



Building the next-generation evidence base for anticipatory action in Asia-Pacific

POLICY BRIEF

Asia Pacific Technical Working Group on Early Warnings and Anticipatory Action

Executive Summary

This policy brief is designed as a practical guide for national governments, intergovernmental institutions, and development and humanitarian partners seeking to understand, and strengthen, the real-world impact of anticipatory action in Asia-Pacific. Grounded in key regional strategies, including the Asia-Pacific Technical Working Group on Early Warnings and Anticipatory Action Roadmap (2024), the ASEAN Framework on Anticipatory Action in Disaster Management (2022), and the Path Forward of the Intergovernmental Organizations' Cooperation on Anticipatory Action (2025), the brief connects regional vision with operational delivery.

Its development was informed by consultations with members of the Asia-Pacific Technical Working Group on Early Warnings and Anticipatory Action and further refined through discussions at the Asia-Pacific Dialogue Platform on Anticipatory Action, held in Yogyakarta, Indonesia, in November 2025, ensuring that the analysis and recommendations reflect regional experience, priorities and practice.

Beyond mapping the evolving anticipatory action landscape across the Asia-Pacific region, the brief brings together the principal schools of thought shaping how impact is understood and measured. It explores three complementary lenses: cost-benefit analysis, which quantifies avoided losses and return on investment; socio-economic analysis, which captures food security, equity, and human well-being; and process learning, which examines how systems, coordination, and decision-making influence timely action on the ground.

Drawing on country experience from across the region, the brief identifies where further evidence and learning can add the greatest value. It argues that the next step is not simply to produce more evaluations, but to build more coherent, comparable and decision-focused evidence around what governments and communities need to know. It calls for stronger national evidence frameworks, greater harmonization of methods and indicators, more systematic after-action and longer-term learning, and evidence that can help turn successful anticipatory action into sustained policy, financing and practice at scale.

Introduction

The Asia-Pacific region is the most disaster-prone area in the world, reflecting its vast geography and diverse climatic conditions. Communities across the region face recurrent floods, storms, droughts, and heatwaves that often compound with one another, with the greatest impacts borne by the most vulnerable. From January to October 2024, over 140 disasters struck the Asia Pacific region, affecting over 87 million people and leading to nearly 6,000 deaths (Humanitarian Action, 2025). As climate change intensifies, the frequency and severity of these hazards are expected to further constrain economic growth, food security, and social development across the region.

To break the cycle of escalating losses and growing reliance on humanitarian assistance, national and local governments, together with humanitarian and development partners, are increasingly shifting from reactive disaster response toward more proactive and preventive systems. This approach, commonly referred to as anticipatory action, is gaining prominence across regional policy frameworks and operational practice in Asia and the Pacific, reflecting a shared recognition that acting ahead of hazards can better protect lives and livelihoods.

At the same time, while investment and implementation is steadily growing, the evidence base remains largely fragmented. Much of the available knowledge is drawn from individual pilots, case studies, or sector-specific analyses that, although valuable, do not yet form a coherent narrative capable of guiding national policy or demonstrating the full value of anticipatory investment to decision-makers and donors. Strengthening how evidence is generated, synthesized, and communicated is therefore essential to scaling anticipatory action across the region.

This policy brief contributes to that effort by presenting a structured lens through which anticipatory action evidence can be understood and applied across three complementary domains: cost–benefit analysis, socio-economic analysis and process learning. By framing these domains and promoting a more coherent and coordinated approach to evidence, the brief aims to support stronger national decision-making, clearer investment cases for partners and donors, and, critically, to ensure that insights translate into practical, preventive change that reaches and empowers communities most at risk.

Anticipatory action in Asia-Pacific

The 2024 Regional Mapping of Anticipatory Action conducted by the Asia-Pacific Technical Working Group on Early Warnings and Anticipatory Action (TWG EW-AA) illustrates both the rapid growth and evolving landscape of efforts to act ahead of hazards across the region. The analysis identified 137 anticipatory action frameworks in 2024 spanning 15 countries, up from 101 frameworks across 13 countries in 2023 (TWG EW-AA, 2024). The latest results from the 2025 mapping show that there are now 169 frameworks across 17 countries, with 77 percent of them focusing on 3 main hazards (flood, drought and cyclone).

In 2025, Flood risk is addressed by the largest share of frameworks (38 percent), followed by cyclones (19 percent) and drought (18 percent), with a further 25 percent of the frameworks targeting hazards such as heatwaves, coldwaves, dzuds, and disease outbreaks. This distribution closely reflects the priority risks identified by national governments, highlighting how anticipatory action, defined as the use of early warning, pre-agreed triggers, and pre-financed actions to protect lives and livelihoods before a disaster strikes, is increasingly being embedded within regional disaster risk management efforts.

At the same time, the pace of expansion underscores a growing need for stronger coordination, harmonization, and integration to ensure these systems move beyond pilots and become embedded within national disaster management frameworks. Many existing anticipatory action frameworks continue to be implemented primarily by humanitarian partners, including United Nations agencies, international and national non-government organizations (NGOs), and the International Federation of Red Cross and Red Crescent Societies (IFRC) and the National Societies of the Red Cross Red Crescent Movement. This highlights the importance of transitioning toward sustainable, government-led and nationally owned approaches capable of delivering anticipatory action at scale - and many governments have stressed that having tangible evidence is at the core of this transition (TWG EW-AA, 2024).

As anticipatory action continues to emerge within the broader disaster risk management landscape, its evidence base, while still developing, is expanding rapidly. Encouragingly, around 72 percent of anticipatory action frameworks in the Asia-Pacific region now report having a Monitoring and Evaluation (M&E) framework in place, signalling a strong and growing commitment to learning what works, for whom, and under which conditions.



The three domains of ‘evidence’

The number of anticipatory action frameworks now in place across the Asia–Pacific region far exceeds the scale of available research assessing their effectiveness. While implementation has expanded rapidly, the accompanying evidence base remains limited in both quantity and scope.

Although some evidence is produced by the community of practice, publicly accessible evidence on anticipatory action remains limited. Findings from the 2023, 2024 and 2025 Regional Mappings by the TWG EW-AA show that many impact evaluations are not publicly available and can only be accessed upon request. While the 2024 mapping identified 35 ongoing or completed publications on activated anticipatory action systems, only a small share is in the public domain.

This evidence gap has important national and regional implications. Without shared monitoring and evaluation approaches or common evidence standards, opportunities for learning, coordination, and the long-term sustainability of anticipatory action systems may be constrained - particularly as demand from governments, donors and communities continues to grow.

Existing studies generally concentrate on three core dimensions which include process learning (institutional and programmatic experience in applying anticipatory action), socio-economic impacts on households and communities, and cost-benefit analysis. However, evidence tends to focus primarily on early-stage impacts, particularly socio-economic outcomes for affected households and overall economic returns. As a result, critical dimensions such as system performance, comparison with response activities, scalability, institutional integration, and long-term resilience outcomes remain comparatively underexplored. Table 1 summarizes the principal analytical approaches currently used to assess anticipatory action across the three core evidence domains.

TABLE 1 THREE DOMAINS OF EVALUATING ANTICIPATORY ACTION SYSTEMS

THEME	METHODS APPLIED	OBJECTIVES
Process learning	• Focus group discussions (FGDs) • Key informant interviews (KIIs) • Household surveys • After action reviews • Post-distribution monitoring (PDM)	Identify implementation and operational challenges faced by anticipatory action programmes and develop solutions.
Cost-benefit analysis	Quantitative analysis using factors such as minimum expenditure basket (MEB), avoided losses, and project cost	Quantify the relationship between the relative costs and benefits of a proposed project, expressed in monetary or qualitative terms.
Socio-economic impacts	• Mixed-methods analysis • FGDs • KIIs • Household surveys • Quantitative analysis using tools such as household dietary diversity score (HDDS)and coping capacity	Assess the multi-faceted impacts on indicators such as asset and livelihood protection, food security, dietary diversity, and coping capacity, based on intended objective, assistance transferred and target population.

This policy brief recognizes that both anticipatory action interventions and the ways their effectiveness is measured will vary across sectors, reflecting the inherently cross-sectoral nature of many anticipatory action systems in the Asia-Pacific region. This is particularly evident in systems supported by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), which often bring together multiple United Nations agencies and NGOs across food security, nutrition, livelihoods, education, protection, sexual and reproductive health, and related domains.

Within this context, the three evidence domains presented in this brief should be understood as the most visible and relevant areas at the current stage of anticipatory action practice, rather than an exhaustive or fixed framework. As anticipatory action continues to evolve and the growing uptake of government supporting the approach, additional dimensions of effectiveness may emerge, and the way evidence is generated and interpreted is likely to adapt accordingly. This framing therefore aims to provide a practical foundation for learning and decision-making today, while remaining flexible to future developments in both practice and evidence. Below offers an in-depth dive into these three domains.

Theme 1: Process learning

Process learning focuses on understanding how anticipatory action systems are designed, implemented, activated, and coordinated in practice, including the operational challenges encountered and the solutions developed to address them. It examines whether systems function as intended, where bottlenecks arise, and how institutional arrangements, decision-making processes, and delivery mechanisms can be improved.

Evidence on process learning is typically generated through qualitative and practice-based methods, including simulation exercises, KIs, FGDs, after-action reviews (AARs), and desk-based operational analyses. Simulation exercises are particularly valuable, as they test system readiness, identify gaps in activation procedures, and assess the real-world feasibility of anticipatory measures before a crisis occurs. In 2024, just over half of anticipatory action frameworks in the Asia-Pacific region had been tested through simulations, while 35 percent had not yet undergone such testing - with the other 12 percent, not providing a response (TWG EW-AA, 2024). Governments have shown strong interest in these exercises.

Process learning is critical because it provides governments and partners with practical insight into what enables anticipatory action to work at scale. By revealing coordination gaps, institutional constraints, and opportunities for innovation, it supports more effective system design, strengthens national ownership, and informs the scalability and mainstreaming of anticipatory action within disaster risk management systems. Box 1 below presents a case study from Fiji illustrating process learning for tropical cyclone anticipatory action.

Box 1: Why process learning matters - the case of anticipatory action for tropical cyclones in Fiji

Between 2023 and 2025, **Fiji** developed one of the Pacific's first nationally endorsed anticipatory action frameworks for tropical cyclones, demonstrating how acting before disaster impacts can be institutionalised with government systems. Led by the National Disaster Management Office and supported by humanitarian and United Nations partners, the framework was co-designed through extensive coordination and sectoral planning.

In 2025, partners collectively undertook a reflection on the two-year process of establishing Fiji's anticipatory action system for tropical cyclones. The resulting *Process Learning Report: Anticipatory Action Framework for Tropical Cyclones in Fiji* (USP, 2025) was prepared by researchers from the Centre for Sustainable Futures at the University of the South Pacific, with technical and coordination support with the OCHA and the Food and Agriculture Organization of the United Nations (FAO). The report documents the co-design, testing, and institutionalisation of the framework and represents one of the first regional studies to assess anticipatory action through a dedicated process learning lens, generating evidence to support national uptake and long-term sustainability.

Importantly, although no real-time activation occurred during the pilot phase, the process itself produced significant institutional learning, strengthening coordination, clarifying roles and responsibilities, improving early warning readiness, and embedding trigger-based decision-making across ministries and partners.

Reviewing how the system was built, rather than only whether it was activated, showed that anticipatory action can contribute to strengthening disaster preparedness by shifting mindsets from reactive response toward pre-emptive planning. The framework improved inter-agency collaboration, mainstreamed anticipatory thinking into operational plans, and demonstrated that system readiness and coordination are critical indicators of success.

The process also highlighted remaining gaps, including limited sub-national engagement, inconsistent community participation in targeting and communication, the absence of dedicated national budget lines, and fragmented data-sharing and monitoring systems. Addressing these constraints is essential for long-term sustainability and effective last-mile delivery.

Key priorities emerging from the review include embedding anticipatory action in national budgets and development plans, establishing a dedicated coordination function, formalising joint targeting and accountability mechanisms, expanding the framework to additional hazards, diversifying financing, and strengthening community-level institutionalisation. Together, these steps position Fiji's experience as a regional model for scaling anticipatory action through nationally owned, system-wide learning.



Theme 2: Cost-benefit analysis

Cost-benefit analysis in anticipatory action refers to the relationship between the cost of interventions and the value of losses avoided and benefits generated, often expressed as the amount of avoided damage and added livelihood benefits per USD invested. It assesses whether acting before a hazard occurs can reduce losses to lives, livelihoods, and productive assets more efficiently than delayed response or inaction.

As fiscal pressures on humanitarian and climate financing increase, demonstrating cost-effectiveness has become a strategic priority for governments and donors seeking to allocate limited resources toward approaches that deliver measurable resilience outcomes and long-term savings.

The widely cited estimate that each USD 1 invested in anticipatory action can generate up to USD 7 in avoided losses and added benefits is derived from a specific case study in Mongolia for livestock support ahead of dzud (FAO, 2018). While this finding demonstrates the strong economic potential of anticipatory action, cost-effectiveness varies significantly by hazard type, sector focus, operational context and delivery model. For this reason, there is a growing need to generate country-specific and sub-regional evidence that reflects diverse agro-ecological environments across Asia-Pacific.

Cost-benefit is the overall concept or analytical lens used to judge whether an intervention delivers sufficient value relative to the resources invested. It focuses on how efficiently an action achieves desired outcomes, whether those outcomes are measured in monetary terms, social benefits, or resilience gains.

Within this broader concept, cost-benefit ratio (CBR) and return on investment (ROI) are specific quantitative methods used to measure economic efficiency when benefits can be expressed in monetary terms.

- CBR compares total benefits to total costs as a ratio.
- ROI measures the net financial gain relative to the investment, typically expressed as a percentage.

In anticipatory action, cost-effectiveness serves as the overarching evaluation framework, while CBR and ROI are key economic metrics that help operationalize and demonstrate value for money, alongside qualitative and non-monetary outcome analysis that captures resilience, protection of livelihoods, and reduced humanitarian need.

Cost-benefit analysis has traditionally relied on household-level comparisons using structured surveys and interviews with both beneficiaries of anticipatory support and counterfactual or control groups that receive no assistance. Increasingly, however, ethical considerations and policy priorities, reflected in the expectations of governments and financing partners, are encouraging a shift toward comparing anticipatory action with rapid or later response interventions rather than with no assistance. This approach ensures that all affected households receive some form of support while still enabling a robust assessment of the timing, efficiency, and value for money of different response modalities. Rather than replacing counterfactual-controlled studies, anticipatory-versus-response comparisons complement them, with both approaches together strengthening the credibility and policy relevance of the evidence base.

While cost-benefit analysis has been instrumental in demonstrating the economic value of anticipatory action, it is also subject to important criticism. Many existing studies rely on conservative assumptions, narrowly defined benefit categories, and short evaluation timeframes that may underestimate the full social, environmental, and long-term resilience gains generated by anticipatory action. Benefits such as avoiding long-term poverty, food security, avoided damages and losses, improved dignity, and reduced future humanitarian expenditure are often only partially captured, or excluded entirely, from standard economic calculations. As a result, there is growing recognition among governments, donors, and practitioners that adopting a more expansive and forward-looking approach to cost-effectiveness, including longer time horizons, system-level impacts, and non-monetary outcomes, would provide a more accurate reflection of the true value of anticipatory action and better inform sustainable investment decisions over the long term.

Overall, understanding and demonstrating the cost-benefit of anticipatory action is essential for informing public finance decisions, disaster risk financing mechanisms, social protection integration, and climate investment planning.

Box 2: Current evidence of cost-effectiveness in Asia-Pacific

South Asia

- In **Bangladesh**, the Start Network's anticipatory action approach centers on early warning dissemination, pre-emptive evacuation support, shelter readiness measures, and the provision of essential water, non-food items, and alternative lighting to enable safe preparedness before cyclone landfall. These early interventions are designed to protect lives, reduce immediate exposure to risk, and limit damage to household assets and livelihoods ahead of impact. Evidence from Cyclone Remal shows that the Start Ready anticipatory financing and preparedness package delivered the greatest economic protection, with each USD 1 invested safeguarding USD 14.88 in livelihood income and reducing USD 7.50 in asset damage, demonstrating the superior cost-effectiveness of early, pre-arranged interventions compared with later response (Start Network, 2025).

Southeast Asia

- In **Viet Nam**, FAO worked with the Viet Nam Disaster and Dyke Authority (VDDMA) and provincial actors to provide anticipatory action in support of government-led measures on an El Niño-induced agricultural drought in the Mekong Delta. FAO provided multi-purpose cash transfers to the most vulnerable rice and shrimp farmers, and government authorities financed water access measures. The CBR analysis found that for every USD 1 invested in the interventions, a range of USD 6.33 (conservative) to USD 7.48 (expanded) was returned (FAO, 2026a).
- In **Timor-Leste**, FAO-supported anticipatory action for agricultural drought combined multipurpose cash transfers with infrastructure support to improve water access across seven municipalities. The intervention generated an estimated CBR of USD 6.26 in conservative returns and up to USD 42.38 in expanded benefits for every USD 1 invested. Further analysis estimated that scaling the drought anticipatory action approach to farming households nationwide could require an investment of USD 14.1 million and potentially generate around USD 70.1 million in returns through avoided water-fetching losses (FAO, 2026b).

East Asia

- In Inner Mongolia, China, an anticipatory action pilot, supported by Hong Kong Red Cross, branch of the Red Cross Society of China (HKRC), targeted extreme winter blowing-snow events, locally known as baimaofeng. Community volunteers were trained, with emergency cash and fodder pre-positioned, allowing assistance to be released and delivered rapidly once pre-agreed triggers were reached. A counterfactual evaluation estimated Social ROI of approximately 1.5:1, with CNY 1.261 million invested generating an estimated CNY 1.892 million in social value. Benefits included reduced livestock losses and recovery costs, alongside enhanced community resilience with stronger disaster preparedness and response capacity in the project sites (HKRC, 2025).

Pacific Islands

- **Papua New Guinea's** agricultural drought anticipatory action intervention in 2023-24, supported by FAO, the National Weather Service, and the Department of Agriculture and Livestock, involved providing multi-purpose cash transfers, drought-resilient vegetable seeds, water infrastructure improvements, and early warning messaging. This full anticipatory action package in Timingondok village yielded a CBR return of 3.30 USD (conservative) to 5.95 USD (expanded) per USD 1 invested (FAO, 2026c).

Theme 3: Socio-economic impacts

Socio-economic impacts in anticipatory action describe the changes in people's wellbeing, livelihoods, and resilience that result from support provided before a hazard occurs. These impacts are measured through looking at areas such as protection of assets and livelihoods, food security and diet quality, reduced harmful coping strategies, access to basic services, and the ability to adapt over time. The analysis considers the timing, type, and scale of assistance, as well as hazard severity, vulnerability, gender, disability, equality, social inclusion (GEDSI), and market conditions, using a mix of quantitative, qualitative, and comparative methods.

To strengthen accuracy, socio-economic analysis also compares baseline conditions and control or response groups, and looks at different timeframes, including immediate protection, short-term recovery, and longer-term resilience. It can also assess wider system effects, such as market stability, service continuity, and protection of local economies. Understanding who benefits most, and who may be left behind, helps improve overall anticipatory action design.

Measuring these socio-economic impacts allows anticipatory action to show value beyond immediate relief, supporting better planning, targeting, and use of pre-arranged financing, while complementing cost-effectiveness analysis. This evidence helps integrate anticipatory action into policy, climate and disaster financing, and multi-sector programmes, ultimately reducing long-term vulnerability and strengthening resilience across humanitarian, development, and climate systems.

Because socio-economic analysis uses mixed methods, it can also capture personal experiences and human stories that show the real importance of acting early. These perspectives reveal changes in dignity, stress, decision-making, and preparedness that numbers alone may miss. Combining lived experiences with data provides a fuller picture of impact and helps explain why anticipatory action matters for people's daily lives, supporting stronger policy engagement and community ownership.

Box 3: Socioeconomic benefits of anticipatory action

- In **Bangladesh**:
 - The Start Network's anticipatory action interventions delivered positive livelihood outcomes by reducing economic hardship, asset losses, and disruption to household activities before cyclone impacts occurred. Households receiving early support showed high use of assistance for essential needs, including food and shelter materials, and experienced lower levels of infrastructure damage, demonstrating how timely action ahead of hazards strengthens preparedness and protects livelihoods.
 - WFP's provision of one-off anticipatory cash transfers ahead of extreme flooding delivered both immediate and longer-term benefits. The transfers were primarily used to meet essential food and water needs, and recipient households were 36 percent less likely to go a day without eating during the flood. These benefits persisted beyond the immediate crisis: three months later, recipient households reported significantly higher food consumption among both children and adults, as well as improved wellbeing. They also experienced lower asset losses, relied less on costly borrowing to recover, and reported greater earning potential.
 - The Bangladesh Red Crescent Society's 2020 Cyclone Amphan Anticipatory Action evaluation found strong protective outcomes from their intervention where 100 percent of supported households evacuated, compared with 97 percent of the comparison group; injuries were lower (15 versus 27 percent); and only 4 percent sold household assets to cope, compared with 58 percent. Supported households also experienced lower livestock and agricultural losses and better shelter conditions (Pronti & Gros, 2021).
- In the **Philippines**, by acting ahead of Typhoon Man-Yi and providing cash to at-risk households, the Start Network found that over 85 percent of anticipatory action-supported households recovered within 1 month, compared to over 67 percent of traditional response households that took 2 to 3 months to recover, and over 85 percent of beneficiaries avoided harmful coping strategies (e.g., selling assets, taking loans). FAO (2026d) analysis for the same event shows boat damage fell from 80 percent among unsupported households to 18 percent with anticipatory action, while supported boat owners returned to fishing in 6 days rather than nearly 17 days among unsupported households.
- In **Mongolia**:
 - An analysis of the multi-purpose cash transfers by FAO indicated that anticipatory action helped stabilize households' abilities to access livestock feed and hay in advance of dzud, which had cascading effects on broader livelihood benefits like reduced livestock mortality, production losses, and expenditures in crisis, ultimately lowering financial stress. This was especially evident in livestock losses, where herders who did not adequately prepare for winter experienced livestock mortality rates of up to 60 percent while those who had prepared saw an average of 21 percent (FAO, 2026f).
 - Complementing this evidence, an evaluation of the Mongolian Red Cross Society's 2017–18 dzud anticipatory action, which provided cash and animal-care kits to 2,000 vulnerable herder households, found lower livestock mortality and improved offspring survival for some livestock types. Importantly, the evaluation also found that earlier assistance was associated with better outcomes, highlighting the value of acting before the conditions deteriorate (Gros et al., 2022).
- Ahead of the 2024 El Niño-induced agricultural drought, FAO provided anticipatory support to rural farmers in **Viet Nam** (FAO, 2026a) and the **Philippines** (FAO, 2026e). Nearly 90 percent of beneficiaries across the two countries reported that the assistance reduced their stress and worry, highlighting important psychological benefits of acting early. In addition, more than 80 percent of beneficiaries said the cash support helped them avoid taking on debt to buy food, thereby reducing the need for harmful coping strategies.

Deep dive: gender & inclusion impacts

These socio-economic findings from the above examples offer an initial picture of how anticipatory action affects livelihoods and wellbeing, as well as the dignity of those at-risk. Standardized tools can help measure these impacts, such as the Household Dietary Diversity Score (HDDS) and food security coping indicators. At the same time, gender and equity considerations are essential. Gender roles, disability, and social marginalization can shape how people receive early warnings, evacuate safely, protect assets, and use financial support. There is emerging evidence growing in this important area in the Asia-Pacific region, as highlighted in Box 4 below.

Box 4: Gender and social inclusion benefits of anticipatory action

- In July 2023, the onset of Typhoon Doksuri (Egay) triggered the Start Network's Start Ready anticipatory intervention in Camalaniugan, Cagayan, **Philippines**. The programme provided multi-purpose cash assistance ahead of impact, which recipients used to purchase essential household items and, in some cases, to support their children's needs. As one beneficiary explained: *"We tried to set aside some of the money in anticipation of our children's needs. We stretched it for up to three weeks."* (Start Network, 2025).
- When anticipatory action was activated ahead of flooding in the Jamuna River basin in **Bangladesh** in 2024, UNFPA provided cash assistance to pregnant women to support continued access to maternal health and childbirth services, as well as to women, adolescent girls and transgender people to meet menstrual health and dignity-related needs. Post-distribution monitoring found that 96.7 percent of respondents considered the assistance timely, 98.3 percent reported feeling respected or highly respected in receiving the support, and 99.3 percent reported that the assistance helped them cope with the impacts of the floods. These findings demonstrate how anticipatory action can help address differentiated needs while supporting dignity and access to essential services ahead of and during a crisis (UNFPA, 2025).
- In **Timor-Leste**, analysis of FAO-supported anticipatory action combining multi-purpose cash assistance with improved water access in drought-affected municipalities demonstrated important socioeconomic benefits, particularly for women. Overall, 89.3 percent of respondents reported that the installed water facilities reduced the time spent fetching water by half. Focus group discussions further highlighted that improved access to water reduced the time and physical burden associated with water collection, easing women's daily workloads and freeing up time for livelihood and household activities (FAO, 2026b).

Findings in Box 4 highlight important gender differences in how people experience anticipatory action. However, evidence on people living with disabilities and other marginalized groups remains very limited. Strengthening the systematic collection and analysis of socio-economic and gender-responsive data is therefore essential to ensure anticipatory action responds to people's real needs and addresses both immediate and structural vulnerabilities.

At the same time, measuring socio-economic impacts in anticipatory action presents practical challenges. Establishing baseline data before assistance is delivered is often difficult because activations occur on short notice, across different locations, and at varying points in agricultural seasons. It is also rarely possible to assess anticipatory action in isolation from other support, since beneficiaries may simultaneously receive government or humanitarian response and recovery assistance. Finally, collecting sensitive vulnerability information from communities, particularly after disasters, requires careful, ethical approaches, supported by clear accountability, consent, and feedback mechanisms to ensure data is both responsible and meaningful. This is particularly important for the socio-economic impact data collection, but the same rule of thumb would also apply for cost-effectiveness and process learning domains.



What are the next steps?

A primary priority for anticipatory action is to **build a coherent national evidence narrative** from the outset, grounded in a shared understanding of what governments and communities need to know to inform policy and practice. Rather than evaluating impacts only after interventions occur, anticipatory action actors (including government) should define jointly, at the country level, the key policy questions, development outcomes, when is the right time to collect the data post-shock, and decision points that evidence must address. This forward-looking approach enables socio-economic, cost-effectiveness, and operational findings to directly demonstrate how anticipatory action contributes to policy change, financing decisions and improved risk management systems, strengthening the case for institutionalization and scale.

Emerging country practices illustrate the value of **coordinated evidence models** (WFP, 2025). In Fiji, for example, a third-party has been engaged to independently develop a framework to be delivered by multiple partners, creating the foundation a shared and credible national evidence base. In the Philippines, partners are collecting data through their own programmes and analyzing it to feed the results into a single, consolidated analytical process, supporting more coherent learning across interventions, particularly as the Republic Act 12287 (on Declaration of State of Imminent Disaster) is now in play. These experiences underscore the need for harmonized evaluation frameworks and shared data systems to strengthen evidence comparability and policy relevance. They also offer a pathway to expand the public availability of anticipatory action evidence in Asia-Pacific and support transparent learning on effectiveness and areas for improvement.

Beyond formal evaluations, **joint After-Action Reviews (AARs)** following activations provide a practical mechanism to bring partners and governments together to synthesize operational, socio-economic, and financial evidence in real time. Using AARs as a regional best practice, and conducting them more systematically after activations, would significantly enhance collective learning and evidence consolidation.

Undertake a **comprehensive stocktaking of existing anticipatory action evidence and practice across the three core analytical domains**. This review should systematically identify what evidence and methodologies currently exist, where critical gaps remain, and how approaches differ across countries, hazards, and delivery systems. Such a structured assessment would support the baseline to develop greater harmonization of methods, indicators, and learning frameworks, enabling more consistent comparison of results and strengthening the overall credibility of the evidence base. It will also allow for a greater understanding of which countries and sub-regions need more focus and support.

A critical gap in the evidence base is the **limited documentation of long-term developmental impacts**. Current evaluations predominantly assess short-term outputs and immediate outcomes, with insufficient analysis of how anticipatory action influences sustained livelihood resilience, poverty reduction, and equity. Post-activation longitudinal follow-up should be institutionalized, including community engagement at 6 to 12 months after anticipatory action, to assess how interventions are sustained in practice, how livelihoods recover or strengthen, and how resilience evolves over time. Such follow-up can also capture behavioural and preparedness changes, as demonstrated by FAO's 2025 Typhoon Fung-Wong activation, where communities replicated the boat evacuation methods introduced during the 2024 Typhoon Man-Yi anticipatory action, indicating strengthened local capacity and learning that can be systematically measured.

Pressure is rising to demonstrate the **cost-effectiveness of anticipatory action**, enabling governments, donors, partners, and communities to compare investments and identify the most impactful options across the disaster risk management chain. While some view this approach as overly economic, it is becoming central to evidence-based policy and financing. Remaining methodological gaps highlight the need for coordinated regional efforts to roll out and standardize cost-effectiveness methodologies, enabling more consistent evidence generation, stronger fiscal justification for anticipatory action, and improved alignment with government planning and financing frameworks. **Evidence would also be strengthened through more systematic comparative analysis between households receiving anticipatory support prior to hazard impact and those receiving early or immediate post-shock response.**

More consistent sex-, age- and disability-disaggregated data and analysis are likewise required to better understand distributional impacts, differential vulnerabilities and equity outcomes. While gender and disability dimensions are sometimes examined retrospectively, low response rates, sampling and exclusion criteria, and limited methodological planning can constrain the robustness and usability of the findings. Future evaluations should therefore embed gender- and disability-responsive data collection and analysis within their core methodologies from the outset, including through approaches that enable the meaningful inclusion of persons with disabilities.

Emerging evidence from Viet Nam, Mongolia and Timor-Leste (FAO, 2026a; FAO, 2026b; FAO, 2026c) demonstrates why this is important. During droughts, women in Viet Nam can face specific and often overlooked hygiene and care-related needs; in Mongolia, women have limited access to informal credit and other financial buffers; and in Timor-Leste, improved access to water ahead of drought can significantly reduce the time and physical burden associated with water collection, which disproportionately falls on women. Evidence on the differentiated impacts experienced by persons with disabilities remains limited, reflecting gaps in data collection and analysis rather than an absence of impact. Together, these findings reinforce the need to systematically integrate gender equality, disability inclusion and other considerations of vulnerability into the design, targeting and evaluation of anticipatory drought action.

Institutionalize two-way evidence processes in anticipatory action that both draw from community knowledge and return actionable insights to communities to guide local preparedness and planning. Positioning evidence as a shared public good, rather than solely a policy or donor tool, strengthens localization, improves relevance of interventions, and enables communities to play a leading role in resilience-building and risk management.

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