



## Independent Evaluation of the GCF's Approach to and Portfolio of Climate Information and Early Warning System Interventions (CIEWS)

### BACKGROUND

Climate information and early warning systems (CIEWS) play a critical role in reducing climate risks and building resilience. Evidence shows that well-designed CIEWS can prevent and reduce loss and damage, saving millions of lives. When aligned with the Global Goal on Adaptation's aim to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change, CIEWS interventions are likely to remain a central priority within climate finance.

The Independent Evaluation of the GCF's Approach to and Portfolio of CIEWS Interventions, approved as part of the 2025 IEU workplan, was undertaken against the above context.<sup>1</sup> Being the first independent evaluation on CIEWS, it applied evaluation criteria such as coherence and complementarity, efficiency, relevance, effectiveness, impact and sustainability to assess both GCF's approach to and portfolio of CIEWS.

### OBJECTIVES & SCOPE

For the GCF's approach to CIEWS, it evaluated the Fund's collaboration with other CIEWS actors as well as how the GCF has leveraged its programmatic approaches and funding windows to support CIEWS. For the GCF's portfolio of CIEWS projects and programmes, the evaluation assessed the extent to which GCF-funded interventions have made CIEWS available, accessible, and responsive, with the aims of protecting lives and livelihoods and strengthening resilience in developing countries. The evaluation also covered themes such as gender and Indigenous Peoples, recognizing that climate impacts often disproportionately affect women and Indigenous communities.

### METHODS

The evaluation employed mixed methods (both qualitative and quantitative) to build the findings and strengthen their validity. With a view to achieving these objectives, the following evaluation methods were employed:

- Literature review
- Data analysis using both external and internal CIEWS-related data sources
- Key informant interviews with GCF stakeholders
- Cluster assessments where samples of GCF-funded CIEWS projects and programmes were categorized into three intervention types, and then scored against a cluster assessment template developed for each cluster
- Country visits to Bangladesh, Guatemala, Timor-Leste and Uzbekistan as well as a virtual visit to Nigeria via online-based interviews

<sup>1</sup> See the full report available at: <https://ieu.greenclimate.fund/document/finalreport-ciews>



# IEU Evaluation Brief

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## CONCLUSIONS (C) & RECOMMENDATIONS (R)

C1

**The GCF is highly relevant to CIEWS and holds a privileged position in the space. However, GCF-funded CIEWS projects lack coherence and a systematic approach at portfolio level.**

By 2024, the GCF has emerged as the leading global financier of CIEWS, surpassing institutions such as the World Bank. The investments as of 2024 accounts for 34 per cent of the global share. The evaluation team estimates that GCF's cumulative investments in CIEWS reached USD 1.997 billion as of the forty-third meeting of the GCF Board (B.43) in October 2025, representing 10 per cent of the total GCF portfolio.

The release of a sectoral funding approach in 2022, alongside the United Nations' Early Warning for All initiative (EW4All), has increased momentum and solidified CIEWS as a strategic priority for the GCF under its Updated Strategic Plan for 2024-2027 (USP-2). Despite its privileged position and substantial investments, the GCF's CIEWS portfolio remains fragmented and lacks a coherent, systematic approach, limiting its potential for achieving the paradigm shift potential in the sector.

R1

**The GCF Board and Secretariat should capitalize on the Fund's position as the leading financier in CIEWS and prepare to assume a leadership role beyond 2027.**

The GCF Board should offer strategic guidance on GCF's intended role and designate CIEWS as a strategic priority under the Strategic Plan for the Green Climate Fund 2028-2031 (USP-3). In turn, the Secretariat should operationalize this guidance aligned with the USP-3.

C2

**Limited knowledge-sharing and knowledge brokering represent missed opportunities in the CIEWS investments.**

The Governing Instrument notes that GCF is "a continuously learning institution guided by processes for monitoring and evaluation." However, its knowledge management practices are still in the early stages, and the Fund does not provide a comprehensive or visible articulation of its experience or strategic approach in CIEWS. Rather, GCF largely adopts a passive approach to knowledge dissemination, primarily contributing to resources developed by other CIEWS stakeholders, resulting in missed opportunities for broader learning, engagement and influence.

R2

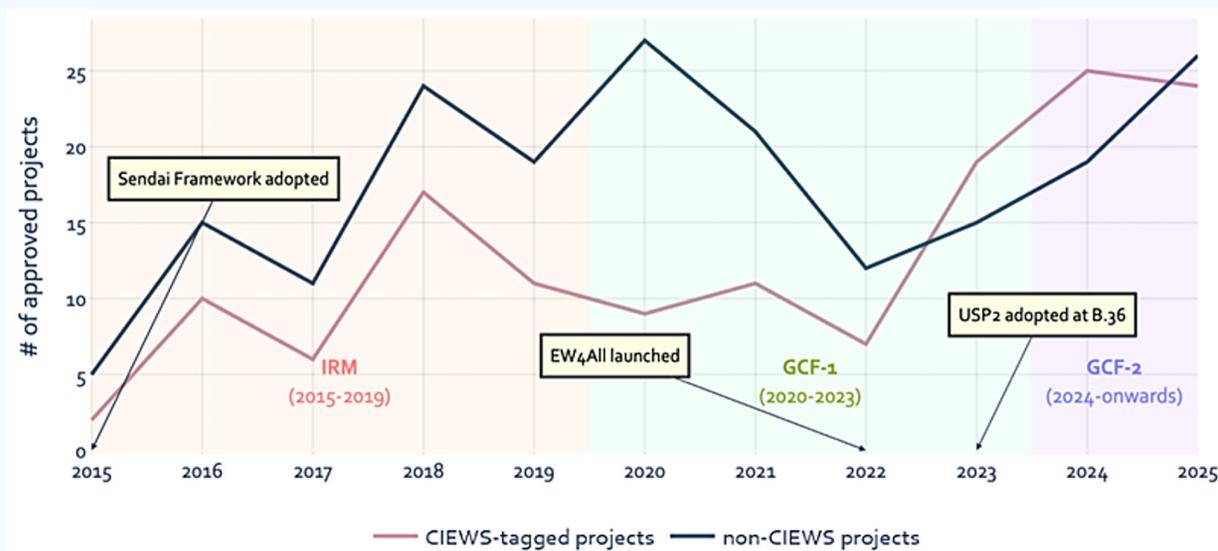
**As a continuously learning institution, the GCF Secretariat should continue to shift towards a structure and operations that ensure learning and feedback loops across projects, countries and entities, clearly and systematically.**

The Fund should share its CIEWS expertise with relevant CIEWS stakeholders to strengthen the GCF's role as a knowledge broker, besides its position as the leading financier in the CIEWS space.



**CIEWS Evaluation Country Visit:**  
FPo69 (UNDP Dacope Khulna; Bangladesh)

**Figure:** Number of approved CIEWS-tagged projects versus non-CIEWS projects by approval year



**Source:** GCF Project database, including all projects approved through B.43 (accessed December 12, 2025).

**Note:** CIEWS-tagging combines Secretariat classifications with additional projects identified by the evaluation team.

## C3

**GCF has succeeded in directing CIEWS investments toward countries most in need. Although GCF’s CIEWS investments have achieved notable results at the project level, a full paradigm shift of climate information and early warning capabilities has yet to occur across the diverse contexts of participating countries.**

The evaluation finds that while the GCF has successfully aligned its CIEWS investments with its mandate to support the most climate-vulnerable countries, as evidenced by targeting those with the highest disaster risk, significant challenges persist at the portfolio level. Although project-level outcomes are notable, such as improvements in meteorological infrastructure, gaps are found in downstream CIEWS value chain such as advanced climate modelling, user engagement, and last-mile connectivity. These CIEWS value chain gaps hinder the realization of a full paradigm shift. The assessment also highlights that the framing of the three paradigm-shifting pathways applied into GCF investments lacks sufficient granularity to identify investment gaps.

## R3

**The Fund should revise how it presents the paradigm-shifting pathways in the CIEWS operational guidance, as outlined in R1.**

A clearer, more structured approach is needed to identify investment gaps across each country’s CIEWS value chain. The revised pathways should align with global standards, including the six value chains of the Global Framework for Climate Services and the multi-hazard MHEWS pillars.

## C4

**The long-term sustainability of GCF CIEWS investments remains an ongoing concern. In some cases, project design and review processes do not adequately address long-term outcomes or account for the practical realities encountered during implementation in local contexts.**

The evaluation identified that GCF funding proposals at times surpassed national capacities, particularly in developing countries such as LDCs and SIDS, leading to implementation and sustainability issues. These mismatches occurred largely due to insufficient stakeholder engagement and limited gap analyses during the design phase, and assumptions that newer or more advanced equipment and technology will automatically deliver greater effectiveness. While many CIEWS proposals emphasize equipment-related investments, such

as observation infrastructure, project designs often fail to account for the full cost of ownership, particularly long-term operational and maintenance requirements, leading to recurring sustainability issues. Collaboration opportunities with organizations like Systematic Observation Financing Facility (SOFF) have not been maximized, and local end-user needs are overlooked in favor of national-level project design. Moreover, challenges persist in engaging the private sector and establishing sustainable, revenue-generating models, with exit strategies remaining unfulfilled and continued reliance on grant funding.

**R4**

### **Across all stages of the project cycle, and particularly during project design, the GCF Secretariat should strengthen considerations of the sustainability of CIEWS investments.**

Such measures should consider including participatory needs assessments that engage both providers and end users of CIS, including women, Indigenous Peoples and other vulnerable groups, as well as comprehensive feasibility studies for revenue-generating activities undertaken by national meteorological and hydrological services or related agencies.

In addition, the Secretariat should strengthen its appraisals of CIEWS funding proposals to ensure that GCF-funded equipment aligns with local institutional and technical capacity, and that post-project operation and maintenance are properly considered in the project design.

**C5**

### **The Fund faces difficulties in assessing portfolio-wide impacts and accurately identifying and estimating investment volumes for CIEWS projects.**

An analysis of reported results against the GCF's mitigation and adaptation performance measurement frameworks (PMFs) and the Integrated Results Management Framework (IRMF) reveals systematic result measurement challenges across CIEWS investments due to data quality issues and inconsistent indicator application. While GCF indicators for CIEWS represent a positive step towards tracking and reporting progress, they remain limited in their ability to capture the full breadth and quality of impacts, especially regarding last-mile interventions. The absence of more granular data means that existing indicators do not adequately capture the potential impact of EWS on those receiving alerts. Moreover, the limited and inconsistent application of standard CIEWS indicators across early warning initiatives prevents the measurement of portfolio-wide impact using these corporate indicators.

This evaluation also found that identifying CIEWS projects and estimating CIEWS investment amounts at the portfolio level continues to pose a challenge for CIEWS actors and climate funds, including GCF. For example, there are inconsistencies in the secretariat's CIEWS tagging exercise; some projects were tagged as CIEWS even though they did not meet the criteria. Conversely, other qualifying projects were not tagged, undermining the accuracy and reliability of the GCF CIEWS portfolio.

Furthermore, while the GCF routinely uses the term CIEWS in its documentation, including in USP-2, it lacks a formal definition, leading to inconsistent application across investments and identification of CIEWS projects. While the previous sectoral guide on CIEWS offered some conceptual clarity, its discontinuation has left the Fund without clear guidance on how to apply the term.

**R5**

### **The GCF Secretariat should leverage the 2026 review of the IRMF to align indicators with global best practices, including the Belém Adaptation Indicators.**

In doing so, the Secretariat should also consider additional measurement approaches capable of capturing the operational progress of CIEWS interventions and their outcomes at the community level. The primary objective should be to improve the monitoring of progress across CIEWS projects, thereby ensuring that the reported results are both reliable and suitable for comparison and impact measurement.

The GCF Secretariat should formally define CIEWS as part of its operational guidance, as outlined in **R1**, to ensure its consistent application across the portfolio. It should also establish a clear CIEWS taxonomy, aligned with the revised framing of paradigm-shifting pathways set out in **R3**, to address existing challenges in CIEWS tagging and investment identification.



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