each stage, please refer to *Climate-Resilient Development: A Framework for Understanding and Addressing Climate Change* (USAID, 2014d), as well as the documents listed in Section 4.

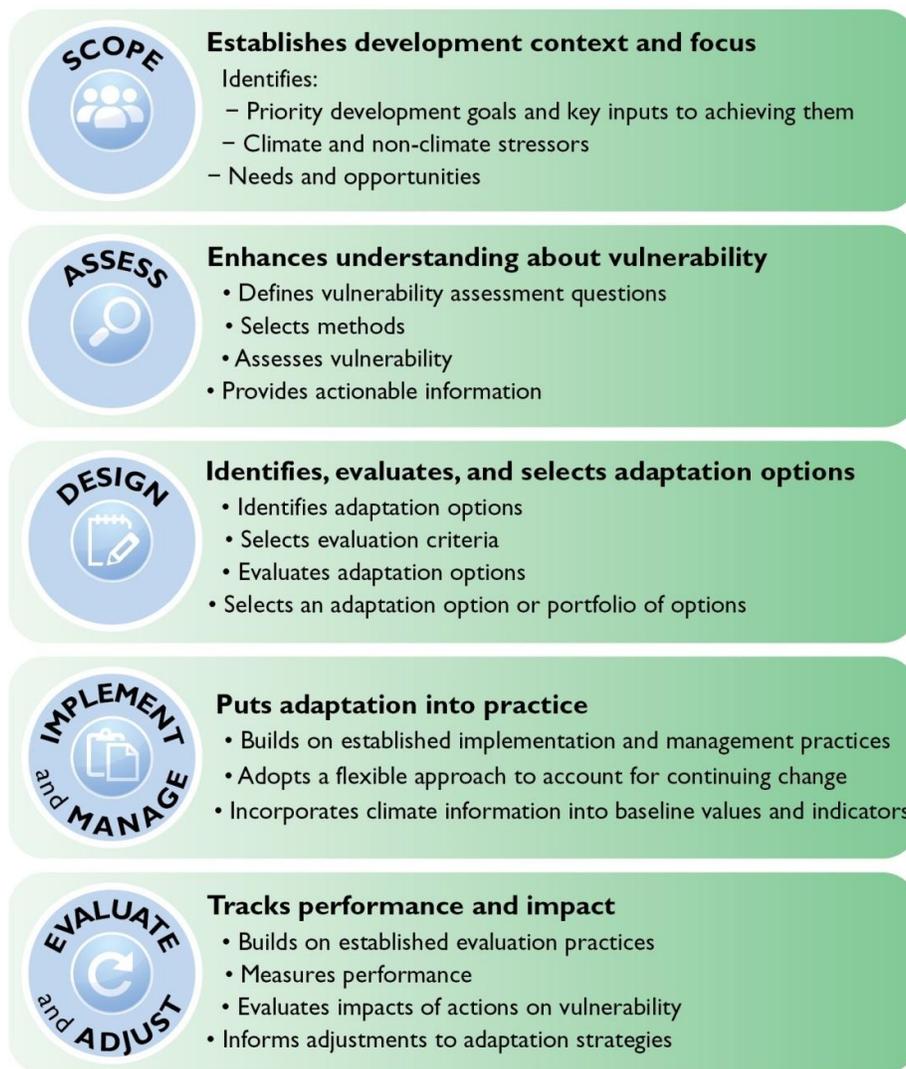


EXHIBIT I. USAID'S CLIMATE-RESILIENT DEVELOPMENT FRAMEWORK.

I.5 HOW DOES THIS ANNEX RELATE TO THE FRAMEWORK?

The objective of this annex is to help readers, particularly development practitioners, understand the importance of considering marginal populations, and to assist them in negotiating the challenges associated with identifying, incorporating, and addressing the needs and interests of marginal populations. It presents specific issues, challenges, and opportunities related to identifying, engaging with, and addressing these needs and interests at each step of the framework so that development initiatives improve marginal populations' resilience to future climate and non-climate stressors. Development initiatives include strategies, programs, projects, and activities.

Development practitioners may wish to use this annex in conjunction with several other companion documents to the main USAID framework document:

- *Climate Vulnerability Assessment: An Annex to the USAID Climate-Resilient Development Framework* [USAID, Forthcoming (a)] describes approaches and good practices for conducting a climate vulnerability assessment and can thus assist with assessing the vulnerabilities of marginal populations.
- *Climate Change and Water: An Annex to the USAID Climate-Resilient Development Framework* (USAID, 2014b) and *Climate Change and Coastal Zones: An Annex to the USAID Climate-Resilient Development Framework* (USAID, 2015a) each elaborate on the climate-resilient development framework in specific circumstances. These documents can help inform development practitioners about the ways in which climate stressors and adaptation actions could affect marginal populations.
- *Governing for Resilience: An Annex to the USAID Climate-Resilient Development Framework* [USAID, 2015b] offers insights on issues related to governance, which can be particularly applicable to marginal populations.

2. MARGINAL POPULATIONS IN THE CONTEXT OF CLIMATE-RESILIENT DEVELOPMENT



Women and children returning from the farm in southern Mali. Photo credit: Edward R. Carr, University of South Carolina.

2.1 WHAT ARE “MARGINAL POPULATIONS?”

Marginal populations are those that have limited access to resources, assets, and services (von Braun and Gatzweiler, 2014); and little social, political, or economic standing to change their situation. Marginality is created and continues through the experience of one or more social, political, economic, ecological, or biophysical circumstances that can limit an individual’s or group’s ability to benefit from opportunities and reduce their resilience to climate and non-climate stressors.

Marginality is not an essential characteristic of a person; rather, it takes shape in the context of a particular social, economic, or political context; a climate or non-climate stressor; or a particular initiative – a development strategy, program, or project aimed at addressing a development challenge. For example, a young, educated woman might hold a wage-paying job in which she is given significant responsibility based on her performance, but when she returns to her husband’s house she might have little say over how her wages are spent to support the household. In the context of her job, this woman is not marginal. However, she is marginalized with regard to household livelihood decisions in her own home. This woman would likely be marginalized in stakeholder consultations on an adaptation initiative in her home area focused on climate-smart agriculture, even though her wages provide much of the capital needed by the household to conduct agricultural activities. Marginality depends not only on gender, but on the context of the situation and the power relationships which may be influenced individually or jointly by a number of factors, including age, gender, ability, class, religion, sexual identity, ethnicity, and nationality.

“Marginality is a multidimensional and interdisciplinary concept integrating poverty, discrimination, and social exclusion; the degradation of ecosystem function; and access to services, markets, and technology.”

Source: von Braun and Gatzweiler, 2014, p. 4.

Additionally, marginality can sometimes be fluid with attributes such as age and financial status, which may change over time. For example, a woman marginalized because of her poverty might find gainful employment and no longer be marginalized, and some communities may marginalize the elderly while others may accord them greater respect and influence.

Exhibit 2 provides an initial list of attributes that development practitioners can consider in identifying relevant marginal populations and discusses how they may be linked to climate vulnerability. In this annex, the term “marginal populations” is used to refer to members of these marginalized groups.

EXHIBIT 2. FACTORS POTENTIALLY CONTRIBUTING TO MARGINALITY AND CLIMATE VULNERABILITY

Factor	Potential contribution to marginality and climate vulnerability
Gender	Social processes, structures, and expectations based on a person’s gender can play a significant role in his or her overall climate vulnerability. For example, in the aftermath of floods and cyclones in Bangladesh in 1991, women were more vulnerable to flooding because of social factors – women were less likely to leave their houses unaccompanied and girls had not been expected to learn how to swim (Röhr, 2006). In contrast, during Hurricane Mitch in Nicaragua in 2001, more men than women lost their lives from gender norms that encouraged “heroic” yet high-risk behavior in the midst of the hazard (World Bank, 2001; Röhr, 2006). Longer-running disasters also have gender-based vulnerabilities; for example, women often receive less of the household resources than men and may be more vulnerable to climate impacts such as drought and famine (Demetriades and Esplen, 2010).
Age	An individual’s age and associated status in society can affect his or her climate vulnerability. Among the Malinké of southern Mali, social organization is structured such that senior male heads of household designate communal household agricultural lands (usually dedicated to the cultivation of staple grains) and fields for individual household members (usually of lower fertility) (Assé and Lassoie, 2011, p.250). In smaller households (i.e. a husband and wife), there is evidence of what Assé and Lassoie (2011, p.255) call “gender inclusive decision-making”, where men treat women as joint partners in agriculture. Larger polygamous households practice “gender exclusive decision-making” (Assé and Lassoie, 2011, p.255) where women are explicitly excluded from communal household agricultural decisions. Thus, as they mature and their households gain assets, women’s husbands will marry again and, as a result, as women age they gradually lose decision-making authority in agriculture and become marginalized with regard to this livelihoods activity.
Physical/mental ability	Individuals with disabilities tend to face inequalities in access to services such as education, health, and employment, as well as in opportunities to accumulate assets and to participate in community life. In the event of a disaster or conflict, or an emergency related to climate impacts, these individuals would most likely struggle with accessibility in evacuation, response, and recovery efforts. This is mainly because disaster planning and preparedness often neglect to consider the needs of the disabled (GPDD and World Bank, 2009). Increasing heat exposure could also exacerbate the clinical condition of people with mental health problems (WHO, 2009).
Health status	Individuals with chronic or socially stigmatized diseases tend to suffer from social exclusion, which increases their climate vulnerability (Grammenos, 2003; Harris, 2006). For example, the <i>Pwani</i> project, which seeks to conserve coastal ecosystems in Tanzania, has found that individuals living with human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) or caring for individuals with HIV/AIDS are less able than healthy individuals to engage in the sustainable use of natural resources (USAID, 2012c), a practice conducive both to a mitigation of and adaptation to climate change. Individuals with chronic health conditions that require regular treatment, such as diabetes or renal disease, can be vulnerable during extreme events like floods.

EXHIBIT 2. FACTORS POTENTIALLY CONTRIBUTING TO MARGINALITY AND CLIMATE VULNERABILITY

Factor	Potential contribution to marginality and climate vulnerability
Minority status (racial, ethnic, religious)	Climate impacts tend to affect minority groups disproportionately, either because of such groups' close relationship to the natural environment through their livelihoods or based on their residing in locations more vulnerable to climate change (Baird, 2008). For example, the Mekong Adaptation & Resilience to Climate Change Study found that the lack of skills to adapt to climate impacts was more pronounced among ethnic minorities living in remote areas with poor access to state services (ICEM, 2013).
Financial status	Climate impacts tend to affect impoverished people – those with the fewest resources and the least capacity to adapt – disproportionately. During extreme events, people living in poverty do not have appropriate shelter and may live in a lowland area, hillside, or in a slum with improper drainage; and thus may die or suffer injuries from natural disasters. Climate impacts also adversely affect the impoverished because of their greater reliance on the natural environment and lack of livelihood options (IPCC, 2014). Individuals trapped in chronic cycles of poverty are also less likely to participate in and benefit from climate-risk mitigation strategies, such as weather-based insurance (Barret et al., 2007). Lack of access to savings and credit also contributes to vulnerability.
Location	Physical location can greatly affect the climate-related vulnerability of already marginalized groups (Baird, 2008). For example, in urban areas, groups marginalized by ethnicity or poverty tend to live along rivers or canals where they are more exposed to flooding and sea level rise than other members of the general populace (IPCC, 2014). Poor-quality or non-existent infrastructure in these areas may also contribute to greater vulnerability.

LINKS BETWEEN “MARGINAL” AND “MAINSTREAM” POPULATIONS

Marginal populations do not exist in isolation. Instead, they have specific roles and responsibilities within the populace; these roles and responsibilities enable their own lives and livelihoods, as well as those of the wider population. For example, the majority Wolof-speaking agriculturalists in Kaffrine, Senegal, often rely on a relatively small number of minority Puel pastoralists to herd their cattle; cattle are a significant source of wealth. The Puel often live amongst themselves within a larger community and may not have the same access to community decision-making as their Wolof neighbors; however, the community as a whole relies on the Puel to take care of their cattle. Therefore, while the Puel are often a marginal population in Kaffrine, any negative impacts on their lives and livelihoods would likely extend to some degree to the majority Wolof population that relies on them.



Korani School in Kaffrine. Photo credit: Edward R. Carr, University of South Carolina.

Marginal populations can be difficult to identify, reach, and engage; they may be excluded from social and political processes, be a lower priority for governments, or have constrained access to means or venues of communication. For example, marginal populations may be largely illiterate or unable to speak the official language in a country. Despite the challenges, USAID has determined that identifying and working with marginal populations in the context of development initiatives is an important step in achieving development objectives including an end to extreme poverty (see, for example, USAID, 2012e and USAID, 2015). When designing and implementing development initiatives, USAID has focused on a number of characteristics that can contribute to marginality: sexual orientation, gender identity, disability status, religion, ethnicity, socioeconomic status, geographic area, migratory status, and forced displacement; as well as having medical conditions, such as HIV/AIDS (see, for example, USAID, 2012d, 2013). However, this list is neither exhaustive nor prescriptive; a group's or individual's status as marginal depends on context – the place, time, and activity under consideration.¹

2.2 CLIMATE VULNERABILITY OF MARGINAL POPULATIONS

Vulnerability to climate variability and change is determined by a range of factors: *exposure* to a climate-related stressor, *sensitivity* of the individual or group to that stressor, and the *adaptive capacity* of that individual or group to adapt to or address the effects of the stressor (IPCC, 2007). Marginal populations can experience unique challenges and opportunities from climate variability and change through three pathways: *distinct exposure*, *differentiated sensitivity*, and differentiated *adaptive capacity*.

With distinct exposure, the marginal population is uniquely exposed to a climate stressor. For example, in coastal communities along the Gulf of Guinea in West Africa, ethnic majorities primarily derive their livelihoods from farming, whereas ethnic minorities lack access to land and instead rely heavily on fishing for their livelihoods. The primary effects of climate change on the majority of farmers are changes in the amount and timing of precipitation, whereas the primary effects of climate change on the marginalized minority of fishermen are changes in the timing and duration of oceanic upwelling, which reduce fish hauls (Brashares et al., 2004; Carr, 2011), as well as changes in sea surface temperature and ocean acidification.

Differentiated sensitivity is another way that marginal populations can experience unique climate-related challenges and opportunities. In this situation, the marginal population shares exposure to a climate stressor with the rest of the population, but has a different sensitivity. For example, an entire agricultural community might experience variability in the timing and amount of rainfall from season to season; however, those with irrigated fields will be far less sensitive to this stress than those who depend on rainfall.

Differentiated adaptive capacity is a third way that marginal populations can experience unique climate-related challenges and opportunities. For example, wealthier people with access to larger landholdings or diverse economic opportunities will likely have greater adaptive capacity in the context of long-term declines in rainfall than those populations who are land-poor and/or completely dependent on rainfall for their subsistence (Carr, 2014).

Despite their increased vulnerability to climate, marginal populations often have valuable assets for managing climate and other risks. This may stem from knowledge of their local environment or their particular livelihood roles and responsibilities. For example, men in semi-arid (Sudanian) Mali are generally responsible for rain-fed agriculture, while women participate most heavily in hand-irrigated gardening. Women in this part

1. For example, a politically marginalized population could be identified as “any group that has historically been excluded from fair participation in a country’s political processes,” while a physically marginalized population could be a community living on a mountain plateau with limited roadways or with no electricity (USAID, 1998, p. 13).

of the world are often marginalized as they have little decision-making authority over household activities and their activities are generally not sufficiently valued by their households and fellow community members. However, women's unique engagement with irrigated agriculture makes their livelihoods less sensitive to seasonal variations in the timing and amount of precipitation (Carr, 2014). In some cases, marginalized populations may even be better able to address climate-related stresses than the wider population. Identifying the specific capacities of marginal groups is critical to designing and implementing climate-resilient development initiatives that benefit target populations and also avoid harming marginal groups within target populations.

Understanding the ways that marginal populations are relevant to and intersect with the goals of an initiative is integral to all of the stages outlined in the USAID Climate-Resilient Development Framework – scoping, assessing, designing, implementing/managing, and evaluating/adjusting the initiative. Section 3 discusses how marginal populations should be considered at every stage of the framework.

CONTEXTUAL NATURE OF MARGINALITY AND CLIMATE VULNERABILITY

Marginality is often simplistically associated with particular groups in society. For example, women are often presumed to be marginal to livelihood decision-making and opportunities. In general, such marginality would render women more vulnerable than men to climate impacts; however, this is not always the case. For example, a study of gender and adaptation in agrarian settings found gender to be a critical marker of marginality and differentiated vulnerability to climate impacts among populations in Ghana's Central Region – but largely irrelevant in communities at the base of the Mount Mulanje Forest Reserve in Malawi. In short, the factors that define marginality and that shape vulnerability to climate impacts are contextual and are not easily identified through assumptions about the status of broad categories of people.

In the Ghana case, men and women in the same household often farmed distinct plots of land, and controlled crop selections, agricultural decisions, and the yields of those farms independently. Men controlled the allocation of land within the household, and tended to assign themselves six or more times the amount of land given to their wives. Further, gender-based responsibilities within households, and gender-based expectations of appropriate behaviors and decisions, led men and women to emphasize different crops. Men focused on tree crops which are relatively resistant to fluctuations in precipitation; while women grew vegetables which are susceptible to precipitation changes. Thus, women's marginality – their limited voice with regard to land tenure and their focus on subsistence crops – produced differentiated sensitivity and adaptive capacity to climate variability.

In Malawi, however, men and women in a household farm the same plot and crops, and share in the income from the farm. Although women conduct a greater amount of domestic and farm labor than men, and often have limited input on crop selection, these forms of marginality do not always translate into vulnerabilities to climate based on gender, as both men and women share in and rely upon the yields of the household farm. In Malawi, distinct exposure, differentiated sensitivity, and differentiated adaptive capacity to the impacts of climate change did eventually emerge based on location (i.e., the distance between a community and the forest reserve affecting access to key resources), and on the marital status of the household head (i.e., women who headed households experienced specific challenges).

The case studies in Ghana and Malawi demonstrate that gender is not always a singularly important factor influencing vulnerability to climate change impacts. Therefore, simplistic gender analyses that rely on the simple disaggregation of data by “men” and “women” are likely to be insufficiently precise in their identification of marginal groups, and the specific vulnerabilities of these groups. To truly identify and address the sources of vulnerability to climate variability and change, gender analysis involves considering the contextual social factors that delineate the roles and responsibilities of both genders.

Source: Carr and Thompson, 2013.

3. MARGINAL POPULATIONS AND THE CLIMATE-RESILIENT DEVELOPMENT FRAMEWORK



Women and children in a market in Pokhara, Nepal. Photo credit: Michael E. Cote, Engility Corporation.

In this section, we discuss how to incorporate considerations of marginal populations in each stage of the Climate-Resilient Development Framework. Appendix A provides examples of key questions that development practitioners can ask to assist in this process. A common theme throughout this section is stakeholder engagement. Marginal populations are frequently less engaged in the development planning process than the general population, and thus are left out of the decision-making process, often to their detriment and to the detriment of the broader community. When development practitioners do not consult with members of marginal populations at each stage of the framework, unique local knowledge, adaptive capacity, and ways of sharing and gathering information may be overlooked. It is important to note, however, that marginal populations may sometimes actively choose not to participate in a process for contextually specific reasons (Cornwall, 2008). For example, those who have been excluded from the educational system might find a school to be an uncomfortable meeting place. Others may fear reprisals for their participation in the design and implementation of initiatives, especially if these initiatives deliver unique benefits to the marginal population. Understanding why a population might decline to participate, and respecting or working with that decision, are important for addressing and incorporating the population’s concerns and needs into the Climate-Resilient Development Framework. Therefore, although it is important to engage all stakeholders in climate-resilient development, particular effort is required to reach out to marginalized populations and engage them *on their terms*. We discuss some approaches to this type of engagement throughout this section and provide additional resources in Section 4.

3.1 SCOPE

The scoping stage is the starting point for planning development initiatives. This stage establishes the development context and assesses vulnerability at an appropriate level of detail to support initial planning. It

involves (1) framing the planning process, (2) identifying development inputs and enabling conditions, and (3) considering the impacts of climate and non-climate stressors on these inputs and enabling conditions.² The implementation of each of these tasks presents opportunities to identify and consider potential marginal populations and their specific challenges and opportunities.

3.1.1 FRAMING THE PLANNING PROCESS

This task involves identifying country-, community-, or sector-relevant development goals and the critical requirements to meet these goals. When framing the planning process, development practitioners need to identify any affected marginal populations and explore ways to involve them in the planning process. This does not necessarily require that initiatives make reduced marginalization one of their main development goals. However, the question of whether affected marginal populations exist should be asked at the outset.

When identifying and prioritizing development goals, development practitioners should consider whose needs they represent and whether or not the goals and needs are representative of both the marginal populations and the population as a whole. The entire focus of some initiatives may be on addressing the circumstances that cause marginalization. For initiatives with an initial focus that may do little to address the opportunities and challenges of the marginalized populations, development practitioners might consider making the improvement of their conditions a key development goal. Or, to a lesser extent, development practitioners could consider how to reduce the disproportionate negative impacts of climate change on these marginalized populations as a development goal.

Identifying marginal populations in this stage of the Climate-Resilient Development Framework requires attention to the particular positions and interests of marginal groups. For example, the Climate-Resilient Development Framework notes that identifying development goals can often be accomplished by reviewing “existing national development frameworks as well as climate change strategies, policies, and plans” (USAID, 2014d, p. 10); however, these plans often do not address marginal populations. As such, development practitioners may begin to define marginal populations by examining which populations are absent in these documents. Similarly, information on current infrastructure can also provide contextual clues about marginality (see text box).

2. For definitions of the terms “input,” “enabling condition,” “climate stressor,” and “non-climate stressor,” from the perspective of the climate-resilient development framework, please refer to the climate-resilient development framework document (USAID, 2014c).

CONTEXTUAL CLUES ABOUT MARGINALITY

The character of infrastructure, or the lack of infrastructure, can tell us much about marginality. The paved portions of a country's regional north-south highway might skip certain areas by ending at certain points and continuing at others. In this case, whether this infrastructure gap represents a limitation of infrastructural funding, an unseen technical challenge, or a conscious effort to exclude a particular group from the benefits of this infrastructure, is not clear. What is clear is that some members of the population have been marginalized, relative to national infrastructural planning, because of the highway's absence in their area.

This observational approach works at different project scales. The aforementioned illustration of marginality takes shape at a regional level, but within broadly marginal groups, there may be additional village-level differences in marginality. For example, the presence of a sectioned-off group of houses, located at a large distance from the community's drinking-water source, could indicate a marginalized subgroup.

Although such a review is likely to identify one or more marginal groups, they may not all be relevant to the initiative being planned. Development practitioners may wish to consider and map the social, economic, cultural, institutional, political, ecological, or biophysical conditions of the entire population that a planned development initiative will affect. By fully understanding the planned and potential environmental and social impacts, practitioners can identify groups that may be affected and how they are affected (IFC, 2007).

In any population, a range of different groups will likely experience some form of marginalization. However, not all forms of marginalization will be relevant to the objectives and outcomes of a given climate-resilient development initiative. For example, in southern Mali, sedentary agriculturalists tend to dominate community life and decision-making, which is visible in village layouts that often relegate pastoralists to the margins (Grigsby, 1996, 2002; Dixon and Holt, 2010). An initiative aimed at agricultural yield improvement may inadvertently marginalize the pastoralists. However, an initiative aimed at improving herding conditions would likely benefit pastoralists and the owners of the cattle (wealthy agriculturalists), but might inadvertently marginalize poorer agriculturalists.

As suggested in USAID's Climate-Resilient Development Framework, making "stakeholder engagement an integral part of [the scoping] process" is important to determining appropriate goals and priorities for initiatives that involve marginal populations (USAID, 2014d, p. 10). In many cases, members of the marginalized populations will be less engaged in the planning process because they often lack a political voice. Development practitioners can take a proactive approach by reaching out to marginal populations early, and engaging them in framing the planning process. Development practitioners should look for individuals or organizations that may represent or advocate for marginal populations; practitioners can also consider previous efforts that successfully engaged them. For example, in Bolivia, the International Fund for Agricultural Development (IFAD) partnered with local and regional indigenous peoples' organizations to help these organizations become legally recognized; legal recognition was a prerequisite for obtaining collective land titles, and the process also helped establish an institutional voice for indigenous peoples' concerns in the political process (OECD, 2012). If engaging members of a marginal population in the planning process is impossible for any reason, development practitioners should at least understand the concerns of and impacts on the affected marginal population.

3.1.2 IDENTIFYING DEVELOPMENT INPUTS AND ENABLING CONDITIONS

Under the Climate-Resilient Development Framework, inputs include physical inputs, such as roads; natural inputs, such as water; social inputs, such as institutions; human inputs, such as labor; and economic inputs,

such as financial resources. The purpose of identifying inputs is to determine what is needed to achieve development goals, and then to determine if and how those inputs could be affected by climate (and non-climate) stressors. These inputs are shaped by broader political, economic, and social conditions, which we call “enabling conditions.” Enabling conditions are elements of the sociopolitical environment, such as regulatory regimes or market mechanisms, which can affect whether development goals are achieved.

Marginal populations can help development practitioners identify key inputs and enabling conditions that may not be obvious to the practitioner or to the broader population. For example, a development goal of increasing coastal tourism would require a range of inputs, including healthy fisheries. Maintaining or increasing local fisheries often requires social and human inputs related to changes in fishing locations or practices. With the delivery of such inputs, the general population might be able to shift fishing locations or practices relatively easily. However, for a marginal population that depends on that particular fishery, these inputs may not be enough to overcome barriers to shifting fishing location or practices. In this case, the failure to consider unique social and economic enabling conditions of the marginal population could potentially cause them harm through impacts on their livelihoods. On the other hand, the knowledge, talents, and labor of the marginal population can serve as a key input for an initiative’s success and an important influence on the enabling conditions for development inputs. Development practitioners could improve the chances of success in achieving the development goal by considering the unique social and economic enabling conditions of the marginal population and focusing on development initiatives that are effective in changing the population’s behaviors.

3.1.3 CONSIDERING IMPACTS OF CLIMATE AND NON-CLIMATE STRESSORS

Stressors directly and indirectly affect the identified development inputs. Climate stressors could include changes in sea level, precipitation, temperature, or extreme events; while non-climate stressors could include development challenges such as corruption, pollution, deforestation, and factors that cause marginalization of certain segments of the population.

Climate stressors can exacerbate marginalization. For example, in Lagos, Nigeria, flooding associated with sea level rise, storm surges, and inadequate infrastructure disproportionately affects slum-dwellers, who make up more than 70% of the population. Those who live in slums lack economic and political power, making them more vulnerable to future flooding; they cannot afford to construct defenses and may live in constant fear of eviction (Adelekan, 2010). Simultaneously, the unmet needs or conditions of marginalized populations can often be non-climate stressors on development inputs. For example, a marginalized community may lack effective sewage collection and treatment services, resulting in uncontrolled discharges of human waste to the coast. This would hinder the success of a development goal, such as increasing coastal tourism.



Brick workers in India. Photo credit: Nimmi Damodaran, Stratus Consulting, Inc.

Marginal populations often have different access to and make different contributions to development inputs than the wider population to which they belong. Therefore, when stressors affect those inputs, marginal populations are likely to be the source of unique challenges and opportunities with regard to the achievement of larger development goals. For example, a farmer in the Sahel who can only afford to plant millet for both household consumption and market sale may be poor and economically marginal within the local community. However, this poorer farmer's crop is less sensitive to variable precipitation than the maize and cotton of neighboring wealthier farmers. Therefore, under conditions of variability, this marginal farmer presents a unique opportunity to contribute more toward achieving food security than the wealthier population at large.

By considering the different challenges and opportunities that marginal populations experience in the context of different stressors, development practitioners can identify development initiatives that are more resilient to them. Additionally, development initiatives that improve the conditions of marginalized populations may help to reduce non-climate stressors such as pollution, thereby increasing the likelihood that other development goals will succeed.

3.2 ASSESS

In the scoping stage, development practitioners will have identified the key inputs needed to achieve their development goals and the enabling conditions that shape them, and considered how the needs, activities, and conditions of marginal populations interact with those inputs. The assess stage involves carrying out a more detailed assessment of the vulnerability of key physical, natural, social, human, and economic inputs. Vulnerability is the degree to which something or someone can be harmed by or cope with a stressor. As discussed previously, the vulnerability of a system or resource is comprised of three elements: exposure to a stressor, sensitivity to that stressor, and adaptive capacity to respond to that stressor. Not all marginal populations identified in the scoping stage will be affected by a given climate-resilient development initiative and experience a distinct exposure, differentiated sensitivity, and/or differentiated adaptive capacity. During the assessment phase, development practitioners can assess who will be affected by what impact and narrow the identified marginal groups to only those whose marginality results in distinct exposures or differentiated sensitivities to climate and non-climate stressors. This will help focus the climate-resilient development initiative on the relevant marginalized populations.

In the context of a vulnerability assessment,³ attention to marginal populations can help development practitioners understand the unique vulnerabilities of key inputs that are important to the success of development initiatives. Engagement and consultation with local stakeholders and experts is an important step in an effective vulnerability assessment. Local stakeholders are generally quite knowledgeable about the ways that climate affects inputs; representatives of marginal populations can provide unique and



Woman gardening onions in southern Mali. Photo credit: Edward R. Carr, University of South Carolina.

3. For detailed information on vulnerability assessments see *Climate Vulnerability Assessment: An Annex to the USAID Climate-Resilient Development Framework* [USAID, Forthcoming (a)].

important insights that could otherwise be overlooked. For example, while men in rural parts of southern Mali might provide insight into how drought affects rain-fed crops, women in the same communities could provide insight into how drought affects the irrigation of their garden crops (Carr, 2014).

When assessing climate vulnerability and considering how it affects development inputs in the context of marginal populations, development practitioners should:

- Determine whether a marginal population has a distinct *exposure* to a stressor compared to the rest of the population
- Determine whether a marginal population has a differentiated *sensitivity* to the stressor than the rest of the population
- Develop an understanding of the baseline *adaptive capacities* of the marginal population, as well as the population's vulnerabilities to potential climate stressors with and without interventions, to identify any differences between the marginal group and the rest of the population.

Absent any interventions, marginal populations have experienced context-specific combinations of distinct exposure, differentiated sensitivity, and differentiated adaptive capacity in the past, and often have developed ways to address resulting impacts. It is critical to assess how these marginal groups manage their distinct exposure, differentiated sensitivity, and differentiated adaptive capacity to ensure that any proposed development initiative does not place new limits on their well-being. For example, the Makushi, an indigenous group in Guyana, have been disenfranchised economically and physically through the loss of their land rights because of historical factors such as colonialism (Watkins, 2015). In times of drought, the Makushi migrate from their homes in the savannah to forest regions to plant crops (Salick and Byg, 2007). Forest carbon development initiatives, meant to preserve these forested areas and provide revenues for Guyana's government, could benefit the wider Guyanese population through enhanced infrastructure and improved schools. However, if such initiatives prevent the Makushi's access to these forest areas in times of need, it could greatly compromise their well-being. These assessments ensure that marginal populations will not be inadvertently harmed by ensuring that development initiatives do not detract from existing efforts to manage vulnerability.

Obtaining information to assess a marginalized population's relationship to development inputs depends heavily on both the scale of the development initiative and its location. At times, there will be enough data from existing initiatives and academic studies to enable a "desk study" assessment that captures the exposure, sensitivity, and adaptive capacity to the stressor in question. However, in most cases, this information will not be available through secondary sources, and will require a degree of primary research. Focus groups or interviews targeting different groups in the population, including those identified as marginal, might be used to identify the relationship of marginal populations to key development inputs. For example, initiatives designed to improve solid waste management in developing countries often result in banning waste pickers from disposal sites. These informal recyclers whose current livelihoods depend on access to the waste will be marginalized if their input is not included during focus groups and interviews (see text box).

WASTE PICKERS

In many developing countries, tens of thousands of waste pickers make their living by recovering recyclable (or reusable) materials from waste disposal sites (Wilson et al., 2006). They constitute an “informal sector” that complements municipalities’ “formal” recycling programs, which results in larger amounts of materials being recovered from the waste stream. Because of the harsh working conditions at dumps and landfills, waste picking has traditionally been the domain of marginalized populations such as migrants, minorities, and children. They often have limited input in waste management decision-making processes, their labor rights are typically not recognized under local and national laws, and they rarely have access to social benefits such as health insurance (Marello and Helwege, 2014).

In recent years there has been increasing awareness of the challenges faced by waste pickers, their value to municipalities, and the importance of integrating them into the waste management system on a more formal basis (e.g., Wilson et al., 2006; Velis et al., 2012). To help facilitate this transformation, waste pickers in a number of cities are organizing themselves into unions and trade associations, such as the National Waste Pickers Movement in Brazil (WIEGO, 2013). Development initiatives could involve such organizations to represent waste pickers when seeking stakeholder input.



Waste picker at Amin Bazar Landfill in Dhaka, Bangladesh. Source: Stratus Consulting, Inc.

Methods for gathering information from marginal groups can include disaggregating focus groups and seeking input from nonparticipants, mapping, and community walk-throughs. Individual interviews with people who do not speak up in focus groups or meetings can further identify the publicly unexpressed needs or concerns of a marginal population (see text box). Practitioners can also use maps of inputs and expected stressors to elicit information on where and how the marginal population could be affected. Alternatively, walking through areas where members of marginal populations live and talking with them about their experiences with stressors can elicit important information about exposure, sensitivity, and adaptive capacity. For example, in the Malawi Climate Change Vulnerability Assessment conducted as part of the African and Latin American Resilience to Climate Change (ARCC) Project funded by USAID, the assessment team undertook technology transect walks – tours of the community led by a guide from the community who photographed pertinent sites or activities (ARCC, 2013).

CONSIDERING MARGINAL POPULATIONS DURING INFORMATION GATHERING

In *reviewing literature*, assess whether the literature advocates for or displays an understanding of the needs of the relevant marginal populations.

In *consulting or interviewing experts*, ask whether the experts are speaking for or at least understand the needs of marginal populations with regard to the policy, program, or project. Specifically, rosters of experts must include individuals able to speak from evidence about marginal populations.

In *engaging stakeholders*, make additional efforts to include marginal populations. Simply bringing members of a marginal population to a meeting or event to identify adaptation options does not ensure that members will express their needs or concerns. The contextual factors that shape the population's marginality might only be heightened amidst the larger population. For example, if scoping identifies girls as the most marginal group in a village with regard to rainfall variability, they should be included in the process. However, children would be unlikely to speak up in a public meeting. Focus groups or interviews with girls might be more effective in exploring the effects of various adaptation actions. Child-friendly participatory tools for engaging children in data collection, as well as ethical considerations and guidelines are available and should be used to ethically and meaningfully engage children as stakeholders (Benson and Bugge, 2007, Molina et al., 2009, Johnson et al., 2014, UNICEF, 2002).

3.3 DESIGN

The design stage focuses on identifying actions that can reduce vulnerabilities identified in the scoping and assessment stages. It involves three tasks: (1) identifying adaptation actions, (2) selecting evaluation criteria, and (3) analyzing options and selecting a course of action. Consideration of marginal populations is important throughout the design process.

3.3.1 IDENTIFYING ADAPTATION ACTIONS

As the Climate-Resilient Development Framework notes, when identifying adaptation actions, “Stakeholders are a good source of options, and may have already identified needs and opportunities during the scoping stage that can be expanded upon” (USAID, 2014d, p. 17). This is also true when considering the ways in which particular adaptation actions might affect marginal populations. Engagement with marginal populations is an opportunity to bring new voices into the design process and to broaden thinking on adaptation options to “facilitate the identification of creative adaptation options that might otherwise never be considered” (USAID, 2014d, p. 18).

There is a wide range of adaptation actions that marginal populations might present or see as appropriate and preferred. One means of identifying, evaluating, and selecting adaptation options is through the USAID Climate Change and Development Strategy prioritization of three broad adaptation themes: (1) improving access to data and information for decision-making, (2) establishing effective governance systems for adaptation, and (3) identifying and taking actions that increase climate resilience (USAID, 2012e).

EXAMPLES OF INNOVATIVE COMMUNICATION

Using a variety of communication methods can enhance a marginalized population's acceptance of warning messages or health and humanitarian information. For example, the charity Oxfam is communicating warnings about drought through community leaders, local gatherings, and mobile phones. In another example, the charity Save the Children is using mobile messaging in the arid Ethiopia-Somalia border region to improve food distribution during droughts.

Sources: REGLAP, 2011; EurActiv, 2013.

Improving access to data and information for decision-making. Access to information about climate and climate change is important because such knowledge can reduce exposure to stressors, mitigate sensitivity, and improve adaptive capacity. Marginalized populations often have limited access to these types of information as they may not, among other factors, (1) be able to read in their native language, (2) have access to typical mass-communication means (e.g., Internet, television, radio), (3) participate in or have access to the information that moves through the social networks of the wider population, or (4) be able to attend public meetings because of the demands their livelihoods place on them, social restrictions, or simply because they are not aware of the meetings. Furthermore, the information requirements of marginal populations are often different than those of the larger population, for example, because they are engaged in different livelihood activities or live in different places.

It is important to provide information to affected children and seek their input as well, especially as they express interest in helping address disaster risk reduction and climate change. This is evidenced by the children's charter representing an action plan for disaster risk reduction developed based on input from more than 600 children in 21 countries (UNICEF 2011). Development practitioners should tailor information dissemination to the specific needs of the population and to the media through which different parts of the population might be reached. For example, a government meteorological service could deliver weather advisories on a range of crops, including those farmed by marginal populations. Furthermore, it could provide this information in multiple languages; use visual displays of information for non-readers; or provide information in person, potentially through a trusted person or institution (such as a cooperative or union) which has access to the target population.

Marginal populations can also play a key role in providing data and information on climate stressors and impacts that not only affect their livelihoods, but will likely affect the livelihoods and well-being of others. For example, in remote regions of northern Kenya and southern Ethiopia, pastoralists are collecting data on water levels in wells and other supply sources and using text messaging to input the data into regional databases on drought conditions. Because the mobile phones have geographic location information, the information can be accurately mapped. This system enables relief organizations to access and provide real-time information on drought for a more efficient response (EurActiv, 2013).

Establishing effective governance systems for adaptation. The annex *Governing for Resilience: An Annex to the USAID Climate-Resilient Development Framework* [USAID, 2015b] provides more detailed information on how governance relates to climate-resilient development. The structure, institutions, and practices of governance are also often key factors shaping the marginalization of groups within society. Climate adaptation actions that involve changes to a governance system can affect marginal populations in unique ways – positively or negatively. Thus, when identifying adaptation options that address governance systems, it is critical to understand the potential effects of those actions on marginal populations.

Adaptation actions that influence governance are not solely shaped by national or local government rules and regulations, but also by governance methods. In the context of state governance, the decentralization of adaptation funding, initiative design, and results monitoring can create situations where marginalized populations, or marginalized portions of larger populations, can gain greater access to the structures and institutions of governance. This access can help them exert political influence over adaptation planning and outcomes in a manner that would be impossible at the national level. Adaptation efforts that serve to link traditional leadership and its control over natural resource governance with state efforts to adapt to the impacts of climate variability and change will often more directly address the actual processes by which environmental decisions are made. This type of linking will more effectively give voice to people who have control over applicable natural resources in the context of state governance.

Whether in formal or traditional governance settings, small shifts in the structure of governance can have large effects on the ability of marginal populations to participate and have their voices heard. For example, if people from a marginalized group cannot participate in daytime meetings because of conflicts with work, finding ways to encourage leaders to hold public meetings at night can increase participation and representation in governance decisions. Similarly, if it is culturally unacceptable for women to attend a public meeting where governance decisions are being made, identifying a female facilitator, holding parallel meetings in women's homes, and exploring pathways by which women's voices and interests are expressed in these meetings might be transmitted to decision-makers are possible options to involve women.

ANALYZING THE OPTIONS FOR ADAPTATION AMONG WOMEN IN GHANA'S CENTRAL REGION

A study in Ghana's Central Region suggests that productively identifying appropriate adaptation options for women would need to take into account the *distinct* exposure of married women and single women heading households, while simultaneously addressing the *differentiated* sensitivity of married women operating under different livelihoods strategies. Single women heading households have a distinct exposure to inadequate and insecure access to land, which limits their capacity to plant different crops or extend the size of their farms to address changing climatic conditions. Among married women, there is no such exposure. However, married women experience differentiated sensitivities to swings in the market pricing for their crops, which comes from their household livelihoods strategy: women who farm under a market-oriented strategy are more sensitive to swings in pricing for their crops than women who live under a strategy where their role is to farm for subsistence. Among these women, there also exist differentiated sensitivities to seasonally variable precipitation. Subsistence producers experience greater sensitivity to swings in precipitation, for these swings compromise their food supply. Those women farming for market sale, however, can benefit when such variability constrains the overall supply of a given crop, making their market production more valuable.

Adaptation options have to consider these distinct exposures and differentiated sensitivities if they are to adequately address the challenges facing women in this region. An adaptation option to allow for the cultivation of tree crops, which have a longer return on investment and greater resilience to climate variability than the grain and vegetable crops currently farmed by women, may lower women's sensitivity and improve women's adaptive capacity to climate-related stresses. However, the option of increased landholding is not easily achieved for all women. In married households, a man securing land tenure for his wife is perceived as giving away his family's land to his wife's family. Furthermore, a husband who allows his wife to increase the size of her farm runs the risk of seeing her income surpass his own. This would challenge his status as a man in his family and the community, and possibly compromise his future access to agricultural land. Thus, there are significant cultural barriers to addressing the differentiated sensitivities of married women to economic and climate-related stresses.

In contrast, single women who head households – who appear to be much more vulnerable to climate variability and change than married women – may actually have wider adaptation options. For example, although the family-based ownership of land is a barrier to transforming married women's situations, it may present an opportunity for those in female-headed households. Because single women obtain land through their fathers or uncles, any benefits from increased and improved agricultural production achieved by these single women would be perceived by the men as benefits accruing to their own extended family system. Furthermore, these women do not have husbands whose status could be compromised by their earnings.

Therefore, efforts to identify actions that can increase climate resilience have to carefully consider who is marginal with regard to climate-sensitive activities, how that marginality takes shape, and the different ways in which it can be negotiated.

Sources: Carr, 2013; Carr and Thompson, 2013.

Identifying and taking actions that increase climate resilience. When identifying actions to increase climate resilience, development practitioners should consider the vulnerabilities of marginal populations because of their distinct exposures, differentiated sensitivities, and differentiated capacities to adapt to the effects

of climate change. Further, development practitioners should identify the ways in which marginal populations already address their particular vulnerabilities, to ensure that (1) any lessons about effective adaptation from a particular development initiative are understood and applied contextually to similar initiatives and through various levels of decision-making, and (2) that any adaptation actions do not reduce the existing adaptive capacity of marginal populations without simultaneously creating alternative opportunities to offset any detriments (see text box on previous page). Considering the needs and opportunities associated with marginal populations also presents the opportunity to identify any unique barriers that might prevent such populations from adopting adaptation actions. Children's safe and ethical participation should be facilitated and their perspectives and participation needs to be included in identifying and taking actions that increase climate resilience. For example, research conducted in Kenya and Cambodia included input from children on climate risks and considered their priorities for adaptation (Institute of Development Studies, 2010).

3.3.2 SELECTING EVALUATION CRITERIA

The main guidance document for the Climate-Resilient Development Framework includes a suggested list of evaluation criteria.⁴ In this step, it is critical to include marginal populations in the process of identifying, evaluating, and agreeing on criteria. It is also important to apply criteria that address the specific vulnerabilities of the marginal populations, as well as the general population. This can be accomplished in several ways:

- Ensure that criteria to evaluate the *effectiveness* of adaptation actions consider the impact on marginal populations. Consider whose vulnerabilities are being addressed by the overall set of effectiveness criteria, whether the vulnerabilities of marginal populations are being included, and the ways in which this inclusion/exclusion affects the activity and therefore the likely achievement of initiative goals. For example, in a cost-effectiveness analysis of climate-related adaptation options for water resources in the Pacific Islands, rainwater harvesting emerged as the top choice, not because it yielded the highest adaptation benefits but because it provided the most sustainable quality and quantity of water for vulnerable groups (UNFCCC, 2011). If the distinct exposures, differentiated sensitivities, and differentiated adaptive capacities of a marginal population are not evaluated, or if they are lost in a net-effectiveness calculation, development practitioners may want to include a separate criterion that specifically evaluates them – perhaps in the unintended consequences criterion.
- Consider the *feasibility* of adaptation actions from the social and economic perspective of the marginal populations identified. For example, there may be sufficient technical and financial capacity in some regions but not in regions where there is a preponderance of marginal populations. Or, there may be social and institutional barriers that affect feasibility for marginal



Brick worker. Photo credit: Stratus Consulting, Inc.

⁴ USAID suggests three criteria that are likely to be useful in any context: effectiveness, feasibility, and cost; and five criteria that may be useful depending on the priorities of the people who are evaluating the adaptation actions: unintended consequences, additional benefits, implementation timing, flexibility, and robustness (USAID, 2014c).

populations in different ways than in the general population. For example, while adaptation funding might support the production and dissemination of weather and climate forecasts to help farmers better time their planting, these advisories cannot address the lack of equipment, among the poor or women, that are needed to use the advisories effectively.

- Ensure that *unintended consequences* that could affect marginal populations are considered. For example, along the eastern coast of Ghana, an adaptation effort to harden the shoreline through a sea defense wall is protecting the coast from erosion caused by sea level rise. However, hardening the shoreline has cut off immediate access to the coast for fishermen who live near the wall, as they can no longer beach and store their boats on the shore and must now relocate their landing and fish-selling sites.
- Consider the equity of *additional benefits* of adaptation actions for marginal populations. For example, if a municipality were interested in improving stormwater management, it might consider adaptation actions that involve constructing new and improved roadways with effective drainage systems. In addition to reducing vulnerability, these roads would result in additional economic and social benefits from improved access to markets and community resources. If the roads were constructed in areas that are used by both mainstream and marginalized populations, the distribution of these additional benefits would be more equitable.

3.3.3 ANALYZING OPTIONS AND SELECTING A COURSE OF ACTION

Development practitioners can use the selection criteria identified in the previous step to evaluate adaptation options and select a course of action. Development interventions will not produce equal outcomes across an entire population. However, development practitioners should strive to ensure that the benefits of implemented actions do not exclude marginal populations, and that the costs and unintended consequences do not fall solely or disproportionately on them. Further, adaptation actions should not enhance existing inequalities that contribute to furthering the conditions that marginalize members of a population. Such exclusions and inequalities often affect development inputs and compromise the effectiveness of an initiative, not only for the marginal population but also for the target population. Therefore, when possible, adaptation actions should attempt to address and improve the conditions that influence a population's marginalization.

To help prioritize adaptation actions and determine next steps, development practitioners might choose to weight evaluation criteria differently, for example, by placing considerable weight on criteria that identify unintended negative consequences to marginalized populations. Development practitioners should consult the target population and the associated marginal populations, including any survey data that already exist, to gather information that will inform this weighting. As discussed previously, considering the social (e.g., gender norms, language, literacy) and economic (e.g., time of day, length of meeting) needs of these populations will increase their ability to participate in the process.

Methods that promote multi-criteria analysis and that humanize the adaptation options are often more useful than more traditional monetized cost-benefit analysis. Traditional methods may support choosing options that have a net benefit to the entire population but a negative impact on marginal populations. Alternative methods could help balance the benefits, costs, and outcomes of various adaptation options and ensure the transparency of an initiative's intended impacts and beneficiaries. An example of one such method is the Participatory Social Return on Investment (PSROI) approach, which creates visual maps of projected impacts from focus groups and interviews with multiple groups of stakeholders. The aim of PSROI is to narrate, from the viewpoint of persons directly affected, a story of the creation of change and ways to measure its effects (Chaudhury et al., 2014).

3.4 IMPLEMENT AND MANAGE

The implementation and management stage puts the selected adaptation actions into practice, building upon established practices and taking into consideration climate change and variability. The Climate-Resilient Development Framework recommends a flexible, adaptive approach to implementation and management that incorporates new information and learning, responds to shifting conditions, and takes advantage of new opportunities to increase the likelihood of success. The implementation stage of an initiative is critical for marginal populations, not only because it initiates the activities, but also because it determines the conduct and monitoring of those activities. Specifically, the implementation and management stage determines the indicators that development practitioners will use to monitor the progress of the initiative. Monitoring will look at progress against predetermined evaluation criteria, as well as other benchmarks, including stakeholder consultations and other forms of participatory engagement.

The Department of State and USAID jointly developed a list of indicators to measure accomplishments of foreign assistance provided by the U.S. government (USG) agencies referred to as Standard Foreign Assistance Indicators (U.S. Department of State, 2015). The relevant indicators for adaptation initiatives are found in the Standard Foreign Assistance Master Indicator List in Section 4.8.2, Clean Productive Environment (U.S. Department of State, 2015), and are shown in Exhibit 3. USAID’s gender equality and female empowerment policy (USAID, 2012d) requires that projects should collect and use sex-disaggregated data, as appropriate.

EXHIBIT 3. STANDARD INDICATORS FOR CLIMATE CHANGE IN THE FOREIGN ASSISTANCE FRAMEWORK.

Indicator	Description
4.8.2-6	Number of people (disaggregated by sex) receiving training in global climate change as a result of USG assistance
4.8.2-10	Amount of investment leveraged in U.S. dollars, from private and public sources, for climate change as a result of USG assistance
4.8.2-14	Number of institutions with improved capacity to address climate change issues as a result of USG assistance
4.8.2-26	Number of stakeholders (disaggregated by sex) with increased capacity to adapt to the impacts of climate change as a result of USG assistance
4.8.2-27	Number of days of USG funded technical assistance in climate change provided to counterparts or stakeholders
4.8.2-28	Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, or adopted as a result of USG assistance
4.8.2-29	Number of person hours (disaggregated by sex) of training completed in climate change as a result of USG assistance
4.8.2-30	Number of subnational laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, or adopted as a result of USG assistance

Source: U.S. Department of State, 2015.

The standard indicators present an opportunity to capture data relevant to the overall impact of an initiative, as well as some of the impacts of that initiative on marginal populations. For example, the two indicators of *number of stakeholders with increased capacity to adapt to the impacts of climate change as a result of USG assistance* and

number of people receiving training in global climate change as a result of USG assistance both speak to the overall reach of an initiative. Further, careful interpretation of these data might provide clues as to the engagement of marginal populations. For example, if the number of people and stakeholders engaged/trained by an initiative is very low, the initiative is likely not reaching representatives of marginal populations and suggests that the implementer should look further into engagement with these groups.

However, monitoring is not limited to the indicators listed in Exhibit 3. Practitioners can also create meaningful and measurable custom indicators that are tailored to their initiatives and the populations they are engaging, and help to track longer-term outcomes. Custom indicators present an opportunity to create a means of measuring the particular situations of marginal groups within the context of larger initiative monitoring. For example, in the context of a climate-smart agricultural program aimed at promoting the uptake of drought-resistant maize by farmers in a district, the required indicator of *number of people (disaggregated by sex) receiving training in global climate change as a result of USG assistance* might provide information about the initiative's overall engagement with men and women. However, this indicator might be misleading if only senior men engage in rain-fed agriculture, as this key difference would not capture the uneven benefits of the intervention. A training such as this effectively marginalizes junior men, but an outcome would not be visible through the standard indicator alone. Therefore, a custom indicator that explores the percentage of farmers cultivating this maize by gender and seniority might serve to capture these different experiences of the initiative.



Fulani herder in southern Mali. Photo credit: Edward R Carr, University of South Carolina.

Additionally, not all monitoring has to involve indicators. Formal and informal engagement with communities, representatives, and even random members of the target population can provide quantitative and qualitative information on the progress and success of the initiative. Ensuring that such engagement reaches representatives of marginal populations can also serve as a critical check on indicator-led data about the overall population, ensuring that the experiences of marginal populations are not lost in aggregated community- and population-level data. Formal and informal engagement requires building relationships with different groups within the target population – including marginal populations – before implementation. Maintaining these relationships during implementation is key to the success of development initiatives.

Development practitioners can undertake several activities to help ensure that they include marginal populations in the implementation and management stage:

- Involving and engaging representatives of marginal populations in initiative implementation and management using culturally appropriate communication methods.
- Soliciting information from marginal populations on climate and non-climate changes that might necessitate shifts in adaptation action approaches.
- Holding periodic meetings with marginal populations to assess their experiences of the initiative.
- Careful monitoring of activities or trends that are of particular significance to marginal populations, such as yields or prices of crops traditionally associated with their agricultural production; and consultation with representatives of marginal populations to interpret the significance of new activities and trends.

- Selecting indicators that will provide information about the changing situation of marginal groups. For example, the indicator of *number of stakeholders with increased capacity to adapt to the impacts of climate change as a result of USG assistance* is broad, and might aggregate the experiences of marginal populations with those of the population at large, making it difficult to see the challenges that marginal populations experience. Therefore, complementing this required indicator with custom indicators aimed at understanding marginal populations and their activities is critical to the collection of data that will contribute to a meaningful evaluation. In the context of a project in Sudanian West Africa, for example, development practitioners could pair this required indicator with custom indicators that address (1) the number of stakeholders with pastoral livelihoods with increased capacity to adapt, and (2) the number of sedentary agriculturalists with increased capacity to adapt. This suite of indicators would capture all pertinent indicators – those of the larger population (in this case, agriculturalists), and those of the more marginalized populations (pastoralists). It is also worth considering indicators that can measure the uptake of adaptive practices.

3.5 EVALUATE AND ADJUST

The evaluation and adjustment stage involves using the monitoring data to analyze implementation progress and adjust the strategy, program, or project as needed; monitoring data can also provide additional information to improve performance. For example, monitoring of child health and nutrition indicators in climate-vulnerable areas could provide timely information on climate change impacts be an early warning system on a variety of issues, including food security, disease outbreaks and children’s overall health (UNICEF, 2011). Development practitioners who adjust an initiative based on monitoring data should carefully consider the changing situation of any marginal populations; the effects of a changing climate can exacerbate existing inequalities and disadvantages or produce unique opportunities. Therefore, the evaluation and adjustment phase represents an important opportunity to explore the effects of development initiatives on marginal populations.

The evaluation process should include a focus on the effectiveness, unintended or unexpected consequences, and benefits of the development initiatives for the marginal populations by soliciting and including the voices of marginal populations. Development practitioners’ ongoing evaluation of the relative success or failure of an initiative should include consideration of how that initiative has affected the situation of marginal groups. If they are not considered separately from the broader population, the distinct outcomes for marginal populations will likely “disappear” within the broader evaluation.

In some cases, an action may be effective for the overall population but may not benefit the marginal populations or may even be detrimental to the marginal populations. Without considering marginal populations, expanding what appears to be a “successful” initiative would exacerbate these issues. In other cases, an initiative may not be particularly effective on a broader level, but may provide a key positive outcome for a small marginal population. Discontinuing such an initiative would disproportionately affect the marginal group and potentially freeze or reverse any gains.

Development practitioners cannot learn from these successes and failures if they cannot see them. Therefore, community-level evaluations should incorporate efforts to evaluate the outcomes for marginal populations relevant to the initiative to help better define where relative successes and failures occurred and identify options for future improvements. Development practitioners should consider using qualitative evaluations and value successes for marginal populations, even in situations where the benefits appear more limited in the general population.

Monitoring, evaluating, and adjusting initiatives is a good management practice; however, such changes may disproportionately alter an initiative’s effectiveness, unintended consequences, or benefits for marginal

populations. For example, an agricultural project seeking to build climate resilience through sustainable intensification (e.g., efforts to boost productivity and increase yields without increasing the area under cultivation or to maintain yields while cultivating less land) might, under typical climatic conditions, appear to benefit the wider community, as well as a poor ethnic minority. However, a significant drought might lead farmers in the wider community to abandon sustainable intensification practices and instead extend their farms into lands used by the minority, thus placing pressure on the marginal group's livelihoods. If such an outcome were observed during monitoring, implementers would have to adjust the initiative and consider shifting the combination of options selected to address the needs of the wider community while continuing to protect the marginal group from negative effects. For example, in this hypothetical case, implementers might have to make management decisions that shift some emphasis from sustainable intensification practices. Implementers might focus on activities that generate alternative non-farm incomes in the community that reduce the community's need for extensification (e.g., maintaining or increasing yields by expanding the area under cultivation) in the event of a drought. This would continue to support the adaptive capacity of the population at large, while buffering the marginal group's livelihoods against future encroachment.

Please note that in the “evaluate and adjust” stage of the framework, stakeholder engagement is also particularly important. Development practitioners should involve and engage representatives of marginal populations in the evaluation and adjustment stage by using culturally appropriate communication methods. The Climate-Resilient Development Framework emphasizes the importance of developing and applying clear and consistent indicators of success; these should also take into account the distinct exposures, differentiated sensitivities, and differentiated adaptive capacities of marginal populations.

Previously, in the scoping stage, we suggested that development practitioners include reducing marginalization as a development goal. In the evaluate and adjust stage, practitioners can explicitly evaluate the success of this goal, adjusting the development initiative to improve the outcome. Successes would include outcomes that address the distinct exposures, differentiated sensitivities, and differentiated adaptive capacities of marginalized populations; that reduce their vulnerabilities relative to the general population; or that increase their resilience to climate and non-climate stressors. In contrast, failures would include outcomes that ignore or exacerbate the disadvantages of marginal populations or that decrease their resilience to climate and non-climate stressors.

In conclusion, the success of development initiatives depends not only on the benefits accorded to the majority, but also to the marginalized groups, of the target population. It is therefore important for implementers to weave the consideration of marginal populations at every stage of the Climate-Resilient Development Framework. This annex concludes with a list of resources to supplement and complement the discussion above on how to incorporate considerations of marginal populations in each stage of the Climate-Resilient Development Framework.

4. REFERENCES

This section presents a list of recommended resources for further reading on the topics discussed in this annex.

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APPENDIX A: SAMPLE QUESTIONS FOR CONSIDERING MARGINAL POPULATIONS WHEN USING THE CLIMATE-RESILIENT DEVELOPMENT FRAMEWORK

This appendix provides a series of sample questions that development practitioners may wish to use to incorporate consideration of marginal populations at each stage of the Climate-Resilient Development Framework. These questions complement the discussion in Section 3 of how marginal populations can be incorporated into the framework. They are intended to be illustrative and serve as a starting point for practitioners to begin considering the needs of marginal populations – they are not comprehensive and are *not intended to be used as a checklist*.

A.1 SCOPE

Considering marginal populations in the context of enabling conditions for climate-resilient development involves asking questions such as the following:

Framing the planning process

- What is the geographic scope of the development initiative?
- What is the technical scope of the development initiative?
- Who is the target population for the development initiative?
- In what ways will the development initiative affect the social, economic, cultural, institutional, political, and ecological or biophysical conditions of the target population?
- Who in the population is marginalized *with regard to the challenge the development initiative is meant to address*?
 - Are there any differences in access to infrastructure and/or natural resources relevant to the proposed intervention between subgroups within the population?
 - Are there groups that appear to be absent from existing development frameworks or climate change strategies, policies, and plans?

- Are there any groups who do not participate in development initiatives or whose input is typically not sought?
- Are there contextual clues that can help identify marginal populations, such as infrastructure gaps, visible disparities in assets, or their physical location within the community?
- Are there political and/or cultural considerations that help explain the reasons for marginalization?
- How can you include perspectives from marginal populations in the identification and prioritization of development goals?
 - Do marginal groups have their own organizations or representatives?
 - How can you build trust with marginalized populations and overcome limitations that limit their participation?
 - How has stakeholder participation with marginal populations unfolded in past development initiatives? Have there been successful modes of engagement that might act as models?
- Whose needs do the development goals represent? Are they representative of all groups within the population – both the marginal populations and the population as a whole?
- Could the achievement of the development goals be detrimental to the marginalized populations?

Identifying development inputs and enabling conditions

- Which development inputs are relevant to marginalized populations? In what unique ways, if any, are these inputs produced by/used by marginal populations?
- How do the knowledge, skills, social/economic networks, and labor of marginalized populations play a role as development inputs?
- How could inputs necessary to achieving a development goal conflict with the needs of marginalized populations?

Considering the impacts of climate and non-climate stressors

- How do non-climate stressors exacerbate the marginality of identified populations, and how might the situation of marginalized populations be leveraged to ameliorate non-climate stressors? How might development actions be targeted to reduce these stressors without negatively affecting the marginalized populations?
- Could climate stressors exacerbate marginalization? If so, in what ways?
- How could development goals be targeted to reduce the impacts of climate change and variability on marginalized populations and/or increase their resilience to current and projected impacts? How might these efforts directly or indirectly impact the development inputs critical to project success?

A.2 ASSESS

Considering marginal populations in the assessment stage involves asking questions such as the following:

- How can you include the perspectives of marginalized populations to better understand the vulnerabilities of key inputs to climate change?
 - How might the unique vulnerabilities of marginalized populations affect development inputs and project outcomes?
- How are the marginalized populations' unique social structures and human inputs to development goals affected by climate change different than those of the general population?
 - In what unique ways are the marginalized populations exposed to the stressor?
 - How does the sensitivity of the marginalized populations to the stressor differ from that of the general population?
 - What are the unique adaptive capacities of the marginalized populations? How might this adaptive capacity be affected by additional stressors, including climate change and the adaptation actions themselves?
- Are there marginal populations you identified in the scoping phase that will not experience distinct and differentiated vulnerabilities to climate stressors? Can these groups' interests be included with those of the general population?

A.3 DESIGN

Considering marginalized populations in the design stage, especially while evaluating and prioritizing adaptation actions, involves asking questions such as the following:

Identifying adaptation actions

- How is access to and understanding of information limited in marginalized populations (e.g., by language, literacy, educational background, ability to attend meetings)?
 - How can you overcome these limitations?
 - How can you improve stakeholder participation in decision-making among marginal populations?
 - Can you accommodate the marginalized populations' needs by adapting your approach (e.g., holding meetings at times that do not conflict with livelihood activities, using female facilitators to reach women)?
- How can marginalized populations play a role in providing information on climate stressors and impacts? How does this knowledge inform or improve the adaptation action?
- When proposing changes in governance, will these changes benefit marginalized populations? Could they cause unintended consequences for these populations?
 - What institutional and legal reforms can help reduce the factors that contribute to marginality and thereby improve the potential for success of the development action?

- How can the resilience of the marginalized populations to climatic and non-climatic stressors be improved? Will marginalized populations benefit from actions taken for the entire population, or do they require specific actions to see benefits?

Selecting evaluation criteria

- By what means can marginalized populations contribute to identifying and selecting evaluation criteria?
 - Who gets to contribute to the criteria for determining success?
 - Are the relevant marginalized populations part of this process?
 - Can participants/commenters safely disagree with the criteria, in whole or in part?
 - What knowledge and information count toward evaluation?
 - Do the knowledge and information contributions of marginalized populations count in the evaluation process?
- Whose vulnerabilities are being addressed by the overall set of effectiveness criteria?
 - Are the distinct and differentiated vulnerabilities of marginalized populations being evaluated?
- Are there social and/or institutional barriers that may affect the feasibility of initiatives for marginalized populations in different ways than in the general population?
- Are there additional costs associated with actions that target marginalized populations?

Analyzing options and selecting a course of action

- Are marginalized populations' interests represented in the process of evaluating options and selecting a course of action? Does the weighting of evaluation criteria reflect the ideas and interests of marginalized populations?
- In what ways could the development actions benefit marginalized populations? In what ways could they exclude or harm marginalized populations? Can you select options that provide more balanced benefits to marginalized populations?
- How might the development actions exacerbate existing inequalities and further these conditions for marginalized populations? Can you attempt to address and improve these conditions through the course of action you select?
- When analyzing options, can you use methods that ensure transparency and attempt to elicit the narratives of individuals rather than viewing marginal populations as an undifferentiated mass?

A.4 IMPLEMENT AND MANAGE

Considering marginal populations in the implementation and management stage involves asking questions such as the following:

- How may responding or not responding to climate impacts on development alter the effectiveness, unintended consequences, or benefits of an action for marginalized populations?

- What might the impact of such unintended consequences or benefits be on development inputs and project outcomes?
- How can you continue to involve and engage representatives of marginalized populations in project implementation and management?
- How can you solicit information from marginalized populations on changes that might necessitate shifts in adaptation action approaches?

A.5 EVALUATE AND ADJUST

Considering marginal populations in the evaluation and adjustment stage involves asking questions such as the following:

- Are the perspectives and outcomes of marginalized populations being considered in your evaluation?
- Is your outreach and communication strategy working to engage marginalized populations in the evaluation process and the design of any adjustments?
- Are marginalized populations benefiting to a similar degree as the general population? Are the marginalized populations experiencing disproportionate unintended consequences?
- Are there projects that are not achieving success in the general population but providing key benefits to marginalized populations?
- Can you use qualitative measures of success that value the importance of the projects for marginalized populations?
- If reducing marginalization is a development goal, have you been able to reduce vulnerabilities and/or increase resilience of the marginalized populations to climate and non-climate stressors relative to the general population?
- When making adjustments, have you considered how these changes will affect outcomes for marginalized populations?

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