

# The Climate Smart Governance Dashboard: Supporting nations to prepare for and adapt to climate hazards

**Authors:** Giriraj Amarnath<sup>1</sup>, Niranga Alahacoon<sup>1</sup>, Emmanuel Atttoh<sup>1</sup>, Sahana V.<sup>2</sup>, Shweta Panjwani<sup>2</sup>, Upali Amarasinghe<sup>1</sup>, Kasanda Bunda<sup>3</sup>, Herrick Mwewa<sup>3</sup>, Sunimal Jayathunga<sup>4</sup>, Leel Randeni<sup>4</sup>, Dakshini Perera<sup>4</sup> and Hasula Wickremasinghe<sup>4</sup>

<sup>1</sup> International Water Management Institute (IWMI), Colombo, Sri Lanka

<sup>2</sup> IWMI, New Delhi, India

<sup>3</sup> Ministry of Green Economy and Environment, Lusaka, Zambia

<sup>4</sup> Climate Change Secretariat, Ministry of Environment, Sri Lanka

*The Climate-Smart Governance Dashboard provides accurate data on climate-related hazards, population vulnerability, forecast climate scenarios, sector-relevant data (water, health, agriculture, ecosystem), infrastructure and climate-related projects to support coordinated mid- to long-term adaptation planning aligned to global development goals.*

## Planning adaptation to climate change for the coming decades

Climate change is bringing increasingly variable weather and more frequent floods and droughts to low- and middle-income countries. If these nations are to adapt to such changes in the medium- to long-term, they must undertake a range of actions. First, they must develop evidence-based, cross-sectoral adaptation plans and policies – including those

required to fulfil the National Adaptation Plan (NAP) process of the United Nations Framework Convention on Climate Change (UNFCCC) – at a range of scales and in collaboration with diverse departments and organizations. Second, they need to implement projects to minimise the impacts of climate change, and to monitor their effectiveness so they can evaluate progress towards meeting the mitigation and adaptation plans they develop, as well as global development goals. And third, they have to identify gaps where additional funding and effort are required.

Fulfilling these activities can be challenging because national-level initiatives are often not coordinated with ground-level institutions; data on climate-related hazards and communities' exposure and vulnerability levels is not available; and effort is frequently duplicated because of a lack of awareness of existing initiatives. The Climate Smart Governance (CSG) Dashboard is designed to resolve these challenges, including by supporting nations to develop robust NAPs. The first tool of its kind, it gathers together data on a range of variables – including past and future climate, and societal characteristics – and combines this with tools for planning investments, reporting and monitoring climate adaptation projects, and evaluating progress towards meeting the United Nations Sustainable Development Goals (SDGs).

The CSG Dashboard has been developed as part of the CGIAR Initiative on Climate Resilience (ClimBeR). Specifically, it is part of efforts to 'build capacity for policies that match local needs with available tools to promote "governance for resilience" (G4R) that operates effectively across multiple levels and scales.' This aim complements other goals of the Program, which seek to: reduce risk to food-producers' livelihoods and agricultural value chains; ensure policymakers have evidence on which to base robust policies; and to understand and

act on security risks posed by climate change. The ClimBeR Program is being implemented in Zambia, Morocco, Senegal, Philippines, Guatemala, Kenya and Sri Lanka.

of institutions – from government departments to financing organizations and humanitarian agencies. It comprises nine modules designed to underpin effective climate adaptation planning. These are:

## Module 1 - Country Overview

This module provides a snapshot of a country's water resources, agriculture, ecosystems, health and climate hazards (flood, drought, tsunami, landslide and cyclone), giving an indication of its level of vulnerability to climate hazards.

## Module 2 - Climate Outlook

This uses the UNFCCC Shared Socioeconomic Pathways to show how the nation's level of risk may change under different climate policies, and across different regions. Users can click on a particular region and explore forecast predictions for climate variables, such as temperature and precipitation.

## Module 3 - Project Tracker

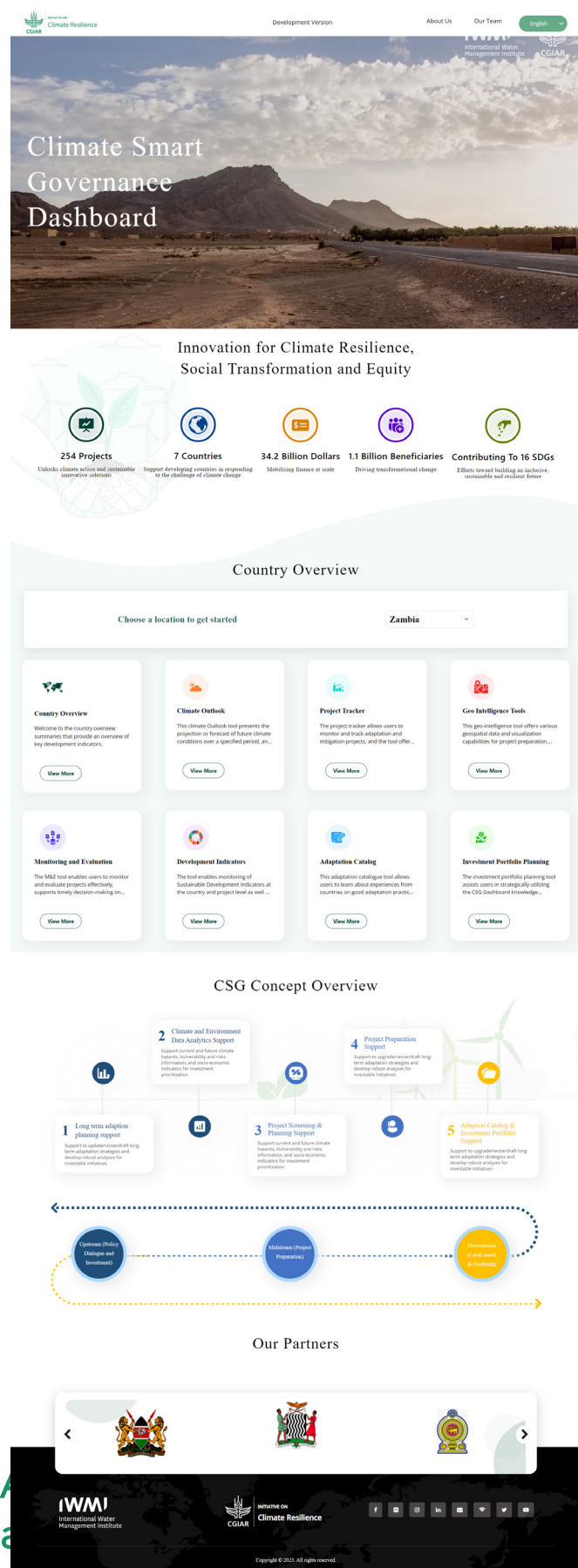
Users of the CSG Dashboard add information on projects via this module. Data is added under set categories to provide: project name, description, duration; country; donor; type of hazard being addressed; scale of the work (such as basin, subnational, global); theme (including fisheries, climate resilience, disaster risk reduction); and approach (such as monitoring and evaluation, innovation and scaling, capacity building). The Tracker then showcases all the climate-mitigation and -adaptation projects that have been added (dating back five years). This data can be presented on maps – and interrogated via the other CSG Dashboard tools.

## Module 4 - Geospatial Tools

This module can help policymakers to identify locations in need of support and to understand the kinds of projects that could most benefit communities living there. Various layers of information can be overlaid on a map, including: infrastructure (such as roads, towns, schools and hospitals); exposure to climate hazards (including floods and droughts); male and female literacy levels; access to toilets; and hygiene levels. Projects listed on the dashboard can also be mapped. Policymakers can use the tool to identify regions in need of financial support, direct development projects to those regions and identify the type of interventions that are most needed and lacking in the area.

## Module 5 - Monitoring and Evaluation

Information uploaded to the Project Tracker includes the type of hazard being addressed and the particular adaptation activities being undertaken. As the number of projects added to the dashboard grows, this data can be mapped to show the spatial distribution of projects concerned with particular aspects of adaptation. And, as project managers upload updates, the projects' collective outcomes can be assessed



The Climate Smart Governance Dashboard: Supporting nations to prepare for and adapt to climate hazards

against national adaptation objectives. As well as enhancing accountability and transparency, the module can be used to assess transformational change in the long-term.

## Module 6 - Development Indicators

This module is designed to facilitate understanding of a country's progress towards meeting the UN SDGs. When individual projects are listed, dashboard users add information on the specific SDGs they intend to address. This guides monitoring and evaluation teams on where to undertake surveys to assess changes in SDG indicators, by which progress towards meeting targets is measured. Data accumulated from many projects can help highlight a nation's achievements towards meeting the SDGs. For example, following implementation of a project that is aiming to reduce poverty (Target 1-1), participants can be surveyed to see how many are living on less than USD1.25 (Target 1-1 indicator) and how that number has changed since before the project started.

## Module 7 - Adaptation Catalogue

This module showcases the climate-mitigation and adaptation projects from around the world that have been uploaded to the Project Tracker. Anyone who has signed up to the system can upload information about projects they are working on, with this information then becoming visible to all other users of the system. In time, the dashboard may be made available more widely, so that members of smaller enterprises and the public can also upload information on initiatives. Projects can be viewed on a map, to show where clusters of similar initiatives or gaps exist.

## Module 8 - Investment Portfolio Planning

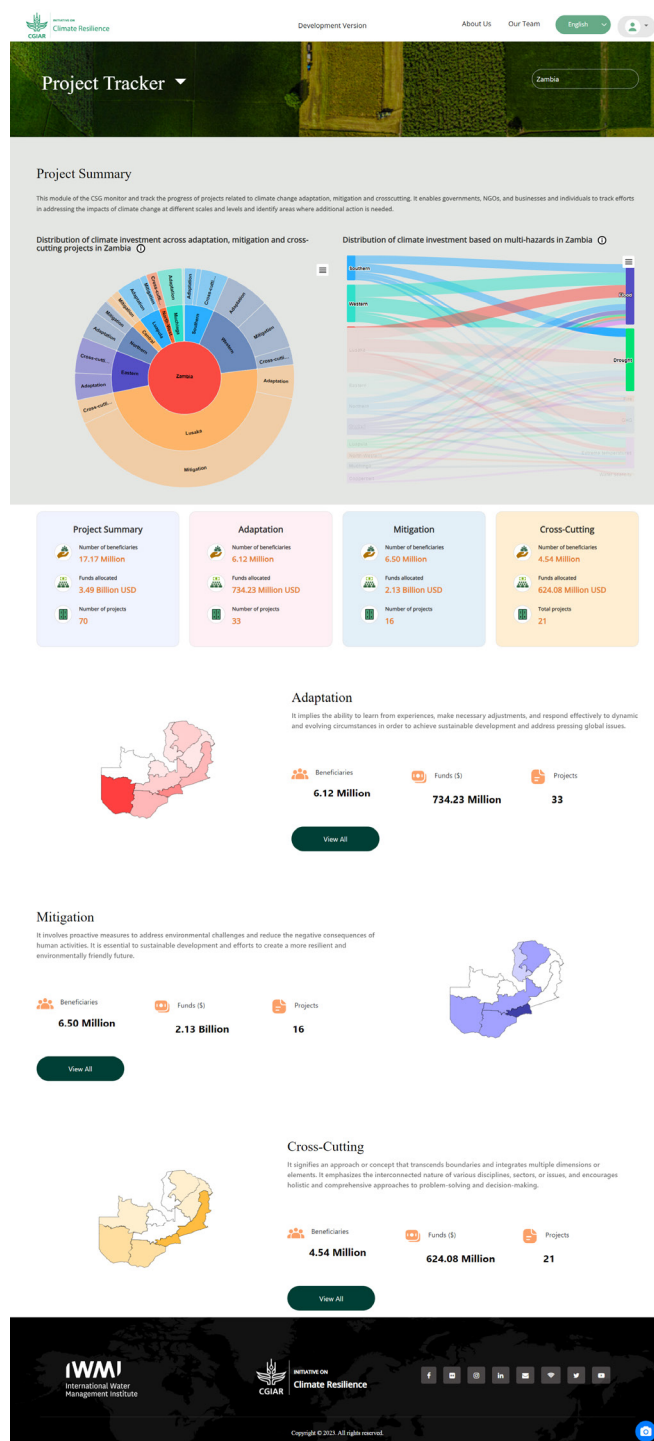
This module provides an overview of a country, detailing the mainstays of its economy and the risks presented by climate change. A climate-risk rank is given, using data from SwissRe outlining the potential impacts on GDP under different temperature-rise scenarios, the risk from specific weather hazards and the nations' adaptive capacity. An assessment is also provided on the impacts of climate change on specific sectors or aspects of the environment, including tourism, crop yields, health, sea-level rise and heat stress. Policymakers can use the module as the basis for analysis to assess the potential financial impacts of climate change within their country and use this evidence to attract investment from donors.

## Module 9 - How-to Guide

An in-depth guide to enable users to use the CSG Dashboard effectively for climate-adaptation planning.

# Benefits of the CSG Dashboard

A holistic approach involving public-sector departments (water, agriculture, meteorology, finance) and private-sector organizations (funding bodies, data providers, insurers, NGOs, CSOs) is needed to plan an effective response to climate shifts in the medium- to long-term. The CSG Dashboard brings these entities together, provides critical data and analytical tools to underpin mitigation and adaptation planning, facilitates monitoring of progress towards national and global goals, and highlights knowledge and investment gaps.



CSG Dashboard Project Tracker.

Specifically, it can help nations undertake the UNFCCC NAP process. Designed to be iterative and ongoing, this process seeks to: build adaptive capacity and resilience to reduce vulnerability to the impacts of climate change; and to integrate adaptation into new and existing national, sectoral and local policies and programs. The CSG Dashboard has been designed with the NAP process in mind to provide a space in which public- and private-sector entities can obtain and use up-to-date data to develop effective, well-coordinated adaptation policies; monitor and evaluate progress towards meeting adaptation goals; collaborate for effective use of resources; and share information on best practices and investment opportunities.

## Where the CSG Dashboard is being implemented

The CSG Dashboard is being implemented in the ClimBeR focus countries of Kenya, Morocco, Senegal, Zambia, Guatemala, the Philippines and Sri Lanka – all countries that are highly vulnerable to climate change but have low levels of resilience. It has so far been implemented in Senegal, Zambia and Sri Lanka. It complements the CGIAR AWARE Platform an early warning to early action, which supports planning for short-term climate risks.

## A versatile tool for adaptation planning

### The following are examples of the CSG Dashboard in use:

- Project managers for an international WASH organisation use the Geospatial Tools to identify areas that have low access to sanitation and poor levels of hygiene, and where few WASH projects exist. They then establish toilet-building and hygiene education programmes in those locations, adding details of each project to the dashboard.
- Staff in a finance department use the Investment Portfolio Planning tool to assess their country's level of risk from climate change. On noting that they face a particularly high threat from sea-level rise and, potentially, associated reductions in tourism and GDP, they approach a development bank for funding to finance coastal defence work.
- A national disaster risk reduction center uses the Climate Outlook tool to identify parts of their country at high risk from flooding. They use this information, along with infrastructure data mapped using the Geospatial Tools, to identify schools that can act as emergency relief centres for people who have to be evacuated. They incorporate this into flood-preparedness action plans.



Ministry of Green  
Economy and  
Environment



INITIATIVE ON  
Climate Resilience

IWMI  
International Water  
Management Institute



**Ana Maria Loboguerrero Rodriguez**, Initiative Lead, [a.m.loboguerrero@cgiar.org](mailto:a.m.loboguerrero@cgiar.org)

**Jonathan Hellin**, Initiative Co-Leader, [j.hellin@irri.org](mailto:j.hellin@irri.org)

**Giriraj Amarnath**, ClimBeR country lead, Zambia, [a.giriraj@cgiar.org](mailto:a.giriraj@cgiar.org)

CGIAR is a global research partnership for a food-secure future. CGIAR science is dedicated to transforming food, land, and water systems in a climate crisis. Its research is carried out by 13 CGIAR Centers/Alliances in close collaboration with hundreds of partners, including national and regional research institutes, civil society organizations, academia, development organizations and the private sector. [www.cgiar.org](http://www.cgiar.org)

**We would like to thank all funders who support this research through their contributions to the CGIAR Trust Fund:**

[www.cgiar.org/funders](http://www.cgiar.org/funders).

To learn more about this Initiative, please visit [this webpage](#).

To learn more about this and other Initiatives in the CGIAR Research Portfolio, please visit [www.cgiar.org/cgiar-portfolio](http://www.cgiar.org/cgiar-portfolio)

© 2023 International Water Management Institute (IWMI).

Some rights reserved.

This work is licensed under a Creative Commons Attribution-Noncommercial 4.0 International Licence (CC BY-NC 4.0).

