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► **Harnessing social protection: Enabling climate-resilient livelihoods in Viet Nam**

Water scarcity and income insecurity in the Mekong Basin



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First published 2026.



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ISBN: 9789220431054 (print); 9789220431061 (web PDF)

DOI: <https://doi.org/10.54394/YTMW5487>

Also available in Vietnamese: *Phát huy vai trò của an sinh xã hội: Thúc đẩy sinh kế thích ứng với biến đổi khí hậu tại Việt Nam – Khan hiếm nước và an ninh thu nhập vùng lưu vực sông Mekong*, ISBN 9789220431078 (print); 9789220431085 (web PDF)

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► Acknowledgements

This report was prepared by André Gama, ILO Social Protection Specialist for Asia and the Pacific; Nguyen Hai Dat, ILO National Programme Coordinator for Social Protection in Viet Nam; Nguyen Tu Anh, Director of Water Resources Economics and Management, Water Resources Institute (WRI), Ministry of Agriculture and Environment (MAE) and Luis Hernán Vargas Faulbaum, ILO Consultant.

The authors wish to express their sincere appreciation to Jana Bischler, ILO Social Protection and Climate Change Specialist, and Professor, Dr. Duong Hong Son, WRI's Director General and Dr. Tran Van Tra, WRI's Deputy Director General, for their invaluable technical insights and overall guidance throughout the development and finalization of this report.

The authors also extend their heartfelt thanks to WRI's research and survey teams, whose expertise and commitment greatly contributed to the successful implementation of fieldwork activities. In particular, we acknowledge the contributions of: Hoang Thi Thao, Le Van Linh, Nguyen Thanh Long, Le Thi Thu Ha, Hoang Bich Ngoc, Pham Thi Bao Ha and Nguyen Thi Thom.

The authors would also like to extend their gratitude to the Departments of Natural Resources and Environment (DONRE) and the Departments of Agriculture and Rural Development (DARD) of the four surveyed provinces – Dak Lak, Kon Tum, Ben Tre, and Tra Vinh – for their cooperation, facilitation, and substantive contributions during the research process. The authors further acknowledge the support of the District People's Committees and the Commune People's Committees in these provinces, whose engagement and assistance were essential to conducting fieldwork, community consultations, and data collection.

Special thanks are extended to Ngo Thi Hoang Lam, Tran Thanh Tu, Pham Thi Thanh Huyen, and Vu Thuy Lien for their dedicated and highly professional editing of the report in both English and Vietnamese.

The authors also gratefully acknowledge the generous financial support provided by the Government of Japan, the Department of Foreign Affairs and Trade of the Government of Australia, and the Irish Government's International Development Programme, without which this research would not have been possible.

This report and its analysis are based on the government and administrative structure in Viet Nam as of December 2024. Accordingly, the report does not reflect subsequent changes in ministerial configurations or provincial structures.

► Acronyms

ASP	Adaptive Social Protection
CDI	Combined Drought Index
DONRE	Department of Natural Resources and Environment
DARD	Department of Agriculture and Rural Development
EII	Employment Injury Insurance
ESA	Emergency Social Assistance
FGD	Focus Group Discussion
GIS	Geographic Information System
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ISSA	International Social Security Association
LAOD	Labour Accidents or Occupational Diseases
MAE	Ministry of Agriculture and Environment
MARD	Ministry of Agriculture and Rural Development
MONRE	Ministry of Natural Resources and Environment
MSME	Micro, Small and Medium Enterprises
RSA	Regular Social Assistance
SA	Social Assistance
SHI	Social Health Insurance
SI	Social Insurance
SP	Social Protection
UI	Unemployment Insurance
UNDP	United Nations Development Programme
VMSA	Viet Nam Multi-Sector Assessment
VSS	Viet Nam Social Security
WRI	Water Resources Institute
WRSI	Water Requirement Satisfaction Index

► Executive summary

Climate change and water scarcity in Viet Nam

Viet Nam is among the countries most vulnerable to the impacts of climate change, facing rising temperatures, intensifying extreme weather events, sea-level rise, and growing water scarcity. These environmental pressures are already affecting economic development, degrading ecosystems, and undermining livelihoods across the country—particularly in the Mekong Basin, which is central to national food production and rural employment. Changing rainfall patterns, prolonged droughts, and worsening salinity intrusion have significantly reduced freshwater availability, with disproportionate impacts on poor households, small-scale farmers, women, ethnic minorities, and informal workers who have fewer financial and institutional buffers against climate risks. Without decisive adaptation measures, projections indicate that millions of people may face displacement or long-term livelihood disruptions by mid-century.

The Mekong Delta exemplifies these challenges. Responsible for half of Viet Nam's rice output and the majority of its fish and fruit production, the Delta faces escalating pressures from sea-level rise, upstream hydropower development, salinisation, and severe erosion. These dynamics are driving declines in agricultural productivity, rising food prices, increased poverty, and out-migration. Despite ongoing government reforms – such as the Mekong Delta Plan and Government Resolution No. 120/NQ-CP on the sustainable development of the Mekong Delta in adaptation to climate change – both livelihoods and ecosystems remain increasingly fragile, underscoring the urgency of integrating climate adaptation across policy systems, including social protection.

Social protection in Viet Nam and its role in responding to water scarcity

Viet Nam has built one of the most comprehensive social protection systems in the region, covering social insurance, social assistance, social health insurance, employment policies, access to basic services, and merit-based policies. This system is grounded in key Party Resolutions (15-NQ/TW in 2012 and 42-NQ/TW in 2023) and a strong legal framework spanning health insurance, social insurance, employment, child protection, disability, and elder care laws. Coverage rates have expanded considerably, with 94% of the population enrolled in social health insurance and over 45% of working-age workers covered by social insurance. However, coverage gaps persist – particularly among agricultural and informal workers, who are also those most exposed to climate risks.

As climate change accelerates water scarcity, the role of social protection in strengthening household resilience becomes increasingly essential. Adaptive social protection offers a framework for integrating social protection with disaster risk management and climate adaptation. By addressing structural vulnerabilities, stabilizing incomes during climate-related shocks, and supporting transitions toward more climate-resilient livelihoods, it can help protect workers and communities from both immediate and long-term impacts of climate change.

In the context of water scarcity, social protection can reduce vulnerability by enhancing affordability of basic needs, reducing healthcare costs through social health protection, and extending social insurance to climate-vulnerable workers who are often excluded from contributory schemes. The system can also be leveraged to provide emergency income support during droughts or floods, expand unemployment protection, and integrate survivor, disability, and injury benefits for those affected by extreme weather events. Linking social protection with early warning systems, predefined triggers, and disaster financing mechanisms is critical to ensuring timely and scalable responses.

Moreover, social protection has an important role in supporting long-term adaptation. This includes helping farmers and rural workers diversify or transition to climate-resilient livelihoods through income security, and active labour market policies. It also includes protecting migrant workers and forcibly displaced people who often face new vulnerabilities in destination areas, including lack of access to social protection benefits such as pensions or access to healthcare by ensuring access to non-contributory schemes.

Overall, while Viet Nam's social protection system provides a strong foundation, it is not yet fully leveraged as a core component of the country's climate adaptation strategy. Strengthening its adaptive function-through greater inclusiveness, stronger integration with disaster management, investment in administrative systems, and expanded support to vulnerable workers and regions – will be critical for safeguarding livelihoods in the face of increasing water scarcity.

ILO – WRI surveys

The survey conducted by the ILO and the Water Resources Institute across four provinces representing upstream (Dak Lak, Kon Tum) and downstream (Ben Tre, Tra Vinh) areas of the Mekong Basin reveals high levels of vulnerability to water scarcity and salinity intrusion. Differences in natural conditions – rain-fed agriculture in the Central Highlands and strong dependence on river flow and freshwater sources in the Mekong Delta – have generated varied but converging impacts, all contributing to heightened risks for agricultural livelihoods. The socio-demographic characteristics of the surveyed provinces show higher poverty rates, a large informal workforce, and a high proportion of ethnic minority populations in upstream provinces, while downstream provinces exhibit older populations and higher population density. Together, these factors significantly amplify vulnerability to water-related shocks. Despite being among the provinces most affected by climate change and water scarcity, these areas also exhibit significantly lower social protection coverage rates compared with the national average, leaving many households and workers with limited protection against climate-related livelihood risks.

Survey findings show clear impacts of water scarcity on health, employment, and income. More than 32% of households reported increased illness after recent droughts, accompanied by rising medical expenses and prolonged treatment needs. More than 20% of respondents reported that drought and salinity intrusion negatively affected their livelihoods across all three assessed periods, while many workers struggled to find alternative employment. Women and ethnic minority groups face disproportionate impacts due to the burden of water collection, reduced economic opportunities, and language barriers that hinder their access to adaptation information. Regarding income, 30–40% of households reported significant income declines after each drought period, reflecting limited adaptive capacity and the weakening of traditional livelihoods.

The survey also indicates that communities have adopted various adaptive strategies, and the majority of households (over 80%) perceive that support policies exist, with more than 74% having received some form of assistance. However, the most widely recognized policies relate to livelihoods and water-related interventions – such as irrigation infrastructure, water-storage ponds, and salinity-control dykes and sluice gates – whereas core social protection measures such as social assistance and social insurance remain less visible or have yet to reach the majority of households. Perceived effectiveness scores for social protection policies were only moderate (between 2 and 3), approximately 30% lower than those for water-related policies, reflecting the limited role that social protection currently plays in helping households cope with water scarcity.

Insights from focus group discussions and key informant interviews highlight a major challenge: existing responses remain largely reactive, focused on short-term relief rather than early warning and anticipatory

action. Additional constraints include administrative barriers, weak inter-sectoral coordination, the absence of financial risk-sharing tools (such as climate risk insurance), and limited accessibility for vulnerable groups – all of which hinder the ability of social protection to reduce long-term vulnerability. Overall, the findings show that communities rely far more on water-related measures than on social protection interventions, underscoring the need to fully harness the potential of the social protection system as a key pillar for more effective climate adaptation.

Policy options

The policy options outlined in the study emphasize the need to strengthen Viet Nam's social protection system so it can better support workers and households facing the growing impacts of climate change, particularly water scarcity and related hazards in the Mekong Delta. While Viet Nam has made significant progress in building a comprehensive social protection system, important gaps remain in coverage, adequacy, and responsiveness to large-scale shocks. Addressing these gaps is critical to protect livelihoods, prevent poverty, and strengthen resilience in regions increasingly exposed to climate-related risks.

A first key recommendation is to advance toward a **social protection floor** that guarantees basic income security and access to healthcare throughout the life cycle. This includes expanding pension coverage—especially for older people in agriculture—strengthening disability benefits, reviewing health benefit packages to address the changing disease burden associated with climate change, and introducing child or family benefits. Such measures would help reduce vulnerability among households, support investments in children's human capital, and prevent negative coping strategies during climate shocks.

Second, expanding **social insurance coverage for agricultural and informal workers** in the Mekong Delta is essential for building long-term resilience. Policy options include piloting innovative mechanisms to extend mandatory social insurance through intermediaries such as cooperatives, providing contribution subsidies for vulnerable workers, allowing more flexible contribution schedules that reflect seasonal incomes, and linking agricultural insurance with social protection schemes. Integrating social insurance incentives with broader agricultural and fiscal policies could also support the formalization of the sector while expanding coverage. These measures should be complemented by employment policies, skills development, and support for non-farm entrepreneurship to help workers transition toward more climate-resilient livelihoods.

A third priority is to strengthen the **shock-responsiveness of the social protection system** so that it can effectively respond to climate-related disasters such as droughts, floods, and storms. This requires improving legal frameworks and programme design for emergency social assistance, establishing clear eligibility criteria and trigger mechanisms, and ensuring predictable financing. Emergency assistance should gradually combine in-kind and cash support and be supported by improved operational procedures, stronger coordination across institutions, and greater use of digital systems to accelerate delivery and avoid duplication. Additional measures could include adapting unemployment protection to large-scale shocks, introducing emergency provisions within existing social insurance schemes, and developing national emergency public employment programmes.

Finally, the report recommends further **hazard-specific research** to ensure the social protection system is prepared for the full range of climate change impacts. Beyond water scarcity, emerging risks such as extreme heat may significantly affect workers' health, productivity, and income security. Strengthening links between social protection and occupational safety and health measures, and adapting benefits such as sickness, work injury, and partial unemployment insurance, will be essential. Continued research and policy innovation will help ensure that social protection can play a stronger role in supporting climate resilience and protecting workers and their families in Viet Nam.

1 Introduction

Viet Nam is currently experiencing shifting patterns of water availability, characterised by growing scarcity and significant impacts on the living conditions of vulnerable populations. Coastal regions face challenges stemming from saline intrusion, exacerbated by rising sea levels and amplified tidal movements linked to increasingly severe tropical storms. Concurrently, altered rainfall patterns have led to extended periods of drought adversely affecting local livelihoods, as well as abrupt flooding events triggered by intense, short-duration rainfall, particularly in the Central Highlands. These issues are further intensified by inadequate infrastructure, complicating efforts by local communities to effectively adapt to conditions rapidly evolving due to climate change.

To respond to these challenges, social protection emerges as a critical policy instrument, operating in coordination with complementary policy areas, specifically emphasising the adaptive capacity of workers and vulnerable populations to cope with and adapt to the consequences of water scarcity.

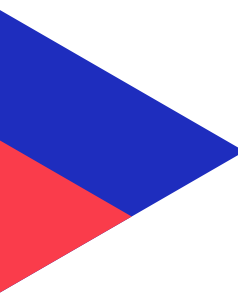
This report explores options for adapting Viet Nam's social protection system so that it can help to build resilience to the livelihood impact of increasing water scarcity due to climate change.

It builds on the existing literature on both climate change and social protection in Viet Nam, as well as International Labour Standards (ILS) and best practices, and combines it with new insights from field work and a following inception report developed jointly by the ILO Country Office for Viet Nam and the Water Research Institute (WRI) of the Ministry of Natural Resources and Environment (MONRE)¹ between September and December 2024, in provinces in the Mekong Basin.

The rest of the report is structured as follows: Chapter 2 presents important background for the analysis, including (i) the implications of climate change for water scarcity in Viet Nam, and the Mekong basin region in particular; (ii) an overview of Viet Nam's social protection system; and (iii) a conceptual framework for the role of social protection in addressing the impacts from water scarcity; Chapter 3 analyses the impact of water scarcity on livelihoods, and the methods communities have been using to adapt to it, based on primary data collected by the WRI; Chapter 4 outlines policy options which can be considered to strengthen the support provided to workers and families whose livelihoods have been affected by climate change, with a strong focus on social protection; Chapter 5 concludes.

It should be noted that this report and its analysis is based on the government and administrative structure in Viet Nam as of December 2024. This means that it does not account for subsequent changes in the configuration of Ministries and provinces. This reflects the fact that the field work for the report was conducted in 2024.

¹ Viet Nam has officially merged the Ministry of Agriculture and Rural Development (MARD) and the Ministry of Natural Resources and Environment (MONRE) into the Ministry of Agriculture and Environment (MAE) from 1 March 2025. The new ministry is mandated to provide unified state management over agriculture, rural development, and natural resources and environment



2 Background

► 2.1 Climate change and water scarcity in Viet Nam

Viet Nam is among the countries most vulnerable to climate change, facing rising temperatures, sea-level rise, and increasingly severe typhoons. These changes are already threatening economic growth and deepening environmental risks (World Bank 2022). Despite this, Viet Nam has committed to a net-zero emissions target by 2050, backed by policies such as the Green Growth Strategy and updated Nationally Determined Contributions (World Bank 2022).

The country's geographic profile, characterized by low-lying coastal and river delta regions, leaves it highly vulnerable to climate impacts. Projections indicate that, without effective adaptation measures, sea-level rise could expose between six to twelve million people to coastal flooding by 2070–2100. Moreover, climate change is poised to exacerbate the impact of river floods, potentially affecting several million individuals annually by 2035–2044. Coupled with a projected average temperature increase of 1–3.4°C by 2080–2090, the rise in extreme heat events threatens human health, livelihoods, and ecosystems alike. In regions such as the Mekong Delta, ongoing sand mining further compounds these issues by accelerating coastal erosion, thereby magnifying the overall vulnerability and underlining the critical need for resilient, forward-looking adaptation strategies. This convergence of disasters and ecosystem degradation, which threatens productive assets in key regions, including the Mekong Delta, Ho Chi Minh City, and industrial and rice production sectors (World Bank 2022), can lead to large scale negative impacts on communities and their livelihoods. Without robust adaptation, sea-level rise and river flooding could displace up to 12 million people by the end of the century, while extreme heat and salinity intrusion are already affecting health, ecosystems, and livelihoods, especially in vulnerable regions like the Mekong Delta (World Bank 2022).

One of the most pressing consequences of climate change in Viet Nam is growing water scarcity. Changing rainfall patterns, prolonged droughts, and salinity intrusion are reducing freshwater availability, threatening rural livelihoods that rely heavily on predictable water supplies (ILO 2019; Tran et al. 2024). Water scarcity undermines water security, a broader concept that includes not only availability but also access, quality, and the capacity of institutions to manage water risks sustainably (Calow, Ludi, and Tucker 2013; Sadoff, Grey, and Borgomeo 2020).

Water insecurity disproportionately affects the poor and vulnerable, especially small-scale farmers who often lack the resources, infrastructure, or adaptive capacity to respond. In the Mekong Delta, limited access to irrigation, transport, and storage has made adaptation particularly difficult for poorer households. In contrast, larger farms have demonstrated more resilience by diversifying their livelihoods and expanding assets (Brown et al. 2018). In Ben Tre Province, water scarcity has already driven a shift away from traditional farming towards alternative livelihoods like aquaculture, non-agricultural work, and livestock (Tran et al. 2024). Gender disparities further compound these challenges. Water scarcity often increases the burden on women, who are primarily responsible for water collection in many rural areas.

The Mekong Basin

The Mekong Delta, a cornerstone of Viet Nam's agriculture, produces 50% of the nation's rice, 95% of rice exports, 60% of fish exports, and 70% of fruit, contributing one-third of national agricultural GDP. However, this vital region is increasingly threatened by climate change. Rising sea levels are driving saltwater intrusion, made worse by typhoons, while floods, droughts, and severe riverbank and coastal erosion are damaging land and livelihoods (World Bank 2022).

Climate stressors are compounded by upstream hydropower developments, particularly in China, which disrupt water flow and quality in Viet Nam. As 95% of the Mekong's water originates outside Viet Nam, managing this transboundary river depends on international cooperation. Yet China and Myanmar's absence from the Mekong River Commission (MRC) complicates coordinated water governance (World Bank 2019; Tran and Cook 2024).

To address these risks, Viet Nam has shifted from intensive rice production to more climate-resilient strategies. The Mekong Delta Plan and Resolution 120 promote integrated approaches, including flood-adapted farming and brackish-water economies. These reforms emerged through extensive collaboration among government bodies, academics, and international donors (Vo et al. 2019).

Despite these efforts, projections are stark. With a one-meter sea-level rise, around 75% of the Delta could be submerged, potentially displacing over 12 million people by 2050 (Minderhoud et al. 2019). Climate-induced salinisation is already reducing arable land, pushing farmers toward aquaculture. Yet this sector also faces growing risks—from storm damage to salinity shifts that drive fish inland or foster disease (Clement et al. 2021).

As productivity falls and food prices rise, low-income households are hit hardest (World Bank 2022). The Mekong Delta, home to over 20 million people, now faces rising poverty and out-migration pressures as environmental degradation deepens.

Ultimately, the Mekong Delta exemplifies how water insecurity and environmental instability can reshape economies and communities and is a very illustrative and representative example of the impacts of climate change on livelihoods not only in Viet Nam, but in the region at large.

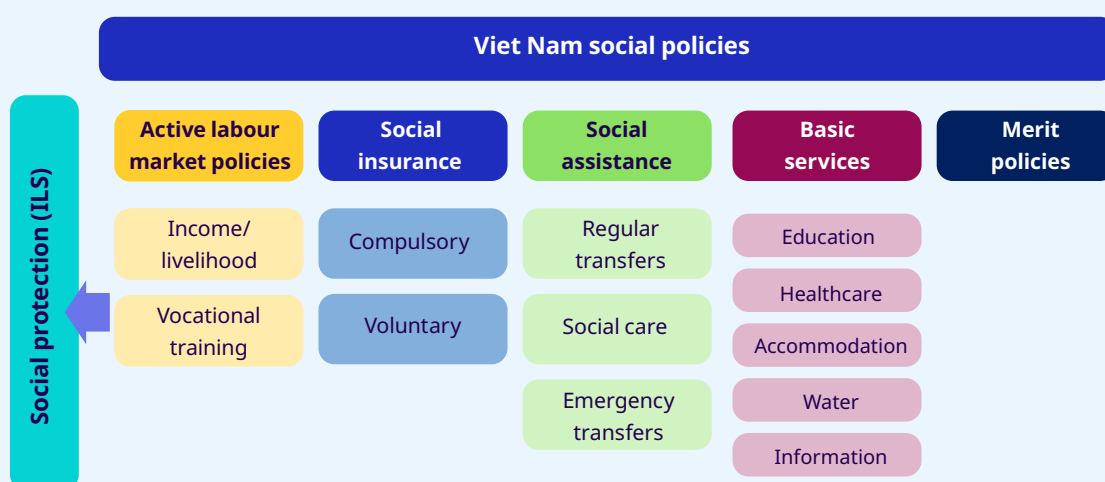


Traditional irrigation system used in rice farming; Viet Nam; April 2011. © ILO / Truong Van Vi.

► 2.2 Social protection in Viet Nam

Viet Nam has a relatively developed social security system which is an integral part of its social policies system. Party Resolution 15-NQ/TW (2012) on Social Policies has defined the system of policies related to all aspects of social security in a unified framework. These include employment, income and poverty reduction policies, social insurance and unemployment insurance policies, social assistance policies as well as policies to ensure access to basic social services, and merit policies. These fields are governed in Viet Nam by a multitude of legal instruments, including the Law on Social Health Insurance, the Law on Social Insurance, the Law on Employment, the Law on the Elderly, the Law on Children, the Law on Persons with Disabilities, the Law on Occupational Safety and Health, Government Decree No. 20 on Social Assistance, and others. In 2023, the Party Resolution 42-NQ-TW has further confirmed the integrated nature of Viet Nam's social protection system.

► Figure 1: Social policies in Viet Nam



Source: Party Resolution 15-NQ/TW (2012) on Social policies.

In terms of funding, the Vietnamese social security system is characterized by a distinct divide between social insurance – funded by workers and employers' contributions– on the one hand, and on the other hand, social assistance for specifically and narrowly defined groups, funded by the State budget.

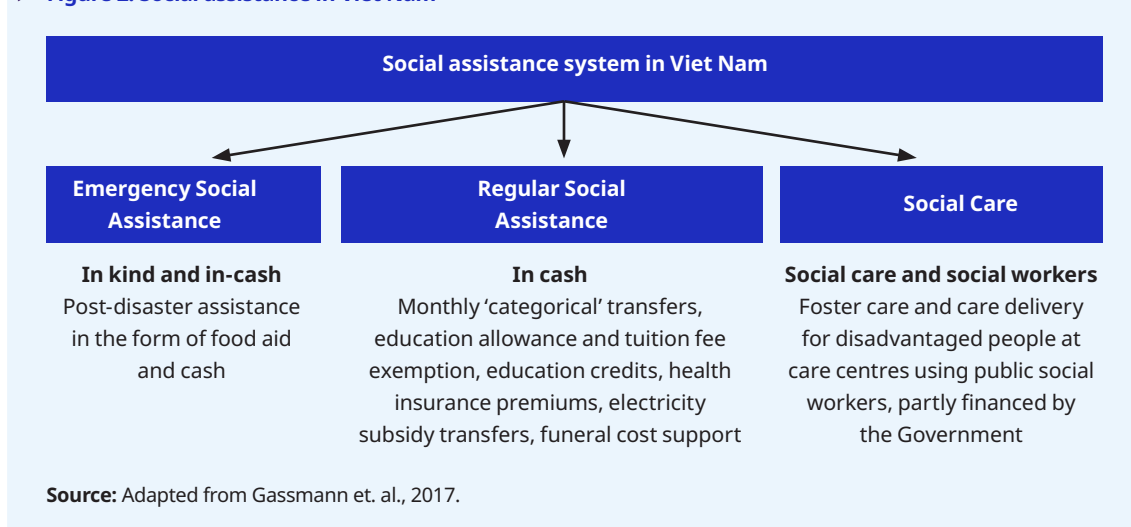
In terms of contingencies, as defined by ILO Social Security (minimum standards) Convention, 1952 (No. 102), the social security system in Viet Nam covers all nine contingencies, including child and family benefits, maternity, unemployment, sickness, work injury, access to healthcare, disability and old-age and survivor benefits.

The social insurance system in Viet Nam has 2 schemes: (i) a compulsory social insurance scheme, which is directed to workers employed with a contract of more than one month which offers benefits for retirement, survivorship, sickness, maternity, labour accidents or occupational diseases (LAOD), and unemployment; and (ii) a voluntary social insurance, for workers aged 15 years or older who are not covered by the compulsory scheme. These individuals can voluntarily join and pay contributions to have

access to benefits for retirement and survivorship (since 2014) and, starting from July 2025, maternity benefits (fully financed by the State budget).

Unlike the social insurance system, which is organized around lifecycle risks, the social assistance system is constructed around a logic of ensuring basic needs for persons in vulnerable circumstances. The social assistance system in Viet Nam consists of three pillars: Regular Social Assistance (RSA); Emergency Social Assistance (ESA); and Social Care.

► **Figure 2: Social assistance in Viet Nam**



Regular Social Assistance comprises the largest component and includes targeted cash support for some benefits, including family/children benefits (for targeted children 0-36 months and orphans), disabilities (for PWDs with 60% loss of working capacity or higher), old age pensions (universal for those 75 and above pension, and targeting specific vulnerable groups within the 60-75 year old cohort); and health insurance (all SA beneficiaries are covered by SHI, fully subsidized by the Government).

Social care services provide care and protection to vulnerable individuals and families and are an important component of social assistance. The social care system is based largely on social protection centres, which provide residential accommodation for vulnerable categories of the population (such as orphans and the mentally disabled).

Emergency Social Assistance is structured around support to households or individuals experiencing a range of idiosyncratic and covariate contingencies, such as food insecurity, housing loss or damage and personal injury. The main form of provision is food aid to poor families before the harvest period and to households affected by covariate or idiosyncratic shocks, with a maximum duration of three months. Eligibility is locally determined and based on household needs. Lump-sum cash transfers are provided to households affected by covariate or idiosyncratic disasters, based on a range of defined contingencies. However, experience with shocks over the past decade have shown emergency social assistance deployment to be a lengthy, administratively heavy process, which often limits its ability to reach its target populations in a speedy and agile manner, undercutting its function as emergency response mechanisms.

Viet Nam's social health protection system centres on a unified national health insurance scheme. Social health insurance in Viet Nam was established in 1992 and is now regarded as the main method of public

financing for health care. The government uses its tax revenues to subsidize vulnerable groups such as members of poor households, persons of ethnic minorities, children under 6, and the elderly above 80.

Viet Nam social protection system coverage has progressed at a fast pace in recent decades, reflecting in some strong coverage numbers for some schemes as highlighted in the table below:

► **Table 1: Key social protection indicators, Viet Nam, 2024**

Scheme	Number of persons covered	Coverage rate	Note
Social Health Insurance (SHI)	95.5 million	94.2%	Share of total population
Social Insurance (SI)	20.1 million	42.70%	Share of working age population
Unemployment Insurance (UI)	16.1 million	34%	Share of working age population
Employment Injury Insurance (EII)	16.1 million	34%	Share of working age population
Social Assistance (SA)	3.8 million	3.8%	Share of total population
Old Age Benefits (Pensions)	5 million	35%	Share of persons above the retirement age

Note: Social Insurance cover: sickness, maternity benefits, pension and survivors. Pension refers to contributory pension and tax-financed social pension for people from 75+.

Sources: Author calculations based on data from Viet Nam Social Insurance and Ministry of Health.

► 2.3 Adapting and leveraging social protection to address water scarcity

Adaptive social protection refers to the ability of social protection systems to build resilience in the face of covariate shocks and crises – those adverse events that affect livelihoods, incomes and wellbeing of large numbers of people at once: pandemics, conflicts, economic crises or extreme weather events (Bowen et al. 2020; ILO 2024). In the context of climate change, adaptive social protection implies the integration of social protection systems with disaster risk management and climate adaptation policy (Davies et al. 2011; Tenzing 2020). While sometimes framed as a specific ‘mechanism’ or intervention (e.g., adaptive social safety nets), adaptive social protection is not only about providing emergency cash support to poor households. Rather it is about ensuring that the entire social protection system – usually made up of a range of contributory and non-contributory schemes, addressing different risks and vulnerabilities all people experience across their life course – are leveraged and adapted in a way in which they can contribute to long-term resilience (ILO 2024). This means social protection systems should be designed to:

- **Address structural vulnerabilities to climate risks ex-ante** by providing at least a social protection floor;

- Protect all affected individuals from the **impacts of climate shocks and disasters** on livelihoods, incomes, and basic living standards;
- Support workers and their families as they adapt, diversify or **transition to more climate-resilient livelihoods**.

This section outlines the role that adaptive social protection can play in the context of water scarcity and insecurity.

2.3.1 Reducing vulnerability: Supporting affordability and human development

Vulnerability is one of the main drivers of climate risk, meaning that socio-economic factors determine how severely people are impacted by climate change (IPCC 2023). For example, older people and children have greater physical sensitivity to lack of food, clean drinking water or water-related diseases. Poorer people, women, persons with disabilities, informal workers or ethnic minorities often have less access to assets and financial resources required to cope with and adapt to adverse impacts of climate change, especially when they are not covered by social protection (ILO 2024). This makes them more vulnerable.

In the context of water scarcity, there are several ways in which social protection can reduce vulnerability:

- **Enhancing access by supporting affordability:** Regular predictable social protection benefits, such as child benefits, old-age pensions, disability benefits or social assistance, increase food security, consumption and savings (Bastagli et al. 2016). Such benefits act as income floors, helping to maintain a basic standard of living which may require increasing expenses for sourcing and treating drinking water (Lowe et al. 2019). In turn, this improves the social determinants of health and adaptive capacities.
- **Reducing rising health care costs through social health protection:** Water scarcity and insecurity can give rise to high disease burdens of water-related diseases such as dengue or diarrheal diseases. Estimates show that climate-related health impacts are the most significant drivers of climate-induced poverty increases in both Latin America and the East Asia and Pacific region (Jafino et al. 2020). Social health protection increases the coping capacity of households by facilitating access to healthcare without hardship and by reducing the need for out-of-pocket health expenditures (ILO 2024). Health benefit packages need to be reviewed and adapted to ensure they cover the services required to prevent and treat water-related health issues.
- **Extending social security to climate-vulnerable workers.** Climate-vulnerable workers are often engaged in informal or unstable forms of employment. This frequently results in their exclusion from contributory social insurance systems-either explicitly, when their employment status does not meet eligibility requirements, or implicitly, when fluctuating and low incomes make contributions financially unattainable. Extending social insurance coverage to these workers is essential for reducing their vulnerability to climate-related shocks. Contributory systems provide income security across a range of life-cycle contingencies (many of which are becoming more likely as a result of climate change), this reducing vulnerability when shocks/risks materialize.

2.3.2 Integration with disaster risk management: Ensuring income security in the face of increased water-related extreme events

Climate change is affecting physical aspects of water security by increasing water scarcity and exposing more people to water-related extreme events, including droughts, floods and storms (IPCC 2023). Such

extreme events can disrupt livelihoods, increase unemployment, food insecurity and poverty, further eroding living standards and resilience.

Social protection systems can provide income security and support for formal and informal workers, as well as vulnerable groups affected by extreme events, protecting livelihoods and gains in human development (ILO 2024). Stabilizing incomes is important to prevent the erosion of long-term adaptive capacity in the context of changing water availability. This can be achieved by adapting, leveraging or expanding various schemes for a comprehensive response:

- **Scaling social assistance:** Options include providing emergency income support/cash benefits to affected populations, temporarily enhancing the adequacy (i.e., increasing the value) of existing life cycle benefits such as social pensions, disability benefits, or other social assistance schemes and enrolling new beneficiaries in social assistance programmes who have been newly made eligible by the shock (i.e. they have been pushed into poverty).
- **Unemployment protection:** Workers may lose their jobs because of an extreme event. Unemployment insurance, or emergency unemployment assistance can provide income security for affected workers, while emergency public employment programmes or wage subsidy/worker retention schemes can provide alternative employment or protect current employment, respectively.
- **Survivor, disability and injury benefits:** Some hazards, particularly storms and floods may result in loss of life, temporary or permanent disability as well injury. Affected workers covered by social security can claim those benefits. Non-contributory options for those not covered could be considered.

Agricultural insurances or other types of climate risk insurances also constitute a way to stabilise incomes, particularly in the agricultural sector for workers and MSMEs (see Box 1).

Integration with disaster risk management and financing

For social protection systems to play an adequate role in providing income security and support during climate-related hazards, they need to be prepared and integrated with national disaster risk management systems. This implies (ILO 2024):

- Legal frameworks that allow for (temporary) adjustments of eligibility criteria, benefit levels and duration when crises occur.
- Pre-defined triggers and scalability protocols.
- Clear roles and responsibilities and standard operation procedures for social protection in the context of disaster risks management.
- Linkages between social protection schemes and disaster risk financing instruments, such as contingency budgets and credit lines, reserve funds or sovereign insurance mechanisms to ensure predictable financing is available.
- Resilient and responsive administrative and management information systems, including for enrolment and payment.

► **Box 1. Agricultural insurances and their complementarity to social protection**

Agricultural insurance (e.g., crop insurances or weather-based index insurances) can help farmers manage the financial risks associated with water scarcity by providing compensation for crop losses due to droughts or irregular rainfall. In turn, this enables them to invest in more resilient practices and technologies, such as water-efficient irrigation or drought-resistant crops.

While agricultural insurances are not traditionally considered as social protection, they are highly complementary and can be designed based on principles of social **solidarity and risk pooling**. This may include:

- **subsidizing agricultural insurance contributions to extend coverage** to small scale farmers unable to afford insurance; or
- **providing guarantees** for financial support to those without insurance from national solidarity funds.

Integrated delivery of social security and agricultural insurance can also help extend social protection to agricultural workers by enhancing attractiveness, relevance and convenience of benefits.

Source: ILO (2023) and ISSA (n.d.)

2.3.3 Integration with climate change adaptation: Facilitating the transition to more resilient livelihoods

Climate change adaptation refers to the broader set of policies, measures, and actions aimed at reducing vulnerability and enhancing the capacity of communities, ecosystems, and economies to cope with and adjust to the impacts of climate change. Adaptation spans sectors such as agriculture, water management, infrastructure, disaster risk reduction, health, and urban planning, and includes both structural measures (e.g., resilient infrastructure, water storage systems) and non-structural measures (e.g., early warning systems, land-use planning, climate-resilient livelihoods).

It is important to distinguish adaptation from **adaptive social protection**, which focuses specifically on how social protection systems—both contributory and non-contributory – can be leveraged or adjusted to support households and workers in managing climate-related risks. While adaptive social protection is part of the adaptation landscape, climate change adaptation is a much broader concept that encompasses systemic, cross-sectoral strategies beyond the social protection domain.

Sea level rise, soil and coastal erosion and saltwater intrusion, as well as recurring droughts, can lead to longer-term increases in water scarcity and thus declines in the viability of traditional livelihood activities, especially those related to agriculture (IPCC 2023).

To reduce vulnerability in the long-run and strengthen resilience, agricultural enterprises and workers may need to adapt, diversify or transition to more climate resilient livelihoods and practices. Social protection can support this process by (ILO 2024):

- Enhancing adaptive capacities and providing/supplementing financial resources required for investments in productive assets, irrigation equipment, tools, drought-resistant seeds, etc.
- Support productive risk-taking and forward-looking planning by providing income security so that people do not need to worry about basic needs while transition their livelihoods.

Thus, priority should be given to developing innovative strategies for extending social protection coverage to agricultural workers – who tend to be among the least covered groups of workers – especially in regions highly exposed to water scarcity. This is important to enhance decent working conditions, resilience and bolster adaptive capacities.

However, social protection by itself is often insufficient to facilitate transitions to more climate-resilient livelihoods. A successful transition usually requires integrated approaches, linking social protection with employment, skills development, and other climate-resilient sectoral policies such as those related to climate-smart agricultural livelihoods (Tenzing 2020).

Supporting migration and relocation

Water scarcity can also act as a push factor or catalyst for migration – both internal and international. In fact, water scarcity is already linked to 10% of the rise in global migration (World Bank 2021). While migration and in some cases, planned relocation, can constitute an effective adaptation strategy there is also a risk of maladaptation: migration or relocation can result in workers and their families moving from one precarious and vulnerable situation to another (Jacobson C. et al 2019; Vinke, K. et al. 2020). In their destination, migrants are often more likely to work in the informal economy with limited access to social security and other decent work conditions. Particularly in cities, they are often living in informal settlements, which tend to be located in places more exposed to climate-related disaster risks and poor housing conditions (Aleksandrova 2020).

Continuing to extend social protection coverage and thus promoting workers' transition from informal to formal employment, particularly in prominent locations of destination for migrants leaving regions exposed to water scarcity is an important strategy to facilitate the transition to resilient livelihoods (ILO 2024). This also involves reducing administrative barriers for accessing social protection benefits when moving from one sub-national administrative unit to another. Non-contributory schemes like child benefits can support basic needs and access to education for children of migrants and social pensions are key to ensure all older persons have income security in old age, which is especially important as many migrants from climate-vulnerable areas are less likely to have had access to a contributory pension.

Integrated approaches are relevant here also: access to social security for those who migrated or were relocated should be complemented with access to tailored employment services and skills development programmes to facilitate access to jobs and more decent and climate-resilient work opportunities. This wide range of benefits provided in both contributory and non-contributory benefits, coupled with the remarkable progress in coverage achieved over the past decade, highlights the strong potential of Viet Nam's social protection system in providing support to workers affected by the negative effects of climate change.

3 Findings from the survey

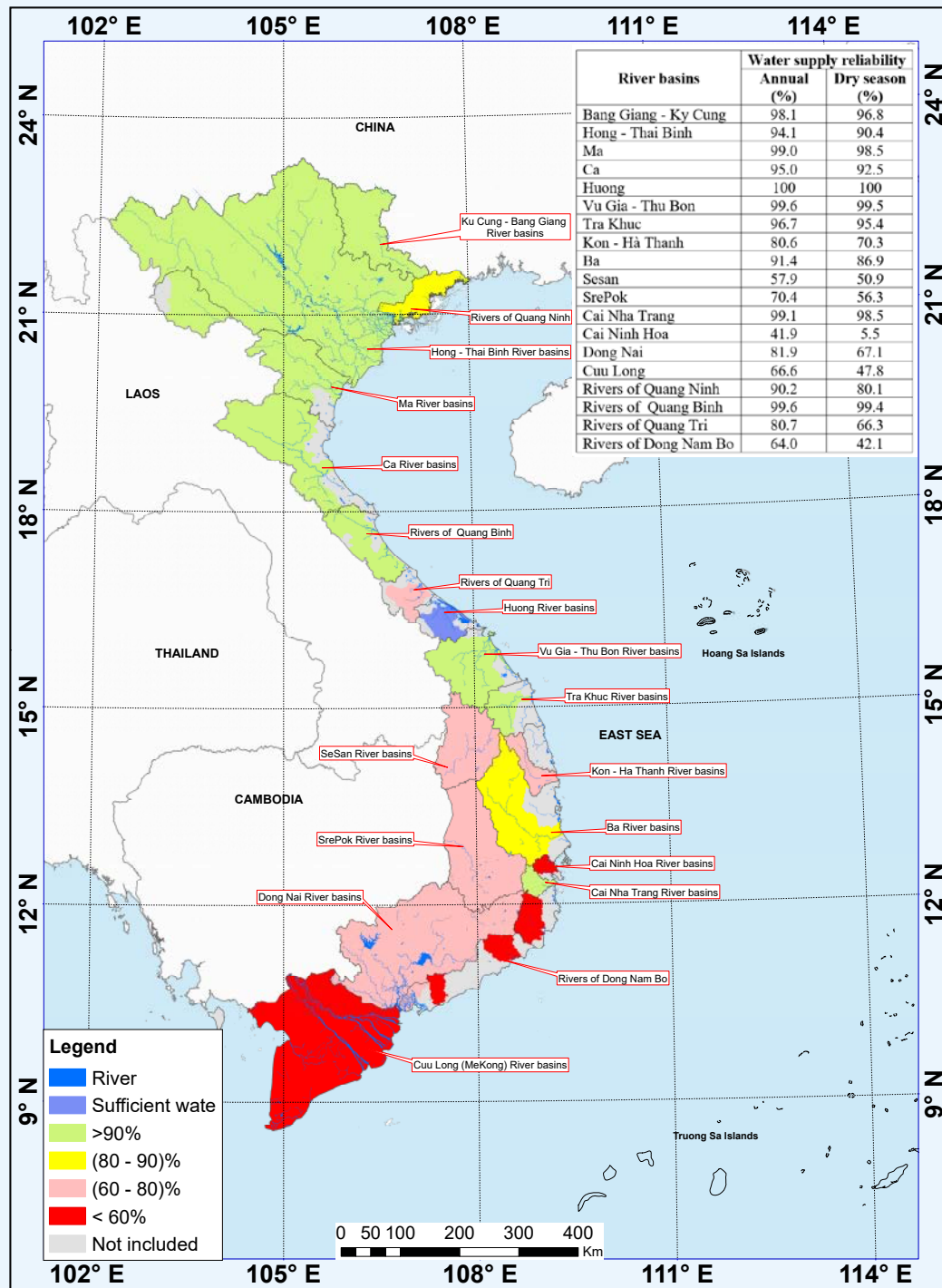
In order to provide deeper insights into the role that social protection is playing in Viet Nam in supporting those most affected by the impacts of climate change – such as increased water scarcity – the ILO partnered with the WRI of MONRE in 2024 in order to develop and implement a survey which focused on the issue at hand, in four provinces around the Mekong Basin: Dak Lak, Kon Tum, Ben Tre and Tra Vinh.

Dak Lak and Kon Tum, located in the upstream regions of the Sesan and Srepok river basins, play a critical role in the headwater dynamics that affects water availability downstream. The area is heavily dependent on rain-fed agriculture, particularly coffee and pepper cultivation, making livelihoods highly sensitive to changes in water supply due to climate variability. Ben Tre and Tra Vinh, situated in the downstream areas near the Mekong River, face significant risks due to their proximity to the sea and dependence on the river's flow. Rising sea levels and reduced upstream flow compound challenges such as salinity intrusion, which directly affect agriculture and access to drinking water.

By integrating these geographically and hydrologically distinct provinces, the study sought to understand the compounded impacts of water shortages on upstream and downstream communities.



Farmer watering vegetable beds; Hung Yen, Viet Nam; March 2017. © ILO / Nguyen Viet Thanh

► Figure 3: Projected water security level in the dry season, Viet Nam, 2050²

Source: Comprehensive Report on Water Resources Planning for the Period 2021-2030, with a Vision to 2050, Ministry of Natural Resources and Environment (2021).

2 Note: The map represents the provinces in Viet Nam as of July to September 2024 when the field work took place.

The survey included a combination of household surveys, focus group discussions, key informant interviews and consultation workshops across the four selected provinces. A more detailed presentation of the methodology used can be found in Annex 1. Summary statistics of the respondents in each province for both the household survey and the focus group discussions can be found in Annex 2.

► 3.1 Socio-economic profile of the Mekong Basin

Viet Nam is characterized by significant demographic diversity and varying degrees of social and economic vulnerability across its provinces. With a total population of approximately 99.14 million as of 2022, demographic structures and social protection coverage indicators reflect considerable regional disparities.

Recent statistics highlight notable contrasts between the Central Highlands provinces (Dak Lak and Kon Tum) and the Mekong Delta provinces (Ben Tre and Tra Vinh). These differences are displayed in the table below:

► **Table 2: Socio-economic indicators in the four selected provinces (most recent year available)**

	Upstream provinces		Downstream provinces	
Indicators	Dak Lak	Kon Tum	Ben Tre	Tra Vinh
Population (people) (2022)	2,851,624	847,163	1,287,408	1,010,365
Population density (people/sq km) (2023)	147.7	61.1	546	436.3
Agriculture contribution to GDP (%) (2023)	38	19	34	29
Proportion of informal workers (%) (2021)	86.8	81.7	85.6	85.8
Female-to-male ratio (2023)	0.98	0.99	1.03	1.02
Life expectancy at birth (years) (2023)	71.9	69.7	75.8	75.2
Poverty rate (%) (2023)	7.1	6.8	2.6	1.2
Dependency ratio (%)	40.8	42.8	39.5	46.6

Source: General Statistics Office (GSO), Statistical Yearbooks by province (most recent available year).

A defining feature of Dak Lak and Kon Tum is their relatively low population density, in comparison with Ben Tre and Tra Vinh, mirroring their roles as agricultural and trade hubs. Among the four provinces of interest – Kon Tum, Dak Lak, Ben Tre, and Tra Vinh – population sizes vary substantially. Dak Lak emerges as the most populous with approximately 2.85 million inhabitants, while Kon Tum is the least populous, hosting around 847 thousand people.

Demographically, the ageing population, defined as individuals aged 60 years and above, constitutes a noteworthy segment, particularly pronounced in Ben Tre (17.44%) and Tra Vinh (15.52%), surpassing the national average of 13.47%. Conversely, Kon Tum exhibits a notably younger demographic structure, with only 7.91% of its population in the older age bracket.

Nonetheless, Dak Lak and Kon Tum contain extensive agricultural areas and large numbers of livestock, reflecting their strong reliance on primary sector activities. While these assets may prove economically advantageous, they also heighten vulnerability to climate-related shocks, such as droughts and floods. For instance, all four provinces rely heavily on agriculture, contributing between 19% and 38% of GDP by 2023, the Mekong Delta provinces tend to sustain stronger performances in both GDP and broader market integration, albeit with higher unemployment rates at times. This is further reflected by the high levels of informality in the labour market, with all of the four provinces registering in 2021 informality rates above 80%, significantly above the national average of 68.5% for the same year (GSO 2023)³.

► 3.2 Access to social protection across the Mekong Basin

The socio-economic characteristics of the four provinces analysed in previous section mirrors to a large extent their outcomes when it comes to social protection. Structural factors such as higher poverty rates, a large share of informal employment, geographic remoteness in some upstream areas, and demographic pressures in downstream provinces shape both the demand for and access to social protection programmes. As a result, despite being among the provinces most affected by climate change and water scarcity, these areas exhibit significantly lower social protection coverage rates compared with the national average, as shown in Table 3.

► **Table 3: Social protection indicators for the four selected provinces, 2022**

	Dak Lak	Kon Tum	Ben Tre	Tra Vinh	Viet Nam
Social Insurance (% of working population)	17.9	12.0	15.3	17.7	38.7
Unemployment Insurance (% of population)	10.6	8.9	12.0	11.8	31.6
Social Health Insurance (% of population)	89.0	89.9	94.0	93.9	93.0
Social Assistance (% of population)	1.2	2.5	0.8	4.2	3.5
Pension (% of 60+ receiving one type of pension)	21.9	21.6	23.4	19.1	34.4

Source: Author calculation based on data from Viet Nam Social Security and Ministry of Health.

3 The General Statistics Office changed its name to National Statistics Office in 2025.

Social protection exhibits varying levels of coverage across these provinces. Social Health Insurance (SHI) coverage is consistently high, ranging between 89.0% in Kon Tum and 94.0% in Ben Tre, surpassing the national average of 93.0% at the time. In contrast, social insurance schemes for the working population remain markedly lower than the national average (38.7%), with the same being true for unemployment insurance coverage. Regarding pension coverage among the old-age population, provincial levels remain consistently below the national average, with the highest province amongst the four (Ben Tre) still registering values more than ten percentage points below the national average of 34.4%.

Lower levels of coverage are particularly evident among workers in agriculture and other forms of informal employment, who often have limited access to contributory schemes such as social insurance. At the same time, many households remain outside the scope of regular social assistance programmes because eligibility criteria tend to focus on the most extreme forms of vulnerability. In provinces where livelihoods depend heavily on climate-sensitive sectors such as agriculture, aquaculture, and fisheries, these gaps in coverage are especially concerning. As a consequence, a large share of households and workers in these areas remain insufficiently protected against climate-related livelihood risks, including income losses associated with droughts, salinity intrusion, floods, and other water-related hazards.

► 3.3 Impact of water scarcity in livelihoods

The increasing frequency and severity of droughts and saltwater intrusion have significant impacts on livelihoods, particularly in rural areas, influencing assets, health conditions, and the daily lives of individuals, households, and communities. These extreme events result in both direct and indirect consequences, with notable effects on health, employment, income, and family relationships.

3.3.1 Health

Among the surveyed households in the four selected provinces, 32.8% reported increased or severe illnesses following the most recent period of drought in 2023 – 2024. In the same period, 16.1% of households reported experience frequent or multiple illnesses.

The share of respondents requiring extended treatment increased steadily from 5.2% in 2015–2016 to 7.2% in 2023–2024, while the proportion incurring higher medical costs grew from 7.5% to 10.1% over the same period. These patterns underscore the growing financial burden on households already facing environmental stressors.

“Because the water in the well is not enough during the day, my family and I had to wait until late at night to collect water for the next day’s irrigation, which caused us physical tiredness and weariness”.

Female respondent in Ea Tar commune, Cu M’gar district, Dak Lak.

Furthermore, the high cost of household water storage facilities in rural settings is also a barrier for many vulnerable populations, preventing them from securing a stable and clean water supply, which can have negative impacts on their health.

Although health insurance coverage in Viet Nam is nearly universal, these developments will likely increase pressure on local health

systems. Addressing the specific health needs of vulnerable groups, particularly women and children, is therefore critical, as is ensuring that climate change related illnesses are covered by social health insurance packages, while out of pocket costs are minimized.

More broadly, robust health and social protection systems are vital for climate change adaptation, requiring institutions to anticipate covariate risks, manage rising expenditures, and adapt their procedures to new social and environmental determinants of health (ILO 2024b).

3.3.2 Employment

Survey data show that job loss linked to saltwater intrusion and water scarcity has remained consistently above 20% in each of the three periods of drought considered. These persistently high levels of job loss following periods of drought underscore the enduring economic challenges faced by households in affected areas. Given the dependence on agriculture and fisheries, these recollections highlight the difficulty of sustaining livelihoods in regions where environmental stressors regularly disrupt productive activities.

“Key districts, including Krong Buk, Ea H’leo, and Buon Don, have reported severe crop damage and reduced agricultural productivity”.

Representative of Ea H’leo district, Dak Lak.

Employment recovery also proved precarious. Between 14 per cent to 17 per cent of recalled difficulties in finding alternative work. This suggests that temporary coping strategies, short-term policy interventions, or market shifts may have provided partial relief but failed to establish lasting resilience. The data point

to ongoing volatility in labour markets exposed to climate-related disruptions, leaving many households without stable alternative income sources.

At the same time, resilience was evident for a substantial proportion of households. Across all three periods, roughly 35 per cent of respondents reported no employment impacts, indicating that some communities have been able to mitigate risks through strategies such as diversifying income sources, investing in technology or infrastructure, or leveraging proximity to stronger economic hubs.

Focus group discussions underlined that, further to these impacts, the absence of gender-sensitive frameworks in policy responses to water scarcity exacerbates the vulnerability of women and girls, by increasing the domestic workload borne by them as they are chiefly responsible for water collection. This aligns with literature findings that emerging economies such as Viet Nam, women, for example, often bear a substantial burden in securing water for domestic use due to inadequate water services, particularly in remote rural areas where often have to travel ever-greater distances to collect water for domestic use (Thanh Tung et al. 2024). This responsibility restricts their educational and economic opportunities, reinforcing gender disparities within their communities and households, in particular when it comes to women’s access to formal jobs and decent work.

Simultaneously, as local water sources dry up, men, by contrast, may migrate to urban areas or shift to off-farm work when agriculture fails, leaving women to manage both the household and any remaining farm duties alone (Thanh Tung et al. 2024). This dynamic intensifies women’s workload and economic insecurity during dry seasons, further increasing gender gaps.

These findings illustrate a complex picture: while some groups have successfully buffered against shocks, others continue to face heightened risks of job loss, unstable recovery, and migration pressures. Without

sustained strategies – such as skills development, economic diversification, infrastructure investment, and adaptive social protection – employment conditions in climate-vulnerable areas are likely to remain fragile as saltwater intrusion and water scarcity intensify under climate change.

Moreover, ethnic minority groups face additional hardships. Participants at the FGDs often mentioned that ethnic minorities mostly rely on agriculture dependent on water availability, making their incomes particularly vulnerable to water scarcity. Language barriers and cultural gaps in policy delivery further compound the problem: consultations noted that top-down water management programmes often fail to effectively engage minority villagers, in part because information is not provided in local languages or attuned to community customs (Quoc Dang 2017). These insights underline the importance of designing adaptive measures that are both gender-sensitive and inclusive of ethnic minorities, ensuring that support reaches those who need it most and is delivered in an appropriate manner.

3.3.3 Income

The household level survey findings on the impacts of saltwater intrusion and water scarcity across the periods 2015–2016, 2019–2020, and 2023–2024 reveal significant challenges and threats to income security of communities. Some indicators suggest gradual improvement, others point to persistent vulnerability, and several highlight a worsening of conditions.

One of the most concerning patterns is the persistent high share of respondents reporting a significant decrease in income after a drought period (between 30 and 40 per cent depending on the period). This reflects limited access to effective adaptation measures. Declining production levels and product quality, in turn, reduce earnings and exacerbate household economic insecurity and vulnerability to future shocks.

“Many reservoirs that had never dried up before were completely empty this dry season. Some reservoirs, which always had sufficient water, now required scraping the bottom to collect every drop for irrigation. The prolonged dry season was followed by continuous and heavy rains, reducing the soil’s ability to absorb water and leading to extensive agricultural losses.”

Representative of Ea H’leo district, Dak Lak.

More positively, only roughly 5 per cent of respondents reported having “no source of income” during these periods, whilst between 17 and 23 per cent reported only “a minor decrease in income” in those periods, suggesting some degree of resilience for a share of households.

Taken together, the survey results highlight a dual reality. On the one hand, a segment of the population has experienced significant income losses, underscoring heightened vulnerability and the erosion of traditional livelihood bases. On the other, the emergence of a resilient group points to adaptive capacity and the potential of targeted interventions. This divergence reflects persistent socio – economic inequality in how communities are able to respond to climate stressors, and a lack of systematic enablers for adaptation.

Moving forward, sustained and inclusive policies will be critical – particularly those that reduce income volatility, support livelihood diversification, and strengthen long-term resilience in areas most affected by salinity intrusion and water scarcity.

“Kon Tum Province is highly vulnerable to drought impacts, given its heavy reliance on rain-fed agriculture and limited water infrastructure. Prolonged periods of water scarcity, particularly between 2015 and 2024, have severely disrupted agricultural production, constrained domestic water supply, and undermined the livelihoods of local communities.”

Representative of People’s Committee of Po Ko commune, Dak To district, Kon Tum province.

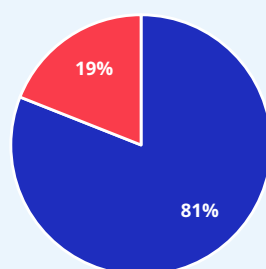
► 3.4 Adaptive strategies to cope with water scarcity

Although water scarcity continues to have a significant impact on livelihoods in the selected provinces, it was indicated by the vast majority of stakeholders that these impacts have been decreasing over the past decade, mostly due to communities and institutions increased capacity to adapt over time.

Over 80 per cent of households surveyed said that there were policies in place to support households during and after periods of drought and water scarcity, and importantly, over 74 per cent of households indicated to have received some kind of support.

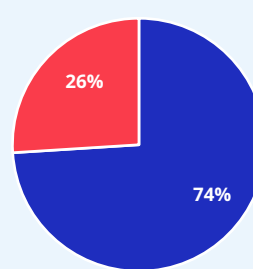
► **Figure 4: The proportion of households reporting on support policies and benefits**

Were policies available to support you during/after a period of drought?



■ Yes ■ No

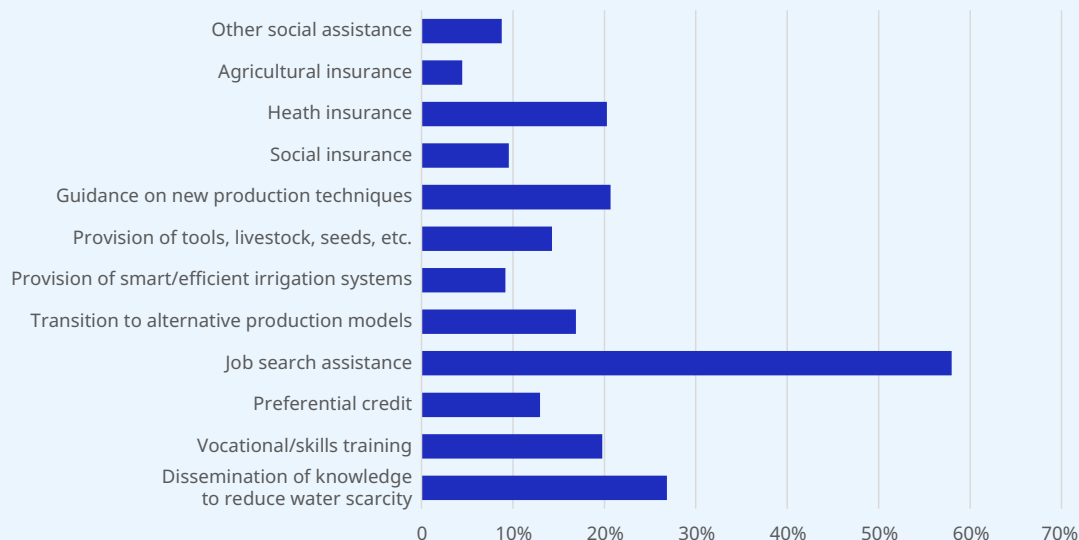
Did you receive any support during/after a drought period?



■ Yes ■ No

Source: ILO and WRI survey in 2024.

When it comes to the availability specific types of support policies, policies that focused on helping workers find new jobs or improve their livelihoods’ resilience, together with health insurance, were seen as the most widely available, while social assistance, agriculture insurance and social insurance were not seen as available by the majority of respondents.

► **Figure 5: Share of households perceiving social policy types as available (%)**

Source: ILO and WRI survey in 2024.

This highlights the reduced role social protection played in providing support to vulnerable workers and households when affected by water scarcity, as well as the potential for a greater role to be played in the future (with all the potential positive effects discussed in section 2.3).

In addition to the availability of policies, the survey also asked households about their opinion about the effectiveness of the available policies (on a scale from 0 to 5, with 5 being the most effective). Stakeholders generally viewed policies as effective in strengthening long-term resilience, though with notable variation across intervention types.

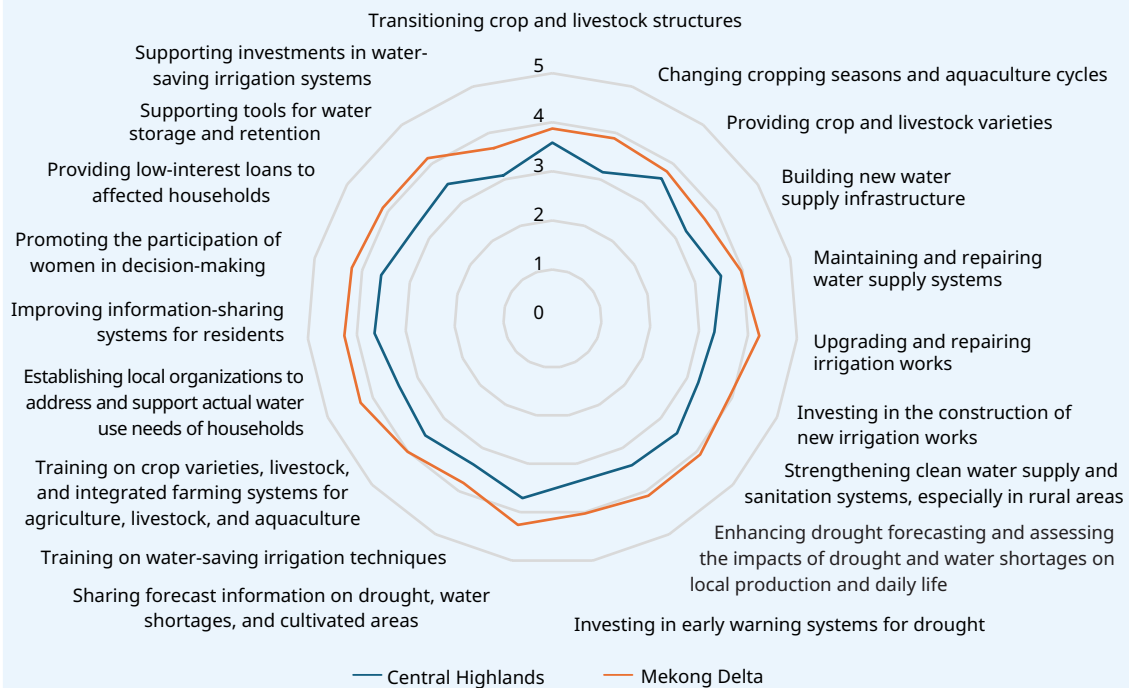
This can be a product of several factors. Firstly, emergency social assistance (in-kind or in cash) might not reach affected households, either due to the ineffectiveness of their implementation, or because water scarcity might not be classified as an emergency which qualifies for such support. Secondly, it is possible that households might not perceive regular cash benefits (such as old age pensions, disability benefits, etc.) as measures that help them adapt to the negative impact of water scarcity given their regular nature. And thirdly, the predominance of affected households working in the agriculture sector, on which coverage rates of social insurance tend to be significantly lower than national averages.



River channel and surrounding landscape in a mountainous area; Sa Pa, Viet Nam; March 2013. © ILO

It is interesting to contrast this perception with households' perception of measures which focused more on water related issues directly, depicted in the figure below:

► **Figure 6: Perceptions about water related policies**



Source: ILO and WRI survey in 2024.

The higher perceived effectiveness of these groups of policies aligns with the fieldwork documentation of several infrastructural and institutional efforts already underway to mitigate water scarcity and salinity intrusion. In drought-prone highland areas, for example, local stakeholder mentioned that investments have been made in local water storage and irrigation solutions. For instance, community-level initiatives in one province have built climate-resilient ponds to harvest rainwater, specifically targeting poor, ethnic minority, and female-headed households to boost their dry-season water supply (UNDP 2016). In the Mekong Delta, authorities have constructed extensive dyke networks and tidal sluice gates to hold back saltwater and protect freshwater ecosystems (Thanh Tung et al. 2024). Such infrastructure, according to the participants, is critical for safeguarding crops and drinking water as sea-level rise and upstream developments exacerbate dry-season salinity. Institutionally, there are signs of progress towards more proactive planning. Local officials spoke of moves to improve integrated water management across provinces – bridging upstream and downstream interests – recognising that unilateral actions are insufficient in a connected hydrological system (UNDP 2016). Importantly, Viet Nam's disaster management reforms are beginning to incorporate drought and salinity into early warning systems and contingency plans, a shift from the historically flood-centric focus. This integrated approach is still emerging, but it represents a move in the right direction towards anticipating water crises rather than reacting belatedly.

Community engagement has also been identified during the local consultations as a cornerstone of building resilience. Grassroots participation in water governance, though previously limited, is gradually improving as awareness grows about the shared nature of water risks. In various localities, mass organisations such as the Women's Union and farmers' groups have started to lead public awareness campaigns on water conservation, hygiene, and climate-adaptive practices. Likewise, agricultural extension programmes are promoting crop diversification and drought-tolerant farming techniques, helping farmers adapt their livelihoods. Such behavioural change initiatives, alongside better communication of water schedules and scarcity alerts, have empowered communities to plan ahead and use water more efficiently. The consultations clearly showed that when communities are involved in decision-making – for instance, being consulted on the siting of a new well or included in a drought task force – the interventions are more locally appropriate and broadly supported.

Despite these positive steps, stakeholders across the provinces identified significant operational inefficiencies and gaps that persist in the current system. Many measures remain reactive rather than anticipatory. Government drought relief often comes in the form of emergency water trucking or rice distribution once villages are already in crisis. While this immediate relief is necessary, it was widely viewed as insufficient for long-term recovery (UNDP 2016). By the time aid arrives, crop losses and income shortfalls have already taken their toll on vulnerable households. Focus group discussions revealed frustrations with delays in support and cumbersome bureaucracy, reflecting geographic disparities in access. Coordination issues were also noted – for example, overlapping responsibilities between agricultural, water, and social protection agencies sometimes lead to duplication or gaps in assistance.

As a result, the linkages between social protection and disaster response remain weak: existing social protection programmes for the poor are not yet agile enough to scale up during drought emergencies or even excessive rainfall, translating into (perceived) lower effectiveness. The situation might be even more dramatic for many ethnic minority and migrant households who may not be registered in official poverty lists or who live outside of mainstream communication networks managed by village leaders and local authorities.

“At present, policy responses to water scarcity are largely reactive in nature, with no dedicated social protection measures or targeted policies specifically designed for vulnerable groups. As a result, “livelihood support for vulnerable populations (poor households, disadvantaged households, single individuals, persons with disabilities, etc.)” is being considered as one of the key measures for preventing and responding to drought and saltwater intrusion in the province in the coming period.”

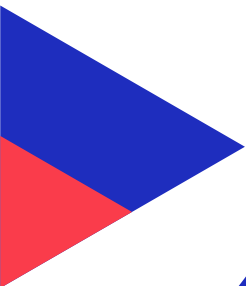
View of a representative of the Department of Agriculture and Rural Development of Ben Tre province.

Additionally, the absence of financial risk-sharing tools (like crop insurance or drought insurance) means that rural families, especially informal rural workers who do not have a membership in local cooperatives, have little cushion against climatic losses. When wells run dry or harvests fail, they frequently resort to high-interest loans or selling assets, driving them deeper into poverty. Government aid, in turn, is financed largely through ad-hoc budget allocations in disaster years, an approach that is neither efficient nor sustainable (UNDP 2016). Such reactive policies are ill-suited to the nature of drought and salinity crises, which require continuity of support and timely intervention before situations become acute.

The results above highlight that households continue to see water focused policies as being significantly more effective in supporting them in adapting to periods of water scarcity, with no policy group scoring below 3 in both the Central Highlands and the Mekong Delta. This contrasts with social policies' perceived effectiveness, of which none had an average perception score above 3. Broadly, among surveyed households, water related policies were seen as being at least 30% more effective than social policies, when it comes to adapt to the negative impacts of water scarcity in livelihoods.

Furthermore, water-related adaptation measures are perceived to be significantly more effective in the Mekong Delta than they are in the Central Highlands.

The results of both the survey and the focus group discussions paint a picture of communities that see social protection as a marginal policy area when it comes to the adaptation to water scarcity. This on the positive side sheds light on communities focus on finding adaption strategies that are pro-active in seeking new or adjusted employment opportunities, and not overlying reliant on "emergency" support, but on the other hand raises the alarm about the fact that, despite its comprehensive scope, the social protection system in Viet Nam is yet to be leveraged to its full potential to contribute to more effective adaptation to the negative impacts of climate change in Viet Nam, in line with what was discussed previously in section 2.3 of this report.



4 Policy options

The analysis in preceding chapters have shown that water scarcity and water-related hazards are a growing problem in Viet Nam, particularly in the Mekong Delta, reversing years of regional progress in income growth, poverty and inequality reduction (World Bank 2025).

While Viet Nam has a relatively developed and comprehensive social protection system, its effectiveness in addressing the impact of water scarcity on livelihoods and the wellbeing of people in the Mekong Delta is currently limited.

This study has identified a few possible reasons for this. First, social protection coverage in the Mekong Delta, including the four provinces targeted by this study, is significantly below the national average. This partly relates to the large proportion of workers in the agricultural sector which is characterized by high levels of informality.

Second, Viet Nam's social protection system is not yet sufficiently prepared to provide universal, adequate and predictable income security during large-scale shocks and emergencies. Social assistance mostly targets extremely vulnerable people, often without the capacity to work like older persons or persons with disabilities. While this is important, there is a clear gap of social assistance provision for households with working age adults. Existing social assistance programmes are also not flexible enough to respond to the dynamic nature of poverty which can be exacerbated by shocks. Likewise, unemployment protection is mostly designed for idiosyncratic job losses faced by those in formal wage employment and is not adapted to handle large-scale income losses, especially among workers in the agricultural sector and the self-employed.

Given the rapidly intensifying impacts of climate change in Viet Nam, action is urgent. This chapter lays out a range of potential policy options that would strengthen the contribution of Viet Nam's social protection system to building resilience in the face of the growing impacts of water scarcity across the Mekong Delta and beyond.

► 4.1 Advancing towards a social protection floor in Viet Nam

A social protection floor means providing at least a basic level of income and access to healthcare for everyone, throughout childhood, working age and old age.

In the provinces covered by this report, pension coverage ranges from 19–23%, well below the national average of 34%. As a result, many older people – especially those in agriculture, where social insurance access is limited – face heightened poverty risks. These risks are compounded by repeated climate shocks and growing water scarcity, which undermine the viability of farming in old age. At the same time, alternatives such as migrating to urban areas or shifting to off-farm work are often less feasible for older

workers, underscoring the urgent need to expand pension coverage, including through social assistance.

While coverage of social health insurance in Mekong Delta provinces is high and comparable to national averages, respondents have highlighted the increased financial burden from health impacts associated with water-related hazards. Out-of-pocket health care expenditures in Viet Nam remain relatively high (ILO 2025a), and risk escalating further as a result of the impacts of climate change on disease burden.

Finally, there are no child or family allowances in Viet Nam which is a major gap in what is otherwise a very comprehensive social protection system (ILO 2025b). In the absence of such predictable basic income support, repeated shocks and growing water scarcity risks rural families leaving no choice but to adopt negative coping strategies such as pulling children out of school, which in turn is reflected in lower skill development that constrains successful livelihood diversification and high-skill off-farm work.

Priority actions to address such challenges can include:

- **Continue the gradual expansion of pension coverage**, building on the successful experience of the New Social Insurance Law (2024), towards progressively achieving universal coverage for all workers above retirement age.
- **Gradually expand coverage of benefits for persons with disabilities**, by considering the potential expansion of existing benefits to persons with mild levels of disabilities
- **Review social health protection benefit packages and consider adjustments, particularly in areas affected by increased climate-related health impacts**: it will be important to review health benefit packages in light of the growing and changing disease burden due to climate change in general and water scarcity in particular, in order to ensure coverage of workers affected by health issues related to climate change
- **Consider the introduction of multi-tiered child/family benefits**. The aim of a child benefit is to provide assistance to families in meeting the costs of raising children, thereby minimizing childhood disadvantage associated with wide disparities in household incomes (ILO 2025b). Child/family benefits can also be key to support adaptive capacities and skills development required to transition to more climate-resilient livelihoods. The introduction of child/family benefits could also help break the vicious cycle of climate shocks and increased vulnerability by providing an income floor to prevent negative coping strategies. The importance of such benefits can be seen in many countries, including Brazil, where the Bolsa Familia played an important role in ensuring rapid recovery in the context of recent floods in the South of the country (Tebaldi 2025). The programme was also found to increase the likelihood of rural households adopting adaptive strategies such as irrigation (Lemos et al, 2016).

► 4.2. Extend social insurance to agricultural workers and other informal workers in the Mekong delta and support the transition to more resilient livelihoods

Social insurance coverage in the Mekong delta is much lower than in the rest of the country, ranging between 12 and 17% for the four provinces studied (compared with 38% nationally). This is partly due to

the high share of employment in agriculture, where only voluntary social insurance coverage is available⁴. The lack of access to social protection exacerbates the climate-vulnerability of workers in the agricultural sector.

In addition to agricultural workers, the extension of social insurance to other workers in the informal economy in the Mekong Delta is equally urgent, in particular to allow the region to contribute to the target of reaching 60% coverage by 2030 set out by Party Resolution No. 28-NQ/TW on Social Insurance (2018). The series of droughts and increasing salination over the past years has contributed to a decline in the share of employment in agriculture: between 2018 and 2022, the share of households engaged in farming fell from 66 to 54 percent (World Bank 2025). While sectoral diversification is important for climate resilience, most non-farm jobs in the region are low-skilled, low-wage and often without social insurance coverage, limiting the benefits from structural transformation for equitable growth and resilience. Reinforcing efforts to extend social insurance coverage would contribute to climate resilience and a just transition in the Mekong Delta and is aligned with the government's social insurance coverage target of 60% of the working-age population.

Policy options in this area can include:

- **Develop and pilot innovative mechanisms to extend mandatory social insurance to agricultural workers:** working with intermediaries such as cooperative or and the Viet Nam Cooperative Alliance (VCA) - recognising VCA's strategic role in representing, coordinating and strengthening the cooperative system nationwide - has shown to be a promising approach in other countries.
- **Provide contributory subsidies:** introducing contributory subsidies, particularly for those who risk permanently losing their livelihood due to sea-level rise or increasing salination can play an important role in making social insurance financially feasible for a large group of workers – building on the recent experience of maternity benefits introduced in the social insurance system by the New Social Insurance Law (2024).
- **Explore more flexible arrangements for the timing of contributions:** providing workers with options to contribute quarterly, semestral or yearly could be important to allow agriculture workers to smooth their income through the months with higher and lower income given the cyclical nature of incomes in agriculture, and their intrinsic volatility.
- **Expand agricultural insurances and explore linkages with social protection:** agricultural insurance, such as crop insurance, is highly complementary to social protection. Some countries have bundled social security benefit packages for agricultural workers including subsidized crop or other weather-index insurances as a way to enhance the attractiveness of schemes. Similar options should also be explored in the Mekong Delta where penetration of agricultural insurances remains low.
- **Link registration of agricultural, forestry and fishery production households with incentives for social insurance enrolment:** This would imply that households that register and participate in mandatory social insurance could benefit from certain incentives aimed at reducing their cost burden and encouraging compliance, such as exemptions or reductions in agricultural land use tax, or allowing value-added tax (VAT) deductions for production inputs and materials. This approach would help connect social security policy with fiscal and production development policies, creating

⁴ Voluntary social insurance coverage is very low, partly because it requires the worker to cover the full contribution amount in the absence of employer contributions or contribution subsidies, making it unaffordable for most informal workers.

dual incentives to both formalise the agricultural sector and expand social insurance coverage. Implementation could follow a gradual roadmap, initially focusing on household heads and subsequently extending coverage to other agricultural workers within the household, ensuring feasibility and alignment with administrative capacity and contributors' ability to pay.

- **Invest in linkages with employment policies to transition livelihoods:** social protection is important to provide income security and should be complemented with skills development and job placement programmes, support for off-farm entrepreneurship to support workers in the Mekong Delta transition to more resilient livelihoods. In this respect, actions that enable an effective implementation of the Employment Law (2025) will be key to ensure that the strengthened framework for skills development and job placements programmes put forth by the law reaches workers in the Mekong Delta, in particular those most affected by climate change.

Agricultural workers are a heterogenous group including both wage-employed workers, self-employed and those working in household or individual businesses. A more detailed study would be required to develop feasible options for extending social insurance coverage to agricultural workers, in line with the new social insurance law. Special attention should also be paid to workers in fisheries who may require specific administrative adaptations (ILO forthcoming).

► 4.3. Strengthen the shock-responsiveness of Viet Nam's social protection system to better respond to water-related hazards, including droughts, floods or storms

This study has also shown that despite the repeated number of severe climate-related disasters, including droughts, typhoons and floods, that have affected Viet Nam in recent years, the extent to which households and workers are reached by social protection support is still limited.

While an emergency social assistance programme and unemployment insurance exist, their coverage and flexibility to respond to large-scale shocks that lead to widespread loss in income or livelihoods is too limited for them to play a role as automatic macroeconomic stabilizers in regions impacted by climate hazards. The existing disaster relief system operates in parallel to the social protection system with very limited coordination.

Given the intensifying impacts of climate change, an urgent objective should be to move from small-scale, discretionary and ad-hoc emergency assistance, mostly delivered through in-kind and food assistance based on time-consuming and complex loss assessments, to a system that can provide predictable income support to workers and families who suffer the loss of income, livelihoods or jobs due to water-related hazards.

Although Government Decree No. 20/2021/ND-CP provides for emergency assistance to support job creation and production development for households whose main breadwinner has died or gone missing, or whose principal means of production have been lost due to natural disasters, fires, epidemics, or

other force majeure events⁵, implementation in practice has been very limited. The main reason is that the provision is broadly framed, lacking specific eligibility criteria to identify beneficiaries, and does not clearly define the types, levels, and duration of support. In addition, there are no detailed implementation guidelines or clear mechanisms for resource allocation. This is largely because the provision is broadly framed, lacks detailed eligibility criteria, does not specify the types, levels, and duration of support available, and is not accompanied by clear operational guidelines or dedicated funding arrangements. It is therefore recommended to undertake a comprehensive assessment to identify the legal, administrative, and financial bottlenecks that have hindered implementation.

Policy options can include:

- **Adjust legal frameworks and programme design to enhance the effectiveness of emergency social assistance:** Rather than discretionary and based on damage assessments, eligibility criteria, benefit values and triggers should be clearly defined by law and underpinned with predictable financing. This may also include options to temporarily top up transfer values of regular social assistance beneficiaries living in the affected areas to accelerate delivery.
- **Develop more specific eligibility criteria.** This would include for instance the provision of clearer definitions of “main labourer”, “principal means of production”, and degree of income loss, along with a defined menu of support measures such as start-up grants, concessional credit, skills training, employment services, or in-kind productive assets. Clear procedures for application, verification, and coordination with employment and livelihood programmes should also be established to ensure that the policy is operational, targeted, and effectively reaches households in genuine need.
- **Move emergency assistance towards a flexible combination of in-kind and cash support:** Emergency assistance policies should be adjusted to move gradually from a purely in-kind approach towards a flexible model that combines in-kind and cash support across different phases, in order to better respond to diverse and evolving needs over time. In the immediate aftermath of a disaster, when markets are disrupted or not yet functioning, in-kind assistance—such as food and essential items—remains appropriate and often essential. However, as markets stabilise and the recovery and livelihood restoration phase begins, cash assistance should be expanded given its flexibility, its ability to respond to the specific needs of individual households, and its effectiveness in supporting local economic recovery, particularly for vulnerable groups with longer-term needs. Regulatory frameworks should therefore be revised and strengthened to clearly institutionalise such a phased approach in the design and implementation of cash-based assistance, ensuring timeliness, relevance, and overall policy effectiveness.
- **Institutionalise the right to receive support in the event of natural disasters through a rights-based approach:** Resolution No. 42-NQ/TW and Resolution No. 68/NQ-CP/2024 have already established the objective of developing a new Social Assistance Law. This legislative initiative provides a critical opportunity to clearly codify entitlements, eligibility criteria, benefit levels, trigger mechanisms, and sustainable financing arrangements, the new law would ensure that disaster-affected individuals and households receive support as a legally guaranteed right rather than on a discretionary or ad hoc basis. To this end, comprehensive preparatory studies and analytical work should be undertaken to inform the drafting process and ensure that the resulting legal framework

5 Article 17, Decree 20/ND-CP/2021.

is coherent, predictable, fiscally sound, and capable of delivering timely and equitable disaster-responsive social assistance

- **Review operational procedures for delivering emergency social assistance:** The implementation of emergency assistance policies in Viet Nam faces several major challenges. First and foremost is the issue of timing: when disasters strike, support is urgently needed, yet the process of verifying damage to housing and assets often requires time-consuming assessments, resulting in delays in payment. In addition, the classification of damage levels (such as minor damage, severe damage, or total destruction) requires rapid and accurate agreement between local authorities and affected households; otherwise, complaints and grievances may arise. Finally, in a context where multiple organisations and individuals are involved in humanitarian relief efforts, the risk of duplication of assistance and difficulties in managing beneficiary lists pose significant challenges, affecting the fairness, transparency, and overall effectiveness of the policy. It is therefore recommended to comprehensively review and improve the operational procedures for delivering emergency social assistance. This should involve assessing current processes to identify legal, administrative, and resource-related bottlenecks, and proposing measures to streamline procedures and developing standard operating procedures from identification, outreach, registration, payments and grievance redress. At the same time, greater use of digital tools, data sharing, and coordination mechanisms among relevant agencies and relief actors should be strengthened to shorten processing time, minimise duplication, and ensure timely, equitable, and transparent support for affected populations:
- **Prepare unemployment protection for covariate shocks:** Viet Nam has a solid unemployment insurance scheme which could be further strengthened for emergency response. For instance, climate risks should be considered when assessing available reserves and emergency rules and triggers may be developed. In addition, options could be identified to extend unemployment assistance to those not covered by unemployment insurance. For example, some countries have disaster unemployment assistance schemes, which are non-contributory unemployment protection programmes that function along-side and in alignment with contributory unemployment insurance and which provide benefits for workers, including agricultural workers, who have lost their jobs due to a disaster. The feasibility of such measures should be studied in more detail for the Vietnamese context in future research.
- **Introducing and operationalising emergency provisions in legal frameworks of existing social insurance schemes:** The automatic advance of benefit payments or instalments can provide immediate liquidity to existing beneficiaries in the aftermath of a disaster and the temporary freezing of contribution payments can provide breathing space to workers and employers, preventing an uptick in informality. While the second measure is already an option under the social insurance law, operational legislation is needed to define triggers and standard operating procedures and enable timely implementation.
- **Consider the development of a national emergency public employment programme:** As an alternative or complement to unemployment insurance and assistance, emergency public employment programmes can provide predictable income support for workers, including seasonal workers suffering from income losses. In India, the Mahatma Gandhi National Rural Employment Guarantee Act and in the Philippines, the Tulong Panghanapbuhay sa Ating Disadvantaged/ Displaced Workers provide post-disaster employment guarantees by offering short-term paid public works after droughts and typhoons, helping workers restore income while rebuilding community

assets. This could be a more effective and comprehensive way to support workers in rebuilding their livelihoods than the current ad-hoc initiatives that follow different natural disasters.

- **Predictable emergency financing options:** providing income support to affected populations, whether through social assistance, unemployment assistance or public employment programmes requires predictable financing. Developing a disaster risk financing strategy and mechanisms would support diversifying disaster financing risks and ensure the rapid availability of financing, to address both smaller and larger climate-related disasters. The disaster risk financing strategy must make explicit reference to the national social protection system and articulate actions to link disaster risk financing instruments to social protection expansions in the case of shocks.
- **Coordination with disaster risk management:** the role of social protection in addressing the impacts of disasters should be clearly articulated also in disaster risk management frameworks and triggers for social protection responses should be aligned with prevailing disaster management response triggers in Viet Nam.

► 4.4. Conduct further hazard-specific research to ensure the social protection system is prepared to address the full range of climate change impacts

While this study focussed mostly on water scarcity and water-related hazards, Viet Nam is extremely vulnerable to a range of other climate-related hazards which threaten the livelihoods, health and income security of workers and their families. Extreme heat, in particular, stands out as a severe and growing challenge. A recent study showed that under all climate scenarios, the number of days exceeding impact-relevant heat stress thresholds will increase substantially, especially in the Red River Delta and the Mekong River Delta (Dzung Nguyen et al, 2025).

Social protection, in close coordination with occupational safety and health (OSH) measures, is essential to address the impact of extreme heat on workers. Where adapted and designed accordingly, partial unemployment insurance can facilitate work stoppages on days with dangerous levels of heat and humidity by compensating employers for workers' wages, allowing them to prioritize their health without suffering financial impacts. Sickness benefits are important to allow workers to recover from heat-related illness, while work injury compensation, disability and survivor benefits can ensure that when prevention has not been enough, severe health impacts do not translate into poverty for workers and their families. Social health protection benefit packages should be reviewed and adapted to cover heat-related impacts, as the Philippines have already done.

However, in practice, many social protection systems, including the one in Viet Nam, are not yet prepared to adequately play this role, leaving workers and employers vulnerable. As such, further research would be vital to anticipate and address the various other dimensions of climate change that can impact workers and families and livelihoods in Viet Nam, and for which social protection could and should play a more prominent role, building on the great achievements of the past decades.

5 Conclusion

The rising frequency and intensity of droughts and saltwater intrusion are exerting substantial impacts on livelihoods in Viet Nam, especially in rural areas in the Mekong Basin. In this context, social protection constitutes a critical policy instrument, working in coordination with complementary measures to enhance the adaptive capacity of workers and vulnerable groups affected by water scarcity.

This report assessed options for adapting Viet Nam's social protection system to strengthen resilience to the livelihood impacts of increasing water scarcity under climate change, based on the analysis of the impact of water scarcity in livelihoods, and existing policy measures that help affected communities cope with them.

The results of the survey conducted jointly by the ILO and the WRI of MONRE underlines significant negative impacts in the health, employment and income of populations in the four selected provinces. Such findings are in line with the literature findings across the globe and stress the need for further strengthened efforts to support affected populations.

The survey also indicates that social protection currently plays a relatively limited role in facilitating adaptation to climate change, particularly water scarcity. Although Viet Nam has built a comprehensive social protection system, many of its broad-reaching programmes contribute only marginally to climate adaptation. Most respondents reported relying primarily on non-social protection policies following periods of drought.

As such, there is a need for continued efforts to ensure that both existing and new social protection programmes can be leveraged to better contribute to climate adaptation.

Viet Nam's solid social protection framework offers several opportunities to enhance adaptive capacity and expand support for populations exposed to increasing water scarcity. These include promoting transitions to formal employment-especially for agricultural workers-within the framework of the new Social Insurance Law (2024). Efforts to make the system more inclusive must also remain central, as groups particularly exposed to climate risks often overlap with vulnerable populations such as persons with disabilities, ethnic minorities, and women. Temporary expansions of social assistance in drought-affected areas could complement these measures, either vertically (increasing benefit levels for existing beneficiaries) or horizontally (broadening eligibility to additional groups). Strengthened coordination between social protection and climate policies is essential to embed adaptive measures into national climate strategies and fully integrate employment and decent work considerations.

Beyond strengthening existing programmes, Viet Nam may also introduce new social protection instruments to complement current efforts. Temporary cash benefits triggered by climate-indexed indicators could provide timely support to communities affected by drought and other climate-related shocks. Public works programmes may also play an important role in restoring livelihoods in areas experiencing major income and job losses. Effective implementation of these measures will require closer cooperation between social protection and water management authorities at both national and subnational levels.

More broadly, adaptive social protection initiatives are most effective when designed and implemented in coordination with wider climate actions, including policies not formally classified as social protection. Agriculture- and weather-based insurance schemes, for example, are vital for improving adaptation capabilities. Measures to increase the uptake of such insurance must be aligned with social protection, particularly social insurance, to avoid unintentionally reducing social insurance coverage, which would undermine efforts to protect workers from both covariate and idiosyncratic risks.

The policy options identified in this report illustrate potential pathways to strengthen the adaptive capacity of Viet Nam's social protection system. However, further in-depth research – conducted in consultation with relevant stakeholders – is required before advancing specific reforms. Additional research could also explore the impacts of climate change beyond water scarcity and expand the geographic focus to other regions, including coastal provinces.

In conclusion, enhancing social and economic resilience to the growing impacts of salinity intrusion and water scarcity requires more proactive, inclusive, and sustainable approaches. Stronger coordination between infrastructural investments – such as water storage, irrigation systems, and salinity barriers – and adaptive social protection measures will help safeguard communities before crises emerge. Policies that take into account the realities of women, ethnic minorities, and other marginalised groups will reduce inequalities and strengthen local adaptive capacities. Through comprehensive collaboration across government agencies, communities, international partners, and the private sector, Viet Nam can continue advancing resilience-building efforts that protect agricultural livelihoods, ensure food security, and promote equitable access to water for all.



Watering vegetables in a household garden; Viet Nam; April 2011. © ILO / Truong Van Vi

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► Annex 1: Survey toolkit

Focus group discussion for commune staff

1. Participant: (10-15 people).

At each commune, organize one focused group discussion with participants: Representatives of the People's Committee, People's Council, Ethnic Minorities, Social and Cultural Issues, Agriculture and Environment, Statistics, Commune Health station, Women's Union, Farmers' Union, Youth Union, Village leaders, etc.

2. Location: Commune People's Committee Hall.

3. Estimated time: A minimum period of 1.5 hours/session.

4. Requirements:

- Record all group discussion content and have detailed meeting minutes attached.
- Ensure enough time to get acquainted, introduce discussion goals and create an intimate atmosphere before discussing.

5. Steps to conduct discussion:

- Introduce the objectives and content to be discussed, creating an intimate and open atmosphere.
- Introduce participants, draw a seating chart and record personal information of delegates.
- Conduct discussions, debates and collect information.

6. Objectives to be achieved:

- Overview of the commune's socio-economic conditions
- The situation and impacts of water scarcity on livelihoods and income of local people;
- Current existing social protection system and its effectiveness to respond to water scarcity (difficulties in the policy implementation process, policy gaps that have not yet been intervened for each specific group and issues that need support/intervention in the future: income/livelihood, health care, and other specific supports...)
- Recommendations on adaptive social protection policies to enhance water scarcity response

Content	Requested method	Results to achieve
I. General information (15 minutes)		
► Population and demographic (number of households, children, women, elderly...) ► Ethnic minorities (divided by ethnic group and economic status) ► The most vulnerable group (number of poor and near-poor households, number of regular social assistance beneficiaries) ► Main economic activity/main livelihood of the population and economic status ► Main agricultural activities (cultivated area, aquaculture area, number of livestock, perennial crops...), number of workers involved)	General introduction, Listen to reports, analyze and describe	General overview of the research's target audience in the survey area Collect: Report on Socio-economic situation in 2023 and the first 6 months of 2024
II. Water scarcity and impacts (15 minutes)		
1. Water for agricultural activities ► Water resources, irrigation and canal system ► Stages of water shortage in production during the year 2. Water for living ► Water resources, clean water, tap water system ► Quality of tap water (if available) ► Population accessing to clean water ► Stages of water shortage during the year 3. Remind history: the periods of extreme water shortage (the periods of 2015-2016, 2018-2019, 2021-2022, 2023-2024). Choose the period with the most negative impacts: ► What happens? Reasons of the shortage	General introduction, Listen to reports, analyze and describe	General overview of the research's target audience in the survey area Collect: report on drought, saline intrusion (if available)

► Impacts on production: • Affected production area, number of affected livestock (estimated, %); estimate of total damage (if any). • How people deal with the situation (digging wells, finding additional water sources, converting production...). • Ask the village leaders for 1-2 typical cases (if any) to interview at the household.		
► Impacts on living: • Number of people/households lacking clean water (estimated), number of children and women affected (estimated) • Problems arising from lack of clean water: increased costs (buying clean water for use), unsanitary conditions, diseases... In which, what happened to the most vulnerable groups (poor/ near poor households, households with women/children/elderly...) • How people deal with the situation (digging wells, finding additional water sources, buying bottled water...) • Ask the village leaders for 1-2 typical cases (if any) to interview at the household.		
III. Policies, programs, and projects related to social protection		
1. Employment and vocational training (15 minutes) Note: Should focus on Livelihood transformation, production model transformation, providing tools, plants, animals, seeds, production support to respond to water scarcity.	Listen to reports, list, describe General discussion, analysis, evaluation and comment	Overview of programs/policies Collect: report/data on implementation

1.1. Overview of policies, programs: livelihood transformation, production model transformation, vocational training, loans, production development, providing tools, plants, animals, seeds, production support, public employment... 1.2. The process of organizing and implementing specific programs and policies? ► Organizational system and implementation coordination mechanism ► Beneficiaries (not yet targeting to people affected by water scarcity) ► Level of support/assistance and organizational resources for implementation 1.3. Results of implementing those programs/policies? (Overview of beneficiaries, coverage level according to policies) 1.4. Evaluate relevant beneficiaries' opportunities to access policies? 1.5. Difficulties, shortcomings and limitations in policy design and in practical organization and implementation at the local level 1.6. Suggestions and recommendations on policy design, organization and implementation.		
2. Policies related to social insurance, unemployment insurance, health insurance, agricultural insurance (15 minutes) Note: Should focus on agriculture insurance, the remaining have not yet really impacted 2.1. Overview of policies: Coverage? Which groups should be added? What is the current level of support? What object does it represent? How to get people to	Listen to reports, list, describe General discussion, analysis, evaluation and comment	Overview of programs/policies Collect: Report/data on implementation

participate (main regulations are contribution – benefit, mandatory participation) 2.2. Overview of the process of organizing and implementing specific programs and policies? ► Organizational system and implementation coordination mechanism ► Network of facilities 2.3. Results of implementing those programs/policies? (Overview of beneficiaries, coverage level, according to policies) 2.4. Evaluate relevant beneficiaries' opportunities to access policies? 2.5. Some difficulties, shortcomings and limitations in policy design and in practical organization and implementation at the local level 2.6. Suggestions and recommendations on policy design, organization and implementation.		
3. Social assistance and poverty reduction policies (15 minutes) Note: should focus on hunger relief programs, livelihood support, food for poor households 3.1. Overview of policies, programs: Coverage? Which groups should be added? What is the current level of support? What object does it represent? How to get people to participate 3.2. Overview of the process of organizing and implementing specific programs and policies ► Organizational system and implementation coordination mechanism	Listen to reports, list, describe General discussion, analysis, evaluation and comment	Overview of programs/policies Collect: Report/data on implementation

► Policy beneficiary conditions and procedures for determining groups ► Level of support/assistance and organizational resources for implementation 3.3. Results of implementing those programs/policies? (Overview of beneficiaries and coverage level according to policies.) 3.4. Evaluate relevant beneficiaries' opportunities to access policies? 3.5. Some difficulties, shortcomings and limitations in policy design and in practical organization and implementation at the local level 3.6. Suggestions and recommendations on policy design, organization and implementation		
4. Policies to support and promote accessibility to clean water (15 minutes) 4.1. Overview of policies, programs to promoting access opportunities clean water 4.2. The process of organizing and implementing programs and policies? ► Organizational system and implementation coordination mechanism ► Policy beneficiaries ► Level of support/assistance and organizational resources for implementation 4.3. Results of implementing those programs/policies? (Overview of beneficiaries, coverage level, according to policies) 4.4. Some difficulties and problems in policy and in organizational and implementation practices! 4.5. Suggestions and recommendations on policy design and implementation.	Listen to reports, list, describe General discussion, analysis, evaluation and comment	Overview of programs/policies Collect: Report/data on implementation

Focus group discussion guide

Thank the participants for accepting the invitation. As a round of introduction, ask them to go around the table stating their names.

Before beginning the interview, the interviewer briefly explains the objective of the research in your own words and confirm that all participants understand. Read out loud the contents of the information and consent sheet. Hand over the information and consent sheet in two copies to each participant, allow enough time to read it and consider their consent, and then record their informed consent on two written copies. If the participant prefers, informed consent can be audio-recorded instead of written. Fill in the demographic information sheet before the interview.

Invite the leader of the commune to introduce the general information of the areas. Continue with question about the water scarcity. They might have not explicit data but interviewer could ask them make estimation. The estimates should be accepted among all participants.

For each part of social protection, go in detail with the existing programs. Ask detailed and specific questions about each field to the specialist in charge of that field. Do not let the leader of the commune answer all questions.

Declaration of consent^{6*}

For participation in a focus group discussion for the research study.

“Building resilience in Viet Nam – The role of adaptive social protection in addressing water scarcity”

To be filled out and signed in 2 copies – one of which to be kept by the respondent

- ☐ By checking this box, I confirm that I have been informed about the purpose and nature of the study. I have read the written information provided on the study. I have had the opportunity to ask questions about the study. I have been able to think about my participation in the study and understand that participation is completely voluntary. I understand that I have the right to withdraw my consent and quit from the study at any time without consequences or needing to give a reason.
- ☐ By checking this box, I agree to participate in the study as confirmed by the signature below.
- ☐ By checking this box, I agree that my interview may be recorded as confirmed by the signature below.
- ☐ By checking this box, I confirm that I understand that I am obliged to keep the information heard in this discussion confidential. I will not disclose any information heard from participants in this focus group discussion to any third party.

Name:

Signature:

Date:

The undersigned, responsible researcher, declares that the said person has been informed about the study mentioned above.

Name:

Signature:

Date:

Interview code (to be completed by interviewer):

^{6*} This form is intended for research with adults who are legally and mentally competent. In this study, consent must be obtained directly from the adult.

Form for collecting socio-demographic data sheet for focus group discussions

Name of interviewer:

Name of assistant/note-taker:

Location (province, district, commune):

Date and time:

FGD code: __ - FGD - __ - __

Number of invited participants:

Number of participants in discussion:

#	Age	Sex	Ethnicity	Highest level of education	Current Position	Working years at the position
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Household survey

Interviewer: Before starting the interview, introduce yourself and briefly explain the objective of the study. Ask for permission to participate in the interview and record the interviewer's personal information. Carry out commitments on information security and information use purposes.

I. General information

1.1. Province: District: Commune:

1.2. Sex: ☐ Male ☐ Female 1.3. Age:

1.4. Education level: 1.5. Ethnicity:

1.6. Classification of household: Poor ☐ Near poor ☐ Non poor ☐

1.7. Number of members in a household: persons

In which, women: Children (<16 yr. old): Elderly (>60 yr. old):

1.8. Accessing to social protection

1	Vocational training	
2	Preferential credit	
3	Providing tools, animals, seeds...	
4	Health insurance	
5	Compulsory social insurance	
6	Voluntary social insurance	

7	Cash transfer	
8	Support in education	
9	Support in health and nutrition	
10	Support in housing	
11	Support in clean water and sanitary	
12	Support in accessing information	

1.9. Main livelihood/economic activity of Households:

1.10. Total income of the household in 2023 (estimate): VND

1.11. Agricultural activities

1	Aquaculture area (m2)	
2	Perennial plant area (m2)	
3	Annual plant area (m2)	

4	Number of cattle (unit)	
5	Number of poultry (unit)	
6	Others:	

1.12. Water resources for domestic use

1	River/stream/pond (%)	
2	Rainwater (%)	
3	Protected dug well/stream water (%)	
4	Drilled water (%)	
5	Tap water, buying water (%)	

1.13. Water resources for agriculture

1	River/stream (%)	
2	Well (%)	
3	Tank, reservoir (%)	
4	Irrigation system (%)	
5	Tap water (%)	

II. Water scarcity

Period	2023-2024	The most extreme period
Description	Income decrease (estimate):%	Income decrease (estimate):%
	Reason: ☐ prolonged drought ☐ water source decreased ☐ rainfall decreased ☐ ground water decreased Others:	Reason: ☐ prolonged drought ☐ water source decreased ☐ rainfall decreased ☐ ground water decreased Others:
	Hazards (drought, saline intrusion...):	Hazards (drought, saline intrusion...):
Impact	Domestic uses: ► Reduce the amount of clean water for daily life:% ► Increase the time spent fetching water:hours ► Issues in hygiene and sanitation, specify: ► Issues in nutrition, specify: ► Issues in health, specify:	Domestic uses: ► Reduce the amount of clean water for daily life:% ► Increase the time spent fetching water:hours ► Issues in hygiene and sanitation, specify: ► Issues in nutrition, specify: ► Issues in health, specify:
	Agriculture activities: ► Impacted aquaculture areas:% ► Impacted Perennial plant area:% ► Impacted Annual plant area:% ► Impacted Livestock:%	Agriculture activities: ► Impacted aquaculture areas:% ► Impacted Perennial plant area:% ► Impacted Annual plant area:% ► Impacted Livestock:%
	Spending increase (estimate):% Income decrease (estimate):%	Spending increase (estimate):% Income decrease (estimate):%

Period	2023-2024	The most extreme period
Response	Domestic uses: ☐ Save water ☐ Dig well ☐ Buy/ask for water ☐ Store water Others: Production: ☐ Find other water sources ☐ Improve irrigation systems ☐ Apply water-saving models ☐ Transform production model Others:.....	Domestic uses: ☐ Save water ☐ Dig well ☐ Buy/ask for water ☐ Store water Others: Production: ☐ Find other water sources ☐ Improve irrigation systems ☐ Apply water-saving models ☐ Transform production model Others:.....
Support from Social protection system	Domestic uses: ► Hunger relief/ food support:/(kg/person) ► Cash transfer:..... (VDN/person) ► Water tank/reservoir:..... (item/hh) ► Other, specify..... Production: ► Support for drought damage: ► Support irrigation system improvement: Guide to new production techniques: ► Skills training programs related to water saving technologies and agricultural practices: ► Support production model transformation: ► Support for materials, seeds, breeds, plants: ► Receive forecasting information on drought and potential impacts - Others: What kind of support you would like to receive in the future but have not received yet?	Domestic uses: ► Hunger relief/ food support:/(kg/person) ► Cash transfer:..... (VDN/person) ► Water tank/reservoir:..... (item/hh) ► Other, specify..... Production: ► Support for drought damage: ► Support irrigation system improvement: Guide to new production techniques: ► Skills training programs related to water saving technologies and agricultural practices: ► Support production model transformation: ► Support for materials, seeds, breeds, plants: ► Receive forecasting information on drought and potential impacts - Others: What kind of support you would like to receive in the future but have not received yet?

Household survey guide

Education level:

1. Not graduated from primary school
2. Graduated from primary school
3. Graduated from Junior high school
4. Graduated from high school
5. Elementary
6. Secondary
7. College, university

Children: Individuals who are less than 16 years of age

Elderly: Individuals who age 60 years of age and older

Ethnicity code

Code	Name	Other names
01	Kinh	Việt
02	Tày	Thổ, Ngạn, Phén, Thù Lao, Pa Dí, Tày Khao
03	Thái	Tày Đăm, Tày Mười, Tày Thanh, Mán Thanh, Hàng Bông, Tày Mường, Pa Thay, Thổ Đà Bắc
04	Hoa	Hán, Triều Châu, Phúc Kiến, Quảng Đông, Hải Nam, Hạ, Xạ Phạng
05	Khơ-me	Cur, Cul, Cu, Thổ, Việt gốc Miên, Krôm
06	Mường	Mol, Mual, Mọi, Mọi Bì, Ao Tả, Ấu Tả
07	Nùng	Xuồng, Giang, Nùng An, Phàn Sinh, Nùng Cháo, Nùng Lôi, Quý Rim, Khèn Lài
08	H'Mông	Mèo, Hoa, Mèo Xanh, Mèo Đỏ, Mèo Đen, Ná Mẻo, Mán Trắng
09	Dao	Mán, Động, Trại, Xá, Dìu, Miên, Kiềm, Miên, Quần Trắng, Dao Đỏ, Quần Chẹt, Lô Giang, Dao Tiền, Thanh Y, Lan Tẻn, Đại Bản, Tiểu Bản, Cóc Ngáng, Cóc Mùn, Sơn Đầu
10	Gia-rai	Giơ-rai, Tơ-buăn, Chơ-rai, Hơ-bau, Hđrưng, Chor
11	Ngái	Xín, Lê, Đản, Khách Gia
12	Ê-đê	Ra-đê, Đê, Kpá, A-đham, Krung, Ktul, Đliê Ruê, Blô, Epan, Mđhur, Bih
13	Ba na	Giơ-lar, Tơ-lô, Giơ-lăng, Y-lăng, Rơ-ngao, Krem, Roh, ConKđe, A-la Công, Kpăng Công, Bơ-nâm
14	Xơ-Đăng	Xơ-teng, Hđang, Tơ-đra, Mơ-nâm, Ha-lăng, Ca-dong, Kmrâng, Con-Lan, Bři-la, Tang
15	Sán Chay	Cao Lan, Sán Chỉ, Mán Cao Lan, Hồn Bạ, Sơn Tử
16	Cơ-ho	Xrê, Nốp, Tu-lốp, Cơ-don, Chil, Lat, Lach, Trinh
17	Chăm	Chàm, Chiêm Thành, Hroi
18	Sán Dìu	Sán Dẻo, Trại, Trại Đất, Mán, Quần Cộc

19	Hrê	Chăm Rê, Chom, Krê Lũy
20	Mnông	Pnông, Nông, Pré, Bu-đang, Đipri, Biat, Gar, Rơ-lam, Chil
21	Ra-glai	Ra-clây, Rai, Noang, La-oang
22	Xtiêng	Xa-điêng
23	Bru-Vân Kiều	Bru, Vân Kiều, Măng Coong, Tri Khùa
24	Thổ	Kẹo, Mọn, Cuối, Họ, Đan Lai, Ly Hà, Tày Pọng, Con Kha, Xá Lá Vàng
25	Giáy	Nhắng, Dắng, Pầu Thìn Nu Nà, Cùi Chu, Xa
26	Cơ-tu	Ca-tu, Cao, Hạ, Phương, Ca-tang
27	Gié Triêng	Đgiéh, Tareb, Giang Rẫy Pin, Triêng, Treng, Ta-riêng, Ve, Veh, La-ve, Ca-tang
28	Mạ	Châu Mạ, Mạ Ngăn, Mạ Xóp, Mạ Tô, Mạ Krung
29	Khơ-mú	Xá Cầu, Mứn Xen, Pu Thên, Tênh, Tày Hay
30	Co	Cor, Col, Cùa, Trầu
31	Tà-ôi	Tôi-ôi, Pa-co, Pa-hi, Ba-hi
32	Chơ-ro	Dơ-ro, Châu-ro
33	Kháng	Xá Khao, Xá Súa, Xá Dón, Xá Dắng, Xá Hốc, Xá Ái, Xá Bung, Quảng Lâm
34	Xinh-mun	Puộc, Pụa
35	Hà Nhì	U Ni, Xá U Ni
36	Chu ru	Chơ-ru, Chu
37	Lào	Là Bốc, Lào Nội
38	La Chí	Cù Tê, La Quả
39	La Ha	Xá Khao, Khía Phlao
40	Phù Lá	Bồ Khô Pạ, Mu Di Pạ Xá, Phó, Phổ, Va Xơ
41	La Hủ	Lao, Pu Đang, Khù Xung, Cò Xung, Khả Quy
42	Lự	Lừ, Nhuồn, Duôn
43	Lô Lô	Mun Di
44	Chứt	Sách, Máy, Rục, Mã-liêng, A-rem, Tu vang, Pa-leng, Xơ-Lang, Tơ-hung, Chà-cúi, Tắc-cúi, U-mo, Xá Lá Vàng
45	Mảng	Mảng Ư, Xá Lá Vàng
46	Pà Thên	Pà Hưng, Tống
47	Co Lao	
48	Cống	Xám Khổng, Măng Nhé, Xá Xeng
49	Bố Y	Chủng Chá, Trọng Gia, Tu Di, Tu Din
50	Si La	Cù Dề Xừ, Khả pẻ

51	Pu Péo	Ka Pèo, Pen Ti Lô Lô
52	Brâu	Brao
53	Ơ Đu	Tày Hát
54	Rơ măm	
55	Foreigner	
56	Unknown	

► Annex 2: Summary statistics

The socio-demographic and economic attributes of respondents from Dak Lak, Kon Tum, Ben Tre, and Tra Vinh provinces are presented in the table below. Gender distribution is generally balanced, with slight variations among provinces. However, Kon Tum, Ben Tre, and Tra Vinh had marginally higher proportions of male respondents, while Dak Lak had a modestly elevated proportion of female respondents. The Kinh majority predominantly inhabits Ben Tre and Tra Vinh. At the same time, Dak Lak and Kon Tum in the Central Highlands are characterized by greater ethnic diversity due to the significant presence of minority groups, the Ede and Ba Na. Among the four provinces, Dak Lak has a higher proportion of poor and near-poor households, which is likely indicative of the challenges faced in rural, mountainous areas with limited access to economic resources. The occupational data reveals a widespread reliance on agriculture in all provinces, with ethnic minorities in the Central Highlands particularly reliant on small-scale or subsistence farming. Tra Vinh has a slightly higher percentage of casual labourers, which is indicative of a broader range of income sources. Even though the general trends suggest a widespread similarity, these findings underscore specific regional differences influenced by demographics, geography, and economic activities.

On average, households comprise approximately 4.5 members. The female ratio within households varies between 0.37 and 0.45, while the ratio of children is marginally higher in Dak Lak and Kon Tum (0.35 and 0.32, respectively) compared to 0.19 in Ben Tre and Tra Vinh. Notably, the elderly ratio is lowest in Dak Lak (0.04) but rises to 0.23 and 0.22 in Ben Tre and Tra Vinh, respectively. Regarding income, average household earnings range from 9.71 to 12.30 million VND, with per capita incomes recorded between 2.37 and 2.97 million VND.

Table 4: Summary statistics of households surveyed in the selected provinces

Characteristics ^a	Dak Lak	Kon Tum	Ben Tre	Tra Vinh
No. respondents (persons)	179	183	204	198
Age group				
15-24 years old	2.79	8.20	4.41	3.03
25-54 years old	80.45	63.90	41.67	55.05
55-60 years old	6.70	9.30	14.22	10.61
Older than 60 years old	6.15	15.80	38.24	27.78
No answer	3.91	2.70	1.47	3.54
Gender				
Male	39.66	54.10	68.63	57.58
Female	60.34	45.36	31.37	41.41
Ethnicity				
Kinh	38.55	48.09	97.55	74.24
E-de	36.31	0.00	0.00	0.00
Ba Na	0.00	45.36	0.00	0.00
Khmer	0.00	0.00	0.00	24.75
Others	23.46	2.73	0.49	0.00

Characteristics ^a	Dak Lak		Kon Tum		Ben Tre		Tra Vinh	
No answer	1.68		3.83		1.96		1.01	
Education level								
Illiterate	2.79		0.55		0.00		2.02	
Primary School	12.85		19.13		7.35		18.69	
Secondary School	31.84		34.43		36.27		26.77	
Education								
Highschool	36.87		19.13		39.22		37.37	
Vocational school/ College	1.12		1.09		1.47		0.00	
University	3.35		2.73		3.43		3.54	
Post-graduate	0.56		0.00		0.49		0.51	
No answer	10.61		22.95		11.76		11.11	
Household income level								
Poor	34.10		5.46		5.90		3.00	
Associate poor	17.90		5.46		5.90		2.50	
Not poor	43.60		84.15		76.50		88.90	
N/A	4.50		4.92		11.80		5.60	
Occupation								
Farmer	87.71		78.69		80.88		57.58	
Casual labourer	1.12		1.09		1.96		20.71	
Worker	0.56		2.73		0.49		2.02	
Business/ trade/ service			4.92		3.92		3.54	
Civil servant/Official	3.91		2.19		5.39		6.57	
Freelancer			1.09		0.49		0.51	
Mason			2.73		1.96		4.55	
Pensioner	0.56		5.46		2.45		2.02	
Unemployed/elderly/ student	93.85		1.09		1.47		0.51	
No answer	6.15		0.00		0.98		2.02	
	Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.
Number of family members (Persons)	4.50	1.40	4.49	1.75	4.43	1.71	4.44	2.39
Female ratio	0.39	0.20	0.37	0.18	0.40	0.20	0.45	0.20
Children ratio	0.35	0.21	0.32	0.24	0.19	0.20	0.19	0.19
Elderly ratio	0.04	0.10	0.10	0.22	0.23	0.26	0.22	0.26
Household income (million VND)	11.38	43.58	10.34	12.42	9.71	11.33	12.30	11.90
Income per capita (million VND)	2.67	8.81	2.70	4.18	2.37	2.70	2.97	2.78

Note: ^a Data on age group, gender, ethnicity, and education level are presented as percentages.

Table 5: Distribution of survey respondents by organization and province

Organization	Dak Lak	Kon Tum	Ben Tre	Tra Vinh
Department of Natural Resources and Environment	3	0	0	0
Department of Agriculture and Rural Development	3	0	4	3
Department of Labour – Invalids and Social Affairs	1	0	0	0
Provincial People's Committee	1		0	0
Provincial Women's Union	0	0	0	1
District People's Committee	6		10	4
Commune People's Committee	18	32	49	34
Village head	16	8	6	3
Other	0	0	1	1
Total	48	40	70	46

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