

Risk Index for Climate Displacement (RICD)

RICD HOTSPOT FACTSHEET – BANDUNG REGENCY



Key Takeaways



Flooding is the most frequent and impactful hazard, with rising severity causing repeated losses - housing damage, service disruptions and livelihood stress.



There is a notable presence of trapped population, mainly due to poverty, few alternatives, or fear of losing property.



Displacement is short-term, local, and reactive, with respondents citing safety risks, housing damage and water outages as key reasons for moving.



Some residents are open to relocation if it ensures safety and livelihood opportunities, but current programs often fail to engage communities.



Both displaced and non-displaced households adopt similar low-cost adaptation strategies, like house elevation and drainage improvements, but these lack external support.



Priority areas for interventions should target resilient housing, preparedness support, and inclusive assistance for immobile and at-risk households. These findings are intended to inform targeted investment windows under the **Climate Catalytic Fund (CCF)** by **identifying context-specific entry points** for building resilience and reducing displacement risk.

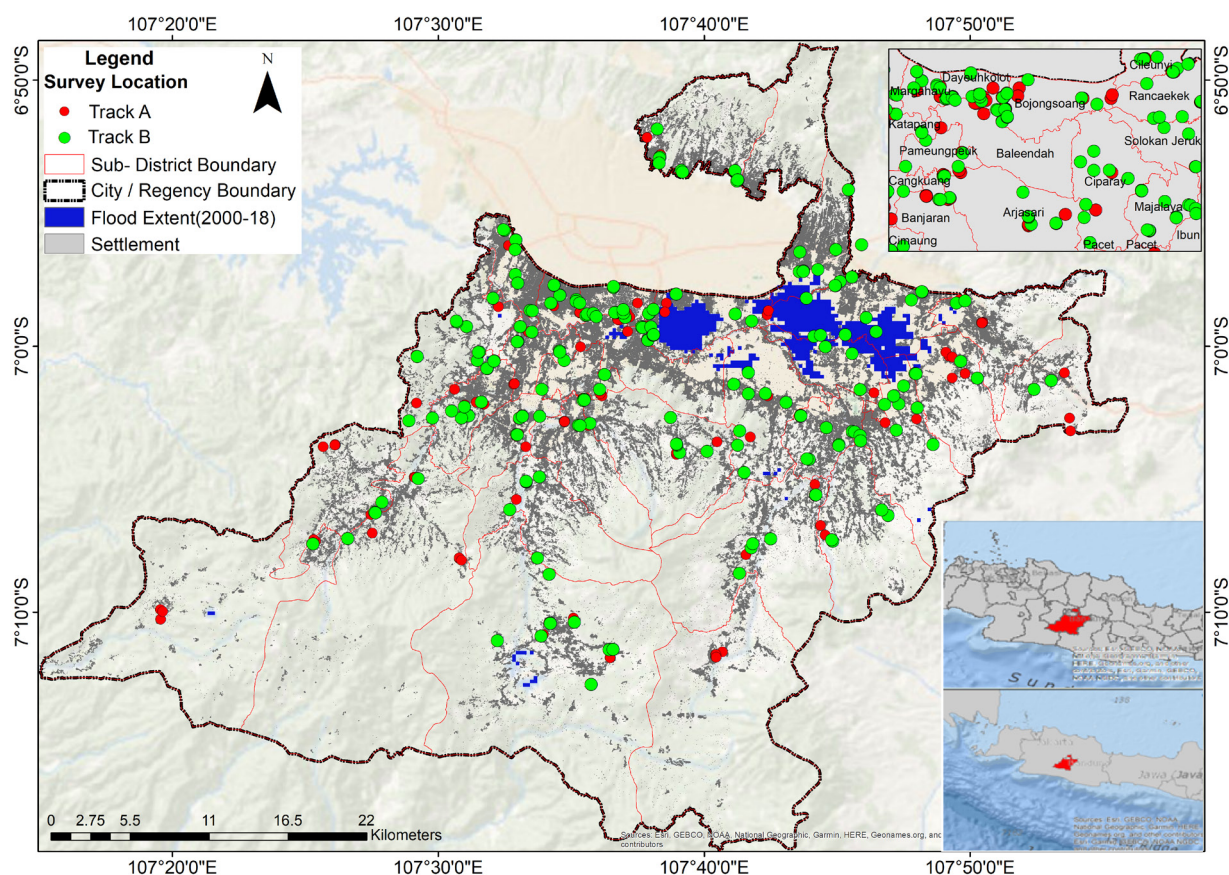


Figure: Location of surveyed households in Bandung regency, Indonesia. Survey points represent displaced households (Track A, red) and non-displaced households (Track B, green), overlaid on a historical flood extent map of observed flood events from 2000-2018.

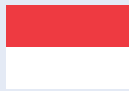
Hotspot Selection and Survey Methodology

Bandung Regency was selected through a **three-tiered selection process**:

- **Level 1:** High climate risk (macro-level composite risk using IPCC AR5: Hazard x Exposure x Vulnerability)
- **Level 2:** Clear evidence of historical displacement, including flood and landslide-related events
- **Level 3:** Feasibility assessed through IOM field presence, data availability, and accessibility
- **Validation:** Through local stakeholder consultation

Household surveys were conducted with both displaced and non-displaced populations to understand the **drivers, triggers, and thresholds of climate-induced displacement**. Respondents were selected based on **exposure to climate hazards and past displacement**, using a purposive sampling approach. Data captured **demographics, hazard impacts, mobility patterns, risk perception, and adaptation strategies**. This was complemented by **key informant interviews (KIIs)** and focus group discussions (FGDs) to contextualize household-level findings and inform displacement risk modelling.

Location Profile

Country	 Indonesia
City / Regency	Bandung Regency
Province	West Java
Average Per Capita Expenditure	IDR 1,337,190
Population (2023)	3,721,111
Total Labor Force (2023)	1,878,757
Land Area (km ²)	1,762.40 km ²
Population Density (persons per km ²) (2023)	2,111
Top 3 Contributing Sectors to GDP (2023)	• Manufacturing (54%) • Wholesale and Retail Trade (13%) • Agriculture, Forestry and Fishing (7%)

Descriptive Profile of Respondents

Sample Size	Displaced households	213
	Non-displaced households	220
	Total sample size	433
Average Household Size	4.5 people	
Average Monthly Household Income	USD \$182	
Proportion of Households with Home Ownership	81%	
Primary Livelihood Source (top 3)	Home-based Enterprises	14%
	Manufacturing	13%
	Agriculture and Crop Farming	11%
Highest Educational Qualification (top 3)	Upper Secondary	58%
	Lower Secondary	23%
	Elementary	10%

Climate Hazards Observed

Common hazards experienced over the last 5 years:



Floods
37%



Heavy rainfall
19%



Landslides
12%

Changes in hazards above over the last 5 years:

Severity  14%

Frequency  8%

Seasonal shifts  2%

Most impactful hazard over the last 5 years:

Floods  52%

Comparison of Displaced and Non-Displaced Households

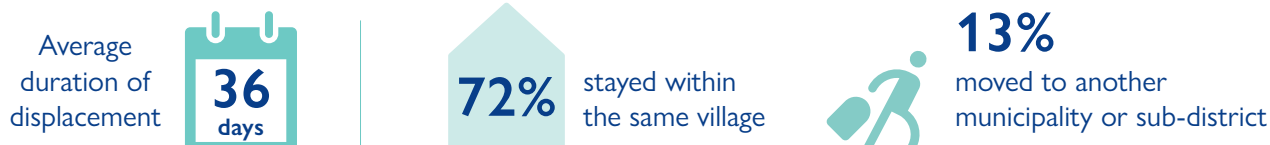
Dimension	Displaced Households		Non-Displaced Households	
Mobility				
Mobility Types Observed	Temporary displacement (Temporarily moved for >7 days and are still unable to return):	6%	Pre-emptive evacuation ¹ (Pre-emptively evacuated for ≤ 7 days and have since returned):	6%
	Permanent relocation (Permanently moved and do not plan to return):	6%	Stayed in place (Did not move):	45%
	Returnees Temporarily moved for >7 days and have since returned):	37%		
Impacts from Hazard				
Top 3 Impacts	Safety concerns due to hazard	26%	Safety concerns due to hazard	25%
	Housing damage	25%	Inaccessibility to electricity	15%
	Inaccessibility to transport infrastructure	10%	Income losses	12%
Average Housing Damage ²	11%		6%	
Average Asset Loss ³	11%		8%	
Adaptation Strategies				
Top 3 Strategies	Elevated my house or moved it to higher ground	36%	Elevated my house or moved it to higher ground	27%
	Improved drainage around the home or community	13%	Improved drainage around the home or community	11%
	Built protective barriers	12%	Built protective barriers	10%
Emergency savings or funds	USD \$102		USD \$99	
Degree of Volition in Moving or Staying				
Volition	I had no choice — I was forced to move	65%	I feel trapped in staying where I am	30%
	I felt I had very little choice — moving was the only realistic option	18%	I feel somewhat constrained to stay where I am	15%
	I had some choice, but I felt pressured by the situation	4%	I felt free in choosing to stay where I am	46%
	I chose to move, but the hazard influenced my decision	8%	Not sure	10%
	I freely chose to move, and the hazard was not a major factor	4%		

¹ Pre-emptive evacuations (≤7 days) are not classified as displacement as they reflect short-term responses to immediate threats, whereas this analysis seeks to capture longer-term displacement beyond immediate flight.

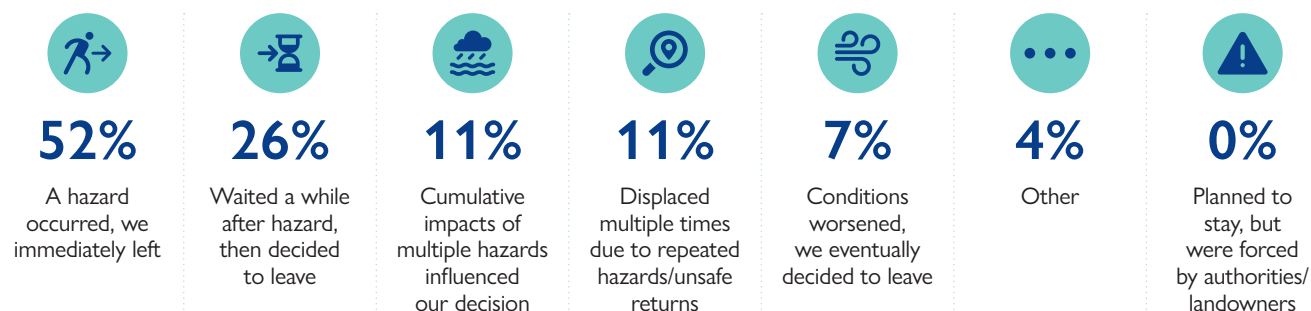
² Statistical analysis shows an association between housing damage and displacement across all four case sites in Indonesia and the Philippines. However, the figure shown here reflects only the weighted average for Bandung, not all sites.

³ Statistical analysis shows an association between asset loss and displacement across all four case sites in Indonesia and the Philippines. However, the figure shown here reflects only the weighted average for Bandung, not all sites.

Displacement Dynamics



SEQUENCE OF EVENTS LEADING TO DISPLACEMENT



Trapped Populations



44% of non-displaced respondents reported feeling unable to leave due to constraints, indicating they are trapped

TOP 3 REASONS FOR BEING TRAPPED

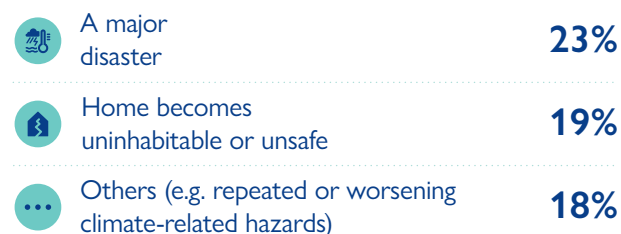


Perceived Future Displacement Risk

TOP 3 WAYS HAZARDS WOULD FORCE HOUSEHOLDS TO MOVE



TOP 3 REASONS HOUSEHOLDS WOULD LEAVE



PLACE HOUSEHOLDS WOULD GO IF THEY NEEDED TO LEAVE



Qualitative Insights from Key Stakeholders

- Some communities **adapt to climate impacts by temporarily changing jobs**, such as farmers affected by drought moving to the city for construction or street vending work until conditions improve.
- Migrants who move into flood-prone areas **without registering locally** at the local population registry are often **excluded from long-term rehabilitation programs**, leaving them without material support for reconstruction after disasters.
- While various programs address slow- and sudden-onset hazards in Bandung Regency, there is currently **no dedicated initiative to support communities facing climate displacement**.
- Some communities are open to relocation if it offers **safety, new livelihood opportunities, and cultural ties**, but government relocation programs often overlook these factors and lack sufficient community consultation.
- Bandung continues to attract in-migration driven by economic opportunities, with some residents **willing to endure severe flooding in order to maintain their livelihoods**.

Applications and Next Steps

INSIGHTS TOWARDS RICD DEVELOPMENT AND BROADER APPLICATION:

- Bandung highlights the need for RICD to capture short-term, recurrent displacement in peri-urban flood zones with low-intensity but frequent events.
- Displacement often reflects cumulative impacts and socioeconomic constraints, not just hazard severity.
- The large share of immobile yet exposed households points to the importance of tracking trapped populations and informal vulnerability within the RICD.
- Insights from Bandung can also inform urban planning and climate adaptation strategies, especially in fast-growing areas facing recurrent flood risk and infrastructure gaps.

LINKAGE WITH CCF:

- Findings from Bandung provide **concrete, data-driven entry points for CCF investment**, particularly in urban adaptation, preparedness systems, and inclusive resilience programming.
- Frequent, short-notice displacement due to flooding highlights the need for CCF investment in early **warning, evacuation planning and temporary shelter solutions**.
- Widespread housing damage and exposure to repeat flooding underscore the value of supporting **flood-resilient housing upgrades** and local mitigation infrastructure.
- The presence of **immobile households** facing poverty, limited options and fear of loss calls for **targeted, in-place resilience support** that addresses vulnerability.

Project Overview

The International Organization for Migration (IOM), the Asian Institute of Technology (AIT), and the University of the Philippines Resilience Institute (UP RI) are jointly developing the **Risk Index for Climate Displacement (RICD)**, working closely with numerous technical experts as part of a co-creation process. This work is being carried out with support from the **Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO)**.

The RICD aims to improve foresight on **climate-induced displacement by mapping and quantifying risk** at national and subnational levels.

The results are intended to inform both the development of RICD and strategic initiatives such as the **Climate Catalytic Fund (CCF)**, which supports interventions to address climate-induced displacement.

