

Risk Index for Climate Displacement

RICD identifies subnational climate displacement hotspots by combining macro-level spatial risk modelling with micro-level community research. It enables science-informed, evidence-based climate adaptation financing and decision-making.



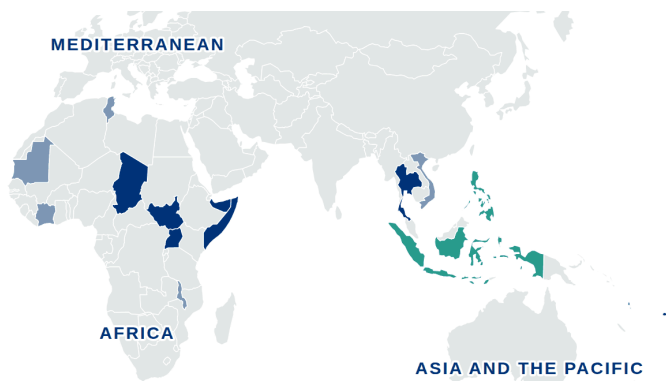
WHAT IS IT?

The Risk Index for Climate Displacement (RICD) is a decision support tool that helps governments and partners invest in adaptation, risk reduction, and preparedness. It also provides the data underpinning the Climate Mobility Innovation Lab's (CMIL) Climate Catalytic Fund (CCF) and IOM's Climate Mobility Investment Plans (CMIPs), supporting evidence-based climate adaptation financing. RICD is implemented across countries in Asia and the Pacific and in Africa, developed through a co-creation network of research institutions, universities, government agencies, and other data partners. Co-creation ensures that the RICD approach is contextualised accurately to each country, and that ultimately the data produced is shaped and owned by national institutions.

CAPABILITIES

- Quantifies national-level climate displacement risk by combining hazard, exposure, and vulnerability data, including hazard maps, population exposure, and socioeconomic indicators specific to displacement risk.
- Validates macro-level risk estimates against historical displacement records to assess how climate hazards have translated into actual movement.
- Collects micro-level evidence, empirical data, and community insights, to pinpoint the triggers and thresholds that drive displacement decisions.
- Integrates risk modelling with high-resolution, country-specific datasets to assess displacement risk under different climate scenarios.
- Modular, scalable, and co-created in partnership with over 20 universities and national institutions to ensure local ownership and relevance.

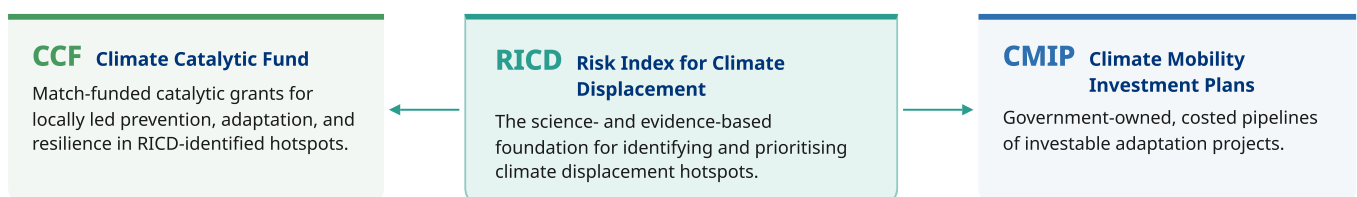
COVERAGE



This map is for illustration purposes only. Names and boundaries on this map do not imply official endorsement or acceptance by IOM.

PUBLISHED	2
Indonesia, Philippines	
ONGOING	7
Chad, Fiji, Somalia, South Sudan, Thailand, Uganda, Vanuatu	
PLANNED	5
Côte d'Ivoire, Malawi, Mauritania, Tunisia, Viet Nam	

EVIDENCE AT THE CENTRE



Both the CCF and the CMIP use RICD to target investment to the areas of greatest climate displacement risk. Successful CCF projects may graduate into the CMIP pipeline.

RICD Framework · Two levels of analysis, one picture of risk

MACRO-LEVEL ANALYSIS

Identifying displacement risk hotspots

The macro-level analysis maps where the risk of climate-related displacement is highest, and how that risk is built up.

HOW THE RISK SCORE IS BUILT

Framework: the IPCC AR5 risk framework¹, bringing hazard, exposure, and vulnerability together to estimate the risk of climate-related displacement.

Scale: conducted at national level and resolved to administrative level 2 or level 3.

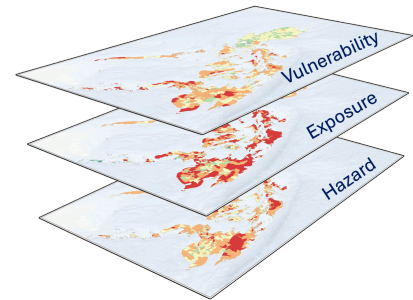
Risk tiers: each unit is assigned one of five tiers, from 1 (very low) to 5 (very high), so areas can be compared and the highest-risk ones identified.

Hazards: risk is computed for each hazard in turn, across rapid-onset hazards (floods, landslides, storm surge) and slow-onset hazards (sea-level rise, drought), then combined into a multi-hazard score.

Scenarios: scores are produced for baseline conditions and for future climate scenarios, and the hazards assessed are contextualised to each country.

Validation: results are validated against observed displacement data and through consultation with national stakeholders.

¹ IPCC Fifth Assessment Report: risk as the interaction of hazard, exposure, and vulnerability.



The RICD combines hazard, exposure, and vulnerability data to map where displacement risk is highest, as illustrated here at the municipal level for the Philippines.

MICRO-LEVEL ANALYSIS

Understanding triggers and thresholds

The micro-level analysis investigates when, why, and how displacement happens in the hotspots the macro-level analysis identifies. Sites are selected through a three-tiered process, and evidence is gathered through mixed, community-centred methods.

SITE SELECTION

Level 1: high displacement risk, as identified by the macro-level analysis.

Level 2: clear evidence of historical displacement in the location.

Level 3: feasibility of data collection, including local government engagement, accessibility, and IOM or research partner field presence.

DATA COLLECTION METHODS

Household surveys: with displaced and non-displaced households, capturing climate impacts, mobility decisions, coping strategies, and perceptions of future risk.

Key informant interviews (KIIs): with local authorities, service providers, and community leaders, setting household findings in their institutional and policy context.

Focus group discussions (FGDs): with community members, surfacing shared experiences, thresholds, and the trade-offs behind moving or staying.

Together these methods enrich the macro-level data with granular, ground-truthed evidence on the drivers, triggers, and thresholds of displacement.

The findings inform the Climate Catalytic Fund, Climate Mobility Investment Plans, and broader climate adaptation financing, guide government policies, and keep the voices of affected communities at the centre of decision-making.



Data collection feeds five thematic areas; quantitative, descriptive, and qualitative analysis build towards a predictive model.

RICD VALUE ADDITION

Data to action: RICD informs planning, community-level action, and the targeting of climate and adaptation finance.

Locally grounded: tools and assessments are co-created with national and local partners.

Flexible and scalable: designed to extend to new hazards and locations.

Capacity building: strengthens local data ownership, institutional foresight, and technical capacity.

USE AND APPLICATIONS

- National adaptation, risk reduction, and preparedness plans;
- Targeting of finance and programmatic interventions;
- Selecting locations and appraising projects for the Climate Catalytic Fund and Climate Mobility Investment Plans, and measuring their results;
- In the future, RICD may support more specialised use cases, including the modelling of the impacts of adaptation investments.

WHO BUILDS AND USES IT

IOM CMIL

Leads RICD across regions: co-develops the methodology, maintains the technical systems, and links results to the Climate Catalytic Fund and Climate Mobility Investment Plans.

National and regional partners

Government agencies, national institutions, and regional organisations that provide data, validate results, and guide hotspot selection. They own the national outputs and use them in policy, planning, and investment decisions.

Experts and technical partners

Universities and research institutions that co-develop methods and tools for both macro-level risk modelling and micro-level community research, and support analysis and validation.

Research partners

ASIA AND THE PACIFIC

- University of the Philippines Resilience Institute, Philippines
- Asian Institute of Technology (AIT), Thailand
- Nanyang Technological University (NTU), Singapore
- University of Fiji, Fiji
- National Institute of Natural Hazards (NINH), China
- University of Indonesia, Indonesia
- National University of Vanuatu, Vanuatu

AFRICA

- CIMA Research Foundation, Italy
- University of Juba, South Sudan
- John Garang Memorial University, South Sudan
- Upper Nile University, South Sudan
- The Sudd Institute, South Sudan
- Institute of Environment and Climate (ICE), SIMAD University, Somalia
- Center for Climate Change Research and Innovation, Makerere University, Uganda

Regional partners

- IGAD Climate Prediction and Applications Centre (ICPAC)
- Pacific Islands Forum Secretariat (PIFS)
- Pacific Community (SPC)



Leveraging data to identify populations in need: IOM, UNDRR, the Platform on Disaster Displacement, and Fiji's Ministry of Environment and Climate Change in session at the CMIL Regional Symposium, Bangkok, 2025.

IOM'S CLIMATE MOBILITY OFFER

The Climate Mobility Offer supports Member States and communities in averting, minimising, and addressing climate-related mobility. It rests on three pillars: policy and governance, which anchors IOM's engagement in global frameworks and supports national policy and planning; the Climate Mobility Innovation Lab, which generates the evidence and tests solutions; and the Climate Mobility Investment Facility, which structures and finances that work at scale through government-owned Climate Mobility Investment Plans. Delivered through IOM's network of 171 country offices and led by the Climate Action Division.

POLICY & GOV

Frameworks · Planning

CMIL

RICD · CCF · Nbs

CMIF

CMIP · Financing windows

THREE PILLARS OF IOM'S CLIMATE MOBILITY OFFER

SUPPORTED BY



IN PARTNERSHIP WITH

