



Anticipatory action and cash transfers for slow-onset hazard events

Practitioners' note for field testing

Asia-Pacific Regional Cash Working Group (RCWG) and
Asia-Pacific Technical Working Group on Anticipatory Action (TWGAA)



PART OF NORWEGIAN
REFUGEE COUNCIL





**Co-funded by
the European Union**



**german
humanitarian
assistance**

DEUTSCHE HUMANITÄRE HILFE



Belgium

partner in development

This publication was made possible through the financial support of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) as part of the Pilot Programmatic Partnership between FAO and DG ECHO. Additionally, the publication was co-funded by German Federal Foreign Office (GFFO) and the Government of Belgium. The contents of this publication can in no way be taken to reflect the views of DG ECHO, GFFO and the Government of Belgium. The European Commission, GFFO and the Government of Belgium are not responsible for any use of the information contained herein.

Anticipatory action and cash transfers for slow-onset hazard events

Practitioners' note for field testing

Asia-Pacific Regional Cash Working Group (RCWG) and
Asia-Pacific Technical Working Group on Anticipatory Action (TWGAA)

Required citation:

Asia-Pacific Technical Working Group on Anticipatory Action and Asia-Pacific Regional Cash Working Group. 2024. *Anticipatory action and cash transfers for slow-onset hazards: Practitioners' note for field testing*, Bangkok.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the organisations concerning the legal or development status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether these have been patented, does not imply that these have been endorsed or recommended by the organisations in preference to others of a similar nature that are not mentioned. The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of respective organisations.

© TWGAA and RCWG, 2024

This paper was co-authored by Catherine Jones (Food and Agriculture Organization of the United Nations (FAO) Anticipatory Action Lead for Asia-Pacific and Co-lead of the TWGAA), Vlad Sorin Cozma (NORCAP/CashCap and Coordinator of the RCWG) and Mulugeta L. Handino PhD (FAO Asia-Pacific, Cash and Voucher Assistance Expert).

The authors are grateful for the review committee for their technical inputs. Special thanks to the following for their substantial contribution and review: Alice Golay (UNFPA Asia-Pacific), Anita Auerbach (German Red Cross), Barbara Pfister (WFP Asia-Pacific), Daniel Gilman (OCHA Asia-Pacific), Digvijay Singh (FAO Asia-Pacific), Edward Parkinson (FAO Timor Leste), Emily Johnson (American Red Cross), Hassan Hussein (NORCAP/CashCap Afghanistan), Indra Puspasari (IFRC Asia-Pacific), Inyoung Jang (FAO Asia-Pacific), Irene Quizon (REGA Asia Pacific/GBV AoR), Jeff Paddock (American Red Cross), Jigjidpurev Sukhbaatar (FAO Mongolia), Joelle Charbonneau (UN Women Asia-Pacific), Jose Atanacio Estuar (World Vision Asia-Pacific), Lazarus Dawa (FAO Papua New Guinea), Lisa Williams (American Red Cross), Madhab Uprety (Red Cross Red Crescent Climate Centre), Malia Talakai (FAO Pacific), Manish Tewani (American Red Cross), Marcolino Goncalves (FAO Timor Leste), Maria Ena Olmedo (OCHA Asia-Pacific), Mikolaj Radlicki (NORCAP/CashCap Philippines), Mirriam Mondia (FAO Papua New Guinea), Mohamed Ahmed (American Red Cross), Nigel Baro (FAO Papua New Guinea), Prakash Tiwari (World Vision Nepal), Raymond Etienne Zingg (IFRC Asia-Pacific), Rhinadel Canete (OCHA Philippines), Sarwat Adnan (DCO Asia-Pacific), Suvd Bold (RCO Mongolia), Thai Anh Nguyen (FAO Viet Nam), Tran Yen (FAO Viet Nam), TsendAyush Batbold (FAO Mongolia), Van Nguyen (FAO Viet Nam), Yasif Hasan (American Red Cross).

The authors would also like to thank participants of the working session at the 7th Asia-Pacific Dialogue Platform on Anticipatory Action, which informed this document: Abhishek Barua (Bangladesh Red Crescent), Adi Ripaldi (Indonesian Meteorology, Climatology, and Geophysical Agency), Agustinho Dos Reis de Fatima (Timor Leste Red Cross Climate Centre), Angela So (Hong Kong Red Cross), Anamul Haque (START Network Bangladesh), Bermet Kargabaeva (German Red Cross Kyrgyzstan), Birendra Bajracharya (International Centre for Integrated Mountain Development), Chanmonirota Iv (WFP Cambodia), Daur Sakyev (Ministry of Emergency Situations Kyrgyzstan) Dhruba Gurmachhan (World Vision Nepal), Edward Zan (World Vision Myanmar), Ellaine Luzada (Philippines Red Cross), Erdenebulgan Bayarbat (World Vision Mongolia), Ganga Kariyawasa (Sri Lanka Red Cross), Gaurab Sagar Dawadi (Nepal National Disaster Risk Reduction And Management Authority), Graziela Olua (Indonesian Meteorology, Climatology, and Geophysical Agency), Hannah Giray-Carcido (DSWD Philippines), Hanna Kusumastuti (Indonesian Red Cross), Harun Rashid (UNICEF Türkiye), Hasanul Amin (Bangladesh Cyclone Preparedness Programme), Herman Metan (Timor Leste Civil Protection Authority), Jebaraj Jeyarajah (World Vision Sri Lanka), John Mel Sumatra (HI Philippines), Khambane Inthipunya (FAO Lao PDR), Lia Gonzalo (START Network), Lalongkone Chanthamaly (WFP Lao PDR), Luma Khadka (World Vision Nepal), Maden Raj Joshi (HI Nepal), Mamunur Rashid (American Red Cross), Margie Siregar (World Vision Asia-Pacific), Maria Natalia Pratiwi (World Vision Indonesia), Mark Yaung (American Red Cross Philippines), Maya Manocsoc (Red Cross Climate Centre), Moe Thida Win (Myanmar Red Cross), Mohammed Atif Khan (German Red Cross Pakistan), Naeem Gul (WFP Pakistan), Naeem Iqbal (FAO Pakistan), Niger Dil Nahar (WFP Bangladesh), Netai Chandra Dey Sarker (Bangladesh Department of Disaster Management), Palash Haldar (Concern Worldwide Bangladesh), Pramila Subedi (START Network Nepal), Rita Da Costa Soares (Timor Leste Ministry of Agriculture and Fisheries), Rio Augusta (WFP Indonesia), Ruslan Umaraliev (WFP Kyrgyzstan), Sarafroz Mavlyanov (German Red Cross Tajikistan), Saroj Thakur (Finnish Red Cross), Sharif Khan (IFRC Bangladesh), Shi Shah Ayobi (American Red Cross Philippines), Shirin Merola (WFP HQ), Shavkat Abdujabarov (German Red Cross Kyrgyzstan), Sovannanth Hang (WFP Lao PDR), Syed Muneeb Ilyas (Pakistan Red Crescent), Tapar Kumar Chakraborty (Action Against Hunger Bangladesh), Tetty Marlina Rajagukguk (IFRC Indonesia), Thakir Chauhan (FAO Nepal), Urbe Seades (WFP HQ), Vanessa Cheng (Hong Kong Red Cross), Van Tao Dang (Viet Nam Red Cross), Verena Kanske (German Red Cross), Viengsavanh Kaseumsuk (Lao PDR Red Cross), Zayar Naing (Myanmar Red Cross), Zohaib Durrani (Pakistan National Disaster Management Authority).

Finally, special thanks to the FAO country teams in Mongolia, Timor Leste, Papua New Guinea, Viet Nam, and Sub-regional Office for the Pacific Islands for supporting the consultations with people at risk.

Contacts: Catherine Jones: Catherine.Jones@fao.org; Mulugeta Handino: Mulugeta.Handino@fao.org; Vlad Cozma: Vlad.Cozma@norcap.nrc.no

Cover photograph: © FAO/H. Null

CONTENT

Abbreviations and acronyms	v
Introduction	1
<hr/>	
PART 1 Understanding slow-onset anticipatory action	5
1.1 Methodology and key definitions	5
1.2 What is slow-onset anticipatory action?	9
1.3 What do slow-onset hazards look like in Asia and the Pacific?	18
1.4 Cash in slow-onset anticipation: What we know	26
<hr/>	
PART 2 Country case studies	31
2.1 Drought case studies	31
2.1.1 Timor-Leste	31
2.1.2 Papua New Guinea	39
2.1.3 Tuvalu	44
2.1.4 Viet Nam	49
2.1.5 Drought anticipatory action and cash transfers: conclusions and recommendations	54
2.2 Extreme winter case studies	55
2.2.1 Mongolia	55
2.2.2 <i>Dzud</i> anticipatory action and cash transfers: conclusions and recommendations	66
<hr/>	
PART 3 Framework for field testing: Intersectoral approach to cash for slow-onset anticipatory action	69

FIGURES

Figure 1: Difference of anticipatory action timing between sudden and slow-onset scenarios	10
Figure 2: Anticipatory action within DRR components	13
Figure 3: Pre-crisis findings from Timor-Leste displayed on a crisis timeline (Cash+ package per at-risk household)	38
Figure 4: Location of Western Province	40
Figure 5: Tuvalu: rising cost of living	47
Figure 6: Differences of rainfall between ENSO and neutral phases, October to June, 1980–2015	50
Figure 7: Viet Nam drought crisis timeline	52
Figure 8: <i>Dzud</i> risk and <i>dzud</i> conditions map	56
Figure 9: <i>Dzud</i> types and status by <i>soum</i> , as of 30 January 2024	58
Figure 10: Key events along a crisis timeline and anticipatory action phases	61
Figure 11: Timeline of pre-crisis findings: household mitigation options, negative coping tactics, and needs	64
Figure 12: Timeline A: Key livelihood-related phases for the target at-risk group	70
Figure 13: Timeline B: Impacts of the hazard event, related early warning system and anticipatory action threshold phases	71
Figure 14: Timeline C: Household actions, coping tactics and needs in each anticipatory action phase	73
Figure 15: Timeline D: External support relevant in each household action or coping tactic in every anticipatory action phase	75

TABLES

Table 1: Mongolia crisis timeline for <i>dzud</i>	12
Table 2: Examples of anticipatory action measures by hazard and rationale (selected or tested at the country level in Asia and the Pacific)	15
Table 3: Hotspots for drought risk in Southeast Asia	22
Table 4: Timor-Leste crisis timeline	34
Table 5: Self-identified needs	36
Table 6: Papua New Guinea crisis timeline	42
Table 7: Impact of major droughts in Viet Nam from 1998	49

BOXES

Box 1: Bracing for drought in Afghanistan	19
Box 2: Bracing for <i>dzud</i> in Mongolia	20
Box 3: Bracing for drought in Timor-Leste	22
Box 4: Bracing for drought in the Philippines through social protection systems	23
Box 5: Bracing for drought in Papua New Guinea	25
Box 6: Anticipatory cash transfer for agricultural drought in Samangan province, Afghanistan	26
Box 7: Targeting criteria and cash assistance, revised in 2024	58

ABBREVIATIONS AND ACRONYMS

AA	Anticipatory Action
AAP	Accountability to Affected People
ACT	Anticipatory cash transfer
ALGIS	Agriculture and Land Use Geographic Information System – Timor-Leste
ASEAN	Association of Southeast Asian Nations
CDI	Combined Drought Index
CEA	Community Engagement and Accountability
CERF	Central Emergency Response Fund
CPA	Civil Protection Authority – Timor-Leste
CWG	Cash Working Group
DG ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
DMT	Disaster Management Team – Papua New Guinea
DNMG	National Directorate of Meteorology and Geophysics – Timor Leste
DRM	Disaster risk management
DRR	Disaster risk reduction
DSWD	Department of Social Welfare and Development – Philippines
ECMWF	European Centre for Medium-Range Weather Forecasts
ENSO	El Niño-Southern Oscillation
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EW	Early warning
EWEA	Early Warning Early Action
EWI	Early warning information
EWS	Early warning system
FAO	Food and Agriculture Organization of the United Nations
FbA	Forecast-based Action
FbF	Forecast-based Financing
FGD	Focus Group Discussion
FSP	Financial service provider
GBV	Gender-Based Violence
GDP	Gross Domestic Product
HCT	Humanitarian Country Team
HEA	Household Economic Analysis
HIES	Household Income and Expenditure Survey
IASC	Inter-Agency Standing Committee
IFRC	International Federation of Red Cross and Red Crescent Societies

ILO	International Labour Organization
IMF	International Monetary Fund
IOD	Indian Ocean Dipole
IRIHME	Information and Research Institute of Hydrology, Meteorology and Environment – Mongolia
KII	Key Informant Interview
MALFF	Ministry of Agriculture, Livestock, Forestry, and Fisheries – Timor-Leste
MARD	Ministry of Agriculture and Rural Development – Viet Nam
MEB	Minimum Expenditure Basket
MPC	Multi-purpose cash
MRD	Mekong River Delta
NAMEM	National Agency for Meteorology and Environmental Monitoring – Mongolia
NCHMF	Viet Nam National Centre for Hydro-Meteorological Forecasting – Viet Nam
NDVI	Normalised Difference Vegetation Index
NGO	Non-government Organisations
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
PDM	Post Distribution Monitoring
PIC	Pacific Island Countries
PNG	Papua New Guinea
PSEA	Protection from sexual exploitation and abuse
PWD	People with Disabilities
RCWG	Asia-Pacific Regional Cash Working Group
ROAP	OCHA Regional Office for Asia and the Pacific
SDMC	Suco Disaster Management Committees – Timor Leste
SEC	Mongolian State Emergency Commission
SRH	Sexual and reproductive health
SOP	Standard Operating Procedures
TWGAA	Asia Pacific Technical Working Group on Anticipatory Action
UNDRR	United Nations Office for Disaster Risk Reduction
UNICEF	United Nations Children’s Fund
VDDMA	Viet Nam Disaster and Dyke Management Authority
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WMO	World Meteorological Organization

INTRODUCTION

Asia and the Pacific, one of the most hazard prone-regions in the world, is now starting to grapple with an increasing number of slow-onset hazard crises. Events such as droughts and extreme winter seasons are becoming the norm, unfolding gradually and often eluding immediate recognition even as they leave enduring imprints on ecosystems, economies, and societies. These slow-onset hazards disproportionately affect marginalised groups, including women and minorities, who often face heightened vulnerabilities due to existing socioeconomic and cultural disparities. Unlike sudden-onset events, these slow-onset hazards unfold over an extended period, testing the adaptive capacities of communities and challenging conventional disaster response frameworks.

Anticipatory action (AA) is considered a valuable tool for reducing or mitigating the impacts of potential hazard events. Cash is rightfully acknowledged as an option for delivering effective, cost-efficient and timely assistance to vulnerable households within the critical window of AA. Despite this recognition, there is limited evidence in the Asia-Pacific region regarding the effectiveness of employing cash in these instances. While some studies highlight experiences of cash+ being deployed for AA in Afghanistan, the Philippines, and Mongolia and provide valuable insights, the broader utilisation of cash transfers in AA scenarios remains underexplored.

As the focus of systems in the region has predominantly centred on AA for sudden-onset events, less attention and investment have been allocated to addressing slow-onset hazards. This trend is underscored by the Central Emergency Response Fund (CERF) AA pilots in the region, which focus on floods, typhoons, and tropical cyclones in Nepal, Bangladesh, the Philippines and Fiji. However, a noticeable shift is occurring: an increasing number of AA protocols are either being developed or already being implemented across the region. These include, but are not limited to, Papua New Guinea (PNG), Timor-Leste, Tuvalu, the Philippines, Lao People's Democratic Republic (PDR), Viet Nam, Myanmar, Bangladesh, Pakistan and Afghanistan.

While the heightened focus on drought in the region is promising, it is imperative to acknowledge and address the existing gaps. There remain significant deficiencies in understanding the optimal balance between in-kind/service delivery and cash assistance; determining the frequency and amount of distributions; understanding the difference between AA and response cash assistance requirements; and clarifying the broader role of cash within slow-onset scenarios.

This paper aims to explore multiple case studies on the slow-onset anticipatory cash topic, consolidating existing knowledge and scrutinising gaps that demand deeper investigation. It underscores the need to tailor cash interventions in AA and ensure that these interventions are sensitive to the diverse needs and challenges faced by all community members. The findings are based on consultations with communities and governments in Mongolia, Viet Nam, Papua New Guinea, Timor-Leste and Tuvalu, as well as regional perspectives from over 30 agencies that are part of the **Asia-Pacific Technical Working Group on Anticipatory Action (TWGAA)**¹ and the **Asia-Pacific Regional Cash Working Group (RCWG)**.² The authors aimed to explore diverse contexts – from some of the most populated countries to the least – to understand how cash can be effectively utilised in different settings for AA in slow-onset hazards. In the realm of slow-onset hazards, the focus will be on droughts and extreme winter seasons, aligning with the body of learning that has unfolded in Asia and the Pacific thus far.

1 Regional working group co-chaired by FAO and IFRC (part of IASC Regional Network for Asia and the Pacific)

2 Regional working group co-chaired by OCHA, WFP, IFRC, and supported by NORCAP/CashCap (part of IASC Regional Network for Asia and the Pacific).

Two Asia-Pacific technical working groups coming together

This paper is the result of the collaboration between the TWGAA and RCWG. The two groups worked together to understand the relationship between cash transfers and AA and come up with initial answers. This is the second in our series of papers exploring the relationship between cash and AA, the first being [Anticipatory action and cash transfers for rapid-onset hazards: Practitioners' note for field testing](#).

As the findings in this document – including from consultations with contributors – reveal a need for more research and technical guidance material until both cash and AA practitioners adopt common standards, this is merely an initial step. Periodic revisions to this technical note are expected, along with the development of supplementary materials. Readers are encouraged to field-test the assumptions outlined in this document and provide feedback for revisions and the design of new guidance material for cash and AA practitioners.

Technical support from regional groups

The two regional groups provide technical support to practitioners at the national and subnational levels, as well as act as platforms for exchanging learning, consolidating knowledge, and harmonising approaches. Technical support from the two regional groups is available as per their respective roadmaps, thematic sessions, updates, and contact details available on [Regional Humanitarian Working Groups dashboard](#). Feedback to this document, as well as learning extracted from it, is encouraged to be shared at these regional forums.

Objectives, methodology and target audience

The objective is to answer issues concerning cash assistance in slow-onset AA and guide practitioners on the considerations for designing and harmonising cash transfer values, as well as the timing, frequency and targeting of such anticipatory cash transfers.

Breaking the purpose down, the paper has four key goals:

- **Unpack** what cash means for slow-onset AA and how it differs from cash for rapid-onset AA ; provide examples; and highlight key considerations.
- **Develop** a guidance note on developing the cash transfer values for slow-onset AA.
- **Explore** the relationship between in-kind/service delivery and cash assistance.
- **Identify** points for further research to test the recommendations.





UNDERSTANDING SLOW-ONSET ANTICIPATORY ACTION

1.1 Methodology and key definitions

Methodology

The conclusions drawn from this study stem from a mixed-methods approach. Community consultations were primarily qualitative, offering participants a platform to express their perceptions, voices, experiences and knowledge regarding various shocks – particularly drought and severe winter seasons – and their ramifications on their lives, livelihoods and mitigation strategies. The firsthand insights from communities facing slow-onset shocks enhance the comprehension of humanitarian and development practitioners in developing suitable response strategies and determining appropriate cash transfer values to mitigate the impacts of foreseeable hazards while safeguarding previous investments. Employing a mixed-methods approach, the process comprised three primary components:

- **Literature review:** A comprehensive review of studies from Asia and the Pacific to compile existing knowledge and identify areas that require further consideration. Relevant academic publications, policy and operational guidance, and practitioner notes were also reviewed.
- **Community-level consultations:** Focus group discussions (FGDs) were conducted in Mongolia (July 2023), Papua New Guinea (October 2023), Timor-Leste (October 2023) and Viet Nam (August 2023) to gather insights from communities, including local authorities. The discussions were facilitated by the authors or representatives from FAO. The FGDs were done across four countries with mixed male and female participants. In each country, the FGDs had different compositions and sizes while the consultations used the same questions.
- **National-level consultations:** In addition to the community consultations, Tuvalu (October 2023) was also approached for discussions on the usage of cash for slow-onset hazards, but this was conducted at the national level with government representatives during an FAO-led Damage and Loss/AA training in the capital Funafuti.
- **Regional-level consultations:** During the Asia-Pacific Dialogue Platform on AA in Kathmandu, Nepal in June 2023, a session with regional agencies was hosted (with over 100 participants) to explore the topic, *Cash in, risks out: Empowering communities with Anticipatory Action for a resilient future*. The session obtained feedback from participants across agencies and government departments in Asia and the Pacific to explore their relationship with cash in drought or extreme winter contexts. It explored what lessons learned are available to date and what challenges the community needs to collectively overcome.

Using a combination of data collection methods that present the perspectives of different community members and practitioners provided rigour and richness to the study. It also helped to develop a better understanding of the cash transfer programming for predicted slow-onset hazards. Across all countries, standard FGD and Key Informant Interview (KII) questionnaires were used to capture the perspectives and experiences of communities and key actors. The questionnaire for Mongolia is slightly different to reflect a unique hazard called *dzud* among the cattle herding communities.

Target audience

The target audience comprises practitioners, government representatives involved in designing AA interventions with cash components, members of Humanitarian Country Teams (HCTs), donors, Cash Working Groups (CWGs), national disaster management authorities, and development practitioners working on slow-onset hazards (e.g. Green Climate Fund), as well as other coordination groups responsible for harmonising AA projects and integrating them into national contingency plans.

The scope of this study, as revealed through consultations with partners, necessitates a clear delineation of what it will not encompass. While the realm of cash and AA is expansive and evolving, this paper – which is part of an ongoing series – aims to articulate its focus, excluding the following aspects that will be explored in subsequent editions:

- **Group cash transfers for AA:** Transfers to local groups, committees, organisations (e.g. civil society and community-based organisations), the private sector, traders and service providers are excluded from the report. The document concentrates on agency/organisation and government-to-household transfers, emphasising the design of cash transfer values or Cash+ interventions for at-risk households anticipating slow-onset events.
- **Disaster risk insurance:** The broader approach involving insurance, payment of premiums, and state-run calamity funds subsidising insurance cover falls beyond the document's scope. Considerations on combining agency and AA cash with such approaches are also omitted.
- **Internal agency readiness:** Internal agency procedures, standard operating procedures (SOPs), and protocols related to implementing anticipatory cash transfers are excluded.
- **Specific target group categories:** The document concentrates on geographical targeting (exposure to hazard) and broad wealth/livelihood groups. Decisions on specific target groups are left to implementing agencies/organisations, emphasising the need for coordination to ensure coherence and avoid duplication or targeting gaps.
- **Human-induced scenarios:** The study specifically addresses slow-onset natural hazards due to the evidence at hand and ongoing efforts in this area within Asia and the Pacific. While acknowledging the importance of exploring human-induced crises such as epidemics, pests and diseases and socioeconomic crises, more exploration on the ground is needed and topics will be explored in subsequent reports in the series.

Selection of case study countries

The countries were chosen based on three primary criteria: (a) their high susceptibility to slow-onset hazards; (b) the availability of ongoing AA initiatives to draw upon; and (c) the feasibility of data collection within a 6-month timeframe to contribute to this report. It is essential to recognize that the selected countries explored in this study are at various stages of AA development, which may introduce potential biases to the findings and subsequent interpretations – a point the authors wish to acknowledge. The following provides an overview of the ongoing AA programmes in the selected countries:

- **Mongolia** has been actively engaged in AA efforts since 2017, focusing on severe winter seasons, locally known as *dzud*. The Mongolian National Agency for Meteorology and Environmental Monitoring (NAMEM) leads efforts to predict these events. Over the past eight years, there have been at least five AA activations – in 2017, 2019, 2020, 2022 and 2023. The government has not only taken the lead in monitoring but has also expanded its involvement into action and financing. In November 2022, a fact-finding mission assessment based on *dzud* warnings, led by the deputy prime minister, State Emergency Commission (SEC), and FAO emphasised the necessity of AA to safeguard herder livelihoods. This recommendation was formally endorsed by the Cabinet of Ministers, in accordance with the requirements of the Law on State Reserve (Government Resolution No. 461/2022), resulting in a 50-percent reduction in state fodder and hay reserves. Various partners have supported AA efforts in Mongolia, including the Mongolian Red Cross Society, FAO, People in Need and World Vision.

- **Viet Nam** is another country that is actively engaged in the AA approach. The Viet Nam Disaster and Dyke Management Authority has worked closely with FAO, the Viet Nam Red Cross Society, World Vision, CARE and Plan International on AA over the last seven years. Recent investments from the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) and FAO have seen the establishment of an AA protocol for drought, which covers both central Viet Nam and the Mekong Delta region. This work draws from FGDs based on the seasonal revision and update of this AA protocol, as well as from the ongoing work of World Vision and CARE in Viet Nam, which was elucidated by CARE in [“Saving lives and assets: The value of nexus ‘cash’ approaches to anticipatory action and social protection during climate-induced crises.”](#)
- **Timor-Leste:** Since 2020, Timor-Leste has been setting the foundations for the AA approach. Drought AA protocols have been established with the Civil Protection Authority, Ministry of Agriculture, Livestock, Forestry, and Fisheries (MALFF) and the National Directorate of Meteorology and Geophysics (DNMG), with the support of FAO. This is under the Green Climate Fund initiative, “Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste” which is conducted in close collaboration with the Timor-Leste Red Cross Society and the Red Cross Red Crescent Climate Centre. In September 2023, the Combined Drought Index triggered an alert for action, marking one of the first AA activations for the country. This sparked the CERF to top up efforts with USD 2 million based on the FAO and Government of Timor-Leste Combined Drought Index model and expand to partners including the World Food Programme (WFP) and United Nations Children’s Fund (UNICEF).
- **Papua New Guinea** is relatively new to the AA space, although efforts have been underway since El Niño was declared in mid-2023. A Disaster Management Team (DMT) Drought Contingency Plan for PNG was finalised in October 2023, requiring USD 28.5 million to provide multi-sectoral support to 108,210 people until the end of December 2023 in the event of possible droughts forecasted to occur in Eastern Highlands, Hela, Southern Highlands, West New Britain, East New Britain and Enga provinces.

Collaborating with the Papua New Guinea National Weather Service, FAO with support of the German Federal Foreign Office, has been working to establish a Combined Drought Index (CDI) for co-monitoring and integration into the existing Drought Early Warning System to facilitate decision-making regarding future drought events.³ However, in October 2023, the system was activated, prompting the implementation of AA measures. Working alongside the Department of Agriculture and Livestock, FAO rolled out AA initiatives in Western Province. The findings from FGDs conducted for multipurpose cash distribution have contributed to the insights of this study.

- **Tuvalu**, as of early 2024, is the youngest in its AA development. The Tuvalu Red Cross Society and the Red Cross Red Crescent Climate Centre, under their Green Climate Fund project, “Multi-hazard Early Warning Systems,” have been working to build AA in the country. This was complemented by FAO’s ongoing training on the AA approach and its link with Damage and Loss training. The findings in this paper are based on this consultation process but lean on further research from the Tuvalu Red Cross Society’s [Community-based Early Warning Early Action in the Pacific: Findings from Tuvalu](#).

3 FAO 2023. *Anticipatory Action Protocol for Agricultural Drought in Papua New Guinea*. Bangkok, Thailand.

Key definitions

The definition of AA and other technical terms will not be covered in this paper as they have already been highlighted in previous publications including, the [Asia-Pacific Technical Standards on Anticipatory Action and the Anticipatory action and cash transfers for rapid-onset hazards: Practitioners' note for field testing](#). To better understand the AA approach or the definition of terms, the authors recommend readers to go through these two documents that highlight the approach in depth. However, two key terms which will be used throughout this document – “**drought**” and “**extreme winter seasons**” – need to be defined.

According to the World Meteorological Organization (WMO), drought is a “period of abnormally dry weather characterised by a prolonged deficiency of precipitation below a certain threshold over a large area and a period longer than a month.”⁴ While drought may be superficially described as the absence of water, it is a nuanced and multifaceted phenomenon monitored across various timescales and defined based on specific needs. It is a gradual, slow-onset event that intensifies over time, impacting multiple sectors of the economy and the environment. Within the drought community of practitioners, various types of drought with general or specific sector impacts have been defined:

- **Meteorological drought** occurs when dry weather patterns dominate an area, typically defined based on the degree of dryness and the duration of the dry period.
- **Hydrological drought** occurs when low water supply becomes evident and is associated with the effects of precipitation shortfalls on surface or subsurface water supply.
- **Agricultural drought** occurs when agricultural production is affected, focusing on precipitation shortages, differences between actual evapotranspiration, soil water deficits, reduced groundwater, etc.
- **Socioeconomic drought** relates to the supply and demand of economic goods with elements of meteorological, hydrological and agricultural drought. It arises when the demand for an economic good exceeds supply due to a weather-related shortfall in water supply.

For this paper, the term “drought” refers to **agricultural drought**. The existing AA systems and evidence examined here predominantly centre around this type and definition of drought, which is also why insights are pulled from the lessons learned from FAO’s experiences setting up such systems.

It is important to note the relationship between drought and El Niño in the Asia-Pacific region is significant. El Niño is a climate phenomenon characterised by the periodic warming of sea surface temperatures in the central and eastern equatorial Pacific Ocean and can be exacerbated by a positive Indian Ocean Dipole (IOD). However, not all El Niño episodes lead to drier conditions or drought as no two events are the same. In the same way, not all El Niño events lead to disasters. Other factors such as local weather patterns play a fundamental role. Information from national meteorological systems combined with the establishment of Combined Drought Indexes are also key to monitoring and altering the phenomenon on the ground.⁵

Along with the term “drought,” it is important to define “extreme winter season.” This phenomenon is unique to Mongolia, but concerns are growing for other areas of Asia and the Pacific, particularly in the Eurasian Steppe, Afghanistan and the north of Pakistan. Also known as a **dzud** in Mongolia, extreme winter season is a severe cold-season hazard in which anomalous climatic (i.e. heavy snow and severe cold) and/or land-surface (snow or ice cover and a lack of pasture) conditions lead to reduced accessibility and/or availability of forage or pastures, causing high livestock mortality in the winter–spring season. Such high mortality results from a combination of drought during the growing season and severe weather in winter.

Due to the creeping nature of slow-onset hazards, it is also important to note that a declaration of an emergency is required for AA. The purpose is to mitigate the impacts so that they will only be mildly felt – or not at all – when AA begins to take effect.

4 WMO. 2024. [Drought](#). Geneva, Switzerland.

5 FAO and OCHA. 2023. [Asia and the Pacific: El Niño Humanitarian Snapshot \(As of 20 July\)](#). Bangkok, Thailand.

1.2 What is slow-onset anticipatory action?

Anticipatory action for slow-onset hazard events

There is currently limited literature on AA for slow-onset hazards in the Asia-Pacific region, as well as globally, highlighting a knowledge gap and an area that requires meaningful exploration. The predominant focus of the AA approach in the region has been on sudden-onset hazards like floods or typhoons/cyclones, driven by their intensity, frequency and overall impact on lives and livelihoods. However, slow-onset hazards are starting to rival this trend due to climate change, and there is a growing recognition of their significance in government planning and processes. Slow-onset hazards, characterised by their gradual impact, pose a sustained threat to livelihoods, particularly among vulnerable populations, and often lead to an increase in vulnerability and the adoption of negative coping strategies.

The aftermath of drought can exacerbate various risks, including a heightened potential for gender-based violence (GBV). Factors such as household tensions, intimate partner violence, increased travel distances for water or wood collection, displacement of women and girls, and the adoption of poor menstrual hygiene practices may contribute to this rise in GBV. Additionally, slow-onset disasters like drought or harsh winters can escalate health needs and negatively impact mental well-being. Limited access to healthcare and GBV services, potentially stemming from reduced purchasing power for transportation, compounds these challenges. However, anticipatory cash transfers can help mitigate these adverse effects.

This section offers insight into the nature of slow-onset hazards, the existing AA systems, and instances where cash interventions have already played a role.

When discussing slow-onset hazards, it is important to note that in the AA realm this is related to **hazards or their impacts that can be predicted within a 3–6-month window**. Therefore, it is related primarily to drought and extreme winter seasons. There are some partners who are exploring the potential role of AA in plant pests and diseases, pandemics, and displacement, which would also be categorised under slow-onset events. However, there is still a lack of evidence on how this is deployed in Asia and the Pacific as of early 2024.

It is important to return to the core principle of AA when working in this area – that it must be linked to an early warning or forecast with confidence the event may come to fruition. Consequently, slow-onset hazards such as sea level rise or desertification, characterised by their prolonged and gradual nature, lack the forecasting precision and confidence needed for effective AA. For these types of risks, longer-term disaster risk reduction (DRR) measures are more suitable and practical.

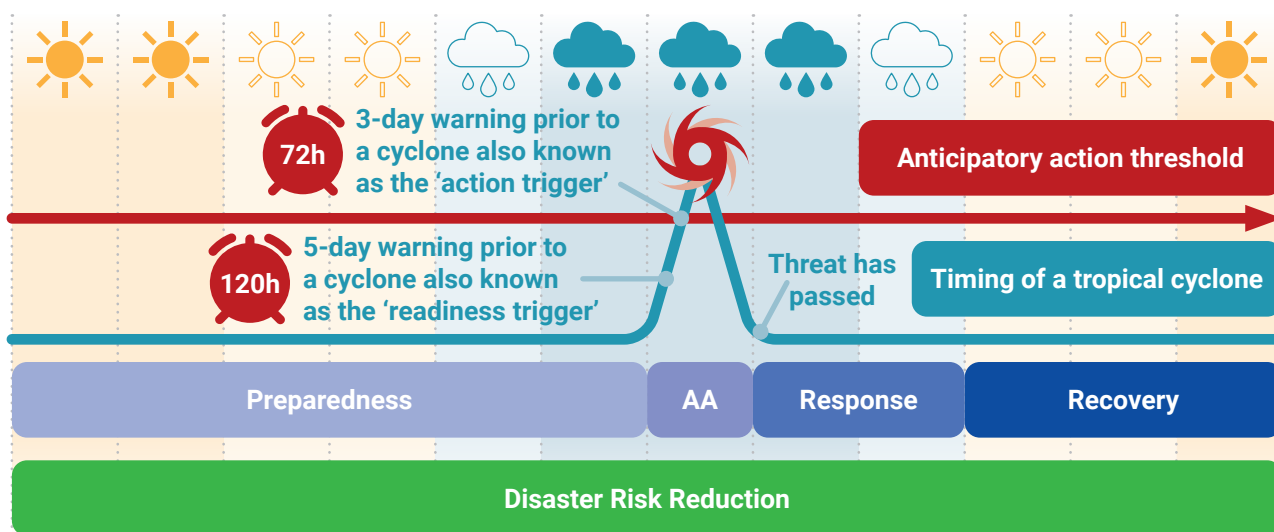
The importance of a phased approach to slow-onset anticipatory action

The application of AA for slow-onset hazards greatly differs from that of sudden-onset events and is often characterised by a staged or phased approach. Unlike sudden-onset events, which have a distinct AA trigger and clear impact, slow-onset hazards are more complex and gradual. This means the lines between preparedness, AA and response can often be blurred and overlap. The cascading timing of the impact presents a certain level of programming complexity and understanding. At the same time, it provides multiple windows of opportunity in which action can be taken before the full brunt of the impact materialises. Impacts on different sectors also occur over different times which also need to be taken into account. In contrast, rapid-onset shocks provide a short and very limited window to act but the distinction between pre-and-post impact is much clearer.

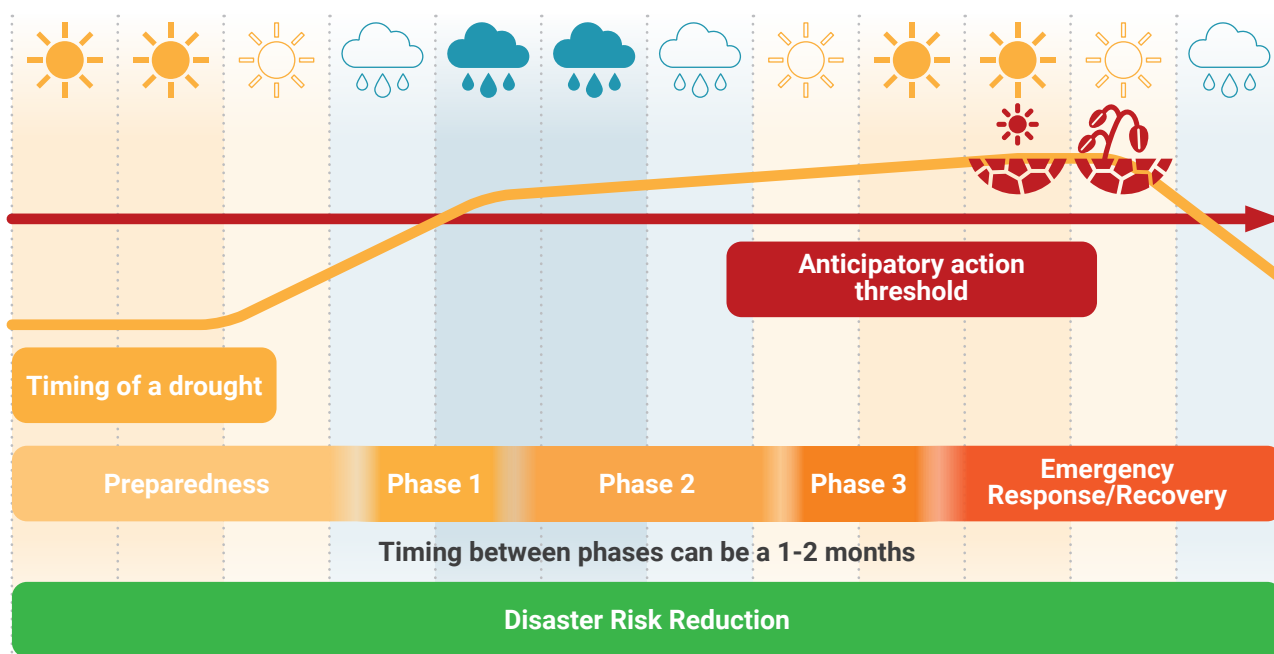
Figure 1 highlights the differences between the approaches within the disaster risk management (DRM) cycle. Working at different paces will have an effect across the AA chain, for instance, where monitoring triggers will likely occur monthly to understand the three month outlook. The actions to mitigate or minimise the impact will likely overlap and require multiple and complementary approaches. This is due to the prolonged exposure to risk and the need for consistent, tailored support, as opposed to a one-off intervention. Finally, financing to ensure this longer-term support – at times for 3 or 6 months – is sustained to enable the AA to be fully effective and flexible to be scaled up or down as the situation develops.

Figure 1. Difference of anticipatory action timing between sudden and slow-onset scenarios

Sudden-onset anticipatory action (tropical cyclone)



Slow-onset anticipatory action timing (drought)



Source: Author's elaboration.

Crisis timelines are essential tools in decoding the blurry lines of slow-onset AA in the DRM system. They are the foundation of the phased approach as they identify AA windows and appropriate actions. These allow actors to know the timing of AA triggers; what actions can be taken to mitigate the risks and when; how much time will be needed to implement the actions; and, ultimately, what the action phases will be.⁶ They map out, from past drought activations, the timing of preparedness and response steps to assist where AA would best fit and provide scaled-up support.

In the application of the AA approach for slow-onset hazards, a crucial initial step involves analysing how seasonal calendars align with the natural hazard in question, including agricultural cycles and nomadic movement patterns. After this analysis, determining which activities would be most beneficial during each cycle becomes imperative for effective intervention.

6 FAO. 2022. *Striking before disasters do – Promoting phased Anticipatory Action for slow-onset hazards*. Position paper. Rome.

Crisis timelines emerge in this context as instrumental analytical tools, shedding light on the historical occurrences of hazards and identifying individuals and assets likely to be affected by potential hazards. While recognizing the uniqueness of each shock and acknowledging uncertainties, these timelines aid actors in determining appropriate early warnings and adapting AA activities to the specific needs of the local context.

Table 1 provides an example from Mongolia regarding extreme winter seasons (*dzud*) and the crisis timeline mapped by local experts. By mapping out the seasons, livestock patterns and monitoring of risk information, one can determine the following phased system:

- **Preparedness:** From **May to November**, herders work on growing, harvesting and preparing their winter fodder and hay reserves.
- **AA Phase 1:** In **November**, the first *dzud* risk map is released at the start of the winter season to provide a forecast for the season and take stock of the national fodder/hay reserves from the summer season. Herders begin their seasonal migration to their winter areas based on the alerts from the *dzud* risk map. In this period, if a severe winter season is predicted and the AA trigger is met, cash-for-destocking is conducted to help reduce the size of herders and provide cash assistance to purchase more fodder/hay.
- **AA Phase 2:** From **December to January**, the outlook of the season becomes clear, and the *dzud* risk map is updated at the end of January. During this period, scaled-up AA support in the form of livestock care kits (salt licks, supplements such as fish oil, and hoof protection) can be provided alongside fodder/hay top-ups.
- **AA Phase 3:** **February to March** are the coldest months and the “lean season” begins. However, in this period, the birthing season also starts where lambing, calving and camel calving are simultaneously ongoing. AA measures here will be tailored to keep the newborns alive, such as the provision of warming bags and nutritional supplements to birthing animals to maintain strength in the harsh peak of the winter season.
- **Response:** From end of **March to May**, animals have metabolised their body reserves and thus succumb to starvation and hypothermia. At this stage, supporting herders in doing proper burials of livestock to stop the spread of pests and diseases is critical. Social protection support to herders who may have lost their entire herd is crucial.

Overall, crisis timelines allow us to understand where the different elements of the DRM cycle overlap and where they can complement. Specifically, utilising such methods provides a space to:⁷

- Minimise uncertainties linked to early warning information. The objective is to execute AA neither too early nor too late. Action should be initiated at the optimal moment, i.e. before the hazard’s impact, based on thorough analysis of the most reliable forecasts and early warning data. Given the varying points in time when agricultural livelihoods are affected during slow-onset events, there exists an opportunity to establish different triggers, thereby reducing the risk of ineffective action.
- Enhance the precision and suitability of AA interventions. Implementing AA as close as possible to the expected start of slow-onset impacts on specific livelihood groups streamlines the selection of the most suitable interventions. This approach relies on more accurate information regarding agroecological zones and livelihood areas expected to be affected by the hazard, facilitating the identification of the most vulnerable households requiring assistance. In essence, this phased approach fosters impact forecasting.
- Facilitate the adaptation of AA options to the evolving hazard context. Implementers retain the flexibility to adjust AA based on the changing nature of the hazard. For instance, they can modify the type of inputs, cash transfer amounts, or agricultural advice to be provided. Although constrained by factors such as early procurement needs and predefined funding agreements, technical experts, in collaboration with at-risk or affected communities, can tailor actions to the observed changes in the hazard’s progression to optimise their effectiveness.

7 Ibid.

Table 1. Mongolia crisis timeline for dzud

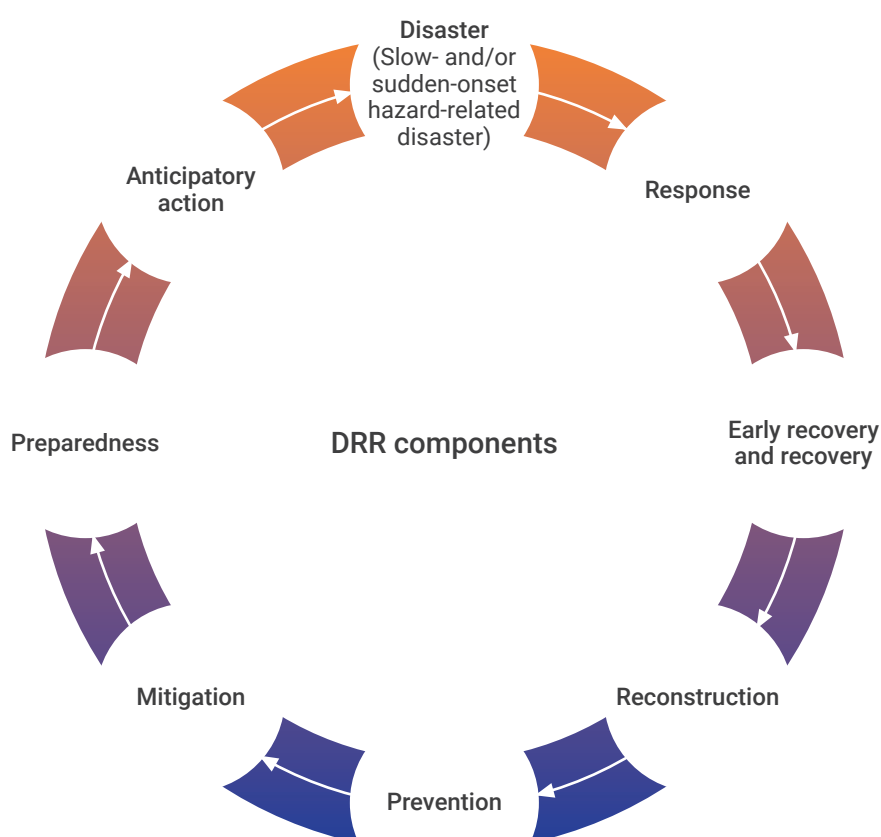
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Winter Season	Blue	Blue	Light Blue	Light Blue						Light Blue	Light Blue	Light Blue
Summer Season				Light Green	Yellow	Yellow	Yellow	Yellow	Yellow			
Lean Season		Red	Red	Red								
Impact on Livestock		Orange	Orange	Dark Orange	Dark Orange							
Impact on Pasture						Green	Green	Green	Green			
Livestock Seasonality												
Prepare winter reserve feed (hay/ fodder/ materials)	Planting fodder crops				Green	Green						
	Harvesting fodder crops							Green	Green			
	Hay making						Green	Green	Green			
	Purchase Concentrated Fodder									Green	Green	
Destocking (old and male castrates)										Orange	Orange	
Supplementary feeding of animals	Yellow	Yellow	Yellow	Yellow								
Prepare winter shelters					Brown	Brown	Brown					
Organize otor migration	Purple	Purple	Purple								Purple	Purple
Birthing season	Lambing		Dark Red	Dark Red	Dark Red							
	Calving	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red						
	Foaling				Dark Red	Dark Red	Dark Red	Dark Red				
	Camel calving	Dark Red	Dark Red	Dark Red	Dark Red							
Combing cashmere	Eastern Region			Brown	Brown							
	Central Region				Brown	Brown						
	Western Region					Brown	Brown					
Sheep wool shearing												
Breeding Season	Cattle			Green	Green	Green	Green	Green	Green			
	Camel	Green	Green	Green								
	Small Ruminants									Green	Green	
Anticipatory action triggers and activities												
dzud risk map released	Red										Red	
Anticipatory action phases	2	3									1	
Typical emergency response			Red	Red	Red							

Source: FAO. 2024. *Disaster risk finance and Anticipatory Action in Mongolia: Lessons from the 2022/23 dzud* – Technical Brief. Ulaanbaatar.

What is the relationship between Anticipatory Action and Disaster Risk Reduction?

AA is becoming undeniably essential, but challenges emerge when the approach is viewed in isolation from wider DRR thinking. Embedding AA into DRR discourse will be essential for its success. Simply put, AA is part of the broader DRR framework as they share the common goal of enhancing resilience and minimising the impact of disasters. Failing to integrate AA as a subset of DRR risks muddling the understanding of the approach and adding to the confusion that already curtails its scale-up. Within the broader DRR framework, AA should occupy a space between preparedness and early response and should be regarded primarily as a complementary element of preparedness rather than as a distinct entity.

Figure 2. Anticipatory action within DRR components.



Source: Adapted from Figure 1 of the United Nations Office for Disaster Risk Reduction. 2023. *Financing disaster risk reduction in humanitarian and crisis settings*.

This placement of AA and between preparedness and response is applicable to both fast-onset and slow-onset situations. The difference, as highlighted in Figure 1, is seen in the **Anticipatory Action threshold**: for fast-onset, it can be a few days with a one-time hazard event and impact that can be mitigated by AA measures; for slow-onset, the impact manifests itself in several slow events which can also be mitigated by AA efforts. In both cases, the distinction between AA phases and response is that in the latter, the focus is on mitigating the cascading impacts already resulting from the hazard. For slow-onset events, this *ex ante* and *ex post* difference can be blurry when compared to fast-onset events.

The distinguishing characteristics of AA – its reliance on weather and climate forecasts, confidence in estimating the severity of impacts, and the necessity for flexible financing to scale up short-term mitigation activities – do set it apart from traditional preparedness measures. But ultimately, it should act as a link between these areas. AA holds the potential to continue monitoring the evolving risk, which can help declare early response and decrease demands in the response and recovery phases if interventions are timely and well-targeted. In the long term, AA can also contribute to resilience-building efforts by integrating activities such as mapping high-risk areas and investing in innovations like impact forecasting models using machine learning; digital cash transfers; house strengthening kits; or drought-resistant seed technology. By leveraging climate and weather forecasting, valuable insights can be gained to inform decision-making and the application of these measures within the designated AA window or the bigger DRR timeframe. However, additional research, discussions and exploration in this domain are needed to solidify the position of AA in the broader DRR discourse. Such efforts are crucial to ensure the long-term success of the AA programming approach.

For a slow-onset hazard, such as an agricultural drought, the relationship between the different stages can be characterised as follows (but tend to blur together and complement each other):

- **Preparedness:** Ensure early warning systems and AA triggers are in place for quick action; pre-positioning key items; simulate AA measures and early recovery SOPs or protocols. Ensure that governments, communities and partners are prepared to act at the height of the season. Encourage communities and households to preserve food stocks and review their water management structures for damage or leaks. Develop appropriate policy for drought declaration.
- **AA:** Activate triggers for high risk of drought over the coming 3–6 months; provide drought-resistant seeds or crops with low water requirements; repair water management infrastructures (i.e. water tanks, boreholes) via cash-for-work schemes; provide multipurpose cash assistance and sectoral cash+; destock livestock; and provide health kits/vaccines for high-risk livestock or birthing stock.
- **Early response:** Depending on the phase of the drought, assess where the needs are most critical and support the affected areas with water trucking, food distribution and other essential items or cash assistance to mitigate the immediate impact. Anticipate possible additional shock in the following phase (s).
- **Recovery:** If the drought risk is over, provide seeds, restock livestock, and invest in rehauling water management systems that failed (water tanks, irrigation systems etc.), food security and livelihood support.
- **Resilience building:** Identify drought risk; map out high risk areas; and provide long-term investments in drought-resistant crops (tests and trials) and water-management systems to strengthen communities' overall resilience.

How is anticipatory action currently being deployed for slow-onset hazards?

There is a notable growth in systems designed to predict slow-onset events. The recent TWGAA regional mapping, conducted in July 2023, revealed that 14 AA systems have been developed or are under development for drought across the region, spanning from Afghanistan to Tuvalu. These AA systems are being designed primarily for agricultural drought while the work in Tuvalu is currently the only example for hydro-meteorological drought. Extreme winter seasons are also being addressed in Mongolia, with two AA systems either under development or already developed. In comparison, sudden-onset natural hazards such as floods, typhoons and cyclones have more AA systems, with 44 being developed and 26 already established. Despite this, the data underscore a growing focus on slow-onset hazards in Asia and the Pacific.

Such AA systems for slow-onset events have primarily been geared towards protecting agricultural assets, water resources and livelihoods, which are at the highest risk. For example, protecting crops ahead of a drought or livestock before an extreme winter season reaches its peak. Accordingly, with such events the agriculture sector, including water security, are usually the two highest at risk and prioritised by AA systems created to date.

Table 2. Examples of anticipatory action measures by hazard and rationale (selected or tested at the country level in Asia and the Pacific)⁸

Hazard	Anticipatory action measure	Sector	Rationale	Country example
Drought	Livestock protection packages (feed, animal health kits and supplements, vaccines)	Agriculture	To keep core breeding stock alive and healthy through the high-risk period	Mongolia, Pakistan, Afghanistan
	Cash for work (rehabilitation of water infrastructure systems, support planting and protection of crops)	Agriculture	To rely on local labour to fix a community issue that could help mitigate the impact of drought on a wider level	Philippines, Timor-Leste
	Multipurpose cash assistance (support with water management systems, purchase of seeds, food storage)	Multisector: cash/voucher assistance	To provide immediate household needs in the wake of a drought and ensure that food security and other basic needs are taken into account	Afghanistan, Viet Nam, Lao People's Democratic Republic, Mongolia
	Crop assistance packages (use drought-resistant seeds or crop varieties that require less water to meet production needs; diversify to new crops that require less water – fertilisers, mulching support, shade structures, and tools)	Agriculture	To support farmers so they can continue producing and engaging in their primary livelihood, and would not resort to negative coping mechanisms (borrowing money from family or taking out loans etc.) if crops fail	Philippines, Lao People's Democratic Republic, Viet Nam, Afghanistan
	Early warning messages to farmers on the coming season, along with low-cost actions they can take (multicropping, shade clothes, water harvesting and mulching)	General	To keep farmers and communities well informed on what the weather will do, as well as the potential impacts and mitigation measures they can take at the household level.	Papua New Guinea, Timor-Leste, Philippines, Cambodia, Lao People's Democratic Republic
	Trainings on climate-smart agriculture (i.e. best planting practices and irrigation techniques for drought-prone areas)	Agriculture	To support farmers so they can continue producing and engaging in their primary livelihood, and would not resort to negative coping mechanisms (borrowing money from family or taking out loans etc.) if crops fail	Timor-Leste, Philippines, Lao People's Democratic Republic
	Water management (irrigation support by fixing systems or providing new water-saving techniques, micro-irrigation technologies, borehole pump distribution, clearing of waterways)	WASH and Agriculture	To conserve water in anticipation of periods with low rainfall, both for human and livestock consumption	Pakistan, Cambodia, Nepal
	Distribution and/or storage of animal fodder and hay	Agriculture	To keep core breeding stock alive and healthy through the high-risk period	Pakistan, Viet Nam, Philippines
	Voucher distribution (for families to purchase drought resistant seeds and fertilisers)	Agriculture	To support the household's immediate needs in the wake of drought and ensure that agriculture needs are supplemented	Nepal, Viet Nam

⁸ Updated Table B1 from the Asia-Pacific Technical Working Group on Anticipatory Action. 2024. *Anticipatory action in Asia and the Pacific: Results from the 2023 regional mapping*. Bangkok, Thailand.

Table 2. (continued)

Hazard	Anticipatory action measure	Sector	Rationale	Country example
Drought	Food storage and preservation support	Food security	To avoid crops from spoiling under extreme heat and dry periods	Papua New Guinea, Pakistan
	Supplementary drinking water (via water trucking) and support to keep water clean (for both human and livestock consumption)	WASH	To support the household's immediate needs in the wake of drought to ensure consistent water access	Philippines, Viet Nam
Extreme winter season	Distribution of fodder and hay for families to cover their livestock needs for up to a month for the core breeding stock	Agriculture	To keep core breeding livestock alive through the winter and into the spring when the birthing season begins	Mongolia
	Destocking of animals for cash (non-breeding livestock purchased at market price to bring down the herd size to a manageable level)	Agriculture	To adjust and manage the herd size to match the available grazing and water resources	Mongolia
	Multipurpose cash transfers (to purchase local fodder/hay and other critical household items such as food, medicine and transport support over the cold wave)	Agriculture essential needs and multisector: cash and voucher	To support direct household needs over the cold season when transport and access to household items become difficult	Mongolia
	Livestock care kits (animal supplements such as salt licks, fish oil, newborn warming bags)	Agriculture	To keep core breeding livestock alive through the winter and into the spring when the birthing season begins	Mongolia



© FAO/Hoang Dinh Nam



As illustrated in Table 2, various actions have been implemented by agencies and governments for slow-onset AA. An essential aspect to emphasise is the interplay between in-kind/service delivery and cash support. While activities like distributing drought-tolerant seeds or livestock protection kits fall under in-kind actions, they are often complemented by some form of cash support, such as multipurpose cash, sectoral cash, cash for work, or vouchers. This paper delves into the symbiotic relationship between these activities. Undoubtedly, cash is a crucial and respected component of the AA toolkit for slow-onset hazards, but how does this manifest in practical terms? What value does it add to the in-kind support given to households?

Studies and consultations conducted across various countries on AA identification underscore the importance of cash. However, during slow-onset hazards, the support needed often surpasses what can be procured with the cash amount based on the **Minimum Expenditure Basket (MEB)**, which has been traditionally taken as the basis for AA cash assistance. This basket typically covers the household's monthly recurrent expenses, but in an AA context where mitigation and prevention are paramount, one-off distribution amounts may fall short of meeting the demands to safeguard significant assets like livestock or crops. In the same sense, costs incurred by households for these preparatory measures are out of the ordinary and not typically included (if ever) in the MEB framework which focuses on basic needs. Therefore, households – as the primary data in Part 2 showcase – advocate for a Cash+ approach, where inputs are supplied to support and protect their livelihoods. Simultaneously, cash is disbursed systematically, either providing a boost for current needs and redirecting support to livelihoods or implementing cash-for-work initiatives in the community to safeguard livelihoods and enhance family income.

It is worth noting that AA for slow-onset hazards tends to yield, on average, higher return on investments (ROI) compared to sudden-onset hazards. Notable studies in Mongolia and the Philippines reveal that for each USD 1 invested in AA, the avoided losses and additional benefits can reach up to USD 7.1⁹ and USD 4.4,¹⁰ respectively. This disparity in return-on-investment can be attributed to the timing of data collection. Assessing the impact of assistance just one month after a major disaster might be too early to quantitatively capture the full benefits. Slow-onset disasters, which unfold over months, allow more time for the benefits to materialise before data collection. As these interventions aim to safeguard durable assets, most benefits accrue over an extended period, contributing to a higher and more substantial cost–benefit ratio than USD 1 over time.¹¹

9 FAO. 2023. *Mongolia: Impact of Early Warning Early Action*. Rome, Italy.

10 FAO. 2020. *The Philippines: Impact of Early Warning Early Action*. Rome, Italy.

11 FAO. 2023. *Viet Nam: Impact of Anticipatory action – Racing against Typhoon Noru*. First revision. Rome.

1.3 What do slow-onset hazards look like in Asia and the Pacific?

In Asia and the Pacific, the nature of slow-onset hazards varies and is heavily shaped by the diverse geography and socioeconomic factors at play in different countries. While the experiences are highly contextualised to individual countries and even specific communities, it is essential to reflect on key events and past experiences. This reflection aids in understanding why slow-onset hazards are increasingly becoming a significant concern in the Asia-Pacific region and how anticipatory action is being considered as a potential solution to effectively manage and address this growing trend. The following snapshots present the trends seen across the subregions of Asia and the Pacific and AA case studies.

South Asia

Drought is one of the most extreme climatic events in South Asia, affecting 1.44 billion people in the last 68 years.¹² A significant portion of South Asia's agriculture relies on rainfall, despite 46 percent of the cultivated area being under irrigation.¹³ Droughts over South Asia are mainly driven by the failure of the summer monsoon (June–September), which is a lifeline for the millions of people in the region and provides about 80 percent of the total annual rainfall.¹⁴ The year-to-year variability of the summer monsoon precipitation in South Asia is linked with the El Niño Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD).¹⁵ The weakening of the summer monsoon season results in meteorological droughts, which, if prolonged, can turn into hydrological and agricultural droughts.

Changes in rainfall patterns or temperature can have adverse effects on agricultural production in the region. For instance, Bangladesh experienced significant declines in rice production due to droughts in 1979 and 1982, resulting in losses of approximately 2 million tons and 53,000 tons, respectively.¹⁶ Similarly, Nepal faced severe winter droughts in 2008–2009, receiving less than 50 percent of its average precipitation, leading to a 14.5 percent decrease in wheat production and a 17.3 percent decrease in barley production.¹⁷ With approximately 57 percent of South Asia's land area dedicated to agriculture and nearly 60 percent of its population engaged in agricultural activities,¹⁸ the region's heavy reliance on rain-fed agriculture makes it highly vulnerable to the intensity, duration and spatial extent of droughts. Given this context, drought adaptation and mitigation systems have been established in Afghanistan and Pakistan, and efforts are underway to expand similar initiatives in Bangladesh and Sri Lanka.

12 Saha, Toma Rani, et al. 2021. *A drought monitoring tool for South Asia*. Environmental Research Letters 16.5.

13 FAO. 2012. *Irrigation in Southern and Eastern Asia in figures, aquastat survey–2011*. Rome, FAO.

14 Saha, Toma Rani, et al. 2021. *A drought monitoring tool for South Asia*. Environmental Research Letters 16.5.

15 Ibid.

16 Selvaraju, R. et al. 2006. *Livelihood adaptation to climate variability and change in drought-prone areas of Bangladesh: Developing institutions and options*. Rome: Asian Disaster Preparedness Centre, FAO.

17 Government of Nepal, FAO and WFP. 2009. *Joint Assessment Report 2009 2008/09 winter drought in Nepal crop and food security assessment*. Rome, Italy.

18 Asian Farmers' Association for Sustainable Rural Development. 2019. *Sustainable family farming agriculture in South Asia through partnerships (Asian Farmers' Association for Sustainable Rural Development)*.

Box 1. Bracing for drought in Afghanistan¹⁹



In 2020 and 2021, Afghanistan experienced a severe drought that had a significant impact on the country's agriculture and water resources. The drought was caused by a combination of factors: low precipitation (including poor snowpack over the winter period), poor soil moisture, and high temperatures. However, this event was predictable.

During the second half of 2020, a moderate to strong La Niña phenomenon was registered. In Afghanistan, the event is commonly associated with drought. The combination of below-average precipitation forecasts, observed poor snowpack levels, high temperatures and worrying vegetation health conditions raised concerns. This was particularly alarming as the timing of the warnings coincided with the main wheat season harvests in May–July 2021, which are critical for food security and livestock production throughout the country. The Integrated Food Security Phase Classification (IPC) further warned of worsening food security conditions in the coming months. Instead of waiting for the worst, FAO acted on the warning signs in December 2020.

AA was implemented in Samangan province to reduce the event's impact on over 7,680 farmers and livestock owners. These included crop and livestock protection packages alongside cash interventions such as multipurpose cash transfers and cash for work. The interventions came at a critical time as 42 percent of the population was already estimated to be experiencing acute food insecurity at crisis or worse levels, and limited wheat harvests could exacerbate the situation. The drought was officially declared in the country on 22 June 2021. However, FAO managed to act six months earlier, showing the importance of predicting crises and providing pre-emptive support.

An impact analysis based on data collected in October 2021 showed improvements in livestock health and food security and gathered critical lessons on the cash-based and agricultural inputs interventions. The return-on-investment from livestock protection interventions showed that for every USD 1 spent, there was a return of USD 1.42 in avoided losses and added benefits. Conversations with community members helped refine actions and support the strengthening of AA systems for future droughts.

19 FAO. 2023. *Afghanistan: Impact of Anticipatory action – Curbing La Niña-induced drought*. Rome, Italy.

East Asia

Extreme winter seasons and droughts have been the main hazards affecting this subregion. Geographically unique, East Asia is highly sensitive to climate change and global warming.²⁰

Over the past two decades, unprecedented heatwaves and droughts have been observed within East Asia, pushing warming and drought conditions to critical levels in the region's climate system, with irreversible changes.²¹ Studies indicate that the increasing temperature and decreasing precipitation are critical factors contributing to drought in northern East Asia, and the intensification of regional drought is closely linked to water supply and demand dynamics, such as precipitation and evaporation.²² The recent extreme drought in 2022 resulted in China's largest freshwater lake and longest river drying up, affecting about 450 million people who had to contend with depleted wells and brush fires.²³ Beginning in December 2019, the DPRK endured its most severe drought in 37 years, prompting urgent action to address crop devastation. This crisis left up to 10 million people in dire need of food assistance.²⁴

The subregion is also affected by bitter cold winters. Observations reveal an increased frequency of extreme winter cold events across Eurasia in the past two decades, characterised by low temperatures and heavy snowfall persisting for months. For instance, in January 2012, several cold surges invaded East Asia, with Yunnan province experiencing record-breaking low daily temperatures. Southern China also faced an extended period of low temperatures, along with rain and snow events.²⁵ Mongolia encountered a complex and prolonged extreme winter season in 2009–2010, just after a summer drought, with heavy snowfalls and unusually low temperatures in winter, followed by a hazardous spring thaw.²⁶ This event led to the declaration of disaster zones in 15 of Mongolia's provinces – which host 28 percent of the country's population – resulting in significant livestock losses and affecting a substantial portion of the country's population. Overall, the region is one extreme where AA can play a critical role for these polarising but interconnected risks.

Box 2. Bracing for *dzud* in Mongolia

The Mongolian Red Cross Society (MRCS) and FAO activated the *Dzud* Early Action Protocol (EAP) in December 2020, based on the *dzud* trigger, which is activated when three or more provinces have a very high risk of at least 20 percent of their land area being affected. The *dzud* risk map, developed by the National Agency for Meteorology and Environmental Monitoring (NAMEM), played a crucial role in this decision.²⁷

As of the *dzud* risk map on 10 December 2020, more than 60 percent of the country was identified with *dzud* risk (16.5 percent very high risk, 50.4 percent high risk), and 18.5 percent of the country had medium risk. Five provinces had more than 20 percent of very high risk coverage in their territory, as calculated by the Red Cross Red Crescent Climate Centre (RCCC). Most areas of the Uvurkhangai, Bayankhongor, Dundgovi, Umnugovi and Govi-Altai provinces were expected to experience an extreme winter, continuing with deteriorating spring.

MRCS and FAO delivered unrestricted cash assistance and livestock care kits to over 3,000 vulnerable households in the target areas to help them meet their immediate needs and preserve their livestock and livelihoods. The actions were completed within two months after the trigger date of 18 December 2020. MRCS and FAO selected the target areas, also considering assessment information from the State Emergency Commission and in coordination with *soum* (district) authorities. More about this case study and *dzud* in general is offered in Part 2 of this paper.

20 M.H. Lee et al. 2012. *Assessment of the changes in extreme vulnerability over East Asia due to global warming*. Climatic Change. 113 (2).

21 Cheng, S. et al. 2021. *Changes in the drought condition over northern East Asia and the connections with extreme temperature and precipitation indices*. Global and Planetary Change 207 (D5).

22 Ibid.

23 Zhang et al. (2024). *A stratospheric precursor of East Asian summer droughts and floods*. Nature Communications 15 (1).

24 FAO and WFP (2019). *Democratic People's Republic of Korea (DPRK): FAO/WFP Joint Rapid Food Security Assessment*. Rome, Italy.

25 Dai, G. et al. (2021). *The Nature and Predictability of the East Asian Extreme Cold Events of 2020/21*. *Advances in Atmospheric Sciences*. 39 (6).

26 OCHA. 2010. *Consolidated Appeals Process (CAP): Mid-Year Review of the Humanitarian Appeal 2010*. New York, USA.

27 FAO, Mongolian Red Cross Society and IFRC (2020). *Mongolia: Anticipating the 2020 dzud*. Rome, Italy.

Southeast Asia

Southeast Asia is often at the forefront of drought impacts in Asia and the Pacific, which is worrying due to its key position as one of the world's key breadbaskets. AA is growing in the subregion: the Philippines, Viet Nam, Lao People's Democratic Republic, Cambodia, Timor-Leste and Myanmar either have developed or are developing drought AA protocols. There is already clear evidence of the devastating consequences of drought. In the region, the frequency, severity and scale of these events have increased significantly, particularly in the past two decades. Prolonged and severe droughts have a detrimental impact on agricultural productivity, threatening food security and the livelihoods of rural households and impoverished communities. Between 2015 and 2016, and again in 2018–2020, the region experienced the most severe droughts in decades, affecting over 70 percent of the land area in Southeast Asia.²⁸ During the peak periods, more than 325 million people faced moderate drought conditions, and over 210 million endured severe drought conditions.²⁹

The subregion has several drought hotspots, and extensive research is being done on this phenomenon. Table 3 provides a snapshot of high-risk areas in the ASEAN region and highlights that 15–25 percent of the region's population lives in drought hotspots, with the risks higher in Cambodia, Myanmar and the Philippines.³⁰ People caught in these recurring droughts were also found to have a high level of poverty and malnutrition, and rely on agricultural employment. During the 2019–2020 drought in Cotabato province, Philippines, more than 19,430 farmers were affected, experiencing significant crop losses. A state of calamity was declared in over 17 local government units in response to the situation.³¹

The region is also one of the most advanced when it comes to drought policy. In 2020, the ASEAN Member States adopted the inaugural ASEAN Declaration on the Strengthening of Adaptation to Drought. This milestone paved the way for the development of the ASEAN Regional Plan of Action for Adaptation to Drought (ARPA-AD), along with renewed commitments to create similar action plans at the national level. Additionally, a network and some communities of practice in drought risk management for Southeast Asia were established. Building upon these efforts, the ASEAN Framework on Anticipatory Action in Disaster Management (AFAADM) was launched in 2022, ushering in a favourable environment for transforming the region's outlook on drought management to a more proactive approach. As of early 2024, drought AA systems have been established in the Philippines, Viet Nam, Lao PDR, Cambodia and Timor-Leste, with work in progress for Indonesia and Myanmar.



28 ASEAN and UNESCAP. 2020. *Ready for the Dry Years: building resilience to drought in South-East Asia (Second Edition)*. Bangkok, Thailand.

29 Ibid.

30 Ibid.

31 Doguiles, D. 2019. Government agencies prepare aid for El Niño-affected farmers. *Philippine Information Agency*, 7 June.

Table 3. Hotspots of drought risk for countries in Southeast Asia

Countries	Areas with high frequency of severe meteorological drought (over period 1981–2019, based on SPI6)	Hotspots of drought severity, exposure and vulnerability in 2015 (based on SPI6, population density and HDI)	Hotspots of drought severity, exposure and vulnerability in 2020 (based on SPI6, population density and HDI)
Brunei Darussalam	All parts	None	None
Cambodia	Central parts	Central and Northern parts	Central and Southern parts
Indonesia	Western, North-Central and Eastern parts	Western and Southern parts	South-Western and Southern parts
Lao People's Democratic Republic	Northern parts	Central parts	Northern parts
Malaysia	South-Western and North-Western parts	South-Western and North-Western parts	North-Western parts
Myanmar	Northern and Southern parts	Eastern parts	Central, Northern and Southern parts
Philippines	Southern parts	Central and Southern parts	Southern parts
Singapore	All parts	Northern parts	None
Thailand	Central parts	Central and Northern parts	Central and Northern parts
Timor-Leste	All parts	Northern parts	Northern and Central parts
Viet Nam	Central and Southern parts	Central and Southern parts	Southern parts

High Medium Low

Source: ESCAP calculations based on:

- 1) Ratio of recurrence time for severe drought persisting at least 3 months (based on SPI6) to the minimum recurrence time identified across all of South-East Asia for the period of 1981–2019.
- 2) Six-month Standardized Precipitation Index (SPI6) in October 2015 and February 2020; Sub-National Human Development Index (SHDI) Version 1, 2018 and Version 4.0, 2020; and UN WPP-Adjusted Population Density 2015 and 2020, v4.11.

Box 3. Bracing for drought in Timor-Leste³²

In mid-September 2023, the early warning signs were clear: drier conditions were on the way.

The newly established CDI, which was being actively monitored by the Ministry of Agriculture, Livestock, Fisheries, and Forestry and the National Directorate of Meteorology and Geophysics, in collaboration with FAO, had identified high-risk areas in the country. The CDI tool closely monitors rainfall, soil moisture and vegetation health alongside El Niño and Indian Ocean Dipole factors to help decide when and where to trigger AA.

The CDI provides an assessment of conditions at the provincial level, focusing on the potential development of agricultural drought. By October, it had issued drought alerts covering the entire country – a significant increase from the previous count in September. This also falls within an important time for agricultural production: the period October to December marks the start of the sowing season for rice and maize crops – important staples for food security in the country.

To meet this challenge, the government and FAO developed an AA Protocol for Agricultural Drought that outlines the step-by-step process of connecting information from the CDI to anticipatory activities that will mitigate the expected impacts. In collaboration with the government, FAO sorted internal funds from its AA window to start putting this process into action.

32 Anticipation Hub. 2024. *Anticipating drought in Timor-Leste*. Berlin, Germany.

Box 3. (continued)

As a result, several high-risk municipalities in Timor-Leste have been targeted, including Baucau, Covalima, Liquica, Viqueque and the Special Administrative Region Oecusse-Ambeno. The first phase of activities focused on communicating early warnings to drought-vulnerable communities and training them to enhance their capacity for anticipatory drought management.

As the risk of drought continues to increase across Timor-Leste, efforts to protect farming households will ramp up until the peak of the drought is felt, which is expected to be around February/March 2024. This will include the implementation of community-specific AA plans that are tailored to individual villages. These plans were developed in partnership with local communities to mitigate the effects of drought on agricultural production and prevent food insecurity in the months following a drought. Activities outlined in these plans include repairing existing water-access systems; installing pumps and water-harvesting measures; expanding facilities for water storage; diversifying food production; providing cash-for-work and multipurpose cash.

Box 4. Bracing for drought in the Philippines through social protection systems



In the Philippines, as the prospect of drought loomed in early 2024, the Department of Social Welfare and Development (DSWD) and the FAO were jointly implementing the project, “Building on Social Protection for Anticipatory Action and Response in Emergencies and Disasters (B-SPARED).” The aim was to mitigate the potential severe impact of agricultural drought on poor and vulnerable smallholder farmers and cushion income loss and food insecurity. This also complemented the established government cash-for-work program to mitigate the El Niño induced drought impact. With weather and climate data indicating worsening conditions in Isabela province, proactive measures involved implementing cash-based interventions to bolster water management efforts and support the needs of farming families experiencing reduced yields. Leveraging socioeconomic targeting methodologies utilising the government’s poverty registry and farmer registry, vulnerable households were specifically identified and targeted for assistance.

Pacific Islands Region

Pacific Island Countries (PICs) are more new to AA, but the concept is growing across the region. The core focus for many agencies has been rapid-onset hazards such as tropical cyclones, but with droughts becoming more frequent and intense within the region, particularly for the North Pacific and Melanesian countries, AA is seen as a potential approach to change the way disasters are managed.



As of early 2024, AA systems for drought are being established in Papua New Guinea and Tuvalu. It is important to note that PICs encompass vast ocean spaces, often consisting of multiple scattered islands. Consequently, the occurrence and severity of droughts vary within these nations in relation to the spatial impact regions of the rainfall drivers.³³

PICs are also driven by a multihazard approach where drought often coincides with another event, such as a cyclone. For example, in Vanuatu, the 2015–2016 El Niño-induced drought severely affected the population, particularly due to the reliance on rainwater harvesting systems and wells for consumption. The scarcity of water during the drought led to challenges, with water tanks either empty or containing contaminated water. Families resorted to paying for water, impacting daily activities, and primary schools operated for half-days due to water shortages.³⁴ The aftermath of Category 5 Tropical Cyclone Pam compounded the situation, destroying vegetation and worsening soil and crop conditions, which resulted in severe food shortages. Yams and taro crops were entirely lost, forcing 90,000 people to rely on food aid, which raised concerns about nutritional adequacy, especially in the southern part of Vanuatu.³⁵

However, drought can also have a fundamental impact in its own right. Papua New Guinea faced a significant reduction in food security during the 2015–2016 drought and frost, affecting around 700,000 people, with approximately 450,000 experiencing critical food shortages.³⁶ The effects were more pronounced in certain ecological zones and districts, including high-altitude areas, central highlands, and inland and lowland areas in the Western Province. In the Marshall Islands, the 2015–2016 El Niño-induced drought triggered a state of emergency, severely affecting 81 percent of the population with reduced access to water and extensive damage to food crops. Tuvalu also grappled with a severe drought during the 2011–2012 La Niña, resulting in water shortages and the loss of critical crops essential for food security.³⁷ The government declared a state of emergency, rationing communal water supplies even as hospitalizations increased due to waterborne illnesses.

33 Iese, V. et al. 2021. *Historical and future drought impacts in the Pacific islands and atolls*. Climatic Change. 166 (1-2).

34 Savage et al. (2021). *Climate extremes constrain agency and long-term health: A qualitative case study in a Pacific Small Island Developing State*. Weather and Climate Extremes. 31 (9891).

35 Iese, V. et al. 2021. *Historical and future drought impacts in the Pacific islands and atolls*. Climatic Change. 166 (1-2).

36 Ibid.

37 Ibid.

Box 5. Bracing for drought in Papua New Guinea

Historically, El Niño episodes have been associated with drier conditions in Papua New Guinea, affecting the harvests of the staple food and water sources. Recognizing the importance of acting early, FAO and the Government of Papua New Guinea have developed an AA protocol to mitigate the impact of forecast drought on agricultural livelihoods and food security. To monitor and trigger actions, the CDI was employed, which comprises the ENSO forecast, Indian Ocean Dipole (IOD) Index, Vegetation Health Index, soil moisture observation, and rainfall forecast/observation. The CDI utilises national weather data, which are complemented by regional and global forecasts. The National Weather Service leads the monthly calculation and monitoring of the tool, which allows FAO and its partners, including government stakeholders, to predict the drought with a lead time of 1-3 months. When the CDI value reaches a predetermined threshold with predicted impacts to communities, a pre-arranged fund is released to conduct pre-agreed anticipatory activities.

As of October 2023, the CDI surpassed the threshold – verified through field assessments – indicating clear signs of an impending drought in Papua New Guinea. The field assessment revealed that the Middle and South Fly districts of the Western Province are already seeing a drop in the water level of the river and a depletion of rainwater from their tanks. Food shortages and increased prices of basic food items were also reported. The communities in target areas in the Western Province rely on subsistence farming and fishing. The worsening of dry conditions may pose a significant threat to their food security.

To prevent and reduce the impact before the peak of the forecast drought, FAO and government partners such as the Department of Agriculture and Livestock decided to act, based on the CDI. A set of anticipatory measures was pre-identified and prioritised by the communities according to their needs. These measures include disseminating early warning messages and agricultural advisories to the communities; supporting communities with water harvesting by providing water tanks and improving water wells to enhance water access; rolling out a cash-for-work programme to construct water catchment; providing equipment for food preservation, processing and storage to ensure sufficient food is available and potentially supplement their income; distributing drought-tolerant seeds and training farmers on crop management practices concerning pests, mulching, irrigation and shade; and delivering multipurpose cash transfers to meet the needs of vulnerable families.



1.4 Cash in slow-onset anticipation: What we know?

Anticipatory cash transfers at a glance

There is abundant evidence on the efficacy of cash transfers in both humanitarian and development initiatives.³⁸ A particular focus is on the heightened effectiveness of unconditional cash transfers in offsetting the ramifications of covariate shocks, which was underscored during the COVID-19 pandemic.³⁹ Many countries in Asia, and increasingly in the Pacific, have implemented one-time or recurrent cash assistance programmes through either established national social protection systems or ad hoc emergency relief efforts.⁴⁰ For AA, cash transfers are still being explored but they are becoming increasingly connected to the approach.

The prevailing discourse on anticipatory cash transfer (ACT) pilots and assessments has focused on scenarios from sudden-onset events, which have yielded promising outcomes for AA application.⁴¹ However, there is scarce evidence on the appropriate cash transfer values for slow-onset shocks within the global context and specifically in Asia and the Pacific. This practitioner's guidance endeavours to bridge such gap, add value to this under-researched space and highlight where critical evidence can support governments and agencies in deciding to employ ACTs.

Empirical assessments of AA pilots have highlighted diverse outcomes. ACTs have been shown to have an impact on sustaining and restarting productive activities; mitigating livestock mortality; preserving or enhancing animal well-being; enabling households to afford essential goods during challenging times; and improving the quality and quantity of food consumption.⁴² Although the empirical evidence base on these outcomes remains limited, it is expanding, especially on the effects of ACTs on livelihoods; food and nutrition security; and the outcomes of AA initiatives targeting pastoral/herder livelihoods, particularly concerning livestock condition and mortality.

Box 6. Anticipatory cash transfer for agricultural drought in Samangan province, Afghanistan⁴³

In January 2021, FAO piloted AA in Samangan province, Afghanistan, with the aim of reducing the impact of a La Niña-induced drought on farmers and livestock owners. Anticipatory Initiatives included crop and livestock protection packages, alongside cash interventions such as unconditional cash assistance and cash for work. Feedback from communities suggested that the amount and frequency of transactions could be improved. Given that the project only provided USD 50 per household over a long period of drought, the sum was too little to have a significant effect on the recipient households. Considering this, future programming requires a more detailed look into the implementation environment. It should take into account the inflation rate, requirements over time and seasonal milestones when cash might be required for agriculture purposes. This may have a much wider impact on households and their livelihoods experiencing a prolonged drought.

38 Devereux, S. et al. 2006. *After the FACT: An Evaluation of Concern Worldwide's Food and Cash Transfers Project in Three Districts of Malawi*. Institute of Development Studies (IDS) and Concern Worldwide Malawi.

39 FAO. 2022. *Adopting Anticipatory Action and Shock-Responsive Social Protection to strengthen disaster preparedness and resilience: Learning from the ASEAN region*. Bangkok, Thailand.

40 Gentilini, U. 2020. *Our Daily Bread: What is the Evidence on Comparing Cash versus Food Transfers? Discussion Paper*. CALP Network.

41 Asia Pacific Regional Cash Working Group and Asia Pacific Technical Working Group on Anticipatory Action. 2023. *Anticipatory action and cash transfers for rapid-onset hazards: Practitioners' note for field testing*. Bangkok, Thailand.

42 Levine, S et al. 2020. *Anticipatory action for livelihood protection A collective endeavour*. ODI. London, United Kingdom.

43 FAO. 2023. *Afghanistan: Impact of Anticipatory action – Curbing La Niña-induced drought*. Rome.

Studies linked to AA initiatives in Mongolia and the Philippines have indicated that ACTs, complemented with in-kind provisions, help people undertake activities to support their livelihoods and secure food for their households ahead of a drought or cold wave-induced crisis.^{44, 45} In such cases, ACT recipients appeared to carry out mitigation activities similar to those undertaken by non-recipients, except they could do so on a larger scale and could avoid resorting to negative coping tactics. These activities included purchasing food before prices rose in the Philippines and purchasing animal feed before a *dzud* in Mongolia.

Such evidence and documentation highlight that most people who receive an ACT will be better off than if they had not received the cash transfer.⁴⁶ According to one Overseas Development Institute (ODI) study, “it is obvious that most people who receive an ACT will be better off than if they had not received the cash transfer. Intuitively, it may also seem likely that people who receive ACT are better off than those who receive the same total level of assistance, but later in the crisis.”⁴⁷ However, this is far from certain, if the earlier transfer meant that people had fewer resources left later on, when they might have most needed them.”⁴⁸

Likewise, there is a call for more evidence regarding the preference for ACTs compared to standard transfers for individuals requiring social assistance or those especially vulnerable to droughts, floods or other prevalent hazards within their context. Previous research on cash transfers underscores the significance of ensuring the reliability and predictability of payments in bolstering beneficiaries’ capacity for risk management and planning. Some studies suggest that aligning the timing of payments with the agricultural cycle could amplify these effects.⁴⁹ The ODI study elaborates that “an ACT is clearly justified where there is good reason to believe that recipients could use resources earlier in the crisis in beneficial ways that cease to be available later in the crisis (i.e. the window of opportunity to act then closes).”⁵⁰

The absence of documentation on the creation of the MEB for slow-onset AA also highlights a current gap. The MEB places the use of cash in a specific context and timeframe. However, the lack of documented calculations and coordinated efforts among partners for slow-onset AA widens the gap in comprehending the rationale and benefits of using cash in these circumstances. A standardised methodology is readily available for calculating transfer values tailored to various sectoral outcomes, typically based on the needs and gaps identified after emergencies affecting a specific population in a given location. Similarly, there has been considerable progress in determining suitable cash amounts in anticipation of rapid-onset shocks, notably for events such as floods and typhoons. However, there is scant analysis regarding slow-onset shocks, highlighting a significant research gap in this area.

Empirical evidence has shown that herders have used cash transfers to help protect their livestock by purchasing fodder and feed, accessing veterinary care, or financing migration. Such is the case with the support provided to herders before a *dzud* in Mongolia or a drought in Afghanistan. However, there is insufficient evidence to know whether the examples of Mongolia and Afghanistan are exceptions or the norm. Until this is determined, it is difficult to know when and for whom ACT can be best used. Scale-up evidence is needed to understand patterns – the very reason this guideline has been created.

44 Gros C. et al. 2022. *The effectiveness of forecast-based humanitarian assistance in anticipation of extreme winters: a case study of vulnerable herders in Mongolia*. Disasters. 46 (1).

45 FAO. 2020. *The Philippines: Impact of Early Warning Early Action*. Rome, Italy.

46 Levine, S. et al. 2020. *Anticipatory action for livelihood protection A collective endeavour*. ODI. London, United Kingdom.

47 Ibid.

48 Ibid.

49 IBastagli, F., et al. 2016. *Cash transfers: what does the evidence say? A rigorous review of programme impact and of the role of design and implementation features*. Report. London: ODI.

50 Levine, S. et al. 2020. *Anticipatory action for livelihood protection A collective endeavour*. ODI. London, United Kingdom.

Defining anticipatory cash transfer values for slow-onset shocks

This section outlines general recommendations for determining suitable cash transfer values for slow-onset shocks, drawing from a review of global practices; pilot interventions across countries in Asia and the Pacific; and community feedback. It must be emphasised that ACT for slow-onset shocks must adhere to sound programming principles, including needs assessment, household economic analysis, market evaluation, assessment of financial service provider capabilities, coordination efforts, MEB considerations, and practical cash readiness.

Emerging insights reveal diverse approaches are used by different countries and stakeholders to determine appropriate cash transfer values for anticipated shocks. The primary goal of anticipatory Cash+ and in-kind assistance for slow-onset shocks is to mitigate risks to the lives and livelihoods of vulnerable populations. From a broader development perspective, proactive measures – compared to reactive responses – are pivotal in safeguarding hard-earned development achievements, such as resilience in livelihoods, enhanced food and nutrition security, increased household income, and improved school enrolment.

Drawing from community consultations and pilot ACT initiatives, the following key considerations for defining appropriate cash transfer values for slow-onset shocks have been identified.

1: ACT calculation requires a sound understanding of what needs to be achieved: livelihood protective action, livelihood maintaining action, or livelihood protective plus maintenance action and their associated costs. Slow-onset shocks suggest protective and maintenance costs are appropriate because they can have prolonged and gradual positive impacts on people's lives and livelihoods.

- A. If ACTs are intended to mitigate a predicted and impending slow-onset shock, and **cash-for-work** activities such as on-farm and off-farm public works are deemed appropriate, the cash transfer value should be based on the local daily minimum labour wage. However, it should be noted that the local daily minimum wage is not equivalent to the legal minimum wage enforced and enshrined in many country legislations. Given that cash for work is a typical employment based safety net introduced by the Government to provide temporary employment opportunities and improve the income of targeted households, the cash transfer value may be set lower to avoid crowding out of the labour force from the regular production sector. Typically, information on local labour wage rates can be obtained from government entities such as the labour or finance ministry, the International Labour Organization (ILO) as well as from interagency Cash Working Groups (CWGs) within the country. Cash-for-work schemes should be designed in a way that mitigates potential income losses due to extended drought or *dzud* and possible disruptions of livelihoods and markets in the area of operation. However, it is important to consider that if ACTs are designed to achieve the dual role of protection and maintenance of livelihoods before and during a hazard event, then the transfer amount should be complemented with appropriate livelihood support packages, which could also be provided in the form of cash if feasible and appropriate.
- B. In contexts where there are ongoing **regular social protection cash transfers**, the standard practice for ACT value considerations is to adopt the **vertical expansion** option, providing a top-up of 100 percent of the original amount of a particular social assistance program (such as child support, maternity benefit, farmer subsidy, social pension, disability allowance, etc.) in the form of cash transfers. Complementary, early warning messages and other forms of livelihood support – depending on the context and operational realities – should be considered when the AA activation thresholds are reached. However, this should only be considered after assessing the proportion of the population benefiting from the regular social protection system in the affected area, the expected magnitude and severity of the shock, and the overall pre-shock vulnerability of the population.
- C. If the assessment highlights that a large proportion of the population is not in the social protection system or where the system is not fully developed/established and the population is at high risk of a slow-onset shock like a drought or *dzud*, then a **horizontal expansion** providing a transfer value similar to what is given to the existing social protection system recipients – with a **plus component** – is recommended.

2: Continuous context monitoring is essential to assess the need for repeated transfers or adjustment of values.

- D. Slow-onset hazards present a longer window of opportunity to act, which provides a reasonable time to do an assessment, in-depth community consultation, and possible adjustment on the transfer value. Thus, it is recommended that the transfer values be adjusted based on actual and evolving needs.
- E. Regular market price monitoring should be an integral part of ACTs for a slow-onset shock. As the severity of drought or drought advances, markets are affected by a reduced supply of food items with potentially higher prices compared to pre-crisis needs. The risks for people also evolve (livelihoods, WASH, access to health, GBV services). In addition, market monitoring helps address unexpected inflation concerns and helps to identify when programmatic adjustments for the next transfer cycle are required.

3. The sequencing of cash transfers, early warning messages, Cash+ provisions, etc. should come at different times, not as one-off delivery, to accommodate drawn-out slow-onset hazard processes.

- F. Findings suggest that the sequencing of anticipatory components when the severity of the shocks increases is critical to maximising the impact of the ACT. The sequencing and phased approach could start at different milestones depending on the type of shock. For instance, in an agriculture-focused AA drought context, **Phase 1** should focus on the provision of early warning messages in local and context-specific channels and methods to raise awareness among communities about potential risks and encourage preparedness measures. **Phase 2** should reinforce water harvesting and climate-smart agriculture techniques, including the promotion of early maturing and drought-tolerant crop varieties. **Phase 3**, with clarity on the progression of the drought or *dzud* situation, should consider the provision of cash transfers (unconditional, cash for work, etc.) to mitigate deficits in income resulting from lower harvests due to the impacts of the hazard. Thus, cash transfers for slow-onset shocks should maintain maximum agility and be dynamic to ensure the gains of cash transfers are not compromised by changing exogenous factors such as market price fluctuations and monetary policies including currency devaluations.

Duration and frequency of anticipatory cash transfers for slow-onset hazards

Even though ACT for rapid-onset shocks shows excellent results in mitigating the risks of shocks and improving the well-being of recipients, the adequacy of transfer values still needs to be revised. Evidence from an evaluation of ACT in Bangladesh concludes that the amount and duration of transfers should be revisited, suggesting that, “more work is needed to determine the ideal size and frequency of the transfers, as a small one-off transfer appears not to be enough. The transfers provided were equivalent to two weeks’ worth of support, but the crisis lasted much longer, and the needs of households were much larger than this.”⁵¹

This suggests that the duration of anticipatory assistance should be based on the context on the ground and the type of modality agencies are using. For instance, based on drought models, unconditional cash transfers should be considered for a duration of at least three months and should be revised based on the magnitude of the advancing drought, consultations, and experiences of the affected communities. This process might need to be repeated multiple times, based on the length and lingering character of the drought.

51 Pople, A. et al. 2021. *Anticipatory Cash Transfers in Climate Disaster Response*. Working paper 6, Centre for Disaster Protection, London.

Recommendations for anticipatory Cash+ for slow-onset shocks and hazards

As outlined in the *Practitioners' Note for Field Testing of Anticipatory Action and Cash Transfer for Rapid-Onset Hazards, 2022*, relying solely on cash transfers is insufficient. It is strongly advised to complement cash transfers with livelihood support packages, skills training, and targeted information dissemination to the most vulnerable populations. Emerging insights from organizations such as FAO, WFP, Save the Children and other humanitarian and development actors indicate that the incorporation of ACT, alongside effective early warning messaging and livelihood support, yields a more substantial protective impact. Further research is needed to document the appropriate sequencing of ACT interventions, as well as their efficacy in achieving livelihood protection versus maintenance goals, in order to institutionalize ACT within national and regional DRM frameworks.

Furthermore, in the face of a gradual loss of livelihoods and reduced income, cash+ can cover basic needs and provide key support to vulnerable households in the period of time in which they need it the most preventing the resort to negative coping mechanisms impacting adversely household members including women and girls more specifically (e.g. resorting to child marriage), as well as maintain lifesaving and key access to services (i.e. not foregoing health care, including maternal and newborn health, protection, psychological).



COUNTRY CASE STUDIES

2.1 Drought case studies

2.1.1 TIMOR-LESTE



In Timor-Leste, agricultural droughts often arise from the combined effects of the El Niño and a positive IOD, which exert significant influence on temperature and precipitation patterns throughout the tropics. In Timor-Leste, El Niño typically triggers dry conditions characterized by reduced rainfall, delayed or shortened rainy season, and poor soil moisture. However, establishing the frequency of drought occurrences in the country proves challenging due to limited historical data. Nonetheless, despite discrepancies among sources, it is generally observed that droughts tend to manifest every 2 to 4 years and approximately 70 percent of Timorese rely on agriculture for both sustenance and income, putting them at high risk.⁵²

To understand the role of cash for drought AA in Timor-Leste, the authors worked with the FAO Timor-Leste office to conduct KIIs and FGDs with the objective of capturing pertinent perceptions for this paper and to inform the development of the FAO AA Protocols for the designated areas.

Interviews were conducted with local authorities in October 2023, including the president of the municipality of Baucau, administrator of Viqueque, commander of the Civil Protection Authority (CPA) in Baucau and Viqueque, and the Director of Agriculture for both municipalities. FGDs were held in two villages in Baucau and three villages in Viqueque with farmers and fisherfolk. Additionally, consultations were extended to include one village in each municipality, as identified collaboratively with the CPA, due to their susceptibility to drought. The following offers an overview to community and government insights into ACT for drought in the country.

52 USAid. 2024. *Timor-Leste: Economic Growth and Trade*. Washington DC, USA.

People at risk of drought

Interviews in the communities focused on bringing together farmers engaged in rice, maize or vegetable production, livestock rearing, or fisheries (specifically, aquaculture). However, the call to join the discussions was open; to ensure representation, people with disabilities (PWD) and the elderly were encouraged to join to highlight their experiences. During discussions, the team delved into the distinctions in roles between men and women within communities, revealing varying perceptions across different locales, and how they experience drought. While some emphasized collective efforts across tasks, others acknowledged differences in agricultural roles based on gender.

Typically, men were associated with tasks such as fencing, ploughing, firewood collection, livestock care, and palm wine production. They were also more frequently linked to jobs in road construction or with the Ministry of Agriculture, Livestock, Forestry, and Fisheries (MALFF).

Conversely, women's roles typically involved planting, crop watering, harvesting, selling produce, foraging for wild food, collecting water, and cooking. While men stressed shared responsibility in agricultural production, some communities exhibited shared responsibilities in crop and livestock management, with women assuming additional tasks related to food preparation and childcare. During droughts, women often took on more responsibilities, particularly if the household had children or if the man fell ill, with women assuming more agricultural duties.

Across all communities, women that were engaged in agriculture were perceived as disproportionately affected by drought, experiencing increased workloads. Additional or more challenging tasks during drought periods included foraging for wild food, engaging in small-scale businesses to boost family income, making longer treks for water collection, and doing additional laundry duties.

Risk perceptions and early warnings

The interviews provided additional insight into how both communities and government participants perceive the risk of drought and the communication of early warnings. In Timor-Leste, a CDI is utilised, which emphasises monitoring factors including ENSO, rainfall observations (SPI-1), rainfall forecasts (SPI-3), the positive phase of the IOD, soil moisture levels, and vegetation observations (such as vegetation health or agricultural stress index). The system is co-monitored by Agriculture and Land Use Geographic Information System (ALGIS) and FAO but was newly introduced in mid-2023.

Perception of drought

The Municipal Authority in Viqueque highlighted that the lack of community concern increases the risk of hazards, and that there needs to be more awareness raising activities at the community level on risk information and the potential impact on hazard-prone areas. This was echoed by the farming group in Babulo who requested more information about the impact of drought and rain on their community, crops, and livestock, and training on how to manage livestock during the drought season. The Municipal Authority in Baucau focused on the need to coordinate with development partners to improve community response to the hazard, identify farmers' needs during drought, and provide training on what actions to take.

Past impacts of drought

The interviews uncovered both common drought impacts across various locations and specific vulnerabilities experienced by different communities. Access to water emerged as a significant concern, with reduced rainfall leading to diminished access to water for human and livestock consumption and crop maintenance. This situation often increased people's reliance on river water, which, in some cases, entailed significant travel times, posed potential health risks and presented additional costs. While some communities had access to tap water for drinking and cooking, restrictions prevented its use for agricultural purposes. Additionally, some communities resorted to purchasing water during the drought season, at a considerable cost of USD 35 for 5,000 litres to fill their water tanks.

The effects of reduced water supply were widely felt in agriculture, with crop production significantly impacted. Rice and maize were among the crops most severely affected, along with cassava, sweet potatoes, eggplants, pumpkins, peanuts, taro, mustard greens, onions, garlic, chilli peppers, bitter gourds, mung beans, beans, water spinach, tomatoes, watermelons, zucchinis, papayas, and bananas. Similarly, livestock suffered due to limited access to grass and fodder, resulting in increased incidence of wasting and mortality among animals, including chickens, lambs, pigs, goats, horses and buffaloes.

The decrease in livelihood income had far-reaching implications for food security. Alongside reduced crop yields for household consumption, diminished income levels constrained the ability to purchase food. This situation led to various levels of food insecurity within communities, often forcing families to withdraw children from school due to financial constraints or the inability to afford school materials. Furthermore, the drought exacerbated existing crises and introduced additional challenges.

Communities reported outbreaks of pests and winds damaging community infrastructure, plants and animals, compounding the impact of droughts or dry periods on their livelihoods and well-being.

Access to early warnings for drought

While a national-level system for triggering drought AA exists, understanding how information is disseminated to communities and across government entities is crucial. Respondents highlighted various channels for drought/dry period early warning information, including television, radio, local authorities, word of mouth and social media. The frequency of information delivery varied, with some people receiving daily updates and others, weekly. However, the explanations about preparedness measures were sometimes unclear.

Some individuals lacked access to climate hazard information and did not receive drought-related alerts through social media, television or radio. Particularly in rural communities without electricity or electronic devices, reliance on historical community knowledge of drought signs, including region-specific indigenous knowledge, was common. This included the early flowering of certain plants or the yellowing of leaves on specific trees.

Gaps in early warning systems information dissemination were identified. The CPA stressed the need to enhance community capacity to utilise early warnings for disasters in general. The MALFF in Viqueque expressed dissatisfaction with the effectiveness of shared information, citing delays and inadequacies in supporting field extension works. They cited instances where farmers had already begun planting activities before receiving drought warnings, underscoring the need for timely and simplified language in early warning messages to facilitate community understanding and action.

Communities identified several signs indicating impending drought or ongoing impacts: groundwater and river depletion, reduced food production, degraded soil, dry vegetation, hot weather with low humidity, livestock deaths, rainfall deficits, cracked ground, withering crops, dying plants, and increased pest activity on maize and rice crops.

Participants also reported certain observed changes over time in weather patterns, pest infestations, diseases, and soil quality degradation. Many cited an increase in pests affecting both livestock and crops (i.e. fall armyworm, mice/rats), along with the diminished availability of river and groundwater. Some noted the death of older trees and a reduction in tree species diversity. Multiple communities observed declines in soil quality, manifested through yellowing leaves, withered shoots, and the appearance of white spots on plant foliage.

Typical timeline of drought impacts

When questioned about their past experiences with droughts or dry periods, both communities and government representatives tended to interpret inquiries about timing of impacts as indicative of the period of drought risk, rather than specific instances of impact on factors such as food security. In Viqueque, respondents noted the effects of drought between August (Luka village), September (Wain Kraik and Uma Kiik villages) and October, attributing this to water scarcity for crops and livestock. In Baucau, October emerged as the month of primary drought impact, whereas in Gariuai, Baucau, June–October was highlighted as the key months of drought risk. Discrepancies in cropping seasons between municipalities likely contributed to variations in responses.

In Baucau, one village chief identified May–November as the peak period for loss of agricultural production income, while another observed that impacts typically commence in December–January, coinciding with decreased local production due to low rainfall. Interestingly, a group in Luka expressed scepticism about their susceptibility to drought risk.

Table 4. Timor-Leste crisis timeline

Month		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Climate patterns		Wet season				Dry season					Wet season		
Seasonality	Main rice season	Sowing				Harvest							
	Second rice season							Growing					
	Main maize season		Harvest									Sowing	
	Second maize season				Sowing				Harvest				
Impact analysis On agriculture and fisheries		Emergence of water shortages					Crop loss/ livestock mortality				Delay in main crop planting		
Emergency response timings Typical peak of need													
Early warning and anticipatory action timings	Early warning monitoring			Phase 2				Phase 0			Phase 1		
	Anticipatory action			Phase 2					Phase 0		Phase 1		

Source: FAO Timor Leste, 2023. *Anticipatory Action Protocol for Agricultural Drought* (Unpublished)

Recent exacerbating factors and vulnerabilities

Many participants were eager to underscore the prevailing agricultural conditions, highlighting the impact of the 2023 rainfall. The village of Luka in Viqueque recounted how heavy rains in June 2023 destroyed their maize and animals, leaving them in a very difficult situation. The rains also left them further exposed as the lack of water later in the year puts their crops and livestock at risk of dying. They explained that they tried planting again after the floods, but the quality of the soil has changed and was not as good as before the floods. This was coupled with a lack of funds to replenish livestock.

Coping tactics and needs

When noticing traditional signs or receiving official warnings of potential droughts or dry seasons, communities shared the actions that they take to mitigate the potential impact. These include:

At the household level:

- Plant crops that can be harvested in a short time or that can endure drier conditions.
- Save money to pay for children's schools, purchase seeds (peanuts, maize, tomato), or buy vegetables or livestock to sell.
- Stock up on essential foods such as maize, fruits and tobacco.
- Borrow money from the bank (Banco Nacional de Comércio de Timor-Leste) and a savings and loan cooperative group.
- Rely on Suco (village) Disaster Management Committees (SDMC) to advise them on actions to take.
- Hold a general annual agricultural planning and preparedness at the beginning of the rainy and dry seasons.

At the village chief level:

- Disseminate early warning to community groups.
- Stockpile cash, seeds and food.
- Sell livestock within the community to generate income and consume some for personal needs.
- Plant drought resistant crops and crops like cassava, eggplants, taro, papaya, banana, and water spinach to diversify income and food sources (multicropping).
- Advise communities close to the coastlines to focus on horticulture agriculture during the lead-up to dry period.

At the municipal authority level:

- With communities, identify which cropping areas serve planting in the drought season to avoid crop loss and damage.
- Provide drought-resistant seeds to the communities.
- Reserve local/national funds for potential drought conditions.
- Disseminate early warning and impact information.

Coping tactics after the onset of drought

Communities outlined several adaptive measures they employ when drought impacts agricultural production, access to water, and household income. These measures include implementing food rationing for both family members and livestock; withdrawing children from school or reducing education-related expenses; and intensifying efforts to collect wild foods. Communities also resort to borrowing money or livestock from family and neighbours to meet basic needs and transition to alternative livelihood activities, such as setting up small businesses (e.g. selling fried food), selling animals, or engaging in stone trading. In some areas, water scarcity prompts individuals to halt planting and resort to cutting down trees in the forest for sale or household use, while others pivot to producing local white wine. Proactive water management techniques are also adopted by some, alongside seeking support from government or Non-government Organisations (NGOs) for cash, water, seeds and food during drought or dry periods.

Self-identified needs to prepare for drought

The below table highlights at a household level across the different villages interviewed their core needs to mitigate or minimise the impact of drought or dry spells, if external support could be provided:

Table 5. Self-identified needs

Location	Key needs
Uma kiik	Rice seedling, water, water tank, watering can or sprayer, resistant seeds, seeds of chilli, maize, paddy, vegetables, mung beans.
Luka	Tractor to repair agricultural land; crops seedlings, livestock; financial assistance to help villagers cope with the drought.
Wain Kraik	Water for consumption and cooking; water tank; seeds (rice, maize); food; money for school fees.
Waitame	Medicine for animal vaccination, fishing materials, cash to support mitigating measures against the drought.
Gariuai	Seeds with short harvesting time; cash to support preparedness for drought (e.g. buy crops seedlings and raw materials for fried food to sell).
Tirilolo	Materials to prepare soil for planting; water; cash to support preparation for the drought.

Communities expressed various needs for external support to enhance their livelihoods and resilience. These include materials for fishing, such as nets and cool boxes for fish conservation, as well as solar panels to address energy needs. Additionally, they highlighted the importance of irrigation canals for agricultural activities, support in accessing markets or finding regular buyers for agricultural produce, and the establishment of school vegetable gardens. Other requested items encompassed agricultural tools like boots, gloves, corn grinding/shelling machines, watering cans, hand sprayers, garden hoses, water taps or sanyo pumps, crowbars, hoes, and silos, as well as the vaccination of animals. Some local authorities emphasised the need for external support to facilitate irrigation works in certain locations, while others stressed the importance of support for school feeding programmes and water conservation initiatives within communities.

Household perceptions on external cash support

As illustrated in Table 4, cash assistance was frequently mentioned as a welcomed intervention, although it was not consistently ranked as a top priority compared to seeds, livestock and early warning information. The most suggested forms of cash support included top-up or expansion of Bolsa da Mãe allowances for children to use for school expenses; unconditional cash transfers; and cash-for-work initiatives. Some participants noted that students had recently received an increase in their Bolsa da Mãe allowances.

However, there were differing opinions on the relevance of cash assistance, with some participants expressing scepticism about its effectiveness in addressing drought-related needs. When asked how they would utilise external cash support for future droughts, responses varied among communities and individuals. Common responses included investing in school attendance and purchasing educational materials; acquiring seeds and livestock; procuring materials for livestock shelters; engaging in small business ventures such as selling goods at markets; supporting family income; and stockpiling food. Despite these responses, some participants reiterated a preference for receiving materials over cash. Overall, community perceptions on the preferred timing for receiving cash assistance as an anticipatory measure were mixed.

There were diverse perspectives regarding the preferred timing to receive AA cash. Seven FGD groups favoured receiving cash prior to the rainy season, with suggested dates ranging from 1 April to 1 September. Conversely, others expressed a preference for receiving cash after the onset of drought, typically later in the rainy season. The varying responses can be attributed, under the assumption-based framework, to the diverse agro-climatic zones within Timor-Leste and the respective stages of key crops, such as rice and maize, during sowing and growth periods. Differences in timing may stem from the fact that some participants in the discussions were not farmers or fisherfolk, leading to varying needs along the timeline for drought mitigation measures.



Considerations for the elderly and PWD were strongly emphasised by communities regarding the collection of cash assistance. Poor road conditions and a lack of transportation from rural areas to markets or financial institutions have made it difficult for them to access essential services. Reports indicate that family members often had to travel long distances, sometimes walking for hours or even half a day, to collect pensions or cash payouts from central distribution centres. Tragically, there were instances when the elderly undertaking these journeys never returned home. Therefore, addressing accessibility issues is crucial. Typically, recipients must personally collect their payouts, as their identification cannot be transferred to another family member or friend. As for any cash assistance programs in any phase of activity, these factors should be taken into account when designing cash assistance programs for AA, however here also particularly during periods of extreme heat and dusty road conditions.

Municipal authority perceptions on external cash support

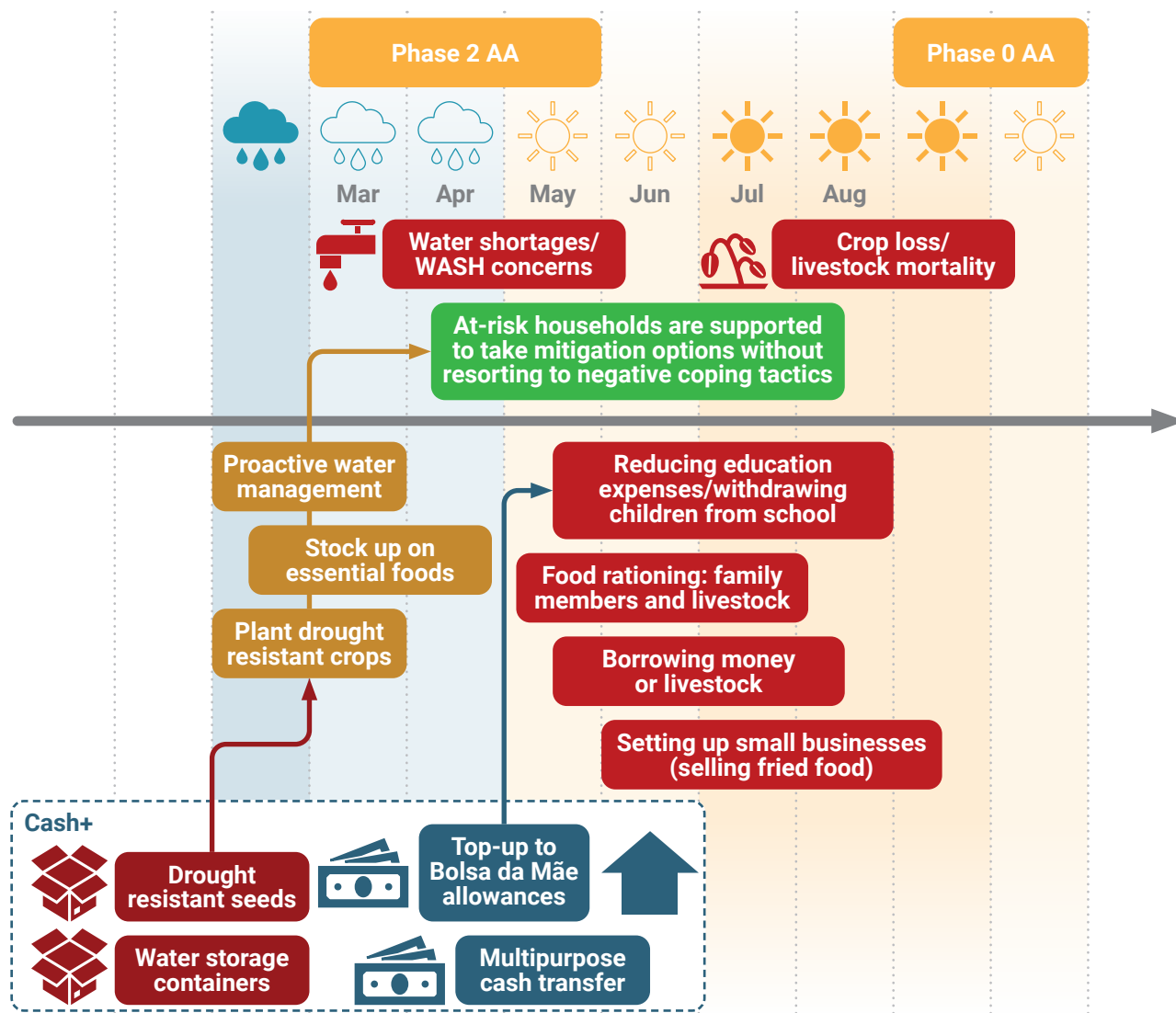
Local authorities also held varied perceptions on the efficacy of cash assistance. In one area, there was a positive outlook towards the distribution of cash support to vulnerable families as a means to mitigate potential drought impacts. These authorities highlighted the practicality and simplicity of cash transfers, noting that it eliminates the need to procure and transport materials to community locations.

However, in another location, the Municipal Authority expressed reservations about cash assistance, fearing it could lead to complacency, inactivity, and blame-shifting within communities. They doubted that community members would use the money wisely. Instead, they advocated for the distribution of materials accompanied by training. They cited an example where communities struggled to repair water installations despite receiving cash assistance after a flood until they were provided with materials and training. Similarly, the MALFF favoured the distribution of materials over cash assistance, expressing concerns that cash assistance might be diverted for unintended purposes.

Government social protection/cash distribution programmes

In all communities, it was reported that certain households or individuals, including children, the elderly, and PWDs, received regular cash assistance through various government programmes. These programmes included support for the elderly and veterans, child support, salaries from government and agency work, merit-based scholarships, the Friday Basic programme (which provides food assistance), and COVID-19 subsidies. While most communities indicated that cash support was primarily deposited directly into bank accounts, some also mentioned distribution as cash-on-hand or through the use of the ficha familia card system.

Figure 3. Pre-crisis findings from Timor-Leste displayed on a crisis timeline (Cash+ package per at-risk household)



Source: Author's elaboration.



2.1.2 PAPUA NEW GUINEA

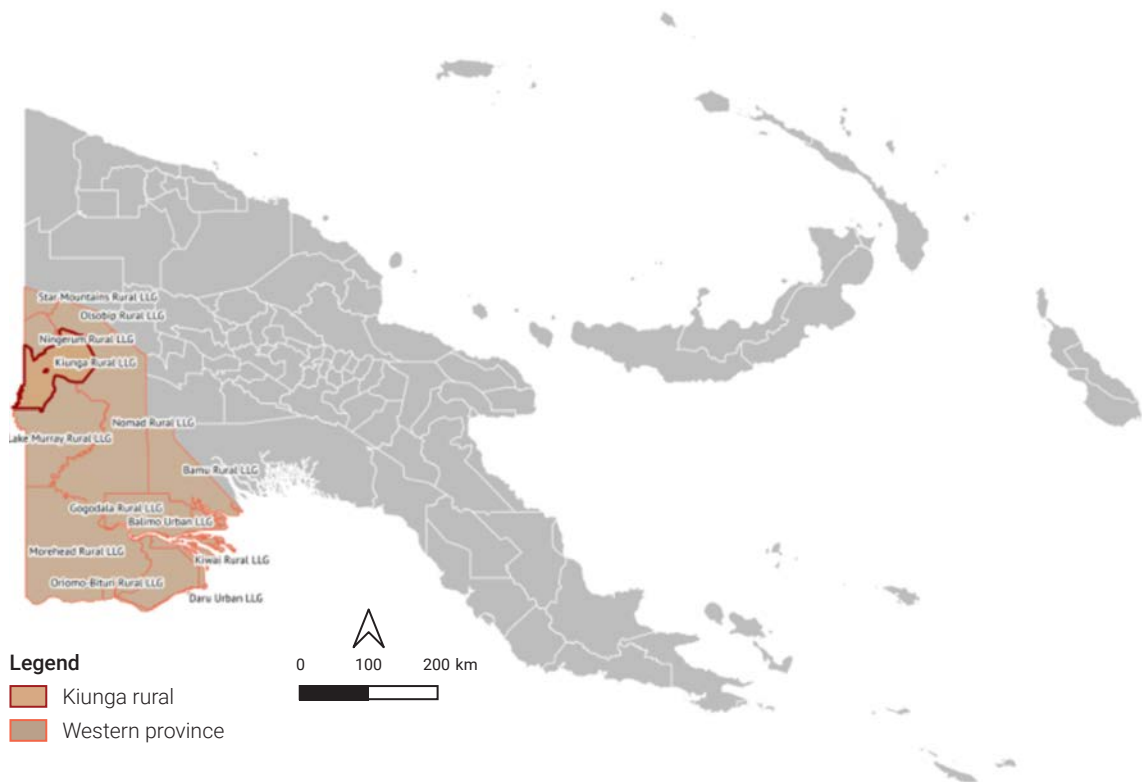


Papua New Guinea (PNG) has experienced numerous droughts throughout its history, and some of the most severe droughts have been linked to the El Niño climate phenomenon. During El Niño years, PNG is more susceptible to prolonged dry spells and reduced rainfall. The warm ocean temperatures can alter the atmospheric circulation patterns, leading to a weakening of the monsoon and the suppression of rainfall in the region. This can result in below-average rainfall and extended periods of drought. About 85 percent of all strong ENSO events have some impact on PNG's food production.

In October 2023, as the risk of drought started increasing again in the country with the ongoing El Niño, FAO in PNG initiated community consultations in Western Province (Timingdondok and Nakrone villages) to gain insights into the community's perception of the impact of previous and ongoing droughts. This was also to inform the development of an AA Protocol. The objective was to learn from their experiences, listen to their voices and stories, and identify appropriate responses to the ongoing drought situation that was increasing at the end of 2023. The consultations also focused on understanding community-level drought signs and awareness, as well as the external support received from humanitarian and development actors, and the prioritisation of AA measures.

Figure 4. Location of Western Province

Location map of Kiunga rural, Western province, Papua New Guinea



Source: FAO RAP Geospatial team based on GPS coordinates

People at risk of drought

In PNG, smallholder farming and rain-dependent agriculture represent the predominant livelihood system, with approximately 86.2 percent of the population residing in rural areas. The country's economy is primarily driven by two sectors: agriculture, including forestry, and fishing, which employ the majority of the labour force; and minerals and energy extraction, which are responsible for the bulk of export earnings and Gross Domestic Product (GDP).⁵³ The agricultural sector contributes significantly to the GDP – about a third of the total – and holds a central position in the government's economic development strategy. In the communities of Timingdondok and Nakrone, where the community consultations took place, a diverse range of agricultural activities were observed, including subsistence gardening, pig and poultry farming, hunting, cultivation of cash crops like vanilla and rubber, betelnut cultivation, and sago harvesting.

Discussions with communities indicated that the impact of drought varies across different groups in the communities, particularly among women, the elderly and PWD. Overall, women bear a disproportionate burden during droughts, as they are tasked with sourcing clean drinking water, which becomes increasingly challenging during dry periods. Despite this, both men and women collaborate in harvesting and selling sago during droughts, underscoring the spirit of cooperation among community members. In both Timingdondok and Nakrone villages, the elderly receive support from relatives and are encouraged to remain indoors during periods of heat and drought.

53 IFAD. 2024. *Papua New Guinea*. Rome, Italy.

Risk perceptions and early warning

The interviews offered further understanding of how both communities and government participants perceive the risk of drought and the communication of early warnings. In PNG, a Combined Drought Index is currently being tested. It was designed to monitor multiple factors such as ENSO, rainfall observations (SPI-1), rainfall forecasts (SPI-3), the positive phase of the IOD, soil moisture levels, and the Vegetation Health Index (VHI). This system is jointly monitored by the PNG National Weather Service and FAO.⁵⁴ However, as it was introduced only in mid-2023, it needs to be refined to enhance its effectiveness.

In all, the villages of Timingdondok and Nakrone reported significant impacts of drought in their area, which resulted in decreased garden produce, diminished livestock feed, and threatened food security and cash availability. Community discussions highlighted the scarcity of drinking water; challenges in sago processing due to water shortages; general food shortages among households resulting in school closures; widespread weevil damage to sweet potato tubers; and low water levels in the Fly River affecting transportation systems. Over time, both communities have observed an increase in pests, particularly weevils affecting agricultural crops, leading to the death of banana suckers and a decrease in crop yields.

Both communities talked about the challenges they faced in accessing drought-related information and early warning, highlighting the lack of specificity of sources and the frequency of information. While social media platforms like Facebook provide updates and national news outlets like *The National* offer information, bridging the gap between these sources and the communities remains a challenge, especially among the different demographics (men, women, the elderly, PWD, and people with varying literacy rates and local languages). In PNG, 40.2 percent of social media users are female, while 59.8 percent are male. However, access to the internet remains limited, with only 32.1 percent of the total population having access as of 2023.⁵⁵ Efforts to disseminate information effectively to diverse community members with varying levels of accessibility and literacy require further attention and innovation.

Awareness of drought also varies across the geographies of the communities, with greater understanding of the risk being observed in administrative and market centres like Kiunga compared to remote areas. This is due to their connection to electricity and the internet, which enable families to access the news and social media more easily. However, this also has a gendered and age impact.

For traditional signs of impending drought, communities rely heavily on observations such as decreasing water levels, warmer temperatures, higher humidity, skin irritation, and pests affecting crops, particularly sweet potatoes. Both communities also reported that an increase in the price of food items is a tell-tale sign of an impending drought.

When questioned about their past experiences with droughts or dry periods, both communities flagged the months of February and March to be the hardest as the rainy season may withdraw early or rainfall has not been sufficient to replenish existing water sources before the start of the dry season. However, these seasonal patterns may differ greatly across PNG's incredibly diverse geographies. Communities indicated the months of November and December as keen periods to receive AA assistance to help mitigate the drought's impacts on crops and livestock.

53 IFAD. 2024. *Papua New Guinea*. Rome, Italy.

54 FAO. 2023. *Anticipatory Action Protocol: Agriculture Drought, Papua New Guinea*. Bangkok, Thailand.

55 DataReportal. 2024. *Digital 2023: Papua New Guinea*. Singapore.

Table 6. Papua New Guinea crisis timeline

Year	2023											2024				
Month	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
Climate patterns				Dry season							Wet season					
El Niño phase	Development phase						Peak phase				Impact phase					
Main crops	Crops in Papua New Guinea are grown on a continuous and rotational basis.															
Impact of drought on crops												Peak of impact				
Impact of drought on livestock														Peak of impact		
Emergency response timings													Peak response time			
Early warning																
Anticipatory action																

Source: FAO Papua New Guinea, 2023. *Anticipatory Action Protocol for Agricultural Drought*. <https://openknowledge.fao.org/server/api/core/bitstreams/a8c9ce76-0f71-4ce3-9d82-4b96d6351da9/content>

Coping tactics and needs

Households often take proactive measures to mitigate the impact of imminent shocks on their well-being and livelihoods. During consultations, it became evident that communities possess indigenous knowledge passed down through generations, enabling them to implement various anticipatory measures to combat the effects of drought on their livelihoods. In both Timingdondok and Nakrone, community members undertake several preparatory actions when anticipating drought, with a focus on water management practices, including:

- harvesting sago palms further inland, away from the main river, to ensure access to swampy areas that retain water for longer periods;
- clearing land for gardening, prioritising early maturing vegetables and crops with minimal water requirements;
- increasing fishing activities and smoking fish for long-term preservation and consumption during drought period;
- moving from inland areas to water sources or rivers and establishing temporary shelters to access water;
- harvesting more betel nuts (buai in tok pisin);
- in extreme cases, selling livestock to cope with financial challenges; and
- implementing water conservation measures to prolong the availability of water sources.

These measures are aimed at safeguarding water sources and prolonging the availability of water to manage the impact of drought with minimal damage and losses.

Key concerns include the adverse effects on rain-fed agricultural systems, such as increased pest infestation and poor crop performance. Additionally, the prolonged drought exacerbates the challenges related to access to market centres, as declining water levels severely disrupt water transportation systems—the primary mode of transportation for goods and services across communities.

Household perceptions on cash assistance to mitigate drought

The potential of cash assistance for drought mitigation was discussed during the FGD, where participants indicated that neither community had received cash assistance targeting drought impacts. However, during the worsening drought in 2015, the national government provided one-time support in the form of food aid, which included one bag of rice and flour per household.

Both communities prioritise several AA measures to address drought, advocating for support from the national government, humanitarian organisations and development actors. These actions encompass:

- enhancing early warning systems and information on the potential event to reach the community on time;
- providing drought-tolerant seeds for pre-drought planting or supplying vegetable seeds;
- offering livestock support (especially poultry);
- facilitating cash assistance to access food from local markets; and
- highlighting programmes on water management, such as cash-for-work initiatives for water harvesting and rehabilitation of water sources.

During consultations in both Timingdondok and Nakrone villages, community members outlined adaptive mechanisms similar to those observed in other countries in the case study, with a focus on water preservation techniques. These include reliance on water wells for their water supply, venturing further inland to find water sources – a job that often falls on women or girls, which places them within a range of dangers and has them digging near the main riverbank despite the often flooded and contaminated water there. Boiling water is a common practice in the absence of clean drinking water, with no water trucking services available.

Appropriate timeframe for cash assistance

In both communities, December and November are perceived as optimal times for providing cash assistance to alleviate the risk of drought-induced food insecurity. During these months, based on the communities' recollections, crops are particularly vulnerable to damage from early dry spells and are starting to show signs of stress. Cash assistance received during drought periods would be used by community members to purchase food and essential tools and cover transportation expenses to Kuinga town.

The majority of respondents expressed a strong preference for cash assistance in preparation for the impending drought. However, they raised concerns regarding limited mobile phone ownership and challenges in obtaining ID cards, especially in Kuinga, where more time is required for processing. Access to birth certificates is also constrained due to resource limitations.



2.1.3 TUVALU



Drought impacts Tuvalu in several ways, posing significant challenges to its small and vulnerable island communities. As a low-lying atoll nation in the Pacific, Tuvalu faces freshwater scarcity during droughts, as rainfall is the primary source of freshwater for drinking and agriculture. Reduced rainfall leads to decreased groundwater recharge and limited access to clean drinking water, exacerbating water shortages and sanitation issues. Because water is essential for crop irrigation and livestock sustenance, reduced rainfall directly affects agriculture, causing decreased food production and food security concerns. Additionally, droughts can contribute to saltwater intrusion, contaminating freshwater sources and further compromising water quality. The reliance on rain-fed agriculture and the limited access to alternative water sources heighten Tuvalu's vulnerability to the impacts of drought.

The phenomenon is commonly associated with La Niña. The frequency of droughts varies between 3 and 14 years, with eight extreme droughts identified over the last 60 years. The latest emergency declaration was in May 2022.⁵⁶

The insights presented in this paper originate from the national training on Disaster Damage and Loss Assessment in Agriculture, which is aligned with the Sendai Framework for Disaster Risk Reduction and the AA approach. This training, conducted by FAO in August 2023, engaged 31 participants from national and local agencies, including officials and technical staff from the National Disaster Management Office, Tuvalu Meteorological Service, Ministry of Local Government and Agriculture, Ministry of Fisheries and Trade, Tuvalu Central Statistics Division, and Falekaupule (local government). The concluding session of the training focused on AA. Through group activities centred on hypothetical disaster scenarios such as droughts and cyclones, participants were guided to identify crucial information and potential actions, utilising guide questions and fictitious financing scenarios. One avenue to explore was the usefulness of cash assistance in a drought scenario.

The analysis is complemented with community consultations conducted by the Tuvalu Red Cross and the Red Cross Red Crescent Climate Centre in July 2022.⁵⁷ Their study explored opportunities for strengthening AA in Tuvalu and existing systems that can be leveraged in-country.

56 Paeniu et al. 2017. *Rainfall Trends, Drought Frequency and La Niña in Tuvalu: A Small Equatorial Island State in the Pacific Ocean*. Journal of Environmental and Analytical Toxicology. 7(5).

57 Red Cross Climate Center. 2022. *Community-based Early Warning Early Action (EWEA) in the Pacific: Findings from Tuvalu*. The Hague, Netherlands.

It is crucial to acknowledge that although the consultations were held at the national level and in the capital, Funafuti, many participants were from the outer islands. In such a unique Pacific Island Country like Tuvalu, the distinction between the national government and the community becomes blurred due to the smallness of the country.

People at risk of drought

Drought in Tuvalu has dual impacts on water management and subsistence farming. Water management decisions are collaborative efforts between men and women. A significant majority of households rely on their own water tanks or cisterns for water. The strain extends to people with disabilities and extended families, as water scarcity makes distribution challenging. Women, who oversee domestic water management, feel ill-prepared for droughts, while men are less prepared for cyclones. The gender-based violence (GBV) sub-cluster in Tuvalu highlights increased risks during droughts, including intimate partner violence, challenges to menstrual hygiene management, and impacts on emotional resilience and vulnerability.

Farmers were also the most at-risk during droughts, particularly those engaged in subsistence farming, which accounts for 90 percent of agriculture in Tuvalu. The main cultivated crops are coconut, swamp taro, breadfruit, pandanus, banana, pumpkin, sweet potatoes, and pawpaw. Local residents also domesticate pigs, chickens and ducks, while commonly growing banana and pawpaw trees. Small gardens are often used to cultivate pumpkin, cabbage and cucumber.

Farming tasks are divided among men and women, each with their distinct roles and responsibilities. Men typically handle activities that require physical strength, such as clearing land, managing cash crops, and overseeing larger-scale agriculture, including livestock rearing and aquaculture. On the other hand, women are often involved in food production and household food security, including planting and tending vegetable gardens, harvesting crops, and processing food for storage. They also play a central role in managing the household's food supply, cooking meals, and preserving food through various methods. While there may be traditional gender roles, farming tasks are often shared within households and communities based on practicality and necessity, with both men and women contributing to decision-making and resource management.

Risk perceptions and early warning

Water management was the top concern for participants, especially for subsistence farmers. While purchasing water or relying on shipments from Australia or China are common solutions, delivery can take up to 4 months, exacerbating the situation. In drought periods, households across the country resort to bottled water, contributing significantly to plastic pollution in the country. To address this, the Tuvalu Department of Waste introduced a water bottle levy, aiming to reduce plastic waste. However, during droughts, water prices surge, compounded by the levy and vendor price hikes, posing challenges for vulnerable families to maintain access. In extreme cases of drought, families have been asked to ration water – at times, 2 litres per day per person – which can strain families.

During recent droughts, farmers – especially those with livestock or investments in *pulaka* or swamp taro – face heightened risks. *Pulaka*, a traditional staple food crop in Tuvalu, is increasingly abandoned due to periodic droughts and saltwater intrusion.⁵⁸ Recent drought events have caused an increase in the salinity of both ground and well water alongside soil, negatively impacting farmers' accessibility to fresh food and overall productivity. With crops also damaged or lost, there is an increased reliance on imported foods and the demand can drive up food prices. Prolonged droughts, which are becoming more common, are now placing stress on typically resilient crops such as giant taro, bananas and breadfruit.

The Tuvaluan Meteorological Service offers the Early Action Rainfall Watch, which presents a concise overview of recent rainfall patterns, focusing on drought conditions and forecasting rainfall for the coming months. This information is updated monthly to provide accurate insights and is uploaded online and through the organisation's uploaded on the organisation's website and [Facebook page](#).

58 Tui, S and Fakhruddin, B. 2022. *Food for thought: Climate change risk and food (in) security in Tuvalu*. Progress in Disaster Science, 16.

While there are regular updates on the situation (e.g. biweekly), participants expressed the need for more guidance on how to apply the information practically and where communities and government organisations can use it.

It was also pointed out that early warning communication on drought should be done in a way that does not instil fear, which was also highlighted in the Red Cross Red Crescent Climate Centre and the Tuvalu Red Cross study. Participants in the training also recognized that the radio remains the primary channel for receiving warnings. Enhanced internet access could, however, open up and strengthen existing avenues such as social media, websites, and direct messages from reliable sources (e.g. government-authorised text messaging). One participant further highlighted the challenges of using spatial data in such a large area of ocean; more granular information is welcomed in the future.

During droughts, many islands rely heavily on local observations to assess the situation, such as checking for ground cracking and monitoring crop development, along with traditional knowledge which involves observing the softness of the soil. Typically, updates on the drought situation are received every fortnight, but there is a desire for more guidance on how to practically apply this information. Traditional warning systems, such as monitoring bird flight patterns and dusty road conditions, work alongside modern methods like sirens installed in community halls.

Timing of drought

In Tuvalu, the climate is characterised by two distinct seasons: the wet season, which spans late October to March, and the dry season, which extends from April to early October. Emergencies for drought have been declared at various times in the past, depending on the severity of dry conditions and their impact on the islands. Generally, these declarations occur during the dry season, although the specific months can vary based on the onset and duration of the drought period in any given year. For instance, during the extreme droughts of 2011 and 2022, a state of emergency was declared in September and July, respectively. Agricultural activities in Tuvalu follow a rotational schedule throughout the year, making them vulnerable to significant impacts from drought. For the timeframe of triggering AA, the window between January and April is considered ideal, as it allows for the progression of the wet season to be analysed alongside the onset of the dry season.

According to the Tuvalu Meteorological Service, the following impacts are recorded over the course of a drought, within 1–12 months:⁵⁹

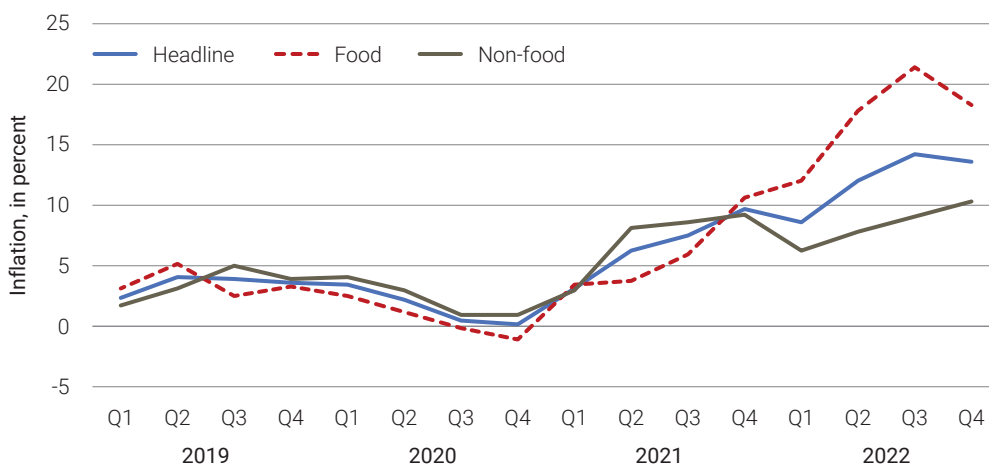
- **1-month period:** Most relevant for shallow-rooted crops such as eggplant, cabbage, tomatoes, spring onions, watermelons and cucumbers, as well as small water tanks (e.g., 1,000 gallons) and household cisterns. These secondary health and socioeconomic impacts have been associated with drought during this period: diarrhoea, skin rash, cough, fever and red eyes; increased power demand and higher water costs for households due to desalination plant operation; declining health of babies and elderly individuals; school closures; and halted construction activities.
- **2-month period:** Relevant for bottle gourds, pawpaws, bananas, chickens, pigs and community cisterns. Secondary socioeconomic and health impacts during this period include halted community gatherings, increased disputes over water resources, and limited or no employment opportunities.
- **3-month period:** Most relevant for pumpkin cultivation, groundwater sources and ponds. Secondary socioeconomic and health impacts during this period include an increase in crimes such as water theft, closure of government offices, and postponement of national events.
- **6-month period:** Pertinent for large trees such as breadfruits, pulaka and taro. Secondary socioeconomic and health impacts during this timeframe include cessation of meteorological balloon flights, delays in interisland shipping, and restrictions on visitors entering Tuvalu.
- **12-month period:** Most relevant for the usually tough, drought-tolerant crops including felo, dragon fruit, pandanus, coconuts and ofega.

59 Tuvalu Meteorological Service. 2023. *Early Action Rainfall Watch*. Funfuti, Tuvalu.

Coping tactics and needs

To improve water management, acquiring water tanks emerged as a crucial step that families could take upon receiving a warning. Early awareness of the situation and water rationing throughout the dry season were highlighted, emphasising the need to differentiate between well water and rainwater usage. However, logistical considerations, particularly fuel and transportation costs associated with providing assistance, must be carefully addressed to ensure timely support. During droughts, the national government typically offers technical assistance to the most vulnerable populations and facilitates water management support, including the installation of water desalination plants and additional water providers.

Figure 5. Tuvalu: rising cost of living



Source: International Monetary Fund. 2023. *Tuvalu. Staff report for the 2023 article IV consultation*. Washington, DC, USA.

As a customary practice, the government instructs shop owners to release essential goods like food, water, and first aid items during disasters, including drought, which are reimbursed through the state emergency fund. A potential pathway forward recommended by participants would look to stock up these stores with key items for droughts or other natural hazards, which could be easily deployed if a trigger for AA is met. This could also support issues with the inflation of prices that often increases during droughts.

Such support could be topped up at the national level as exemplified through the drought response measures taken in November 2022. Government authorities responded to the increasing inflation due to drought and exhausted rainwater supplies (see Figure 5: Tuvalu: rising cost of living) by implementing untargeted inflation mitigation payouts amounting to a total of AUD 400,000 or AUD 40 per eligible household. The government also expanded the list of products subject to price controls.⁶⁰

Implementing such a solution during periods of relative calm, also referred to as peace time, could serve as a preparatory measure to address operational challenges that often impede effective AA efforts. These challenges include procurement logistics, transportation limitations, and poor road conditions. By proactively addressing these obstacles during 'peacetime', organisations can enhance their capacity to respond swiftly and efficiently when faced with impending crises such as droughts.

At the island level, management responsibilities are delegated to the *Kaupule* or *Falekapule*, the village management structure tasked with maintaining island affairs, which usually have a registry with the most vulnerable households. They often impose water restrictions upon the community after receiving early warnings, and they coordinate support from the national government. While there are limited funds available at the island level – such as the *Kaupule* Loan Scheme, supplemented by ongoing projects from international organisations – access to resources

60 International Monetary Fund. 2023. *Tuvalu. Staff report for the 2023 article IV consultation*. Washington, DC, USA.

is facilitated through the Disaster Committee Fund, as aligned with island plans. Establishing a registry of families and defining support criteria could enhance the *Kapule's* ability to select households for assistance in the future.

The potential of cash

Regarding cash transactions, it is important to note that there are no ATMs in Tuvalu, with Western Union services only available in the capital and not on the outer islands. MoneyGram is one alternative for sending money to the outer islands. Transactions are based on the Australian dollar in cash with no internet banking or debit cards available.

Despite this, local authorities emphasised both in our discussions and through an analysis with the International Monetary Fund (IMF)⁶¹ the advantages of modernising financial services, while also recognizing the importance of closely monitoring financial risks. There is a consensus across the government that there are significant efficiency improvements associated with offering basic modern financial services, such as debit cards and ATMs, as the economy transitions away from being solely cash-based. Authorities also acknowledged the necessity of taking additional measures to enhance financial intermediation safely and are considering these into their modernization plans.

One common avenue through which households obtain finance is remittances. Participants highlighted the seasonal work in agricultural or fisheries that some family members undertake, often going to New Zealand or Australia, or other families that have migrated more permanently who still remain connected. Such relationships with family abroad provides another avenue of financing and has often been a resource many tap into when natural hazards come into play. The Tuvalu Red Cross Society and the Red Cross Climate Centre study also discovered that households use a combination of savings, funds and remittances to purchase water tanks or carry out drought preparedness activities when warnings are issued. However, further investigation is needed to determine when families abroad are most inclined to send remittances to mitigate/respond to droughts and whether strengthened early warning communications would impact the timing and amount of cash assistance. This research could also assess the confidence levels of both Tuvaluan and overseas families in forecasts and early warnings when deciding on cash assistance. While remittances could enhance AA efforts due to the gradual onset of droughts, challenges and risks must be carefully considered.

Cash distributions from partners or the government are overseen by the *Kapule* or *Falekaupule* on the islands, with the decisions on allocation dependent on perceived risk and need. Future cash interventions must adhere to this structure. Cash assistance is viewed as a proactive option to support those vulnerable to drought, particularly households with livestock investments. However, considerations must be made regarding available goods for purchase on the islands. Short-term cash usage may prioritise buying water, which sees a significant price increase during dry periods, and containers for storing food and water. Transport costs for essential items may also be covered, although this depends on the availability of goods in the capital and could take several months to obtain if not readily accessible, therefore the applicability of cash assistance versus in-kind that could be quickly supplied might be favoured.

Concerns were raised about the duration and frequency of cash assistance, with suggestions for more frequent distributions to match the severity and duration of the drought. However, questions remain about the appropriateness of such frequency and its potential transition into regular social assistance, rather than anticipatory support. Additionally, the inflated cost of goods on the outer islands compared to the capital exacerbates these challenges.

Implementing cash assistance would require drawing lessons from past government payouts, such as the one conducted in November 2022, in response to drought and rising food/water prices. Transitioning towards digitising the cash system would likewise be a crucial component of this process.

61 Ibid.

2.1.4 VIET NAM



In Viet Nam, there is growing concern about the increasing risk and frequency of agricultural drought attributed to climate change. Over the past 26 years, the country has experienced five major drought events, characterised by elevated temperatures and reduced rainfall. In the Mekong River Delta region, the situation is compounded by saltwater intrusion. Typically, salinization in the Mekong River occurs for only one month annually. However, during severe droughts, this period can extend to four months or longer, disrupting agricultural and aquaculture activities. Table 7 below offers a summary of the primary impacts on the agricultural sector, emphasising the heightened water security challenges during these events.

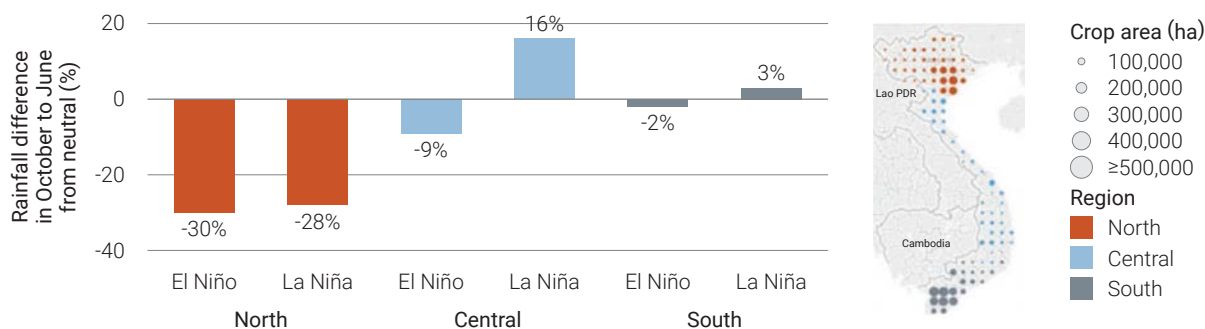
Table 7. Impact of major droughts in Viet Nam from 1998

Year	Main regions affected	VND (million)	Affected crop areas (ha)	Livestock loss (excluding poultry)	Households facing lack of water
1997–1998	Mekong River Delta, Central Highlands		1,023,000		600,000
2004–2005	Mekong River Delta, Central Highlands		246,500		200,000
2010–2011	Central Highlands		70,000		
2015–2016	Mekong River Delta, Central Highlands	15,700,686	355,178	6,528	505,825
2019–2020	Mekong River Delta	2,500,000	72,511	0	99,068

Source: Government of Viet Nam

The impact of drought may also be compounded during El Niño episodes as highlighted in Figure 6. During El Niño years, average temperatures are higher and total precipitation is 12 percent lower than during non-El Niño years. The rainy season ends about a month early, reducing rainfall in the dry season, increasing the temperature and evaporation rate, and decreasing the water levels and water flows in rivers.

Figure 6. Differences of rainfall between ENSO and neutral phases, October to June 1980–2015



Source: William R. Sutton et al. 2019. *Striking a Balance: Managing El Niño and La Niña in Vietnam's Agriculture*. World Bank, Washington, DC.

The consultations for this paper concurrently occurred under consultations for the AA protocol that FAO has established with the Viet Nam Disaster and Dyke Management Authority (VDDMA), under the Programmatic Partnership with the DG ECHO. These consultations took place in five provinces: Kien Giang, Cà Mau, Sóc Trăng, Trà Vinh and Bến Tre of the Mekong Delta River area in June 2023.

People at risk of drought

Drought poses a significant concern across Viet Nam, particularly in targeted areas like the Mekong River Delta and the Central Highlands, especially during the dry season. While the impact on forests is less pronounced, the potential repercussions on humans and agriculture are of primary concern. At the forefront of the drought impacts are households engaged in farming, livestock raising and fishing, which include:

- **Rice farmers** constitute a major at-risk group, with 56 percent of rice farmers located in the Mekong River Delta region, followed by the Red River Delta. Although other provinces also contribute substantially to cereal production, they do not match the scale of production observed in these two deltas.
- **Perennial crop farmers**, including those cultivating coffee and pepper, face significant potential losses in the event of prolonged drought. The Central Highlands, responsible for 97 percent of Viet Nam's coffee bean production, is particularly vulnerable and is listed among the country's most drought-prone regions. Smallholder farmers, with plots as small as a hectare or less, account for approximately 80 percent of the region's plantations, covering around 650,000 hectares.
- **Those engaged in aquaculture farming**, particularly in the Mekong River Delta – where approximately 70 percent of aquaculture farming in Viet Nam occurs – are at risk as the delta experiences expanding salt intrusion, which is significantly compounded during drought periods. This phenomenon has led to the conversion of many crop areas to aquaculture due to increased salt tolerance. While freshwater areas primarily support catfish production, shrimp farming dominates in brackish waters. However, shrimp production is notably vulnerable to drought, exacerbated by an increase in the number of excessively hot days throughout the year. In extreme drought periods, the price of fish significantly decreases: during the 2020 drought, aquaculture farmers reported a drop in the price of fish from VND 40,000 (nearly USD 2) per kilo to VND 15,000 (USD 0.64) per kilo.⁶²
- **Livestock owners**, including those raising buffalo, cows, pigs and poultry, also face potential impacts from drought due to limited water supply and feed, combined with high temperatures which can exhaust animals or induce illnesses. Livestock contribute nearly 40 percent of cash income for smallholder households, particularly from pig farming.

62 Aljazeera. 2020. *The great salt drought is desiccating Vietnam's Mekong Delta*. Doha, Qatar.

In Viet Nam, both men and women play crucial roles in agriculture, with their responsibilities often divided along gender lines. Traditionally, men are more involved in tasks such as land preparation, ploughing, planting, and harvesting, which are considered physically demanding. On the other hand, women are often responsible for tasks like transplanting seedlings, weeding, and post-harvest activities such as cleaning, sorting and processing crops.

During drought situations, both men and women are significantly impacted, albeit in different ways. For men, who often oversee tasks related to land preparation and planting, drought can lead to reduced crop yields and financial losses. This can affect their ability to provide for their families and contribute to household income, leading to increased stress and economic hardship.

Women, who are typically responsible for tasks like weeding and post-harvest activities, may also experience adverse effects during drought periods. Reduced crop yields can lead to food shortages and insecurity, affecting the nutritional status of their families. Livestock losses can hinder people's income-generating capacity, with women, in particular, more likely to engage in this type of activity. Women may also face increased workloads as they attempt to cope with the challenges posed by drought by finding alternative sources of water and ensuring the survival of crops and livestock.

The Mekong River Delta region – particularly areas like Bac Lieu, Kien Giang, and Cà Mau – stands out as one of the most economically disadvantaged regions, with over half of households classified as multidimensionally poor, according to the UNDP Recovery Plan 2016. In times of drought, these households face further hardships, experiencing a significant loss of income due to decreased labour demand resulting from disruptions in both the rice and aquaculture sectors.

Risk perceptions and early warning

In Viet Nam, as in PNG and Timor Leste, a Combined Drought Index is monitored at the national level to support AA triggering. These key indicators – ENSO, SPI-1, SPI-3, soil moisture, temperature, and Normalised Difference Vegetation Index (NDVI) – are considered to support the decision of acting early, with small adjustments possible for the target regions, Central Highlands and Mekong River Delta.

Having experienced severe drought almost every 4 to 5 years, local communities are quite familiar with this type of risk and have an increasing awareness of this phenomenon. Communication and information sharing play a very important role for awareness-raising. Local communities can access drought forecast and warning information from many channels: community meetings, local loudspeaker systems, news and weather forecast bulletins on newspapers, radio and television, social media, and government campaigns. Evidence shows that the impacts of historical salinity in the 2019–2020 drought event in the Mekong River Delta were less compared with the impacts in the 2015–2016 event, as confirmed by the Ministry of Agriculture and Rural Development (MARD) in the reviewed conference on drought and salinity response and management in the Mekong River Delta in June 2020.

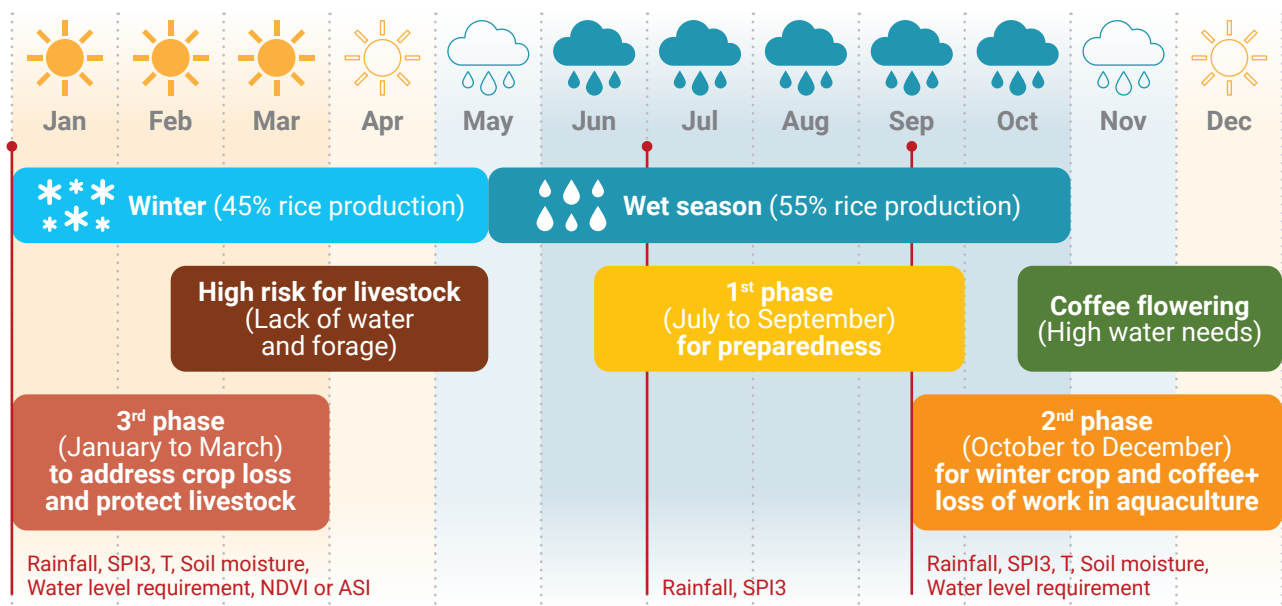
In Viet Nam, drought early warning messages are disseminated by the Viet Nam National Centre for Hydro-Meteorological Forecasting (NCHMF) through official websites, social media platforms, and press releases to provide updates on drought forecasts, conditions, and potential impacts. Radio broadcasts, television programs, local loudspeaker systems, and community meetings are commonly used to reach rural communities and raise awareness. Mobile phone alerts, community networks, communication campaigns, and educational institutions are also crucial in disseminating early warning messages directly to individuals and communities, fostering dialogue, and promoting proactive measures to mitigate the impact of droughts.

Based on consultations to establish the AA protocol in Viet Nam, combined with scientific data, the following phased approach was recommended to highlight the evolution and timing of typical drought impacts based on past experiences (see Figure 7):

- **Phase 1 (July–September):** Monitoring the onset of the monsoon season is crucial during this period. Forecasts, particularly the SPI 3-month outlooks, provide insights into the expected performance of the season. Observations of El Niño development and any delays in the monsoon onset are also important. Agricultural indices can be used to track the progress of wet season crops.
- **Phase 2 (October–December):** This phase marks the transition from the monsoon to the dry season. Assessing the performance of the wet season and anticipating conditions for the dry season are essential. A combination of forecast and observation data, such as 3-month SPI forecasts and soil moisture trend analysis, is recommended.
- **Phase 3 (January–March):** Monitoring the winter/spring crop season becomes critical during this phase. Understanding its performance helps inform decisions on whether to take action.

These three critical periods should be considered for drought monitoring: the end of the dry season/start of the rainy season (May–June), the end of the rainy season (September–October), and the beginning of the dry season (December–January).

Figure 7. Viet Nam drought crisis timeline



Source: FAO. 2023. *Anticipatory Action Protocol for Drought*. Hanoi, Viet Nam.

Coping tactics and needs

As directed and guided by the government, local communities normally prioritise dredging canals; digging ponds and wells; and building temporary dams to store fresh water and prevent saltwater intrusion, which should ensure daily water supply for people and agricultural activities. At the household level, people use equipment – tanks, tubs, jars, water bags and others – for water supply and storage in areas affected by drought, water shortage and saltwater intrusion. In worse cases, households have to purchase can/tank water for daily use. For agriculture, as per government advice, they also adjust the structure of crops and livestock numbers, and apply new production models.

During consultations with communities, a prioritisation exercise was conducted on what forms of key external support they require to mitigate and minimise the impact of droughts:

1. Awareness raising for communal officers and communities on drought and saltwater intrusion through training and communication materials. Training sessions can be arranged for representatives of various communes and hamlets, who would then disseminate the knowledge to the wider community. These training sessions should include guidance on water conservation, efficient water usage, and community health protection during drought conditions. Appropriate materials should be provided to support the training initiatives.
2. Provision of tools for water reservation/collection for daily use. This can include supplying plastic containers with a capacity of 1,000–3,000 litres to most communes, with the exception of Van Khanh in Kien Giang province, where locally produced cement containers are preferred.
3. Provision of seeds/seedlings that are saltwater resilient, along with technical support and fertiliser/fodder. This activity may differ from commune to commune, depending on the practical conditions of each commune.
4. Provision of a basic food package. This can be done through multipurpose cash transfer for poor/near poor/most vulnerable households at the peak of drought and saltwater intrusion, normally from March to May/June.

The potential of cash

Cash assistance emerged as one of the four primary areas of support identified by communities to help households mitigate the effects of an upcoming drought. However, it is crucial to recognize that during these consultations, there was an emphasis on the need for in-kind assistance to supplement cash support. This is because the value of cash assistance alone may not be adequate to address agricultural and water management requirements, nor does it facilitate knowledge transfer through training sessions.

The Viet Nam Post Corporation has established postal offices in all communes and hamlets, ensuring easy access to its services. Although banking services are available in every commune, many individuals still prefer to rely on cash transactions. During interviews, most respondents expressed a preference for receiving assistance in cash. However, some commune leaders advocated for in-kind support, fearing that impoverished families may not use the cash for its intended purpose. Local market assessments reveal that current market offerings adequately meet increased demands during emergencies, facilitating accessibility to essential goods in times of drought.

As for the timing of cash transfers: support for water containers is recommended during the rainy season, typically around September–October, while food assistance is best provided during the dry season, around January–March. The anticipated uses of cash include purchasing water, food, and investing in land improvement for shrimp and crab farming, as well as acquiring seeds and seedlings. Most interviewees prefer cash transfers facilitated through the postal service.

In select Mekong Delta provinces, the People's Committees administer the 30A programme, which targets poverty reduction in 61 designated districts. This initiative encompasses various forms of support, including reduced interest rates for loans; provision of rice; cash aid for forest plantation and protection; and assistance for agricultural, livestock and aquacultural endeavours. Additionally, the programme extends support for education, healthcare, irrigation and other essential needs, with funds distributed to households via the postal service since 2018.

2.1.5 DROUGHT ANTICIPATORY ACTION AND CASH TRANSFERS: CONCLUSIONS AND RECOMMENDATIONS

It has been observed across all case studies that knowledge of drought and perceptions of drought risk vary across communities in the four countries, ranging from a lack of concern to proactive community and household measures with well-defined needs. This is especially important to understand and include in AA intervention design, as looking at previous impacts of droughts or dry conditions the way at-risk people define them is critical. It indicates how likely people are to take proactive measures and to use the external AA support as intended – especially if they are supported to do so – or to use it on other, more urgent, unmet needs. Across the four case studies, households use various channels for accessing drought/dry period early warning information, and their levels of trust in these messages also vary significantly.

A general conclusion important for the design of AA interventions is that at-risk people seem to be proactive in relation to droughts/dry periods based primarily on their:

- level of access and trust in early warning information and their perception of how at risk they are;
- ability to afford being proactive. This is particularly important as the most vulnerable households are likely facing other needs throughout the year, which they might perceive as more urgent. This is directly related to negative coping tactics that people might use to be proactive or deal with the impacts of droughts; and
- knowledge on what proactive mitigation measures they can take and when.

When designing AA interventions, it is essential to consider how people cope with droughts. It was observed that at-risk households resort to various forms of negative coping tactics to compensate for costs related to drought preparations or economic losses resulting from the impact of droughts. In addition, proactive measures and negative coping tactics are often undistinguishable from the perspective of at-risk households, so the design of AA interventions should consider promoting proactive measures and reducing households' use of negative coping tactics.

Our findings also show that perceptions on the relevance of cash transfers for at-risk households vary, and that preference seems to be always for a mixed modality approach, as well as mixed preferences on the timing of interventions along the stages of the AA threshold and early response.

Overall recommendations for designing AA interventions for drought is that practitioners should:

- determine the mitigation actions, coping tactics and needs of at-risk households;
- develop AA assistance for each action-tactic-need for every AA threshold phase;
- understand the role of remittances and the support that diaspora can bring to such risks;
- start the cash versus in-kind ratio per AA package with three essential considerations: preferences of at-risk households; item/service availability in local markets; transport and accessibility to collect support; and the likelihood of at-risk households using AA assistance to take proactive measures versus using the external support to meet other urgent needs; and
- factor in the extra burden on women when designing the assistance packages. Overall, women bear a disproportionate burden during drought periods, either taking more tasks during preparation or when dealing with the impacts. Although AA interventions primarily target households as end-users, designing packages that enable support for the elderly or PWD needs should think about transport and accessibility.

Detailed recommendations on **Cash+** support per household mitigation option/negative coping tactic are outlined in Part 3: Proposed framework.

2.2 Extreme winter case study

2.2.1. MONGOLIA



Mongolia is celebrated for its traditional nomadic culture and the enduring herder way of life, which still sustains a third of its population, relying on the expansive steppe for grazing. However, the impacts of climate change are increasing, with a notable rise of 2.1 degrees Celsius in average air temperatures over the past seven decades, significantly affecting people's ability to maintain their livelihood.

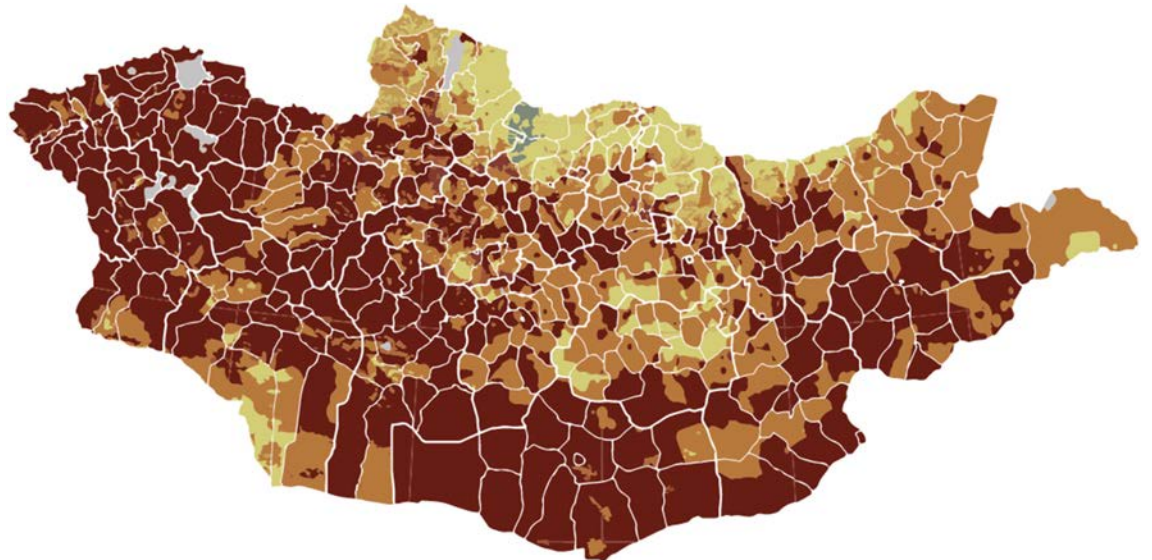
Dzud, a natural phenomenon characterised by a hot and dry summer followed by a harsh winter, poses a significant threat to livestock herds. This combination prevents livestock from accumulating the necessary fat reserves during summer, leaving them vulnerable to the extreme cold of winter, which results in substantial livestock losses. Human factors, including overgrazing, unequal herd sizes, and limited access to grazing land, exacerbate these effects.

Dzud events are classified as slow-onset hazards, prompting the implementation of various mechanisms to help herders mitigate livestock losses or cope with the aftermath. In July 2023, FAO and NORCAP conducted consultations with at-risk herder families and local authorities, which provided invaluable insights into the impacts of *dzud* events and the use of cash interventions. These consultations focused on areas such as the Bayankhongor and Ovorkhangai provinces. One-on-one consultations were also conducted as doing FGDs in Mongolia is notoriously difficult due to the distance between herder households. Consultations were also gender balanced, composed of 50 percent women and 50 percent men.

During the 2022/23 winter period, early warnings from the Information and Research Institute of Hydrology, Meteorology and Environment (IRIHME) of Mongolia led partners to release several multipurpose cash distributions to herders. However, these distributions often did not align with government standards. The findings from these discussions were synthesised and structured to highlight key operational considerations and insights based on the stages of a *dzud* timeline.

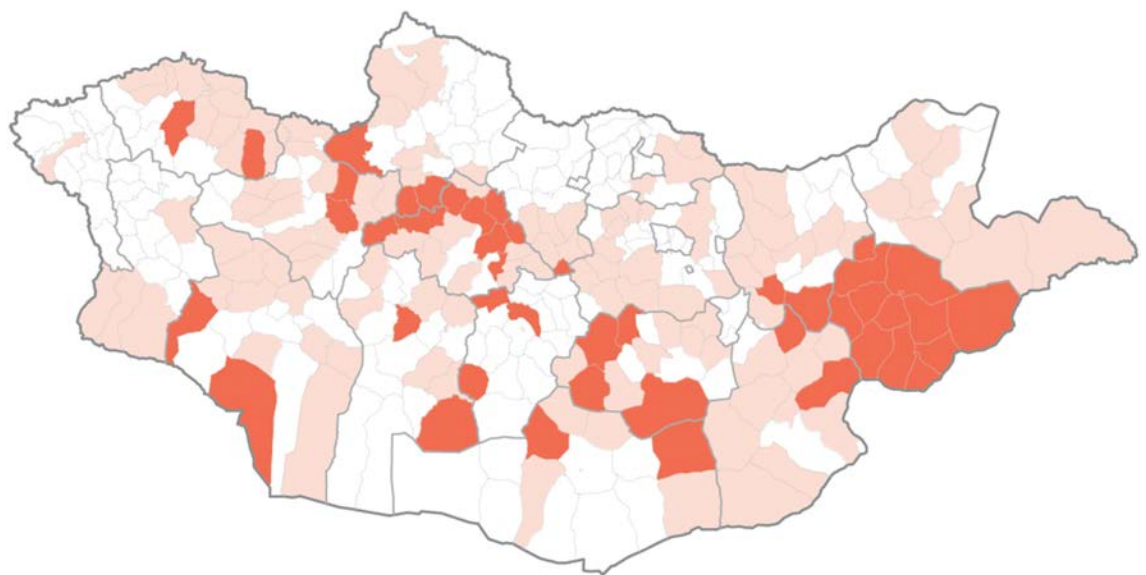
It is important to note that these findings do not offer a comprehensive overview of the challenges faced by Mongolian herder families or provide specific details regarding wealth disparities, herd sizes, household mitigation actions, and preferences. Rather, the consultations aimed to capture a snapshot of typical herder families at risk of *dzud* events, informing assumptions and recommendations for further studies.

Figure 8. *Dzud* risk and *dzud* conditions map



20 December 2023

90% high or extreme *dzud* risk



30 January 2024

74% in *dzud* or near *dzud* conditions

Source: National Agency for Meteorology and Environmental Monitoring. 2024.

Dzud Early Action and Response Plan (December 2023–May 2024), Ulaanbaatar, Mongolia. OCHA ROAP.

People at risk of *dzud*

Mongolia stands out as one of the most sparsely populated regions globally. The majority of Mongolians residing outside urban areas, known as *aimag* and *soum* centres, opt for yurts or gers as their primary dwellings. These mobile housing units are periodically relocated to areas with favourable grazing lands for their livestock. While some families choose to move together in groups, others prefer solitary settlements, influenced by factors such as proximity to towns, access to healthcare facilities, grazing rights, and land ownership. Commonly, the types of livestock owned by these communities include sheep, goats, cattle, horses, and in certain regions, yak.

From the interviews, it was evident that the herder lifestyle serves as the main source of livelihood for these families, with no additional sources of income reported. The families the team engaged with typically owned 50–200 animals, with approximately 20–30 percent of livestock facing death (including miscarriages) during severe winters if not adequately sheltered and fed. In Mongolia, the number of sheep units directly correlates with the wealth status within this particular livelihood. Families classified as poor typically own 50–300 animals.

The most vulnerable to the impacts of *dzud* are single-parent herder households situated in the semi-desert-steppe zone, facing significant challenges in securing resources to safeguard their livelihoods during and after the winter season. Poverty in Mongolia is multifaceted, stemming from factors such as limited income opportunities, migration patterns, harsh weather conditions, inadequate access to water and healthcare services, sporadic food security, and social vulnerabilities including disability, old age, and single-parent households. According to the National Statistics Office of Mongolia, the poverty level in rural areas has risen from 43.4 percent to 46.6 percent, while it has decreased in urban areas, from 30.3 percent to 26.9 percent. More than half of the population in the western, eastern and highland regions live at or below the national poverty line.

In Mongolia, the impacts of *dzud* are gendered, affecting men and women differently. Some of these gendered impacts are disruptions in livestock husbandry, where men are often responsible for herding and managing the animals, while women are usually involved in tasks such as milking, processing dairy products, and managing household finances. *Dzud*-related livestock deaths can disrupt these gendered divisions of labour, impacting both men's and women's abilities to maintain their livelihoods.

Women may bear a disproportionate burden of household responsibilities during *dzud* events, such as caring for children, preparing food, and collecting water and fuel, which can place additional stress on them. Vulnerability to health risks during *dzud* events, including exposure to cold temperatures, respiratory illnesses, and malnutrition, may also be higher for women, children and elderly individuals, especially in rural areas where healthcare services may be limited and become more limited as the disaster unfolds (increased isolation and lack of transportation, increased financial barrier in access).

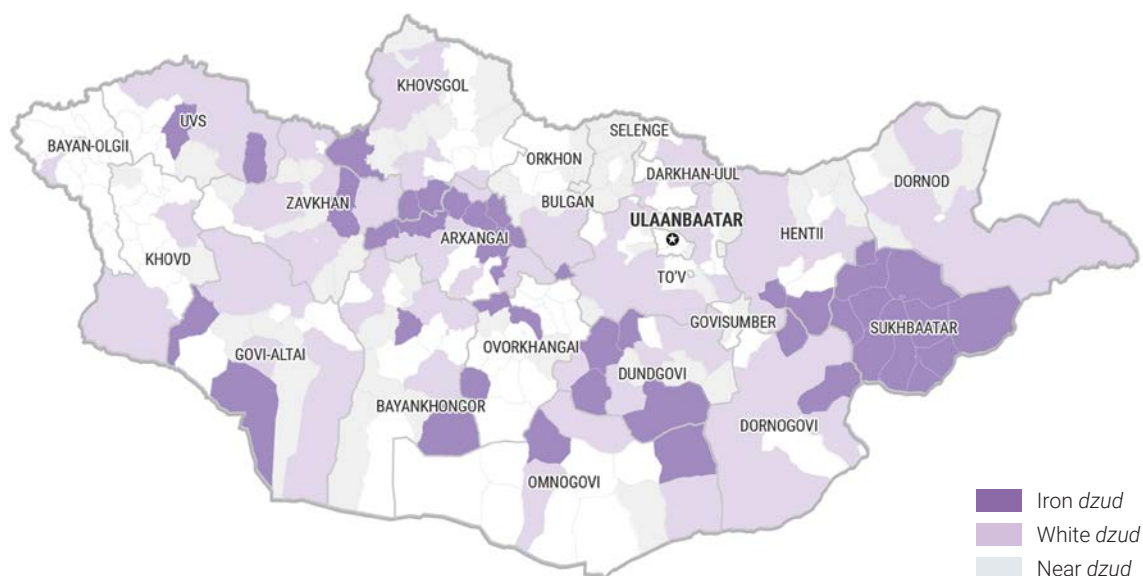


Box 7. Targeting criteria and cash assistance, revised in 2024

As of the first quarter of 2024, the *dzud* in Mongolia had been harsher than the previous year. The Government of Mongolia and the United Nations Resident Coordinator Office, along with their partners, had already been providing assistance to vulnerable households as of January 2024. The interventions were needs-based, and priority was given to vulnerable households with livestock ranging from 100 to 400 converted into sheep head units, living in extreme and high-risk non-mining and non-cropping areas. The preferred modality of assistance was a combination of cash assistance and in-kind support. The members of the Cash Working Group (CWG) in Mongolia had convened in late 2023 to agree on a harmonised approach to cash transfers to vulnerable herder families. The CWG had determined that the cash transfer value should remain consistent during both early action and response periods, and be the equivalent to the Government-declared minimum wage, which was currently standing at 660,000 MNT (equivalent to USD 192), a one-time transfer applicable for implementing international organisations. The same common criteria had been agreed upon by the CWG as well.

The objective of this assistance was to protect the livelihoods of vulnerable herder households affected by *dzud*, and enable them to meet their essential needs, cope with rising prices, and still access services or commodities necessary to protect their livestock.⁶³

Figure 9. *Dzud* types and status by *soum*, as of 30 January 2024



Source: UNCT Mongolia. 2024. *2024 Dzud Early Action and Response Plan: Mongolia (December 2023–May 2024)*. OCHA ROAP.

Risk perceptions and early warning

All herders interviewed stressed that *dzud* had a significant impact on their families and economic stability. Every respondent mentioned that the most challenging aspect was the loss of livestock. One household reported that all their yaks perished, along with 30 goats, and approximately one-third of the animals experienced miscarriages. Despite efforts to provide sustenance for the yaks, they succumbed to the cold weather.

63 UNCT Mongolia. 2024. *Mongolia: 2024 Dzud Early Action and Response Plan (December 2023–May 2024)*. Ulaanbaatar, Mongolia.

Each interviewee highlighted that past *dzud* events severely disrupted their livelihoods, leading some family members to seek temporary employment in the *soum* or *aimag* centres. The mortality of livestock during winter months primarily stems from the herders' inability to find adequate grazing land for their animals during the preceding summer. Consequently, the animals fail to accumulate sufficient fat reserves, and when the ground freezes or becomes covered in snow, they struggle to access food, ultimately succumbing to the cold.

The impact of the *dzud* is not limited to the winter period. The spring brings with it cold and windy weather, chilling livestock which are already weakened. The spring birthing season is also difficult, as young animals are at risk of death due to exposure, and their mothers may not be able to produce enough milk for them due to their own near-starvation from the *dzud*. Many expect that the worst is yet to come as weakened livestock finally die; erosion further degrades grazing areas once the rains start in June; and spring floods may be 2–3 times higher than normal in some areas, threatening both animals and people in river valleys and other drainage areas. Some estimate that it may take 2–4 years to recover from the disaster.

Herders also expressed that the risk, their pre-emptive actions, and their negative coping mechanisms fall into two key waves:

October–November

During this time, herders have extra cash from selling milk, animal hides or meat, and when the *dzud* warning is released, they decide to buy extra hay and fodder. The quantity of animal feed that they can purchase depends on their individual economic situation, but most said they are able to cover a couple of months, at least. In January or February, they will need a top-up to last until the spring months, when the snow melts. During this time, they also prepare the specialised animal feed, for which they need wheat bran, horse manure and oil.

Herders will also endeavour to repair their *uvuljuu* (livestock shelter), taking advantage of the optimal timing for adjustments or repairs. The primary requirement for this task is timber, and herders have expressed a preference for receiving wood directly rather than cash.

This preference stems from the difficulty of sourcing timber in local markets and arranging its transportation. At this time of the season, it can be inferred that cash transfers are not a priority for households. However, providing support specifically for *uvuljuu* repairs should be considered a viable form of assistance.

There are two common negative coping strategies that come into play within this period: selling livestock and taking out loans. While selling livestock is a common practice and an essential aspect of herder livelihoods, it can become detrimental if the number of animals sold exceeds what is necessary for maintaining a sustainable standard of living. This can lead to a reduction in the herd size, hindering the ability of the family to sustain their livelihoods in the long term.

In instances where families are unable to cover the costs associated with preparing for the *dzud*, taking out loans becomes a common recourse. However, this option carries inherent risks, including high interest rates and uncertainty surrounding the severity of the impending *dzud* and its impact on livestock. The ability of the family to replenish their herd size may also be compromised by factors such as miscarriages in the spring and the possible subsequent dry summers, leading to further financial strain and debt accumulation.

January–March

During this period, the second *dzud* risk map is released, providing a clearer indication of how the season will unfold. The need for fodder and hay remains critical, alongside priorities such as ensuring animals stay warm, providing adequate nutrition for pregnant animals, and assisting with births. Some households, which had previously taken out loans, reported using FAO cash assistance to purchase hay and fodder, as well as to settle debts. With January–February coinciding with the lunar new year, there are additional expenses to consider. Families have emphasised the importance of cash during this time, with some utilising Mongolia's universal Child Money Programme allowance of MNT 100,000 (USD 30) per child, to cover costs related to hay and fodder. Others have sought alternative sources of income, such as temporary employment in construction or cleaning jobs in *soum* centres to support their herds.

It was argued that the best month to receive assistance was February as this is when resources are depleted and these negative coping mechanisms start to be deployed.



Early Warning information

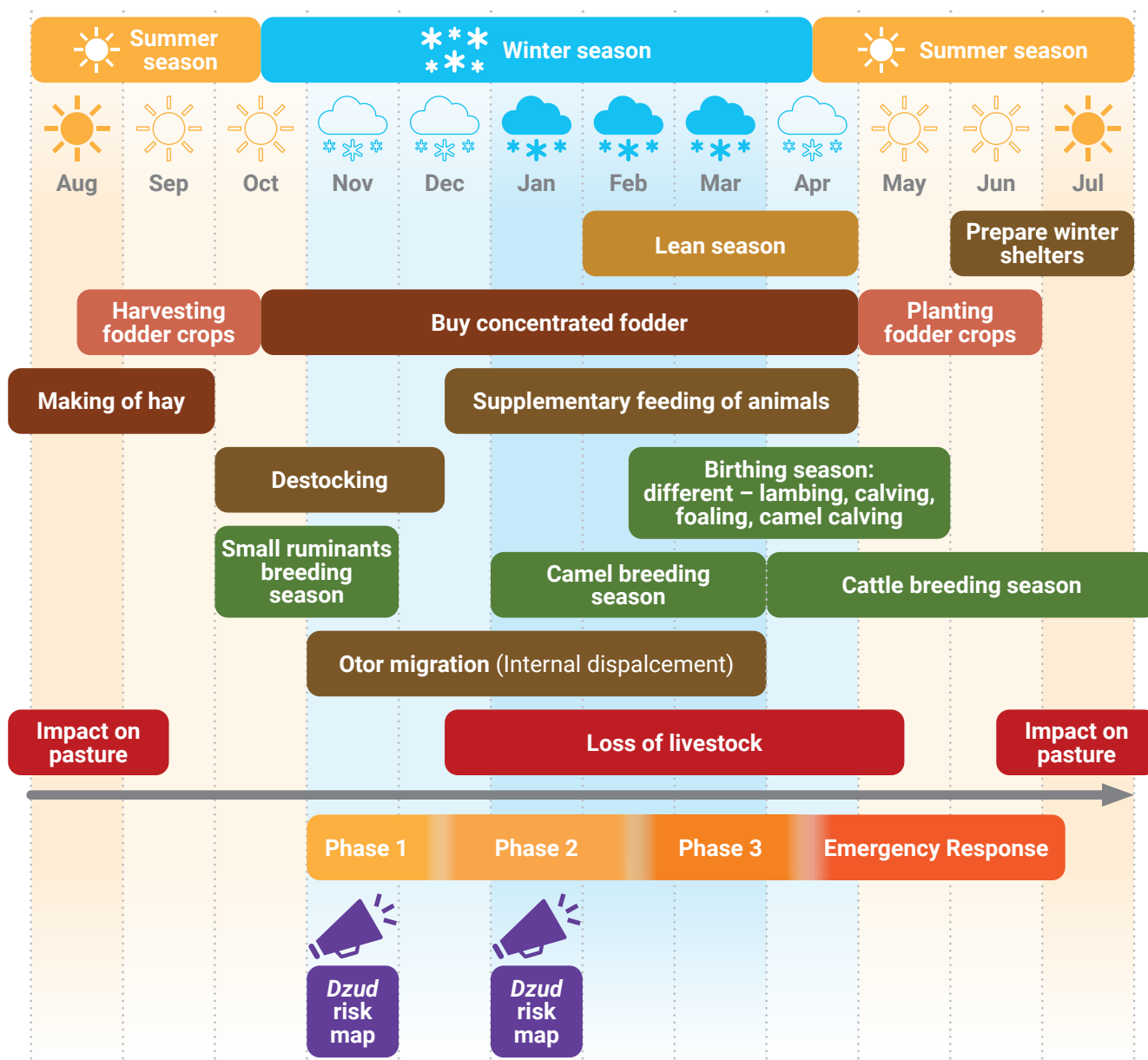
Since 2008, the IRIHME has been issuing a monthly *dzud* risk map, which is released twice a year: November and January. The following parameters are considered for publishing a risk map:

- the condition last summer
- severity of drought condition
- pasture carrying capacity for next winter and spring
- pasture yield by the end of last August
- livestock number
- air temperature and precipitation deviations
- current snow cover and its thickness
- forecast of air temperature and precipitation for the coming winter and spring months

The *dzud* risk map is communicated to the *soum* level through various channels and methods. Typically, government authorities disseminate this information through official announcements, meetings and workshops. Local media such as newspapers, radio broadcasts, and television programs may also convey the *dzud* risk map to the communities in the *soum*. Furthermore, community leaders, local officials and extension workers play a crucial role in relaying this information to the residents through door-to-door visits, community gatherings, and the distribution of information materials in the *soum*. The crisis timeline for *dzud* is available in Part 1 of this paper and Table 1 for reference.

This process was confirmed at the household level. Some households said they primarily rely on television, particularly a specific channel that consistently broadcasts predictions about potential *dzud* events. For those who do not use television frequently, alternative platforms such as radio, SMS notifications, notices in town centres, and informal networks are utilised to access relevant warnings.

Figure 10. Key events along a crisis timeline and anticipatory action phases



Source: Author's elaboration.

Coping tactics, and needs

Most households advised to divide the *dzud* timeline into two periods with related measures and needs. Their responses were thus outlined (by the authors) according to two key stages: September–October and January–March. These periods are references only; in practice, the stages are flexible, depending on the weather patterns and individual household situation.

The households also explained several negative coping tactics, which are used at various stages throughout the year with the aim of having the resources to buy hay and fodder, keep the animals warm, and – in extreme cases where the herd size is reduced significantly – to find alternative sources of income. These are listed below as well.

To mitigate the risk of livestock mortality, herders rely on their stockpiles of hay and fodder, which may be depleted by November or December for poorer households. Consequently, they are compelled to purchase more to sustain their animals in the coming months, contingent on their ability to afford these needs and the availability of these provisions in local markets. Individuals residing in remote areas also expressed difficulties in accessing healthcare facilities and their concerns about being able to provide medical treatment for their children and address future *dzud* events.

Herders' and government's planning for *dzud*

When households were asked if they had specific plans to get through a potentially harsh winter, most of them said they had three key concerns. These are listed below in the order of priority, according to the households:

- 1. Storage and availability of hay and fodder.** Unsurprisingly, the top priority for all interviewed was having sufficient supply of livestock feed. Some households mentioned their plans to harvest hay themselves, yet the majority did not live in geographical areas where this is possible and so expressed plans to buy hay in the nearby towns. Given the herder way of life, it can be safely assumed that such provisions are a top priority across the board, regardless of the herders' location or the number of livestock owned.

Soum-level government authorities echoed this, highlighting how the government stepped in to support herders in anticipation of the last *dzud* early warning. The rising concerns of *dzud* in November 2022 led to a fact-finding mission by the State Emergency Commission (SEC), led by the deputy prime minister, and FAO to assess *dzud* risk and initiate intensified mitigative efforts. Following a thorough review of the assessment results in meetings held in November and December 2022, the SEC recommended to reduce the hay and fodder reserves in high-risk areas by 50 percent. *Soum* government authorities, in certain areas, also used their local disaster risk financing budgets to cover the remaining 50 percent. These recommendations were formally endorsed by the Cabinet of Ministers during its meeting on 14 December 2022 in accordance with the requirements of the Law on State Reserve (refer to Government Resolution No. 461/2022).

- 2. Children placed in *soum* and/or *aimag* centres during the winter.** This was also a priority for the herders who were interviewed. Some households even chose to live temporarily (a few years) close to town to enable the children to continue going to school. It is important, however, to not make assumptions and extrapolate this information because others preferred that the children stay at home, close to their families.
- 3. Maintenance of the livestock shelter (*uvuljuu*).** Keeping animals warm is one of the key mitigation actions that households can take. This entails having a livestock shelter (*uvuljuu*) and bedding/blankets for the animals. Sickly newborns are usually kept inside the yurt for extra warmth. The role of the *uvuljuu* is to mitigate the cold, as micronutrient deficiency, exacerbated by cold stress, leads to livestock mortality. Various structures of *uvuljuu* are used in Mongolia, with some units able to accommodate over 100 animals (e.g. goats and sheep), while others are large enough to accommodate even horses. If designed appropriately and properly maintained, these structures are largely sufficient to keep the animals warm. At the same time, they are not costly to build and maintain.

The *uvuljuus* are sometimes located next to the family yurt or at some distance (e.g. from 500 metres to a few kilometres from the yurt) depending on the local geography and ideal conditions to build the structure. To make this structure fit-for-purpose for harsh winter conditions, households must invest to improve the structure. Broadly, this entails a significant cleaning to keep it from freezing inside and repairing/replacing the roof.

Some households said this investment can come from their own resources. Others mentioned they would need support not only with labour – as it can get difficult to find someone to help the family to do the physical work – but with the design of the structure as well. Other costs are related to materials, especially wood. For some households, their current *uvuljuu* is insufficient to house all their livestock but expanding it is relatively easy if they can just purchase the materials and find labourers. According to one person interviewed, a renovated *uvuljuu* can be kept for a few years without needing any other maintenance (except cleaning) and entails no yearly costs.



Otor migration

The term “*otor* migration” in Mongolia refers to the traditional seasonal movement of herders and their livestock between different grazing areas in search of pasture and water. This migration pattern is essential for sustaining the livelihoods of many Mongolian herders who rely on the vast steppe for grazing their animals, primarily sheep, goats, cattle, horses, and yak.

During the warmer months – typically from spring to early autumn – herders move with their livestock to higher elevation areas or regions with better grazing conditions. These areas provide abundant grass and water sources, allowing the animals to feed and thrive. As the seasons change and temperatures drop, herders gradually move their livestock to lower elevations or areas with more shelter to escape harsh winter conditions. This cyclical movement ensures that the animals have access to sufficient food and water throughout the year.

Otor migration is deeply ingrained in Mongolian culture and has been practised for centuries by nomadic herders. It not only sustains their livelihoods but also helps to preserve the delicate balance of the ecosystem by preventing overgrazing in any one area. *Otor* migration did not feature much in the responses, but one family mentioned that without this practice, they risk a very low reproduction rate among their herd of yaks.

External support: herders’ perceptions on type and timing

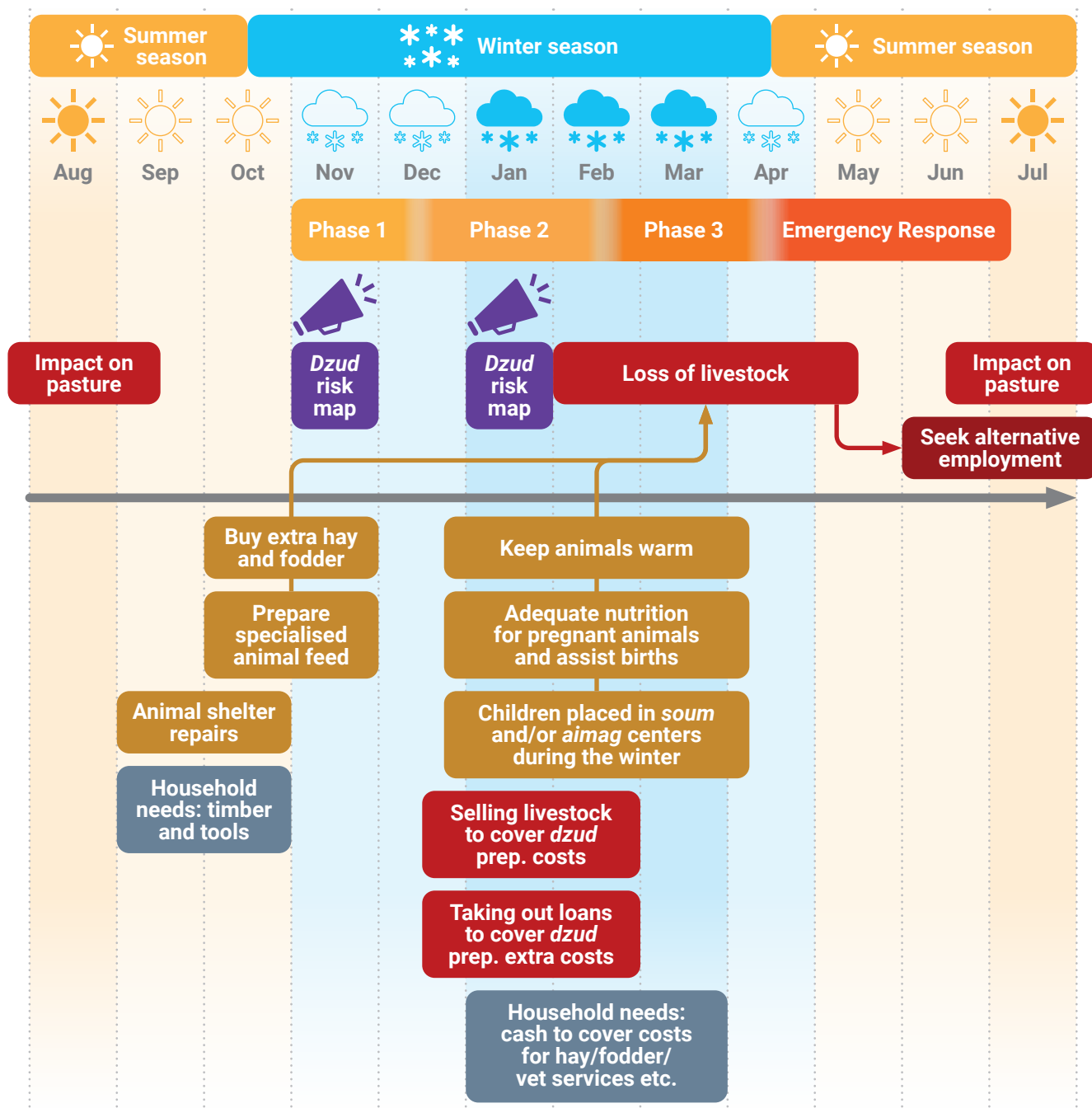
The vast majority of herders interviewed, regardless of the size and type of their herds, expressed a consistent preference for external support in the form of both in-kind assistance (e.g. hay and fodder for animals) and cash. The use of cash varied among households, with some opting to purchase additional hay or fodder while others seeking to repay loans or acquire essential items like rice and flour.

Regarding the stages of a *dzud*, respondents highlighted the importance of support for *uvuljuu* repairs in September/October and assistance with hay and fodder in January/February. Both forms of support were deemed equally crucial. Households also expressed the need for restocking programmes in March/April – this is, however, more of a response action while the other two can be categorised as AA measures.

Based on discussions and previous experiences with *dzud* events, cash assistance was deemed most beneficial when received in January/early February. Some of the herders interviewed had been recipients of FAO assistance during the 2022/2023 *dzud* AA intervention and spoke positively about the support they received, using the cash assistance primarily to purchase hay and fodder to keep their livestock alive through the cold months.

Herders typically sell parts of their livestock as late as November/December, as animals begin to lose weight beyond this period. It is essential to recognize that actions taken between November and February, though implemented as coping tactics, also serve a mitigative purpose. During this period, herders are already grappling with the effects of the preceding dry summer and aim to mitigate the cascading impact of the impending *dzud* event.

Figure 11. Timeline of pre-crisis findings: household mitigation options, negative coping tactics, and needs



Source: Author's elaboration.

Household actions with the sole purpose of mitigation, such as doing *uvuljuu* repairs, are taken by herders earlier in the year. In September, when herders have not yet received a *dzud* warning – the warnings are only released in November onwards – they might choose to work on their livestock shelter if the effects of a dry summer are already felt and the animals are underfed. At this stage, their decision to pre-empt any losses in livestock will depend on their individual economic situation and how much of their resources they can spare for *uvuljuu* repairs and/or buying animal feed.

This distinction between household actions that are preventive and actions that are both *preventive* and also a *coping tactic* could have budget implications as some funding streams can be applicable only for certain types of AA initiatives, and not for those that may be considered as response actions or preventive actions which are outside the trigger model (e.g. *uvuljuu* repairs).

Household perceptions on cash assistance to mitigate *dzud* risk

The decision on the use of cash (and external cash assistance) is made collectively among the heads of the household. Women, however, tend to manage the finances of the household and have a greater say on what to purchase for the family. Although this finding cannot be extrapolated, the authors selected the people to interview considering gender balance and privacy, and roughly the same answer was given in all discussions.

Herders mentioned that despite potential heavy *dzud* conditions, they foresee no major problems related to the use of cash assistance. Even if they cannot access the ATM, they can rely on relatives' help to access physical cash. Most herders are already part of one or more social protection schemes (Universal Child Money Programme, Pregnant Mother Benefit Social Welfare Fund, National Pension System) and are receiving cash in their bank accounts. All those interviewed expressed this is the most effective method for them to receive cash support. Such a community-based support network seems to be available even for single herder families who are in remote locations, and this came up several times in our discussions. Depending on other types of support (transfer amounts were not discussed), all herders mentioned they are likely to use cash assistance to buy hay, fodder, detergent and hygiene items (these were also part of kits distributed by other entities).

Given the focus of this guidance note, the authors wanted to look especially at how easy it is for herder families to access local marketplaces, as a key consideration for cash programming. Herders mentioned they can go biweekly or monthly to markets in the *aimag* or *soum* centres to shop for necessities. Depending on where the families are located, the travel distance to these marketplaces can be anywhere from 1 km to 30 km or even more, in cases when they have to be with their herd in remote places. The *aimag* and *soum* centres are well connected by the road network and maintain an adequate supply of stocks year-round. Herders mentioned that the prices of some basic items tend to go up when in low supply at certain times of the year, particularly animal feed during winter months. Such transport costs should be considered when calculating the cash assistance transfer rate.

Unlike other contexts where identification documents are a significant issue for remote geographical areas, all herders engaged in this study stated that every member of their households has IDs and it is more unusual for people to not have an ID, regardless of where they live. Herders are typically registered with such IDs to access social protection programmes at the *soum* level. *Soum*-level government offices are responsible for administering the schemes and maintaining registration records for herders and other eligible individuals.



2.2.2 *DZUD* ANTICIPATORY ACTION AND CASH TRANSFERS: CONCLUSIONS AND RECOMMENDATIONS

The findings from this one case study cannot be extrapolated but can offer indications on forming programmatic assumptions on the use of cash for *dzud* AA. It is up to the stakeholders in Mongolia to continuously monitor and update their collective approach to *dzud* anticipation and response, as they have done in the last early action and response plans, covering 2022–2023, and 2023–2024. Key common threads in our discussions with people in Mongolia have been observed and are outlined below. Unlike drought, the impacts faced by herders during the *dzud* can be compounded if the cycle continues in the following year: hot and dry summer followed by another harsh winter. Unsurprisingly, in all our consultations, the herder families underscored the significant impacts on their economic situation resulting from loss of livestock.

In Mongolia, risk information is mostly available, and our findings show that herders have knowledge on mitigation measures (although this also varies) so the critical consideration for at-risk families taking proactive measures is how much they can afford to do so. In this sense, the authors recommend the continuous testing of the programmatic assumptions about assistance to herder families, particularly the timing of delivery.

It was observed that perceptions on cash assistance and timings varied as well, but a phased approach of AA interventions is essential for Mongolia. The important considerations for **cash vs in-kind ratio** of AA interventions in each phase are similar to those for drought events: preferences of at-risk households, item/service availability in local markets, and the likelihood of households using AA assistance to take proactive measures vs meeting other urgent needs. This last consideration needs further unpacking especially around the programmatic assumptions on how people will decide to use the cash assistance.

The use of cash assistance by herder families can look different before *dzud* conditions set in versus the later winter months. For ease of reference, the recommendations are divided based on the broad time periods that were mentioned during our consultations (for the detailed crisis timeline in Mongolia, see Part 1):

- **October–November:** This is when herder families buy extra hay and fodder; prepare the specialised animal feed; carry out maintenance work for their *uvuljuu*; sell livestock; and in difficult situations, take out loans to cover the extra costs of preparing for a potential *dzud*. At this stage, even in late November, *dzud* risk maps and early warning messages have a 70 percent confidence level at best.

During this time, herder families likely already have extra cash on hand from the selling of milk or animal hides or meat in the previous months. Any form of cash support at this stage could be used for maintenance of the *uvuljuu*, purchasing extra hay and fodder, or other costs related to the protection of their herd and livelihood.

A programmatic assumption here would be that external cash support is not aimed at meeting basic needs but would have to be tailored to the specific mitigation option or negative coping tactic it is designed to support. This might entail that cash could be part of a larger package, e.g. *uvuljuu* support, keeping in mind that these months are outside the current AA activation window.



© FAO/P. Khangalkhuu

- **January–March:** If *dzud* conditions do set in, having fodder and hay remains critical for herder families, as well as ensuring animals stay warm, providing nutrition for pregnant animals, and assisting births. At this stage, the vulnerable herder families are already experiencing the effects of the *dzud*, and their own cash reserves or hay and fodder reserves are likely to be depleted. Cash support here would likely be used both for meeting essential needs and protecting their herd, e.g. purchasing more hay and fodder, specialised feed, or other specific requirements such as baby blankets or veterinary services.

Programmatic assumptions on the use of cash at this stage should be common across stakeholders as it would determine the transfer values per household.

April onward would be the **response phase**, and at this stage, if the loss of livestock was beyond what the household can cope with, some family members or entire households will likely seek alternative sources of income, such as temporary employment in construction or cleaning jobs in *soum* centres. Depending on the success of previous *dzud* AAs interventions, the cascading impacts could be mitigated by restocking support or cash assistance aimed at reducing the negative coping tactic of seeking alternative employment or further taking out loans.



FRAMEWORK FOR FIELD TESTING: INTERSECTORAL APPROACH TO CASH FOR SLOW-ONSET ANTICIPATORY ACTION

Coordinated slow-onset anticipatory action

This skeleton framework comprises a set of recommendations based on the findings of this paper. It presents activities and outputs for governments and stakeholders to follow and test at the national level when developing AA protocols for slow-onset hazard events. The intended outcome is a coordinated approach between all relevant stakeholders engaged in the design, planning, coordination, and implementation of the slow-onset AA interventions.

Applying this framework, the following sequence of activities and related outputs is recommended:

- 1. Pre-crisis consultations:** The analytical questions below can be reworded for a survey in the target geographical locations. When conducting consultations, please ensure there is gender diversity of respondents and enumerators. The format of the pre-crisis consultations should include findings related to at least these four components:
 - A) Profile of people at risk,
 - B) People's perceptions of the hazard risk and early warning,
 - C) Household actions, coping strategies and needs, and
 - D) People's perceptions on the type and timing of external support.
- 2. Crisis timelines:** The detailed crisis timelines are meant to plot the information from the pre-crisis surveys to workable timelines; determine the phases of AA interventions for the hazard event, support gender-specific analysis of risks and needs to inform AA interventions and response; and decide on the timing of support for each phase. The crisis timelines are based on the findings of the pre-crisis consultations but should be cross-checked with the existing national and local DRM frameworks. As the timelines should be based on the perceptions of the people at risk, this proposed framework recommends developing crisis timelines that follow the same format as the findings of the pre-crisis consultations.
- 3. Intersectoral packages for assisting people at risk:** This is applicable at each stage of the crisis timeline. The frameworks for assisting people at risk should be developed collectively, in an interagency forum, by the stakeholders engaged in the AA interventions. There are several forums where this can be done: the RCO-led coordination architecture at the national level, Humanitarian Country Teams, UN Country Teams, Cash Working Groups, AA Working Groups, Accountability to Affected People Working Groups, as well as their national and subnational counterparts. The National Disaster Management Offices/Authorities, national Meteorological Offices and other government entities tasked to oversee Disaster Risk Management policies and national social protection, as well as local coordination forums, can also be a venue for the collective development of AA packages.

Pre-crisis surveys and crisis timelines

As the pre-crisis surveys and crisis timelines follow the same format, the timelines should be an integral part of how the survey results are displayed and how unified AA packages are developed. Below are the timelines developed based on the four common categories of findings from the pre-crisis consultations.

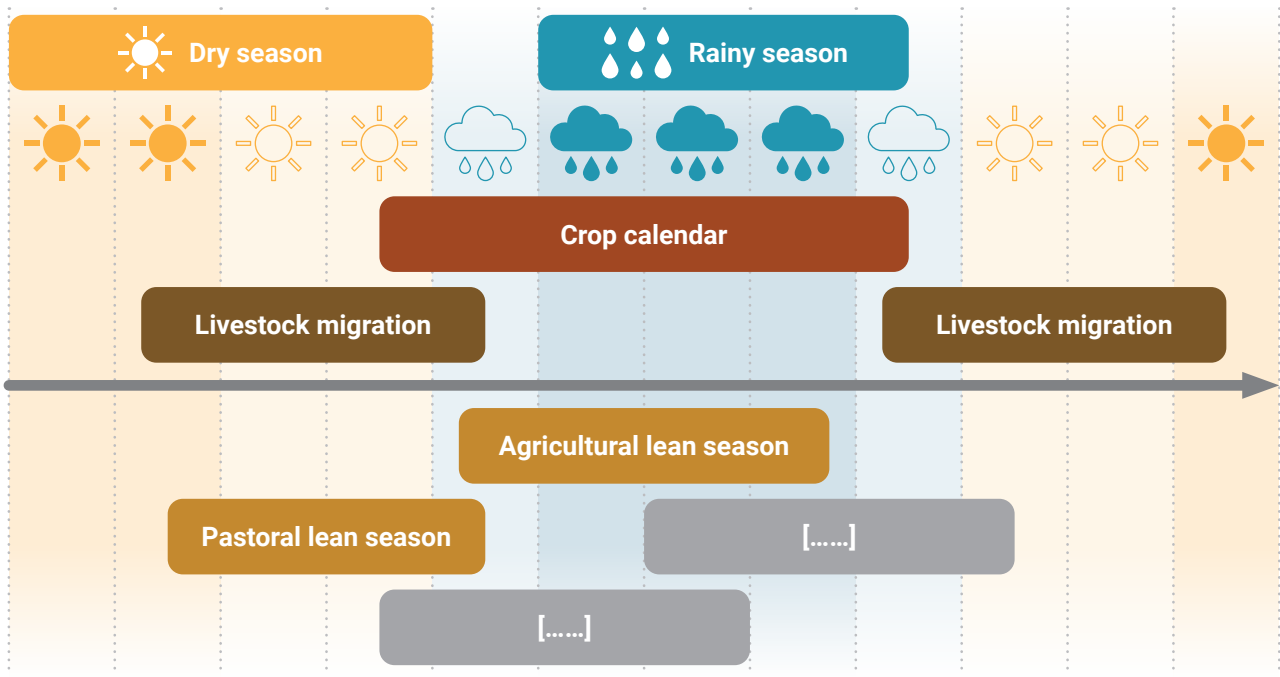
A) People at risk of the slow-onset hazard event

This section looks broadly at who are at risk of the slow-onset hazard event, their locations, levels of exposure, livelihoods, and perceptions on the key stages of the crisis timeline.

It is essential to capture the perspectives of at-risk households regarding these stages and not rely only on the national or subnational standards as people will have varying perceptions of when certain livelihood-related activities should be implemented in a year and this can vary even between neighbouring communities, as the case study in Timor-Leste showcased.

In contrast to sudden-onset disasters, where immediate action is often based on initial risk assessments, the process of understanding and identifying those 'at risk' in slow-onset disasters allows for greater refinement and adaptation during the initial phases. This flexibility stems from the extended timeframe and the continuous influx of information as the slow-onset disaster unfolds. Unlike sudden-onset scenarios where interventions rely heavily on the initial mapping, in slow-onset disasters, there is room for ongoing adjustments and enhancements to the assessment process before the implementation of anticipatory cash transfers. This iterative approach ensures that resources are allocated more effectively to reach those most in need as the situation evolves.

Figure 12. Timeline A: Key livelihood-related phases for the target at-risk group



Source: Author's elaboration.

Analytical questions to develop Timeline A (relevant for workshops and pre-crisis surveys)

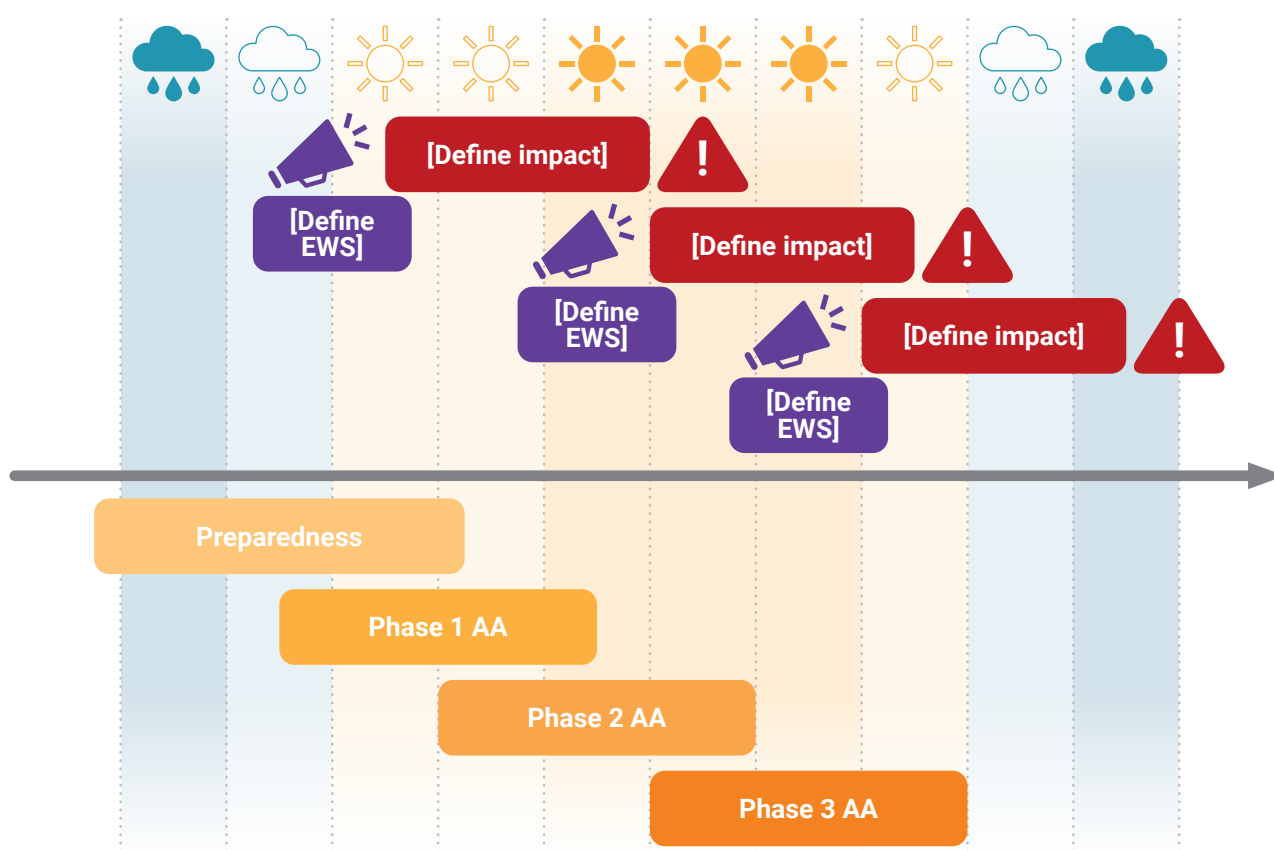
Theme	Analytical questions
Profile: Who are the people at risk?	What are the key livelihood activities in the target locations?
	Who is involved in these activities? Do men and women have different roles or similar work?
Key phases per year	What are the months of the seasonal calendar? The lean season, livestock migration, etc.

B) People's risk perceptions and early warning

This section looks at people's perceptions of the impact of the previous hazard events on their lives and livelihoods, **how "at risk" they consider themselves to be**, how likely they think another hazard event will happen, and how it will impact them.

The section also looks at people's **access to early warning** information; the channel, types and frequency of messages; and whether they would act upon this early warning information and how they would so. Knowing this would enable practitioners to determine the likelihood that people at risk would act upon early warning information and take preparatory measures and, if necessary, develop the appropriate risk communication plans to enhance people's awareness of the risks, their acceptance and trust in the relevant early warning information, and knowledge on mitigation/preparatory options for at-risk households and communities.

Figure 13. Timeline B: Impacts of the hazard event, related early warning system and anticipatory action threshold phases



Source: Author's elaboration.

Analytical questions to develop Timeline B (relevant for workshops and pre-crisis surveys)

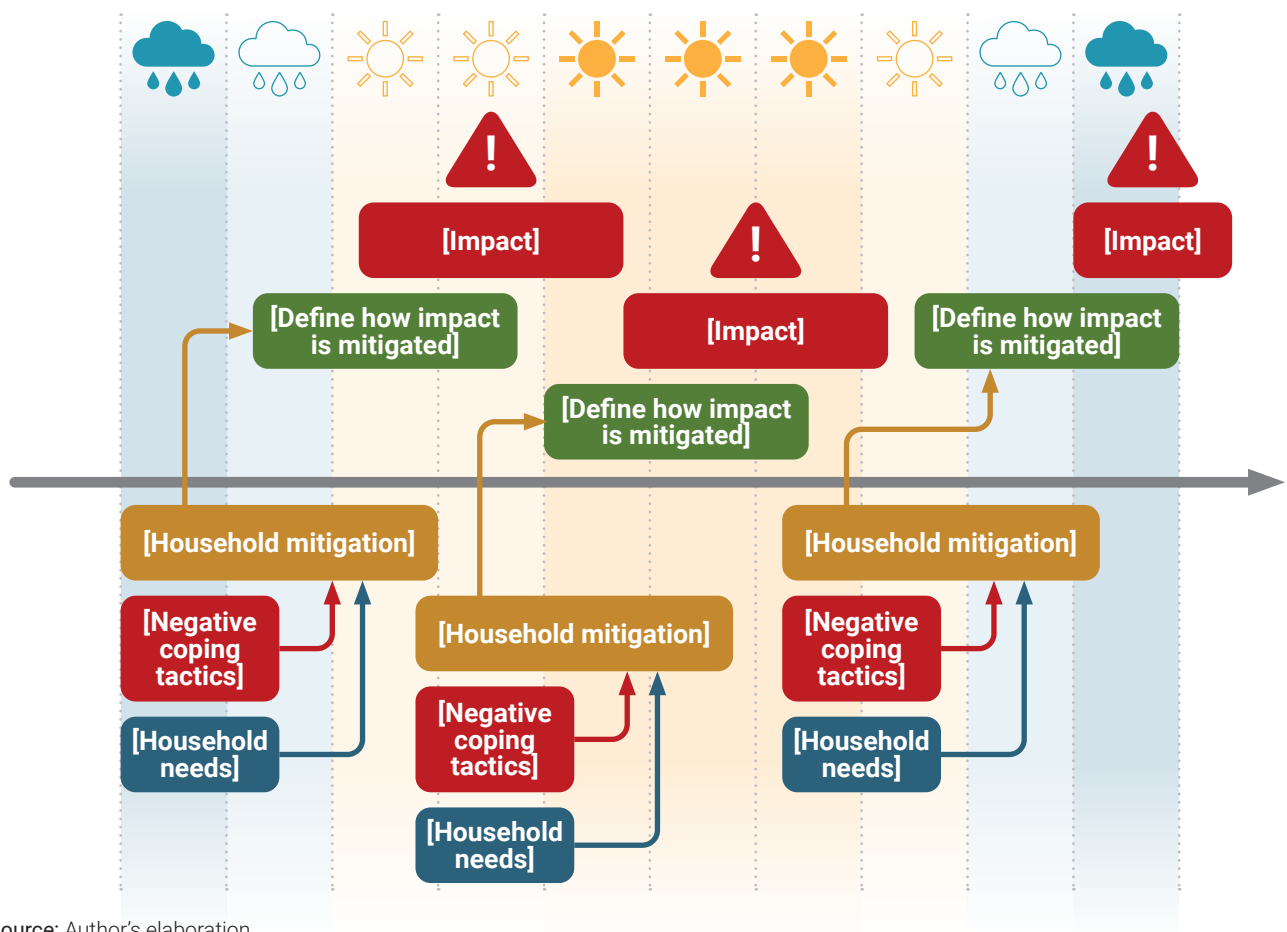
Theme	Analytical questions
Impact of hazard event	How does drought usually impact the at-risk communities, especially in terms of agricultural production (crops and livestock)? Does it affect the availability of food or cash?
	Considering the timeline of droughts in previous years (e.g., from September to March), when does the target group typically feel the impact of drought?
	How does drought affect women, and is it different from its impact on men?
	How does drought affect the elderly, and what actions do they take during drought?
	How does drought affect people with disabilities?
Perceptions on the likelihood of another hazard event happening	Do at-risk households consider another hazard event likely to happen in the near future? What impact do they predict will the hazard have on their lives and livelihoods? Are they generally concerned about another event, such as drought, happening in the next 3 to 6 months?
	How vulnerable do at-risk households perceive themselves?
Early warning information	How do at-risk people become aware that a drought is approaching, and what signs do they observe?
	How are they informed or notified of potential drought conditions?
	What information do they receive, from whom, and how frequently and through which channels? Do men and women prefer different methods or sources of communication?
	Do at-risk households trust the official early warning information they receive? Are they likely to act upon the information and take preparatory measures to mitigate the impact of the hazard event?
Localised traditional knowledge	Have they noticed any changes over time in weather patterns, pests and diseases, soil quality, or other factors?
	If no (or little) standard EW messages are available to the people at risk, how (if) do they 'traditionally' know if dry conditions are likely to continue and lead to drought? (adapt for <i>dzud</i> or other slow onsets)
Information needs	What are the information needs of at-risk households and their preferred channels?
	What are the information needs of the different segments of the community? E.g. men, women, boys and girls
	How should information be accessed especially by those with disabilities? E.g. hearing impaired, blind, or other physical disabilities

C) Household actions, coping strategies and needs

Here, the framework recommends identifying **what** households usually do to mitigate the impact of the hazard event; **when** they take these actions; and **what** negative coping tactics these actions imply (if they do signify negative coping). Based on this information, practitioners can determine how and when people will react to early warnings, as well as their level of knowledge in adequate mitigation, which is relevant when developing risk communication plans, awareness raising, or household-level capacity building activities. It is also recommended to identify the household needs related to these preparatory/mitigation measures as the people perceive them, and the households' long-term concerns regarding the event. Identifying these long-term worries of at-risk households will help practitioners to determine whether people – if supported with AA interventions – will use such support for mitigation options or for other, more urgent needs as they perceive them.

Moreover, as exemplified in the Tuvalu case study, a key aspect that deserves more research in the realm of ACT is remittances. The potential role of remittances in AA remains largely unexplored but holds promise for offering intriguing insights into how diaspora members, who regularly provide financial support to their families back home, could engage in more anticipatory measures. Remittance flows demonstrate greater stability compared to capital flows and often exhibit a countercyclical pattern. This means that remittances tend to increase during economic downturns or in the aftermath of disasters in the migrants' home countries – times when private capital flows typically decrease. Interviewing both remittance senders and recipients could shed light on whether, with early warnings provided confidently, such resources could be pre-emptively redirected before an event occurs, or if funds are already being received in a manner conducive to AA.

Figure 14. Timeline C: Household actions, coping tactics and needs in each anticipatory action phase



Source: Author's elaboration.

Analytical questions to develop Timeline C (relevant for workshops and pre-crisis surveys)

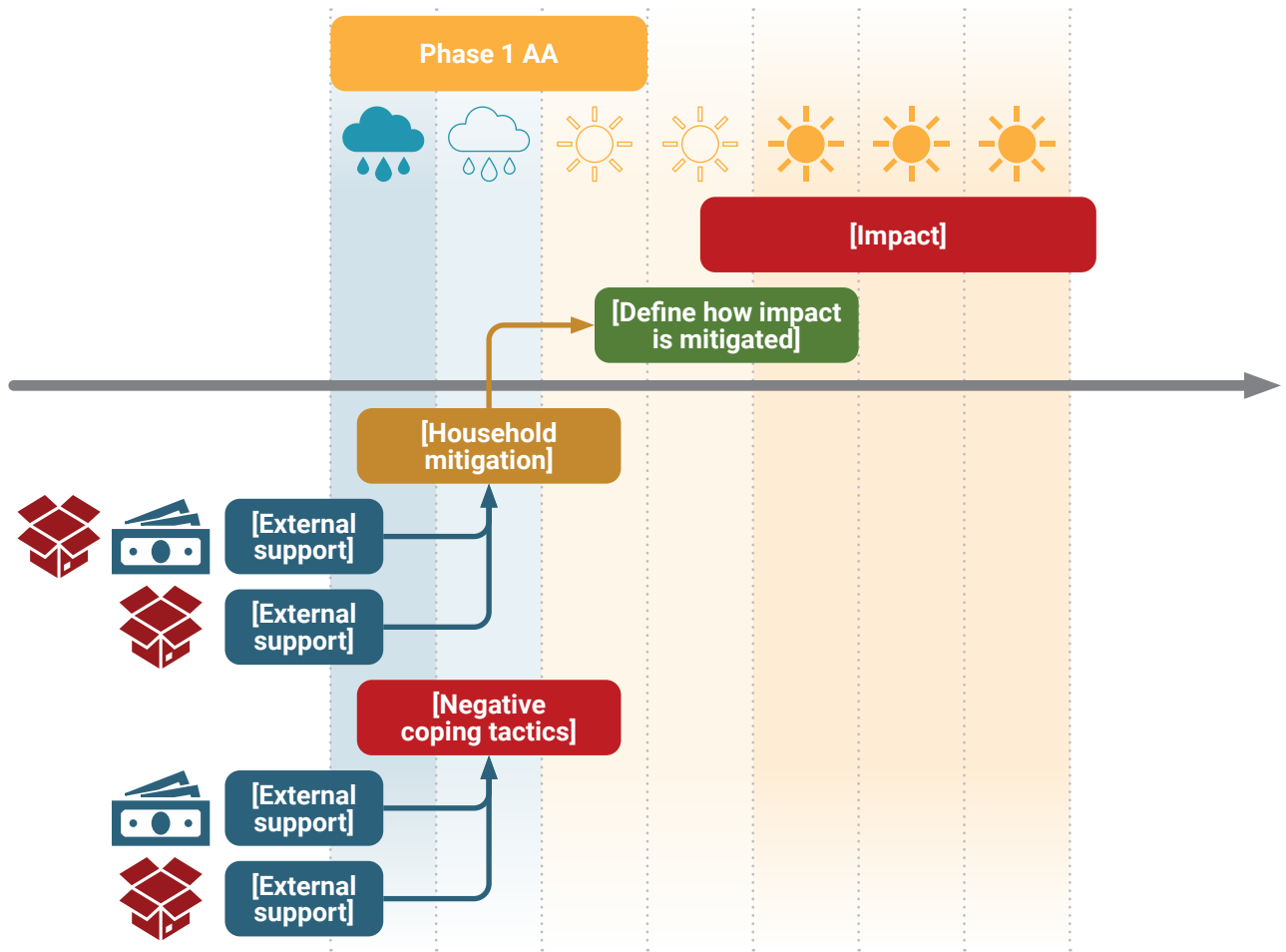
Theme	Analytical questions
Household planning for the hazard event and mitigation options	What preparations (mitigation activities) do people at risk make when they anticipate a slow-onset hazard event (e.g. between April and August)?
	What are the required actions from members of the household especially mothers and fathers or the heads of the household?
Household coping tactics	Do at-risk people have to resort to negative coping tactics when they make preparations for a slow-onset hazard event?
	How do people typically cope with drought (even if they take no mitigation measures)?
	Do individuals within a household (e.g. women, pregnant women, elderly persons, persons with disabilities) cope differently with the hazard? If yes, why and how?
Household needs for mitigation	What resources or support do they need to make these preparations (e.g., between April and August)
Long-term worries	What measures do they plan to take (if any) if they lose their agricultural livelihood?
Remittances	<p>To households receiving remittances (pre-crisis consultations)</p> <ul style="list-style-type: none"> • Have you received remittances based on a warning of a natural hazard or after the impact of a disaster? If yes, how much earlier did you receive it before the impact was felt? • (If yes) How often and how much was the cash assistance provided? • In what ways did the early warning impact your financial planning and resource allocation? • Were there any challenges or barriers in accessing and utilising remittance funds? • Based on your experience, do you have any suggestions for improving the effectiveness of early warning systems in facilitating proactive responses among remittance-receiving households?

D) External support: people's perceptions on type and timing

The findings related to external support should form the basis for the development of national intersectoral frameworks for slow-onset AA. The recommended approach here is intersectoral because the starting point for developing these AA packages should be the results of the pre-crisis consultations, which cut across sectors.

This section looks at what type of support at-risk people would need to prepare for the hazard event and what their perceptions are around cash transfers (expected use, preferred timing, delivery mechanisms, etc.) and in-kind support or service delivery. Also important, particularly for the design of AA interventions with cash transfers is information related to social protection: if at-risk people are part of any ongoing social protection programmes, if they can easily access cash, etc.

Figure 15. Timeline D: External support relevant in each household action or coping tactic in every anticipatory action phase



Source: Author's elaboration.



Analytical questions to develop Timeline D (relevant for workshops and pre-crisis surveys)

Theme	Analytical questions
External support: people's perceptions on type and timing	Does everyone in the household receive regular cash support as part of a government programme? If yes, please name the programme(s).
	How do they receive the cash from the government or other organisations? In their experience, does this type of regular support continue or is enhanced in times of disasters such as drought and <i>Dzud</i> ?
	How easy is it for the target group to access markets, water sources and services? If it is not easy, please specify the reasons.
Household perceptions on external cash support	(Scenario) If they would receive cash support to mitigate the impacts of drought (e.g. between April and August), which month would be the ideal time to receive it and why?
	What actions would they take with the cash to mitigate the impacts on crops, agriculture, or livelihoods (e.g., between April and August)?
	Does someone in the household own a mobile phone and SIM card? If not, please provide the reasons. If only one person – who is that person and who all has access to it? (ie. Male or female head of household and access to information for female members of household).
	Do all members of the household over the age of 18 have national ID cards or voting cards? If not, please explain why some individuals do not have these cards.
	Do members of the household under the age of 18 have a birth certificate? If not, please state why they do not have one.
	Are there any concerns that women or men may have with accessing cash support (distance travel, need to care for children, disabled or elderly family members)?
	Do you face any challenges in accessing ATMs or potential distribution points due to disability or other mobility challenges?

Intersectoral packages for assisting people at risk

As this paper is the result of work conducted in two interagency forums, it makes no recommendations on sector-specific packages for slow-onset AA. The aim of both regional groups is that whatever is agreed at national and subnational levels is developed collectively in an interagency forum, where various actors can plan for slow-onset AA following a common methodology, triggers and phases. It is also important to ensure that AA interventions are people-centred, i.e. based on comprehensive pre-crisis consultations with at-risk communities and local authorities.

Based on the findings of this paper, the general assumption is that most (if not all) the AA interventions should be a combination of cash and in-kind/service delivery, so the questions below are formulated in relation to **Cash+** interventions. **Questions related to the feasibility and appropriateness of cash transfers, delivery mechanisms, market analysis, and other aspects related to designing cash interventions are outside the scope of this framework as they are well documented in existing cash programme guidelines.**

The recommended starting point to formulating Cash+ components in each phase of the AA threshold in an interagency forum is to use the findings from the pre-crisis surveys and the detailed crisis timelines and answer the following questions. The response will inform programmatic assumptions around the use of cash by at-risk households in each phase, and the result of the exercise is stakeholders agreeing on:

Topic	Analytical questions (to develop the harmonised AA package in phase)
<p>Timing of AA interventions</p>	<p>When is the optimal time to give assistance to help households mitigate the impact (e.g. prevent animal deaths, reduce adoption of negative coping mechanisms) of the hazard event? (e.g. in January, February, March, April)?</p> <p>The answers here should be broken down <i>per mitigation measure</i> available to at-risk households.</p> <p>When is the optimal time to give assistance for households to cope with the impact (e.g. recover livestock numbers after animals died, cover basic needs, maintain access to key services) of the hazard event? (e.g. in January, February, March, April)</p> <p>The answers here relate to the activities just before or during the response phase.</p>
<p>Objective of cash transfer (and additional package, if applicable)</p>	<p>What is the intent of the cash assistance? What do agencies/organisations predict beneficiaries will use the cash for (e.g. basic household needs, specific household and individual needs, preparation costs, repaying debts, etc.)?</p> <p>The answers here should be broken down <i>per mitigation measure</i> available to at-risk households.</p> <p>Here the consideration of priorities as perceived by households is essential, as people could decide to use cash transfers to cover other urgent needs (as they perceive them) instead of using it for mitigation.</p> <p>How is the cash provided strengthened by complementary programming for enhanced impact (e.g. disaster-related information; messaging and referral information (Protection from sexual exploitation and abuse (PSEA), GBV, etc); support to functioning of medical facilities)?</p>
<p>Cash transfer value and additional package formulation</p>	<p>What is the applicable methodology to determine the cash transfer value?</p> <ul style="list-style-type: none"> • For instance, if the objective is to help households meet basic and/or specific household needs, the transfer value can be based on the Minimum Expenditure Basket • If the objective of the transfer, for example, is to help households and individuals meet specific costs related to drought preparations (specific items or services), these costs would likely not be included in the MEB, so separate calculations should be made. <p>(Both objectives can be relevant for a phased AA approach to slow-onsets.)</p> <p>It is important to note the distinction in the households' economic situations during the different phases of the AA timeline, and the difference between <i>people at risk</i> vs. <i>people affected</i>.</p>
<p>Coordination</p>	<p>What are the minimum preparedness actions for AA implementing agencies to avoid duplication of efforts and gear towards more coordinated interventions. Through this, delivery mechanisms, monitoring processes and information sharing are also pre agreed amongst AA players for coordinated activities, including communication and advocacy.</p>





**ASIA-PACIFIC
REGIONAL
CASH
WORKING
GROUP**