

CREWS Action Final Report

1. Action Title	Enhancing risk data ecosystem and people-centered early warning systems in Timor-Leste	2. Action Reference	CREWS/ASW/09/Timor Leste
3. Implementing Partner	United Nations Office for Disaster Risk Reduction (UNDRR)	4. Other Partners (i.e., Sub-contracted)	Red Cross Red Crescent Climate Centre (RCCC) and UNDP Timor-Leste
5. SC Approved Action Duration / End Date	Start Date: 09 July 2024 End Date: 09 July 2025 No Cost Extension until 31 December 2025	6. Actual Action Duration / End Date	31 December 2025
7. SC Approved Action Budget (in USD; incl. IP fees)	USD 249,165	8. Actual Action Expenditure (in USD; incl. IP fees)	USD 249,165
9. Reporting Focal Point(s)	Chinatsu Endo, Programme Management Officer, UNDRR Stefanie Dannenmann-Di Palma, UNDRR		
10. Action Type	Analyses and Assessments; Advisory Services		
11. Early Warning System	Disaster risk knowledge based on the systematic collection of data and disaster risk assessment		
12. SC Approved Action	<p>The project aimed to enhance disaster risk management and early warning systems in Timor-Leste through three specific objectives:</p> <ol style="list-style-type: none"> 1. Improve risk knowledge: Enhance methodologies for calculating disaster losses (prioritizing economic assets) and build capacity for data collection disaggregated by sex and disability. 2. Promote people-centered EWS: Transform early warning messages to be inclusive (particularly for women and persons with disabilities) and assess the reach of current systems. 3. Strengthen governance: Support the Civil Protection Authority (CPA) and NDMG in leading inter-ministry coordination and normative development. 		

<p>13. Summary of Actual Action</p>	<p>The project successfully established Timor-Leste's first government-led system for routine tracking of disaster losses and damages and completed a nationwide baseline study on the reach and effectiveness of early warnings systems (EWS).</p> <p>1. Improvement of Risk Knowledge:</p> <p>Methodology & Tools: Established the "Losses and Damages Assessment Methodology" and Standard Operating Procedures (SOPs) to track disaster losses and damages. The scope expanded from the initial target of three to 13 sectors, including housing, health, education, culture and heritage, water and sanitation, power, transport, telecommunications, public buildings, agriculture, commerce & industry, tourism, and environment. A Municipal Toolkit and a Minimum Reporting Dataset with 18 mandatory fields were created to ensure data interoperability with existing national digital systems (TERS).</p> <p>Capacity Building: Executed a multi-tiered training program reaching 240 participants (29% women, 71% men) across national and municipal levels. Capacity building was conducted in six pilot municipalities (Aileu, Baucau, Ermera, Lautem, Liquica, Viqueque), complemented by national consolidation training. Pre- and post-training assessments showed learning gains of up to 44% in technical competencies.</p> <p>To ensure national data translates into global accountability, a dedicated training was conducted for CPA on Sendai Framework Monitor data entry. Following this targeted capacity-building effort, the CPA has initiated the entry and reporting of historical disaster losses and damages data into the Monitor, directly addressing previously identified gaps in Timor-Leste's global reporting.</p> <p>2. Promotion of People-Centered EWS:</p> <p>EWS Effectiveness Study and Application of the Inclusive EWS Checklist: The project completed the "Study on the Reach and Effectiveness of Early Warning Systems" based on 909 household surveys and 27 focus group discussions across eight municipalities. The study design was guided by the "Checklist and Implementation Guideline for Inclusive Multi-Hazard Early Warning Systems" which was applied to the Timor-Leste context. The checklist informed the development of survey tools, focus group discussion guides, and institutional interviews, ensuring systematic assessment of accessibility for persons with disabilities, gender-differentiated access to information, language considerations, and last-mile dissemination mechanisms. The study findings reveal that, while 65% of households reported receiving early warnings, 56% face weak or no mobile network coverage, and 22% reported not receiving warnings at all. The study also identified a significant trust gap: approximately 90% of respondents expressed greater trust in local leaders than in national digital sources. By combining quantitative reach analysis with inclusion-focused assessment, the study provides an evidence base to further strengthen people-centered, end-to-end early warning systems in Timor-Leste. The study's findings</p>
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also set a baseline for monitoring Timor-Leste's progress on early warning systems under the Sendai Framework's Target G. Moving forward, this evidence will directly support the Government in improving early warning system coverage and service delivery. Additionally, the data provides practical guidance for other partners, including the Timor-Leste Red Cross, UN agencies, and development partners to strengthen their community preparedness initiatives and last-mile reach of early warning.

Inclusive Communication: UNDRR also worked with UNDP and UNESCO, who organized training of 36 journalists and government communications officers on ethical, inclusive disaster reporting, focusing on combating misinformation and using verified disaster impact data

3. Strengthening Governance:

The project operationalized inter-ministerial coordination on disaster losses and damages by convening over 34 senior officials and technical representatives from key ministries (Public Works, Agriculture, Health, and Finance) through national stakeholder workshops. These forums functioned as a practical coordination platform, breaking down institutional silos to jointly develop and validate the national methodology. CPA strengthened its role as national steward of disaster loss data in line with Decree-Law No. 23/2024. To ensure sustainability, the project proposed a governance model providing for the formal establishment of National and Municipal Technical Working Groups (TWGs), with clearly defined roles to bridge both horizontal (inter-ministerial) and vertical (national–municipal) coordination gaps for disaster losses and damages accounting.

14. Contributions to CREWS Programming Principles and Results Framework

Contributions to CREWS Programming Principles

People-Centered: The project grounded technical work in community realities. The Study on the Reach and Effectiveness of EWS (909 household surveys, 27 FGDs across eight municipalities) revealed that 90% of respondents trust local leaders over digital channels and that 56% of rural households lack reliable mobile coverage, requiring low-tech dissemination (sirens, loudspeakers) to reach the last mile. Disaster losses and damages data collection tools were simplified for community use, introducing offline-first digital systems (TERS) and paper templates to ensure village chiefs in remote areas can collect and report data despite connectivity constraints.

Gender-Responsive: The revised disaster losses and damages data collection methodology mandates sex-, age- and disability-disaggregated data (SADDD). Disaster losses and damages accounting-related training and workshops (national and sub-national) reached 240 participants, with women representing 29% of participants. During the National Training Workshop on disaster losses and damages, a 60% learning gain was recorded in “Gender & Social Inclusion in Disaster Losses and Damages Assessment.” The Study on the Reach and Effectiveness of EWS identified gendered access patterns, noting women often relay information within households while men more frequently access digital sources.

Leverage: The project maximized value by leveraging partnerships. CREWS supported methodology development and training, while the UNDP GCF project provided nationwide rollout platforms (TERS). UNESCO supported media training on losses and damages accounting to counter misinformation. The work carried out under the CREWS ASW to strengthen the methodologies for losses and damages accounting also strengthens Timor-Leste’s access to climate finance, including future GCF, Fund to Respond to Loss and Damage (FRLD), and Santiago Network.

Contributions to CREWS Results Framework

Risk Information: Timor-Leste’s first national disaster losses and damages assessment methodologies and Minimum Reporting Dataset (18 mandatory fields) were developed, standardizing economic loss calculations across 15 sectors. The methodology was integrated into TERS and the MHVRA platform – that are the existing disaster data platform used by CPA with the support of UNDP Timor-Leste, making loss data accessible for future impact-based forecasting and planning.

Preparedness & Response: Validated SOPs for disaster losses and damages accounting established a two-stage workflow (Rapid Impact and Detailed Assessment), clarifying CPA and municipal roles.

Knowledge & Awareness: The 2025 EWS Study established a baseline warning reach of 65% and identified gaps in language and trust. Media

	<p>training on disaster losses and damages accounting reached 36 journalists from 21 outlets, improving evidence-based disaster communication.</p> <p>Capacity Building: A multi-tiered training programme strengthened municipal and national reporting capacity, including 96 municipal staff and village chiefs and 32 national focal points. Inclusion efforts reached 4 persons with disabilities and 21 individuals who identified themselves as members of ethnic minorities or culturally distinct community groups.</p> <p>Contributions to CREWS Programme Indicators</p> <p>Access to Early Warning: The EWS study identified barriers (weak connectivity, technical language), providing evidence to help redesign future dissemination strategies and improve access beyond the 65% baseline.</p>
<p>15. Contributions to Partner Country Plans and Commitments</p>	<p>Sendai Framework: The project provided the necessary technical architecture, through established methodologies, to routinely capture direct economic losses and damages to different sectors and critical infrastructure. During the National Training Workshop, participants were specially trained on how to use those methodologies to account for the disaster impacts on the ground. A training to CPA on reporting against Target C (economic loss) and Target D (infrastructure damage) was conducted separately.</p> <p>National Adaptation Plan (NAP) & NDC: The project supported creating a foundational mechanism to track climate-induced tangible losses/damages. During the National Training Workshop and Stakeholder Consultations, it was heavily emphasized that having robust, standardized losses and damages data is a pre-requisite for creating strong investment cases to access climate finance mechanisms, especially the Loss and Damage Fund and the Green Climate Fund (GCF), that are potential funding sources to implement NAP and NCD.</p> <p>Legal Framework: The project operationalized Civil Protection Law No. 12/2020 by developing and providing the regulatory instruments (SOPs, validation protocols) required to enforce mandatory disaster reporting.</p>
<p>16. Lessons Learned</p>	<p>The Digital Divide Requires "Offline-First" Design: With 56% of rural households facing weak coverage, reliance on apps/online databases for disaster losses and damages data collection is premature. The project pivoted to a hybrid model where municipal teams use offline-capable digital tools (TERS) or paper-based protocols that sync when connectivity is available.</p> <p>Trust is Local: The EWS study confirmed that communities overwhelmingly trust village chiefs (Sucoss) over national broadcasts. Future EWS investments must focus on equipping these local intermediaries with low-tech tools (megaphones/sirens) rather than solely digital solutions.</p>

Policy Lag vs. Operational Need: Legal reforms take years. The dual-track strategy (implementing SOPs operationally while waiting for the Decree-Law) proved essential to maintaining momentum and generating data immediately.

Institutional Turnover: High staff rotation threatens sustainability. The project adopted a Training-of-Trainers (ToT) model and standardized "job aids" to ensure institutional memory persists beyond individual staff tenure.


Future Needs and Way Forward: While the CREWS ASW project successfully established the foundational architecture for a government-led disaster losses and damages accounting system in Timor-Leste and identified critical "last-mile" early warning dissemination gaps, implementation currently remains limited to a pilot phase across six municipalities. Transitioning from this pilot to a fully institutionalized and nationwide standard will require sustained and strategic investment. The 12-month initiative revealed several priority actions necessary for scale-up: operationalizing national and municipal Technical Working Groups, rolling out a nationwide Training-of-Trainers model to build decentralized capacity, establishing a National Unit-Cost Reference Library, and continue strengthening the digital platform utilized by the Government to enter and host disaster losses and damages data (e.g., TERS, TLDD). At the community level, persistent last-mile dissemination and action gaps underscore the need for continued efforts to strengthen inclusive, community-led and -owned early warning and early action mechanisms.

The Ministry of Interior, under which CPA operates, has expressed its intention to embed the Early Warnings for All (EW4All) initiative within the forthcoming Strategic Plan for Civil Protection Authority. Growing government interest in EW4All is closely aligned with Timor-Leste's Anticipatory Action Roadmap, reinforcing policy coherence across preparedness and financing frameworks.

Given the strong national ownership demonstrated by CPA and the critical role of robust loss and damage data in accessing global climate finance (such as the Fund for responding to Loss and Damage and GCF) - it is recommended that Timor-Leste be elevated as a priority country within the CREWS programmatic pipeline. Building on the momentum generated through the ASW will help prevent regression and ensure that the early warning and risk-data ecosystem is scaled nationwide.

17. Visibility Products and Supporting Documents	<p><i>[Insert links to press releases, videos, or communication items and/or social media links, and list and attach to the report any documents providing details on action activities such as review reports, reports of training sessions, technical assessment reports, etc.]</i></p> <p>Publications:</p> <ul style="list-style-type: none"> • Study on the Reach and Effectiveness of Early Warning Systems in Timor-Leste [LINK] • Checklist and implementation guideline for inclusive Multi-Hazard Early Warning System in Timor-Leste [LINK] (CREWS ASW enabled the translation of the guideline into the two official languages Tetun and Portuguese, and the document informed the design of the Study on the Reach of Effectiveness of EWS in Timor-Leste.) <p>Methodological/Technical Documents (shared as a set of attachments.)</p> <ul style="list-style-type: none"> • Losses and Damages Accounting Updated Methodologies <ul style="list-style-type: none"> ○ Main document (overview) ○ Methodologies (13 sectors) ○ Standard Operating Procedures (SOPs) • Losses and Damages Accounting Toolkit (linking methodological refinement with the existing data collection platforms such as TERS)
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This is to certify that the report is accurate.

Impl. Partner Representative:	Marco Toscano-Rivalta
Position Title/Name of Organization:	Chief, Regional Office for Asia and the Pacific
Date and Signature:	30 March 2026 

This is to certify that the resources allocated are used for their intended purpose. All parties are in compliance with the financial rules, regulations and procedures of the Implementing Partners.

Impl. Partner Representative:	Sandya Prasad
Position Title/Name of Organization:	Chief of Administration, Resource Planning and Management Section
Date and Signature:	31 March 2026 