

## Climate and Disaster Risk Screening - Sector Screening Guidance Note Health, Nutrition and Population Global Practice

This Sector Screening Guidance Note provides an end-to-end roadmap of the climate and disaster risk screening process.

Climate and disaster risk screening applies to:

- All IDA operations
- All IBRD operations starting July 1, 2017

### Why screen for climate and disaster risk?

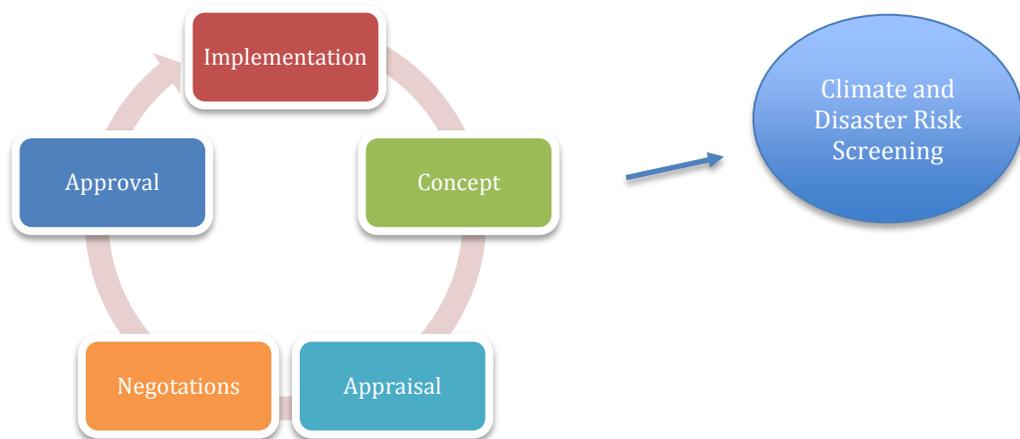
- Meeting the corporate climate commitment (WBG Climate Change Action Plan (CCAP) commits to increasing the climate related share of the portfolio to 28% by 2020)
- Complying with the screening requirement (IDA-17 policy commitment to screen operations since July 1, 2014; commitment will continue under IDA-18; screening requirement extended to IBRD operations starting July 1, 2017 as per CCAP commitment)

### What is climate and disaster risk screening?

- A **proactive approach to managing short- and long-term climate and disaster risks** with the final aim of integrating appropriate resilience measures in development policies, programs and projects

### When to screen operations?

- Climate and disaster screening is carried out at an **early concept stage** of the project cycle



### What information is required for screening?

- An initial understanding of project components, location and target beneficiaries
- Some knowledge of the project's country context including the health sector context and the political, social and economic context
- No specialized knowledge of climate change and disasters is required

### Where to get screening support?

- Visit the [Country Adaptation Profiles](#) and [Climate Change Knowledge Portal \(CCKP\)](#) for information on climate and disaster risks
- Watch the training videos for [screening](#) and the [CCKP](#)

- Follow an [e-learning course](#)
- Join a [face to face training session](#)
- Contact the Climate Help Desk at [climatescreeninghelpdesk@worldbankgroup.org](mailto:climatescreeninghelpdesk@worldbankgroup.org)

### What screening tools are available?

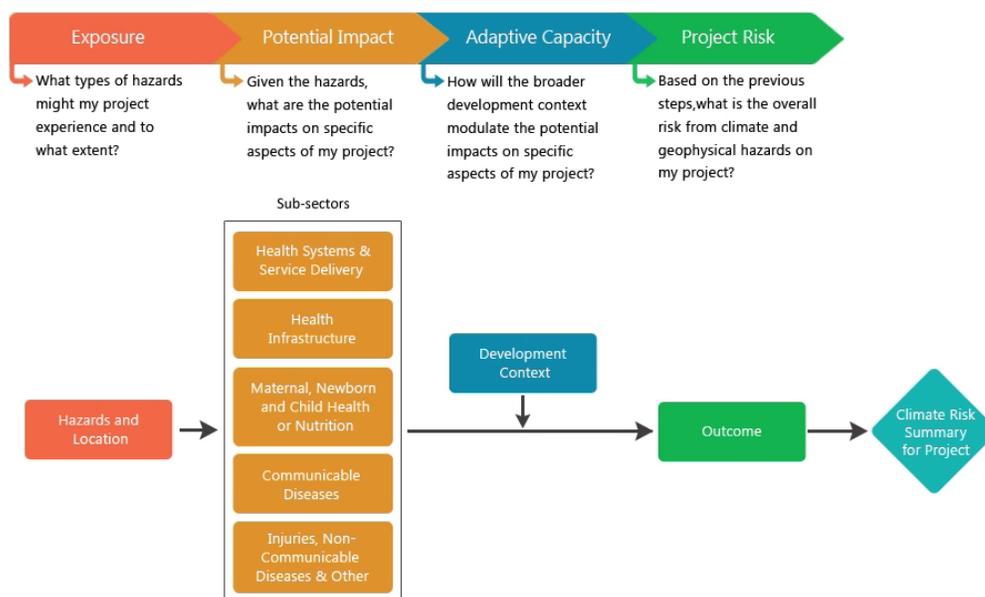
- Two screening tools are available: one **Rapid Screening Assessment** and one **In-Depth Screening Assessment**
- The tools can be used for all WBG lending and financing instruments
- **Note:** These tools provide high-level screening at an early stage of project and/or program development. They **do not** provide a detailed risk analysis, nor do they suggest specific options for increasing the project’s resilience. They are intended to help determine the need for further studies, consultation and/or dialogue in the course of project and/or program design.

Tool	Description	Completion Time	Outputs
<b>Rapid Screening Assessment</b>	<ul style="list-style-type: none"> <li>• Provides a lightweight, rapid assessment of current and future climate and disaster risks.</li> <li>• A good option for users who already have knowledge on the climate and disaster risks that may impact their project/program.</li> </ul>	Around 30 minutes	Downloadable summary report of selected risk ratings to be included in project and/or program documents
<b>In-Depth Screening Assessment</b>	<ul style="list-style-type: none"> <li>• Provides a more in-depth assessment of current and future climate and disaster risks.</li> <li>• A good option for users who may need additional guidance on the climate and disaster risks that may impact their project/program.</li> </ul>	Around 2 hours	Downloadable detailed project risk report to be included in project and/or program documents

### What screening steps do the tools follow?

The screening tools follow four main steps:

1. Exposure
2. Potential Impact
3. Adaptive Capacity
4. Risks to the Project Outcome/Service Delivery



## STEP 1: EXPOSURE OF THE PROJECT LOCATION AND TARGET BENEFICIARIES

- This step assesses the current and future exposure of the project location and target beneficiaries to relevant climate and geophysical hazards
- This is based on climate information drawing on global, quality controlled data sets from the [Climate Change Knowledge Portal](#)
- Changes to the baseline health conditions of target beneficiaries as result of hazards may alter the effectiveness of the project
- Understanding the trends of hazards is important as they act individually and collectively on project components

Climate and geophysical hazards	Guiding questions for health projects
Extreme temperature	<ul style="list-style-type: none"> <li>• Is annual and monthly temperature (i.e. seasonality) projected to change?</li> <li>• Is the frequency, intensity and duration of extreme temperatures projected to change?</li> </ul>
Extreme precipitation and flooding	<ul style="list-style-type: none"> <li>• Are annual and monthly (i.e. seasonality) precipitation patterns projected to change?</li> <li>• Is the frequency, intensity and duration of extreme precipitation projected to change?</li> </ul>
Drought	<ul style="list-style-type: none"> <li>• Is the frequency, intensity and duration of droughts projected to change?</li> </ul>
Strong winds	<ul style="list-style-type: none"> <li>• Is the project location exposed to winds from tropical cyclones, such as hurricanes or typhoons?</li> </ul>
Sea level rise	<ul style="list-style-type: none"> <li>• Is local sea level projected to change by the end of the project lifetime?</li> </ul>
Storm surge	<ul style="list-style-type: none"> <li>• Does the project location include areas that have experienced storm surge in the past?</li> </ul>
Geophysical hazards (earthquakes, tsunami, volcanic eruptions, and landslides)	<ul style="list-style-type: none"> <li>• Is the project located in an area with high, medium, or low seismic hazard?</li> <li>• Have there been historical earthquakes?</li> <li>• Is the project located in a tsunami zone area?</li> <li>• Is the project located near an active volcano (i.e., one that might have erupted in the last 10,000 years)?</li> <li>• Has the location of the project ever experienced landslides of any nature in the past?</li> <li>• Has the location of the project ever experienced wildfires in the past?</li> </ul>

Climate and geophysical hazards	Implications for target beneficiaries
Extreme temperature	<ul style="list-style-type: none"> <li>• May cause heat-related illnesses, including heat cramps, fainting, heat exhaustion, heat stroke, and death. Pregnant women and children are especially vulnerable to heat-related illnesses</li> <li>• Can reduce air quality, such as increased amounts of pollen and smoke in the air, and affect respiratory conditions. Children are especially vulnerable to respiratory illnesses</li> </ul>
Extreme precipitation and flooding	<ul style="list-style-type: none"> <li>• Can influence the growth, survival, and persistence of pathogens, resulting in shifts in the incidence, seasonal transmission, and geographic range of vector-borne, infectious, tick-borne, and zoonotic diseases</li> <li>• Can damage sanitation infrastructure leading to outbreaks of water-borne diseases</li> </ul>
Drought	<ul style="list-style-type: none"> <li>• Can increase undernourishment through impacts on crop yields and affect health by exacerbating chronic water shortage. Women and children are especially vulnerable</li> </ul>

	<ul style="list-style-type: none"> <li>• Can also increase risk of wildfires which can cause serious injuries and increase morbidity and mortality</li> </ul>
<p>Strong winds Sea level rise Storm surge Geophysical hazards</p>	<ul style="list-style-type: none"> <li>• Can cause serious injuries, increase mortality and morbidity, restrict access to health services and also damage or destroy key health service infrastructure</li> <li>• May increase the prevalence of mental illness and exacerbate stress on the mentally ill</li> </ul>

## STEP 2: IMPACTS ON THE PROJECT’S HEALTH INFRASTRUCTURE AND OTHER ACTIVITIES

- This step assesses the current and future impacts of identified climate and geophysical hazards on the project’s health infrastructure and other activities as currently designed
- Understanding where risks may exist within one or multiple components and identifying where further work may be required to reduce or manage these risks can help inform the process of dialogue, consultation and analysis during project design

Health subsectors	Potential impacts from climate and geophysical hazards
<p><b>Health Infrastructure</b></p>	<ul style="list-style-type: none"> <li>• <b>Extreme temperatures</b> can reduce comfort in health clinics and increase the need for heating and cooling devices</li> <li>• <b>Extreme heat</b> may also increase the burden on electrical resources, causing power outages and disrupting electricity supply to hospitals</li> <li>• <b>Drought</b> can exacerbate chronic water shortage and affect water quality, which might lead to the use of unsafe water sources</li> <li>• <b>Drought</b> may also cause soils to dry and cause damage to the foundation of health care facilities. Water supply pipes may crack, reducing the availability of water for the hospital</li> <li>• <b>Extreme precipitation and flooding</b> can block roadways, preventing the transportation of essential medical supplies and pharmaceuticals and preventing access for ambulances</li> <li>• <b>Extreme precipitation and flooding, strong winds or sea level rise and storm surge</b> can damage hospitals and health care equipment and cause power outages in clinics</li> <li>• <b>Strong winds</b> can compromise the structural integrity of clinics</li> <li>• <b>Earthquakes</b> can damage and destroy health infrastructure such as hospitals, clinics, health facilities at all levels and disrupt services. Therefore, it is important that health facilities follow standards or norms that withstand the level of earthquake in the project location</li> <li>• <b>A tsunami</b> can cause serious injuries and increase morbidity and mortality of coastal areas, as well as damage key infrastructure for health services</li> </ul>
<p><b>Health Systems &amp; Service Delivery</b></p> <p><b>Maternal, Newborn &amp; Child Health or Nutrition</b></p> <p><b>Communicable Diseases</b></p> <p><b>Injuries, Non-Communicable Diseases &amp; Other</b></p>	<ul style="list-style-type: none"> <li>• <b>Extreme temperature</b> may impact health workers’ productivity and capabilities in delivering care.</li> <li>• <b>Extreme temperature</b> may disrupt the delivery of nutrition supplies.</li> <li>• <b>Extreme precipitation and flooding or sea level rise and storm surge</b> can prevent community health workers from traveling to provide education, treatment, or health care services in the community and disrupt the delivery of health care supplies</li> <li>• <b>Strong winds</b> during storms may prevent community health workers from traveling to patients to provide care to local populations.</li> <li>• <b>Flooding</b> may obstruct the target population’s access to clinics and disrupt the project’s delivery of health services.</li> <li>• <b>Strong winds, sea level rise and storm surge</b> can reduce the target population’s ability to safely access clinics and the project’s health services.</li> <li>• <b>Extreme precipitation and flooding</b> may inundate health information records, preventing providers from accessing information on patients to provide care.</li> </ul>

### STEP 3: MODULATING EFFECT OF THE PROJECT'S ADAPTIVE CAPACITY

- This step assesses how potential impacts on key components/subsectors due to exposure to hazards is modulated by the project's broader development context

	<b>Modulating effect of adaptive capacity</b>
<b>Sector context:</b> Health	<ul style="list-style-type: none"> <li>• Surveillance and forecasting systems that incorporate climate information for critical diseases and other health outcomes can ensure early warning of changing conditions</li> </ul>
<b>Social, economic and political factors:</b> Access to technology, Prices (food and energy), Financial resources, Conflict, Political instability, Legal enforcement, Population growth, Urbanization, Land ownership issues, Land and soil quality, Nutrition, Education, Gender	<ul style="list-style-type: none"> <li>• Investments in associated sectors, such as water and sanitation projects or projects to lower emissions of short-lived climate pollutants, can improve public health</li> <li>• Limited access to technology makes it more difficult to monitor disease outbreaks and warn vulnerable populations</li> </ul>

- This step also considers vulnerable groups including **women, migrants and displaced populations**

<b>Women, migrants and displaced populations</b>	<b>Adaptive capacity elements that help alleviate risks</b>
<b>Development context</b>	<ul style="list-style-type: none"> <li>• Tracking systems (e.g. early warning systems that utilizes climate data) that monitors sex-disaggregated trends related to climate extreme event mortality</li> <li>• National health policies and strategies targeted to increase women's adaptive capacity post natural disasters (e.g. increasing access to assets and networks that aid mitigating impacts of climate change disasters)</li> </ul>

- Annex 1 provides additional information on climate and disaster risks to women

### STEP 4: RISK TO THE PROJECT OUTCOME/SERVICE DELIVERY

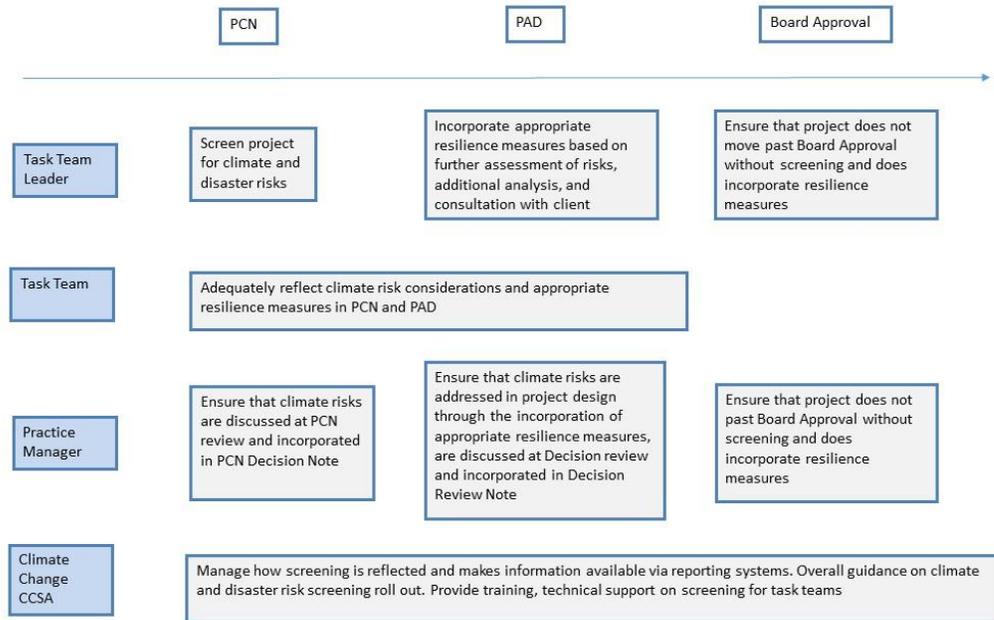
- This step assesses the level of risk to the outcome/service delivery that the project is aiming to provide
- Both screening tools will provide guidance on next steps to take and on how to use your risk assessment based on the level of risk identified for your project
- The table below provides some general guidance based on risk ratings for project outcome/service delivery:

<b>HIGH RISK</b>	<ul style="list-style-type: none"> <li>• For areas of <i>High Risk</i>, you are strongly encouraged to conduct a more detailed risk assessment and to explore measures to manage or reduce those risks.</li> </ul>
<b>MODERATE RISK</b>	<ul style="list-style-type: none"> <li>• For areas of <i>Moderate Risk</i>, you are encouraged to build on this screening through additional studies, consultation, and dialogue. This initial screening may be supplemented with a more detailed risk assessment to better understand the nature of the risk to the project.</li> </ul>
<b>LOW/NO RISK</b>	<ul style="list-style-type: none"> <li>• If you are confident that climate and geophysical hazards pose <i>no or low risk</i> to the project, continue with project development. However, keep in mind that this is a high-level risk screening at an early stage of project development. Therefore, you are encouraged to monitor the level of climate and geophysical risks to the project as it is developed and implemented.</li> </ul>
<b>INSUFFICIENT UNDERSTANDING</b>	<ul style="list-style-type: none"> <li>• Gather more information to improve your understanding of climate and geophysical hazards and their relationship to your project</li> </ul>

- Annex 2 lists some climate risk management measures for typical health projects for your consideration.

**Who does what and when?**

- The figure below depicts clear roles and responsibilities for the TTL, task team, relevant Manager, and Climate Change CCSA at key points in the project cycle, as related to screening.



- Task teams should be able to do the following at project concept and appraisal stage:

Project concept stage	Project appraisal stage
<ul style="list-style-type: none"> <li>Identify the climate change and disaster risks that could potentially impact project outcomes</li> <li>Determine, based on available knowledge, the level of risk to project outcomes</li> <li>Discuss screening results at the project concept note review meeting and record decision on potential level of risk to project outcomes in the review minutes</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how the project components can be better designed. As appropriate, understand how to integrate resilience measures into project design</li> <li>Discuss key climate and disaster risks and resilience considerations at the PAD review meeting and record decisions in the decision meeting minutes</li> </ul>

**How to reflect screening in project documents?**

- Summarize potential climate and disaster risks in the ‘Introduction and Context’ and the ‘Overall Risk and Explanation’ sections of the PCN document.
- Where risks exist, identify potential resilience-enhancing measures in appropriate sections.
- If risks and resilience-enhancing measures have not been identified at PCN stage, these must be considered by appraisal stage and reflected in the appropriate sections of the PAD.

## Additional Resources

### For more information on climate change impacts on health:

- [\*The Lancet Countdown: Tracking Progress on Health and Climate Change\*](#) is an international, multi-disciplinary research collaboration between academic institutions following on from the 2015 Lancet Commission on Health and Climate Change, which emphasized that the response to climate change could be “the greatest global health opportunity of the 21st century”.
- [\*Geographic Hotspots for World Bank Action on Climate Change and Health: Investing in Climate Change and Health Series\*](#) by the World Bank outlines the scope of health impacts from climate change and its drivers, the means of transmission, and a description of the drivers of climate change, and their sources. It also identifies hotspot countries, and narrows the focus to those countries that are both most likely to bear the brunt of a greater burden of disease and death from climate change and climate drivers, and that are the least ready to cope. Coping mechanisms through mitigation and adaptation measures, are also outlined, as are the multiple benefits that can be expected from multi-sector, concerted efforts to address health impacts from climate change, and its drivers.
- [\*The Atlas of Health and Climate\*](#), by the World Health Organization and World Meteorological Organization, provides scientific information on the connections between weather and climate and major health challenges, including infections, emergencies arising from extreme weather events, environmental degradation, and demographic aging.
- The World Health Organization’s report, [\*Protecting Health from Climate Change: Connecting Science, Policy and People\*](#), presents an overview of the links between climate change and human health and outlines priority actions to reduce vulnerability.
- [\*The Health Dimension of Climate Change\*](#) by the World Bank focuses on the health impacts of climate change that are relevant for ECA countries, assessing the vulnerability of health sectors to these impacts, and providing insights into building health-specific adaptive capacity. The impacts of climate change on health is detailed and analyzed at various levels, in relation to an increased frequency and/or intensity of extreme weather events as well as those due to a progressive increase in temperatures entailing expanded disease vector distribution and other climate-sensitive factors. The report is divided into three main sections: (i) discussion of climate change events and their health impacts in ECA; (ii) a country-level climate change-health vulnerability assessment; and (iii) adaptive strategies for optimizing health outcomes in the face of climate change.
- [\*Risk Expands, But Opportunity Awaits: Emerging Evidence on Climate Change and Health in Africa\*](#) by USAID presents evidence on the effects of climate change risks on the health sector in Africa. It illustrates climate threats to health and development investments and highlights opportunities to achieve health targets in Sub-Saharan Africa in the face of climate change. Included in the report is information on the basics of climate forecasting in Africa, climate change and health vulnerabilities, details of health risks (i.e. undernutrition and vector-borne diseases), response opportunities (i.e. policy response and frameworks for action), and information on future efforts.
- [\*Climate Change and Health Impacts: How Vulnerable is Bangladesh and What Needs to be Done?\*](#) Is a study jointly undertaken by the Climate Change and Health Promotion Unit of the Ministry of Health and Family Welfare, the International Centre for Diarrheal Disease Research, Bangladesh, and the World Bank. This study had two broad objectives: (1) to assess national

vulnerability and impact on major diseases of increased climate variability and extreme events in Bangladesh; and (2) to assess existing institutional and implementation capacity, financial resources at the local level, and existing public programs targeted at climate-sensitive diseases.

- [\*A Human Health Perspective on Climate Change\*](#) by the U.S. National Institute of Environmental Health Sciences (NIEHS)-led Interagency Working Group on Climate Change and Health identifies major research areas that need to be further explored and understood. These include the following: Asthma, Respiratory Allergies, and Airway Diseases, Cancer, Cardiovascular Disease and Stroke, Foodborne Diseases and Nutrition, Heat-Related Morbidity and Mortality, Human Developmental Effects, Mental Health and Stress-Related Disorders, Neurological Diseases and Disorders, Vectorborne and Zoonotic Diseases, Waterborne Diseases, Weather-Related Morbidity and Mortality.
- [\*The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment\*](#) by the U.S. Global Change Research Program provides an assessment of climate-related health burdens in the United States. Acknowledging the rising demand for data that can be used to characterize how climate change affects health, this report assesses recent analyses that quantify observed and projected health impacts. Each chapter characterizes the strength of the scientific evidence for a given climate–health exposure pathway or “link” in the causal chain between a climate change impact and its associated health outcome. The overall findings underscore the significance of the growing risk climate change poses to human health in the United States.
- [\*Improving Capacity to Correlate Climate Change and Environmental Health Outcomes in Mozambique\*](#) by The World Bank presents the results of a geospatial regression analysis that aims to identify future trends in health vulnerability as a result of extreme events and future climate change in Mozambique. The goals of this analysis are as follows: i) To develop an understanding of the relationship between environmental/climate variables and the distribution of diseases. ii) To use that relationship to predict future trends in disease distribution across Mozambique and to identify specific districts that will be more vulnerable to various diseases in the future.
- [\*WHO Climate Change and Human Health Publications\*](#)

**For more information on health management measures to address climate change impacts:**

- [\*WHO Adaptation Resources for Health Partners\*](#). Provides a range of resources which can raise awareness and build capacity of UN staff, health professionals, multisectoral actors, and the general public to better understand and prevent negative impacts of climate change on health.
- [\*Climate Change and Health approach and Action Plan\*](#) by the World Bank outlines a potential approach for the WBG in climate and health by considering the current health-climate change imperative, the evolution of the global policy environment and the picture today, and global initiatives and WBG roles now and in the future. It also describes strategic objectives and potential operational steps and tools.
- [\*Climate-smart Healthcare: Low-carbon and Resilience Strategies for the Health Sector by the World Bank\*](#). Low-carbon approaches can provide effective, cheaper care while at the same time being climate smart. Low-carbon healthcare can advance institutional strategies toward low-carbon development and health-strengthening imperatives and inspire other development institutions and investors working in this space. Low-carbon healthcare provides an approach for

designing, building, operating, and investing in health systems and facilities that generate minimal amounts of greenhouse gases.

- [Lessons Learned on Health Adaptation to Climate Variability and Change: Experiences Across Low- and Middle-Income Countries](#) by the World Health Organization first reviews and synthesizes the first five years of implementation (2008–2013) of projects on health adaptation to climate variability and change in low- and middle income countries worldwide. The second part of the report presents results of qualitative research undertaken to document lessons learned and good practice examples from health adaptation projects to facilitate assessing and overcoming barriers to implementation and to scaling up.
- The WHO's report, [Protecting Health from Climate Change: Vulnerability and Adaptation Assessment](#), provides guidance on making vulnerability assessments of health risks due to climate change as well as guidance on policies and programs that could increase resilience.
- The World Bank's [Reducing Climate-Sensitive Disease Risks](#) assesses known interventions to reduce risk. The report also looks at ways to help practitioners reduce the risks of key climate-sensitive infectious diseases by strengthening risk management systems for disease outbreaks.
- [Climate Effects on Health Factsheets](#) by the U.S. Centers for Disease Control and Prevention (CDC) give a snapshot of how climate hazards can impact health as well as prevention and management measures. Issues covered include extreme precipitation and drought, warmer water and flooding, air quality, extreme heat, and vector-borne diseases.
- [Health and Disaster Risk Reduction within the Global Framework for Climate Services](#) is a report that resulted from a meeting organized by the World Meteorological Organization (WMO) and the World Health Organization (WHO), the International Federation of the Red Cross (IFRC) and the UN International Strategy for Disaster Reduction (UNISDR). The purpose of the meeting report was to develop recommendations for the implementation of a platform to enhance the applications of climate information and products in the health and disaster risk reduction sectors.

**For additional tools that are relevant to the health sector:**

- [Think Hazard!](#), is a web-based tool enabling non-specialists to consider the impacts of disasters on new development projects. Users can quickly and robustly assess the level of river flood, earthquake, drought, cyclone, coastal flood, tsunami, volcano, and landslide hazard within their project area to assist with project planning and design.
- [USAID Climate Risk and Management Tools](#) including a [Health Annex](#). These tools are meant to support climate risk screening and management in strategy, project and activity design. Excel templates enable the user to record results.
- The [WHO UNFCCC Climate and Health Country Profiles Project](#) aims to provide Ministers of Health, health decision-makers and advocates with country-specific, evidence-based snapshots of the climate hazards and health risks facing countries. They present opportunities for health co-benefits through mitigation actions and provide a global platform to track national progress in policy response and implementation.
- The [Health and Climate Change Toolkit for Project Managers](#) by the World Health Organization is a one-stop resource containing key resources that address climate change and health issues. It is intended for planners, policy makers, and those working at the policy/practice interface. Publications are sorted by eight topics, by type, geographic focus and year of publication. These eight topics are Health Impacts of Climate Change, Vulnerability and Adaptation Assessments,

Early Warning Systems, Building Resilience of Health Systems, National Adaptation Strategies and Plans, Monitoring and Evaluation of Health Adaptation, Engagement with Other Sectors, and Health Co-benefits and Climate Action.

- [The Climate Change and Human Health Literature Portal](#), from the U.S. National Institute of Environmental Health Sciences (NIEHS) is a knowledge management tool for locating the most relevant scientific literature on the health implications of climate change. It provides access to a database of studies from around the world, published between 2007 and 2014.

#### **For more information on climate change impacts, the water sector and gender:**

- [Gender, Climate Change and Health](#), by the World Health Organization, documents evidence for gender differences in health risks that are likely to be exacerbated by climate change, and in adaptation and mitigation measures that can help to protect and promote health.
- [Mainstreaming Gender in Health Adaptation to Climate Change Programmes](#), by the World Health Organization, is a guide on mainstreaming gender throughout all phases of health adaptation programs.

#### **For more information on climate change and migration:**

- [Environmental Change and Human Mobility: Reducing Vulnerability & Increasing Resilience](#) is a policy brief by the KNOWMAD Thematic Working Group on Environmental Change and Migration summarizes major findings and policy implications of papers commissioned to examine vulnerability and resilience, with particular focus on developing countries.
- The [IDMC's Global Internal Displacement Database](#) is an interactive platform designed for policy makers, NGOs, researchers, journalists and the general public for data and analysis on internal displacement.
- IOM's [Environmental Migration Portal / Country Profiles](#)

#### **Help Desks:**

- **The Climate Screening Help Desk can be reached at [climatescreeninghelpdesk@worldbankgroup.org](mailto:climatescreeninghelpdesk@worldbankgroup.org).** The Help Desk can provide support in the following areas:
  - IT assistance: Support with IT problems and glitches in the WB screening tools.
  - Assistance with risk screening: Assistance with the use of the tools for risk screening; guidance on use of the Climate Change Knowledge Portal (CCKP); links to World Bank regional or sector experts to obtain additional information to help screen for risks to your projects and additional information on in-person trainings.
  - Climate and disaster risk management: Guidance on how to address climate and disaster risks beyond completing the risk screening tools (e.g., incorporating climate and disaster risks into feasibility studies, terms of reference, consultations, and project design).
  - Feedback: Provide your feedback on the tools.

#### **Trust Funds:**

- Global Facility for Disaster Reduction and Recovery (GFDRR) – Just in time Resilience Grants
- [Adaptation Fund](#)

- [BioCarbonFund Initiative for Sustainable Forest Landscapes \(ISFL\)](#)
- [Carbon Partnership Facility \(CPF\)](#)
- [Climate Investment Funds and the Pilot Program for Climate Resilience \(PPCR\)](#)
- [Forest Carbon Partnership Facility \(FCPF\)](#)
- [Global Environment Facility \(GEF\)](#)
- [Green Climate Fund \(GCF\)](#)
- [Korea Green Growth Partnership](#)
- Least Developed Countries Fund
- [Program on Forests \(PROFOR\)](#)
- [Transformative Carbon Asset Facility \(TCAF\)](#)

## **Annex 1 – Climate and Disaster Risks to Women in the Health Sector**

**Overview and key considerations:** Women and men face different vulnerabilities and risks from climate change, and have varied opportunities and resources upon which to draw in their adaptation strategies. Due to gender and social exclusion, women often face barriers in benefitting from opportunities of green growth, and in taking best advantage of new resources, leadership opportunities, and assets created through climate investments. Gender-responsive climate programming requires an understanding of the roles and responsibilities of women and men in diverse sectors and country contexts, along with their rights and entitlements to relevant resources, assets and networks that aid in reducing vulnerability to the impacts of climate change.

A number of gender gaps lie at the heart of the gender and climate challenge. These include: i) the difference in women and men's mortality rates in extreme events (stemming in part from gendered norms around mobility, skills, and other factors); ii) women's particular vulnerability in the context of climate-induced migration (including furtherance of tenure insecurity; potential for gender-based violence; loss of social networks and place-specific livelihood skills, such as specialization in particular forms of agriculture or livestock management); iii. women's disproportionate vulnerability to climate-induced shocks at the household level (especially important in regions facing multiple hazards or increasing frequency of extreme events), due to reliance on natural resource-based livelihoods (as compared to male movement into the non-farm economy and services employment); iv) increased risk of women using negative coping strategies, due to prevailing gender norms, and the gender division of labor around household reproductive and care activities.

Below are probing questions in order to encourage analysis of impacts from exposure to climate change, and second-order effects related to the gender-climate-health sector nexus.

### **Health sector, gender and exposure to climate change**

Climate change will lead to key health sector impacts in such areas as disease incidence (both water-borne, such as typhoid, and vector-borne disease, such as malaria and dengue); morbidity and mortality impacts from extreme events; and impacts on road infrastructure affecting health service delivery and access to facilities. These phenomena can interact with gender in the following ways.

Women's over-representation in the agricultural sector can put them at increased risk of heat stress, compared to men who are more employed in services or manufacturing employment. Increased disease incidence can place healthcare cost burdens on the household, which in some places fall to women to cover due to their more common gendered responsibility to decide and pay for 'household expenses' of food, education, and health, in contrast to e.g., farm asset, land purchase or crop sale decisions often undertaken by men.

There are also indirect and second-order impacts as when climate change increases incidence and severity of extreme events (and potentially of environmental/ resource-driven conflict, e.g., over water scarcity or degraded lands) leading to temporary or more permanent displacement and migration. Again, women's household management responsibilities due to gendered norms are put under more strain in these instances of movement to new locales, or even in local temporary shelter. Women are also at increased risk of gender-based violence in contexts of displacement. Women's morbidity and mortality rates in disasters are shown to be higher than men's generally.

- What are the rates of disease incidence (water-borne and vector-borne) and how might these change women's care burden and time poverty, as well as health status itself?
- What are the trends in extreme weather events (and impacts such as flooding), and patterns in health infrastructure operating days? Do clinics have emergency sources of power?
- What are the sex-disaggregated trends in extreme event morbidity and mortality?
- Are energy services offered clean technologies that reduce indoor and outdoor air pollution, and thus incidence of respiratory diseases (currently disproportionately affecting women and children due to time spent at the homestead and engaged in cooking with biomass and solid fuels).

### **Health sector, gender impacts from climate change**

- What are the socio-spatial impacts of disease prevalence under different climate scenarios for the project area? Are coastal areas, urban slums, desert regions predicted to be especially hard hit by climate impacts of sea level rise, saline intrusion, waterlogging, urban heat islands, water scarcity or similar? How does this affect disease and morbidity/ mortality in geographic regions and what is the sex-disaggregated demographic data related to those locations that can suggest who may need to be targeted (for example, areas with high proportion of female-headed households due to male outmigration, or in post-conflict situations).
- Are surveillance services offered in disasters for gender-based violence incidence, especially for displaced populations?

### **Online data sources on gender:**

- World Bank: [Gender Equality Data and Statistics](#). This gender data portal is a one-stop shop for gender information, catering to a wide range of users and providing data from a variety of sources. The portal has indicators related to five dimensions of gender equality: economic structures and access to resources; education; health and related services; public life and decision-making; and human rights of women and girl children.
- FAO: [Gender and Land Rights Database](#). This portal highlights the major political, legal, and cultural factors that influence women's ability to claim their land rights throughout the world. It includes 84 country profiles, land tenure statistics disaggregated by gender, and a Legislation Assessment Tool for gender-equitable land tenure.
- FAO: [Agri-gender Statistics Toolkit](#). This toolkit supports increased collection and analysis of sex-disaggregated agricultural data. It includes a compilation of gender-sensitive questions, questionnaire components, and tables. The database is structured around nine items related to agriculture: agricultural population and households; access to productive resources; production and productivity; destination of agricultural produce; labor and time use; income and expenditures; membership in agricultural or farmer organizations; and food security poverty indicators.
- World Economic Forum: [Annual Global Gender Gap Report](#). The Global Gender Gap Index 2015 ranks 145 economies according to how well they are leveraging their female talent pool, based on economic, educational, health-based, and political indicators.
- World Bank: [Women, Business and the Law](#). Getting to Equal measures legal and regulatory barriers to women's entrepreneurship and employment in 173 economies. It provides

quantitative measures of laws and regulations that affect women's economic opportunities in seven areas: accessing institutions, using property, getting a job, providing incentives to work, going to court, building credit, and protecting women from violence.

- UNDP: [International Human Development Indicators](#). The Human Development Report Office releases five indices each year: the Human Development Index (HDI), the Inequality-Adjusted Human Development Index, the Gender Development Index (GDI), the Gender Inequality Index (GII), and the Multidimensional Poverty Index (MPI).
- UN Statistics: [The World's Women](#). This portal highlights differences in the status of women and men in eight areas: population and families; health; education; work; power and decision making; violence against women; environment; and poverty.

## Annex 2 – Types of Climate Risk Management Measures for Typical Health Projects

OBJECTIVE	EXAMPLES
<b>Improve health care systems</b>	<ul style="list-style-type: none"> <li>• Improve strategic planning for health services to account for climate change</li> <li>• Increase the capacity of health care and emergency services to support disaster planning and management</li> <li>• Increase medical training to improve awareness and treatment of climate-related health issues</li> <li>• Communication - timely warnings are communicated to health decision-makers, the media and the public and translated into effective action to prevent negative outcomes</li> </ul>
<b>Build information collection and management systems including early warning systems</b>	<ul style="list-style-type: none"> <li>• Monitor relevant climate and health parameters important in assessing integrated health risk to ensure early warning of changing conditions</li> <li>• Use surveillance equipment needed for early warning and emergency response to provide information to managers and designers of health programs and services</li> <li>• Identify climate-relevant diseases and gaps in information systems that could provide early warning of changes in relevant health patterns</li> <li>• Ensure that information is used in decisions around health resources and supply chains, capacity development, and early warning systems</li> <li>• Use demographic and health surveys for the country to provide information to support climate-resilient health services</li> <li>• Increase development of predictive tools around key priority diseases and heat waves</li> <li>• Develop diagnostic tools to analyze the seasonality and timing of interventions, map populations at risk, and monitor trends</li> </ul>
<b>Improve risk management systems</b>	<ul style="list-style-type: none"> <li>• Develop/improve climate-sensitive vector control programs (e.g., distribute bed nets in areas expected to be affected)</li> <li>• Strengthen preparedness and response to health emergencies (e.g. create cooling centers to provide relief from heat to the public; provide cooling stations for vulnerable populations; create contingency plans for loss of water treatment and sanitation systems during extreme events)</li> </ul>
<b>Strengthen governance systems around climate change and health</b>	<ul style="list-style-type: none"> <li>• Encourage integrated work across different technical ministries or institutions (e.g. increased cholera risk should be addressed through collaboration of the water resources ministry and the ministry of health)</li> <li>• Encourage the health sector to develop partnerships with meteorological agencies and climate information service providers to prepare and plan for health-related climate hazards</li> <li>• Mobilize relevant finance for health systems, surveillance, and research through assessment of resource requirements, available finance, and critical gaps.</li> <li>• Consider relevant policies that should be enacted to increase response and encourage cross-sector collaboration around relevant issues</li> <li>• Build increased need for climate data directly into health sector programming</li> </ul>
<b>Invest in climate-resilient health infrastructure, including water and energy systems</b>	<ul style="list-style-type: none"> <li>• Discourage development in flood-prone areas and use permeable paving materials and other design elements to reduce storm water runoff during heavy rains</li> <li>• Rebuild “climate smart” after extreme events to improve access to health services over the long run</li> <li>• Ensure that water, sanitation and energy systems are resilient to climate impacts</li> <li>• Consider the sustainability of roads that connect vulnerable populations to health centers or food markets</li> <li>• Support protection or creation of green spaces to reduce urban heat island effects</li> <li>• Develop new public-private partnerships to build climate-resilient health infrastructure</li> <li>• Broaden engagement to other sectors to design future infrastructure that focuses on maximizing multiple, cross-sectoral benefits, including benefits to health</li> </ul>

Sources: [USAID Climate Risk Screening and Management Tools: Health Annex](#); [WHO Strengthening Health Resilience to Climate Change](#); [World Bank Climate-Smart Health Care](#)