Linking Forecast-based Financing to Shock-Responsive Social Protection Programmes to Scale Up Assistance against Climate Hazards

Challenges and Opportunities, A Case Study of The Philippines

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Lund 2022

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Number of pages: 69
Word Count: 14974

Keywords
Forecast-based financing, social protection, shock-responsive social protection, anticipatory action, humanitarian assistance, disaster risk management, development, climate hazards

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Abstract

Climate hazards are increasing globally both in their intensity and frequency, requiring more integrated approaches that also strengthen national leadership over disaster management. Mobilizing resources ex-ante has been demonstrated as an effective way of reducing the impacts of hazards on livelihoods and protecting development gains, while social protection (SP) has also been demonstrating capacity to deliver faster assistance to disaster affected areas. Consequently, this gives a rationale for the need to better understand how to link forecast-based financing (FbF), an anticipatory disaster risk reduction tool and national SP programmes in order to improve anticipatory disaster relief by leveraging SP's existing mechanisms (e.g. dataset, delivery channels). A knowledge gap, however, remains between theory and practice, which this research seeks to fulfill by exploring constraining and enabling factors for bridging FbF and SP. To do so, there is a need to understand (i) the challenges of scaling up FbF as part of national disaster risk management strategies and plans, and (ii) the programme features that determine SP programmes' shock responsive characteristics. Through qualitative methodology of a single case study approach, this research builds on primary data through semi-structured key informant interviews, and secondary data compiled by other researchers and organizations. Besides an established leadership, strong political will and government interest in FbF and shock-responsive SP, several challenges were discovered at design and policy level, which eventually hinder operationalization of an FbF infused SP programme. These include lack of local ownership over the design of FbF projects, an inaccurate national database for targeting households in hazard prone areas, policies that prevent SP programmes from expanding and releasing funds ex-ante, and unreliable source of funding.

Acknowledgments

This paper would not have been possible without key individuals who supported the research process, and to whom I would like to express my deepest gratitude.

To my supervisor Henrik Tehler for his continuous support throughout the entire duration of my research. I appreciate that you always responded my emails promptly and made time for me despite your own busy schedule. Thank you for your clarifications and constructive feedback, which helped me make progress in the writing, data collection ad data analysis processes.

To all informants who participated in this study, as without your insights, this project would not have been possible. You trusted me with your time and shared your valuable knowledge and experiences. I respect your commitment to introduce and sustain innovative approaches into the field of disaster risk management, and humanitarian assistance.

To all the professionals who took the time at the initial stage of the project to discuss with me the ideas I had and guide me to the right direction.

To my parents, my brother and my partner, who have encouraged and believed in me despite the challenges I came across throughout the research and writing process.

Yours Sincerely,
Sara Csapo,

August 2022

Executive summary

The changing landscape of hazards and the rise of extreme weather events both in intensity and frequency necessitates to explore innovative approaches for disaster risk reduction and response mechanisms. One tool that is breaking the ground is forecast-based financing (FbF), which relies on forecasting information and risk analysis to anticipate hazards and their impacts, and guarantee anticipatory actions before they occur through prepositioned funding (GRC, 2017: 1). Simultaneously, there is growing interest in exploring how social protection (SP) programmes, which are traditionally designed to provide long-term assistance to poor and vulnerable populations, can be leveraged to deliver emergency assistance to disaster affected areas (O'Brien et al., 2018: 8). Recently, research on how to link these two approaches is also growing (Costella et al., 2017 & 2018; Daron et al., 2021; Wilkinson et al., 2018). This essentially means to enable SP programmes to scale up support and be more shock responsive, not only by delivering cash assistance immediately after hazards had occurred, but also in anticipation, by for instance integrating forecasting information and/ or triggers into SP systems, or using FbF's prepositioned funding and risk-informed data to support SP's targeting and actions (ibid). However, the idea of bridging FbF and SP is still understudied, especially in specific country contexts, and there remains a gap between theory and practical execution of such a system. Therefore, the overall purpose of this research is to answer the research question:

What are the enabling and constraining factors of linking forecast-based financing to shock responsive social protection programmes?

Additionally, sub-questions were also developed to guide the research.

a. What are the challenges of scaling up anticipatory action?
b. What factors enable or hinder social protection programmes from becoming more responsive to shocks?

The research draws on a qualitative methodology of a single case study, applying methods of (i) semi-structured key-informant interviews with six key informants and (i) secondary data review. The Philippines was selected as the case study because of its robust SP system, existing anticipatory action (AA) initiatives by various agencies, as well an interest by both national and international stakeholders to strengthen shock responsive systems and explore their linkages to forecast-based mechanisms.

Answering the research questions, the researcher found several constraining factors for bridging FbF and SRSP in the Philippines. Firstly, results justified lack of national ownership over the design of the trigger model used for FbF, which is currently relying on external forecasting data, potentially undermining local capacities and priorities. This makes the government hesitant over the institutionalization of FbF, and lowers the chances of integrating the triggers within SP programmes. Secondly, data demonstrated that current policies restrict the release of funds in anticipation, which means it is unattainable for SP programmes to deliver cash relief ex-ante to hazard prone areas. Findings also revealed problems related to the national information management system (IMS), describing it as inaccurate for targeting households in hazard prone areas, and outdated. This could potentially be mitigated by enrolling new beneficiaries using FbF's risk-informed database on households, but policies limit enrollment of new beneficiaries to the existing database. Furthermore, the government does not have an identified source of disaster risk financing (DRF) instrument neither for anticipatory actions, nor for assisting scaled up SP programmes that seek to extend coverage to households during large-scale emergencies. Conclusively, bridging FbF and SRSP is well-established theoretically, however problems with the design, policies and funding indeed slow down successful operationalization and sustainable use of such a system.

Nevertheless, some very important enabling factors were also found for developing a shock responsive system in the Philippines that is able to deliver anticipatory cash relief. These include an established leadership, political will and strong interest in both AA and SRSP, a platform for advocacy and coordination - called AA Technical Working Group (TWG)-, and most importantly a 5-year Roadmap to establish an adaptive and shock responsive social protection (ASRSP) system, which was endorsed by the government.

In light of these results, this study suggests further research on exploring flexible and scalable financing instruments, better coordination amongst national and international stakeholders, preplanned agreements on how to leverage SP programmes in disaster response, strengthening risk-informed data collection, harmonizing policies across sectors, and sharing of best practices and lessons learnt to build evidence on the values and benefits of ex-ante support.

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Abbreviations and Acronyms

4Ps	Pantawid Pamilyang Pilipino Program
AA	Anticipatory Action
ADB	Asian Development Bank
AICS	Assistance to Individuals in Crisis
ASRSP	Adaptive and Shock Responsive Social Protection
BDRRMC	Barangay Disaster Risk Reduction and Management Committee
CBMS	Community Based Monitoring System
CC	Climate Change
CCA	Climate Change Adaptation
CERF	UN Central Emergency Response Fund
DREF	Disaster Relief Emergency Fund
DRR/M	Disaster Risk Reduction/ Management
DRRMO	Disaster Risk Reduction & Management Office
DSWD	Department of Social Welfare and Development
EAP	Early Action Protocol
ECT	Emergency Cash Transfer
EW / EWS	Early Warning / Early Warning System
EWEA	Early Warning Early Action
FAO	Food and Agriculture Organisation
FbF	Forecast Based Financing
HA	Humanitarian Action
IDP	Internally Displaced Person
IFRC	International Federation of Red Cross and Red Crescent Societies
IMS	Information Management System
KI / KII	Key Informant / Key Informant Interview
LDRRMF	Local Disaster Risk Reduction and Management Fund
LGU	Local Government Unit
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NDRRMC	National Disaster Risk Reduction and Management Council
NDRRMF	National Disaster Risk Reduction and Management Fund
NDRRMP	National Disaster Risk Reduction and Management Council

NFSCC	National Framework Strategy on Climate Change
NGO	Non-Governmental Organisation
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services
PFM	Public Financial Management
PRC	Philippines Red Cross
QRC	Quick Response Fund
REAP	Risk-informed Early Action Partnership
RISRSP	Risk Informed Shock Responsive Social Protection
SDG	Sustainable Development Goals
SP	Social Protection
SRSP	Shock-Responsive Social Protection
TWG	Technical Working Group
UNICEF	United Nations International Children's Emergency Fund
WBG	World Bank Group
WFP	World Food Programme

Chapter 1

1. Introduction

Commonly defined as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods (UNFCCC, cited in IPCC, 2014: 5)", climate change (CC) has undeniably become a global threat multiplier that requires immediate, nationally owned mitigation and adaptation practices backed up by sustainable funding (Costella et al., 2021:6f). CC exacerbates existing risks and creates new ones, all the while the international community is still recovering from the setbacks in development gains that Covid-19 had caused (ibid). According to the IPCC's (2021: SPM-19f) sixth assessment, it is of high probability that the frequency and intensity of extreme weather events[1] will continue to increase. The most affected regions are likely to be Africa, Asia, Central and South America, Small Islands and the Arctic, because in these places high level of exposure, dependency on ecosystem-related sectors, and lack of access to social safety nets on the individual level intersect with systemic problems, such as unsustainable resource management, rapid urbanization, and weak governance (IPCC, 2021: 35 & SPM-10f).

The changing nature of risks caused by CC explains the need for new approaches. As traditional methods of disaster response with lengthy funding procedures is no longer able to meet people's growing needs, global commitments to strengthen preparedness, prevention and mitigation are anchored in major international agreements; the Sendai Framework for Disaster Risk Reduction (DRR), the Paris Agreement and the Sustainable Development Goals (SDGs) (TRANSFORM, 2020: 15*)*. Amongst other objectives, strengthening national Early Warning Systems (EWSs) and forecasting information, scaling up anticipatory action (AA), using risk and vulnerability assessments, and building resilience to shocks on all levels are also prioritized in these documents (ibid).

As the capacity to forecast climate hazards is increasing, forecast-based financing (FbF), a disaster risk management (DRM) tool that enables AA is gaining momentum (Costella et al., 2017: 32). It

[1] Extreme climate events including agricultural and ecological drought events, flooding, hot extremes, changes in precipitation, tropical cyclones, reduction in sea ice and permafrost (IPCC, 2021: 19f)

relies on weather - and hydrological forecasts, and risk analysis to anticipate hazards and their potential impacts (German Red Cross [GRC], 2017: 2). Once forecasted that the hazardous event is highly likely to occur and cause damage exceeding beyond the critical wellbeing of the population, prepositioned funding enables to take early actions to reduce– or even prevent – the anticipated impacts (ibid: 2). Since the first pilot project in 2014 initiated by the German Red Cross (GRC), FbF has expanded to more than 60 countries[2] (ibid: 3).

Subsequently, there has been growing interest in understanding how to leverage national social protection (SP) - mostly cash assistance - programmes, to mitigate the impacts of large-scale shocks (Costella et al., 2021; IFRC, 2021; O'Brien et al., 2018; Longhurst et al., 2020). Originally, SP programmes are designed to address vulnerabilities of poor households by protecting them from different lifecycle risks (European Commission [EC], 2021: 17). Recently, however, several countries are experimenting to make their SP programmes more shock responsive by delivering timely humanitarian assistance not only to existing beneficiaries, but to additional, hazard affected households as well (Béné et al., 2018: 2; IFRC, 2021: 9; FAO, 2019: 37).

Consequently, the idea of bridging SP with FbF to respond to climate hazards ex-ante is also growing (Costella et al., 2017 & 2018). Such a system could reach a wider segment of populations, and protect development gains by preventing households from resorting to negative coping capacities when hazardous events strike (FAO, 2019: 20; GRC, 2017: 3; IFRC, 2021: 9). In addition, linking the two could bridge the gap between the humanitarian and development nexus to achieve a more holistic approach to manage disasters (IFRC, 2021: 9).

1.1 Background and Motivation of the Research

A weakness of the literature on bridging FbF and SP is that, in spite of engagement on the national as well as international level, there still remains a significant knowledge gap between theory and practical execution on the ground. FbF projects are small scale, led by foreign agencies (Weingärtner et al., 2019), and leveraging SP programmes to respond to shocks mostly happen in an ad-hoc manner (e.g. Covid-19 response) (Beazley et al., 2021). FbF and SP has clear theoretical links (Costella et al., 2017 & 2018), but research that lists key constraining and enabling factors of

[2] Some examples include Uganda, Bangladesh, Mongolia, the Philippines, Malawi, Tajikistan, Peru, Mozambique, Ethiopia, Mexico, the Dominican Republic, Bangladesh, the Philippines (GRC, 2017).

their integration on the country level is missing. Confusion also lies in defining the concepts. Some papers explicitly say linking FbF to SP (Costella et al., 2017), whilst others define it as integrating trigger-based thresholds and forecasts into SP systems to improve early action (Daron et al., 2020; Wilkinson et al., 2018). Indeed, there needs to be further research into (i) factors that prevent scaling up FbF projects, or in other words institutionalizing it within national DRM strategies and plans, and (ii) programme features that allow SP to become more responsive to shocks, and therefore to be used in emergency settings.

1.2 Purpose and Objectives

The thesis aims to understand the promises as well as pitfalls associated with scaling up FbF, as well as it seeks to explore the factors that enable or hinder SP's cash assistance programmes from being more responsive to shocks within the context of emergency humanitarian response.

The overall objective of the study is to identify enabling and constraining factors of linking FbF and shock responsive social protection programmes (SRSP) for the purpose of enhancing anticipatory humanitarian relief in the face of increasing climate hazards. Findings of this research may benefit both national and international agencies that aim to use SRSP in emergency contexts, by pinpointing areas needed to be reviewed and/ or changed for the successful operation of future programmes.

1.3 Research question and sub-questions

What are the enabling and constraining factors of linking forecast-based financing to shock responsive social protection programmes?

To answer the research question, the following sub-questions need to be understood first.

A. What are the challenges of scaling up anticipatory actions?

B. What factors enable or hinder SP programmes from becoming more responsive to shocks?

Chapter 2

2. Methodology

The thesis uses the qualitative research methodology of an exploratory single case study. Case studies are commonly used methodologies to gain holistic and detailed information of the case chosen (Yin, 2003: 2). In this context, the nascent empirical understanding of constraining and enabling factors of channeling anticipatory cash relief through SRSP is the reason why this methodology is thought to be the best way of answering the research questions. It is exploratory in the sense that the propositions developed in the conceptual framework are not only specific to this case, but they suggest further inquiries as well.

The researcher collected primary data through six key-informant interviews (KIIs), and reviewed secondary data to determine the research gap (see section 1.1.) as well as to develop a conceptual framework in relation to which the research questions are answered. Literature on FbF, SP and linking the two were reviewed to have a more nuanced understanding of the challenges associated with AA, and SP's role in humanitarian relief. Secondary data identified by the researcher includes peer-reviewed articles, grey literature published by global multilateral and non-governmental organizations (NGOs), and case studies with country-specific focus. Grey literature refers to reports and working papers with a non-country specific focus. The Philippines was selected because of its robust SP system, existing AA initiatives by various agencies, as well an interest by both national and international stakeholders to strengthen SRSP and explore its linkages to AA.

2.1. Methods

2.1.1. Key Informant Interviews

Semi-structured key informant interviews (KIIS) were conducted with professionals working in the Philippines at various humanitarian agencies that are involved in FbF/AA and SP. The first KI interviewed was identified through purposive sampling, based on her first-hand knowledge about FbF in the Philippines context, as well her representation of the GRC, one of the agencies that was involved in the development of the very first FbF project. The interview allowed snowball sampling technique for choosing the rest of the KIs, which means that existing participants suggested other potential subjects for the interviews (Flick, 2009: 267). The researcher was looking for people who hold the most current knowledge and hands-on experience on FbF/ AA

and SRSP based on the projects they are working on and their organizations' focus areas. Although this selection process inherently carries bias, it is credible enough to achieve the objectives within the scope of this study. The interviewees helped to complement the gap found in the literature and allowed a more in-depth analysis of the variables identified in the secondary data reviewed. A full list of personnel consulted can be found in Annex 1.

The interviews were conducted online, on a voluntary basis using Zoom applications, and recorded upon receiving written consent of the informants. The interview questions were fixed in terms of the topic, but the flexibility of the semi-structured method allowed the researcher to ask spontaneous follow-up or additional questions during the interview, based on responses. The order of the interview questions was modified to best fit respondents' own areas of expertise and technical know-how, either on FbF or SP. The interviews were transcribed, then analyzed using NVivo, a qualitative data analysis software.

2.1.2. Interview Design

The interview design was influenced by the conceptual framework, aiming to generate more revealing information on the case, drawing upon KI's expertise and particular knowledge. To design appropriate interview questions, it was first necessary to gain some contextual knowledge related to the research topic area. Once the researcher established preliminary knowledge, and wrote the conceptual framework, only then the interview questions were designed, that way ensuring that the questions cover the study concepts and variables (Turner, 2010: 755). The interview questions are listed below in Table 1.

Table 1: Interview Guide

Review the project objectives; how the data will be stored and analyzed; and ask if the respondent has any questions	
Main questions	**Additional Questions (If Needed)**
Q1. Can you tell me about your position and area of work?	
Q2. Can you clarify the concepts of forecast-based financing/ anticipatory action/ shock-responsive social protection?	
Q3. What challenges have you encountered in designing and implementing FbF projects in the Philippines?	How do you overcome these barriers? What type of financing instruments are currently used for AA? What are some specific technical challenges? How do you collect data?
Q4. The Philippines has made great progress in anticipatory action, so what are those factors that enable this in the country?	
Q5. How can regular social protection programmes become more efficient in covering climate hazards?	What are the challenges of delivering cash through SP structures? What challenges exist for scalability of programmes? What type of local financing instruments are currently used for AA and SRSP?
Q6. What is your understanding of linking anticipatory action and social protection in the Philippines context?	How does the ASRSP Roadmap facilitate linkages between FbF and SP?

2.1.3. Primary Data Analysis

First, the interviews were transcribed and uploaded to NVivo qualitative data software analysis. The process of creating codes was inductive in this research, meaning that codes have evolved from the data as opposed to being initially set based on the conceptual framework. The researcher thoroughly read the interviews and applied first cycle coding, identifying codes mainly by frequency, consistency (similarities and differences), and cause-effect relationship. After second -or more- cycle(s) of coding and recoding, through thematic analysis the labelled codes were clustered into themes, which "are broad units of information that consist of several codes aggregated to from a common idea (Flowerdew and Martin, 2005: 186)." Then, axial coding helped the researcher to identify dominant and less dominant themes, and to find the best

representative codes (Saldana, 2016: 244). As a final step, the researcher extracted the themes related to sub-Q1 and sub-Q2. The coding trees can be found in Chapter 6, the results chapter. The process of analysis was guided by the book *The Coding Manual for Qualitative Researchers* by Johnny Saldana (2016).

2.1.4. Secondary Data Collection

Secondary data, both academic and grey literature was collected to explore the current status of FbF, SP's use in emergency response and the linkages between FbF/ AA and SP. Academic literature was identified through keyword search via *Science Direct* and *Scopus* search engines.

Keywords used: (i) FbF terms ('forecast-based financing', 'anticipatory action'), in combination with technical terms ('trigger', 'threshold', 'prepositioned funding', 'impact-based forecasting'), (ii) SP terms ('social protection', 'shock-responsive social protection') in combination with field related terms ('climate hazard', 'disaster management', 'emergency relief', 'humanitarian assistance') and (ii) FbF terms in combination with SP terms. Several exclusion criteria were applied to the documents after reading the abstract, table of contents, introduction, conclusion and recommendation sections.

Exclusion Criteria: Because of the scope of the study, the researcher limited the timeframe to papers published between 2016 and 2021. The number of papers found did not exceed 80. The researcher excluded papers that (i) focus on FbF and SP as resilience-building tools, (ii) grey literature which analyze FbF and SRSP using the same structure, and (iii) documents that consider the long-term implications of the two approaches, as the scope of this study focuses on short-term humanitarian assistance.

The remaining literature was read manually at least three times, so the researcher was able to identify key variables from which the conceptual framework evolved. The conceptual framework provides the basis of the study by laying the foundations for the research problem and therefore influencing the formation of the research questions (Rocco and Plakhotnik, 2009: 122). The conceptual framework describes the main concepts relevant to the study, and draws propositions based on the relationship amongst them (ibid: 122). Furthermore, it helped to look for relevant literature on the Philippines context.

2.2. Limitations of the Methodology

Limitations	Mitigating Limitations
Limitations of Case Study Research	
A key limitation remains in the generalizability of the unique features of the Philippines context.	Variables in the conceptual framework are consistent with those presented in the literature reviewed. This means that an analytical generalization -the replication of the conceptual framework and the process of analysis- is possible for future research in other contexts (Blaikie, 2010: 194; Yin, 2003: 10).
The research would have significantly benefited from a field visit, but financial limitations as well as travel restrictions due to the Covid-19 pandemic prevented the researcher from in person data collection.	Interviews were conducted over Zoom with the camera on, without any technological problems encountered. To ease rapport, KIs and the researcher had a short, informal conversation off topic at the beginning of each interview.
Limitations of Semi-structured Key Informant Interviews	
Respondents are professionals from organizations that work in close collaboration with government agencies and communities, however, the information acquired derives from their perspectives and not from government officials, community members or beneficiaries' points of view.	The researcher acknowledges the role of respondents, and is fully transparent about whose voices are represented.
Because of the low number of key informants – respondents were busy and hard to reach – it is difficult to generalize results to the population at large.	Even if the number of participants in this study is low, results still provide guidance and room for further research, as well on potential areas where focus is needed.
Although the researcher sought to minimize potential bias while analyzing the data, an influence on the results cannot completely be ruled out.	The researcher is transparent in stating the process of primary data analysis and presents all findings, even the ones that occur unexpectedly throughout the research.

Limitations of Secondary Data Review	
Limitation lies in utilizing data that has been collected and analyzed by other researchers as their bias may color the information and findings disclosed. Furthermore, in the absence of a thorough literature review, there is a risk that the researcher has missed important concepts or themes, and thus the accuracy of the discussion is also limited.	Only peer reviewed documents and those issued by acknowledged organizations were used for secondary data analysis. Appropriateness of secondary data was evaluated based on (i) the methodology used to obtain data and (ii) consistency of the information/ variables found across sources. A more detailed explanation for choosing the literature is explained in *section 2.1.4.*

2.3. Ethical considerations

Ethical problems are expected to be present in every phase of the research project from deciding on a topic to disseminating research findings (Flick, 2009: 40f). Therefore, the researcher followed an ethical guideline based on the most important principles highlighted by Flick (2009: 40f). These include, but are not limited to (i) informed, voluntary consent received from the KIs upon understanding the purpose of the research, their role in it and data management procedures; (ii) collecting data in a way that is culturally appropriate and respectful in order not to harm participants; (iii) confidentiality, meaning that respondents' identities are anonymized, their personal data is stored appropriately and not shared publicly. Importantly, information shared by KIs reflect on, and represent the values and objectives of the organizations they are working for, as opposed to personal opinions.

Furthermore, the researcher does not take the side of any respondents to confirm a result that she wants to gain out of the data acquired. Interpretations are grounded in data and adhere to the "doing justice to participants in analyzing data" principle (Flick, 2009: 41). The researcher is fully transparent about the adaptation of other researchers and organizations' work.

Chapter 3

3. Conceptual framework

The following chapter offers a conceptual framework, which outlines the key variables found in the secondary data reviewed, and the presumed relationship amongst them (Rocco and Plakhotnik, 2009) to provide a rationale for the study. This means that it includes both the definition of key concepts, and propositions regarding these concepts in relation to one another. Since the conceptual framework was developed while reviewing the literature, it is grounded in a relevant and existing knowledge base, which also laid the foundation for the problem statement. The conceptual framework guides through the research, and will be analyzed in relation to the research findings in Chapter 6.

3.1. Forecast-based financing (FbF)

FbF is a DRM tool within the broader concept of AA, which relies on scientific data to deliver early actions prior to anticipated hazardous events (GRC, 2019: 1). It has three essential components, (i) pre-agreed triggers, (ii) pre-agreed action plans and (iii) prepositioned funding, which is automatically released when triggers go off to undertake the actions (ibid). Table 2 explains how FbF projects are designed step-by-step, while some of its documented positive impacts on lives and livelihoods are listed in Table 3. Scaling up FbF in this paper refers to its institutionalization into national DRM strategies and plans, so that projects can expand geographically as well (UNDP, 2013, in Wilkinson et al., 2018: 26).

Table 2: Designing Forecast-based Financing Projects

Step 1	**Conduct risk, vulnerability, exposure** and **impacts assessments** to inform the design of appropriate actions in the appropriate geographic areas.
Step 2	Identify the **capacity of existing early warning systems (EWSs)** to produce and disseminate reliable and timely information in anticipation of an extreme weather event.
Step 3	**Agree on thresholds** together with national DRM actors to decide what level of impact the government should act upon depending on national capacities.
Step 4	**Develop anticipatory actions** (low, moderate and high-risk) that align with national DRM strategies and plans.
Step 5	**Agree on triggers,** which indicate when to act based on forecasting capacity, hazard type, and the time and cost necessary to undertake the actions.
Step 6	**Design standard operating procedures (SOPs) together with key national stakeholders,** an early action protocol (EAP) that contains clear information on FbF's three essential components and provides a step-by-step guidance for the implementation of anticipatory actions.
Step 7	**Monitor forecast and act if** thresholds are reached and the triggers go off. **Document lessons learned**.

Source: WFP, 2019: 4f

Table 3: Evidence from Anticipatory Action projects

Country and Hazard type	Activities	Anticipatory Action Impacts
Bangladesh, 2017 and 2020 Floods	Unconditional cash transfer	Reduced loss of assets and livestock, maintained food consumption and the use of health care facilities, while beneficiaries also took on less loan (Gros et al., 2019; Tanner et al., 2019: 26; Weingärtner et al., 2020: 34)
Kenya, drought	Provision of supplementary feed for livestock	Better milk production of animals which allowed livelihood activities, and reduced livestock mortality (FAO, 2018a, in Weingärtner et al., 2020: 34)
The Philippines, El-Niño induced drought 2018/19	Cash transfer, storage of fishermen gears and livestock treatment	Return on investment, better food security, changing gender dynamics by women and less family loans (FAO, 2020: 13f).
Mongolia, 2017/2019/2020 Dzud	Cash Transfer and supply of animal care kits	Increased the survival rate of animals and protect vulnerable households' livelihoods (e.g. cashmere and milk production) (FAO, 2018: 13).

3.2. Challenges Associated with Forecast-based Financing

3.2.1. Forecasting Capacity and the Risk of Acting in Vain

While the benefits of acting in anticipation are compelling, design and implementation of FbF projects have several constraints. Firstly, forecasting capacity, by definition "the accuracy involved in correlating the prediction of an extreme event to the actual occurrence of one (Costella et al., 2018: 5)", has appeared in a number of research (Daron et al., 2020: 4; Gros et al., 2018: 90; FAO, 2019: 31; Tanner et al., 2019: 37; Wilkinson et al., 2018: 28). It varies by region depending on the technical capacity of hydrometeorological services used, as well as on which hazard needs to be forecasted. Rapid onset ones (floods, cyclones, typhoons) can be forecasted more accurately, however the short lead time (days or only hours) limit the type of AAs to be undertaken (Levine et al., 2020: 21; Wilkinson et al., 2018: 11). On the contrary, while predicting a slow onset hazard (drought) gives longer lead time, it also involves more uncertainty about when the actions should be deployed (Wilkinson et al., 2018: 11; WFP, 2021: 10). Forecasts do not have 100% certainty, so consequently there is a risk of acting in vain - activities taken in advance of hazards that eventually do not occur-, which have negative implications for political accountability, wasting resources and lowering trust in forecasting information (Levine et al., 2020: 25; Lopez et al., 2017: 7; Tanner et al., 2019: 17; Wilkinson et al., 2018: 28).

3.2.2. Ex-ante Funding and Evidence Building

When uncertainty is present, governments as well as donor agencies are likely to spare less resources for events that may or may not happen (Levine et al., 2020: 25f). Additionally, Wilkinson et al. (2020: 3) explain that for funds to be released ex-ante by solely relying on science, FbF's effectiveness needs to be demonstrated to the government. However, so far projects have only been piloted at the local scale and several of them have not yet been activated, hence the lack of robust evidence base (Weingärtner et al., 2020: 35). Lack of compelling evidence halts political will to acknowledge the role of FbF within national DRM plans, and thus to allocate funds for projects from preparedness and response funds (Costella et al., 2017: 37; Gros et al., 2018: 89; Wilkinson et al., 2020: 3). Further activations in various contexts are necessary, from which systematic lessons learnt and best practices can be documented, while there is also a need for long-term evaluation of the impacts of anticipatory interventions (Levine et al., 2020: 17; Tanner

et al., 2019: 38; Weingärtner et al., 2020: 8). Operating at small scale also means that EAPs are designed only for a specific type of hazard (e.g. flood, typhoon) (Wilkinson et al., 2018: 27).

In light of these findings, the conceptual framework proposes that weak forecasting capacity is a barrier for progressing towards the institutionalization of FbF, because of fear of acting in vain. This further prevents project expansion and activation at larger scales, and thus evidence building to contribute towards a proof of concept is also limited. Consequently, governments are hesitant to allocate funding for FbF.

3.3. Social protection (SP)

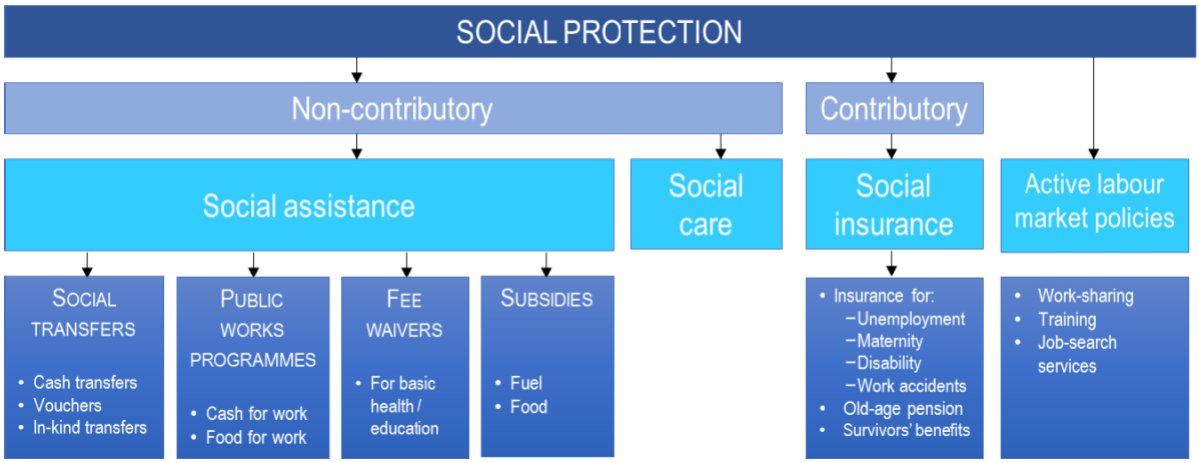
SP is "a set of policies and programs aimed at preventing or protecting all people against poverty, vulnerability and social exclusion throughout their lifecycle, with a particular emphasis towards vulnerable groups (SPIAC-B, in TRANSFORM, 2020: 6)". Various types of SP instruments exist to support households in response to idiosyncratic shocks[3], and shocks affecting specific vulnerable groups of people (e.g. women, indigenous groups, the elderly) (OPM, 2017: 3). Recently, many countries are experimenting on designing SP programmes with climate and disaster risk strategies in mind, so they can be used to manage covariate shocks as well[4], including climate hazards (Asian Development Bank [ADB], 2018: 5; UNICEF, 2019: 3).

3.4. Shock Responsive Social Protection (SRSP)

SRSP is "the adaptation of existing social protection programmes and systems to cope with changes in context and demand following large-scale shocks. This can be ex ante by building shock-responsive systems, plans and partnerships in advance of a shock to better prepare for emergency response; or ex post, to support households once the shock has occurred. In this way, social protection can complement and support other emergency response interventions" (O'Brien et al, 2018: 7). The most substantial overviews of making SP programmes more responsive to shocks are detailed in O'Brien et al., (2018) and OPM's (2017) work. Table 4 presents the five different ways of scaling up programmes, outlined in their research, so that they can extend assistance to people in need in crisis situations.

[3] "Shocks that affect individuals or households indiscriminately", e.g. car crash, loss of a partner (O'Brien et al., 2018: 7)
[4] "Shocks that affect a large proportion of the population simultaneously", e.g. pandemic, earthquakes, typhoons, financial shocks (O'Brien et al., 2018: 7)

Figure 1: Types of Social Protection Instruments



Source: O'Brien et al., 2018: 7

3.5. Social Protection and Shock Responsiveness

Below is presented a framework in which the relationship between the key factors that influence SP's shock responsiveness is explored, derived from previous research and toolkits on designing SRSP, written by O'Brien et al. (2018), OPM (2017) and UNICEF (2019). These factors have been suggested as important focus areas that together provide the basis of a system that is able to flexibly scale up and respond to disasters leveraging its own mechanisms.

Table 4: Types of Modifications of Social Protection Programmes for Emergency Response

Vertical Expansion	Increasing the benefit value or duration of an existing programme for some or all existing beneficiaries.
Horizontal Expansion	Temporarily adding new beneficiaries from disaster affected areas to an existing programme.
Piggybacking	The activation of a new emergency programme that piggybacks on existing SP structures, e.g. beneficiary list, payments schemes, delivery channels, administrative and operational systems.
Design Tweaks	Adjusting the design of existing SP programmes and systems to adhere to the crises that the country is facing, e.g. allow people to receive a cash transfer over the counter if a usual electronic payment system is no longer functioning, or waive conditionalities linked to receiving cash (such as school attendance).
Alignment	Running a parallel humanitarian system that aligns as best as possible with a current or possible future social protection programme.

Sources: Béné et al., 2018: 12; O'Brien et al., 2018: 7; OPM, 2017: 19; UNICEF, 2021: 11

3.5.1. Institutional Arrangements

A common suggestion in the reviewed literature is that a strong legislative base provide an enabling framework for SP programme's shock responsiveness (Beazley et al., 2021: 12; Bharadwaj et al., 2020: 29; IFRC, 2021: 14; Smith and Bowen, 2021: 43; OPM, 2017: 14; UNICEF, 2021: 22; WFP, 2019: 5). This entails formal policies that back up access to SP and acknowledge its role in responding to shocks within the wider toolbox of DRM (ibid).

3.5.2. The Relevance of Information Management System (IMS) to Targeting and Delivery

The role of a comprehensive and climate sensitive IMS has also been recognized in previous contributions to the discussion on SRSP, arguing that data collected by the government can only be utilized for emergency response if it is relevant, complete, accessible and accurate (Beazley et al., 2021: 13; Longhurst, 2020: 16; O'Brien et al., 2018: 33f; UNICEF, 2021: 46). An accurate IMS has been suggested to enable better beneficiary targeting and faster delivery of support as well, if the database covers populations vulnerable to hazards (Beazley et al., 2019: 28; Costella et al., 2021: 23; O'Brien et al., 2018: 30f; OPM, 2017: 53f; Smith and Bowen, 2021: 8; Ulrichs and Sabates-Wheeler, 2018: 14; WFP, 2021: 11). Interestingly, all these documents highlight that current SP beneficiaries are mostly identified based on proxy means testing or categorical targeting (e.g. age, disability) in order to identify the poorest citizens, but they are not necessarily the most vulnerable ones to climate hazards (ibid). Changing that, as per several of the reviewed sources suggest, requires data on risk, exposure, vulnerability and impacts, so that the geographic areas highly exposed can be prioritized in time (ADB, 2018: 11; Béné et al., 2018: 8; Costella et al., 2021: 23; Bharadwaj et al., 2020: 43; WFP, 2019: 10). Then, with adequate targeting the delivery of assistance to the already preidentified beneficiaries can be much faster, provided that reliable cash delivery mechanisms are also in place (e.g. mobile phones, ATMs, post office) (O'Brien et al., 2018: 39f; Smith and Bowen, 2020: 6). Apart from improving IMS systems, O'Brien et al. (2018: 39f) also advise to strengthen administrative capacity to avoid overburdening systems when the demand for assistance is higher during shock response.

3.5.3. The Effects of Funding on Delivery and Scalability

Funding has also come up repeatedly in the literature on SRSP, with an important correlation to delivery and scalability. This means that a scaled up SP programme (for instance either

horizontally or vertically, *see table 3*) requires a robust understanding of the budget available for shock response, allowing to preposition the amount needed to guarantee fast resource mobilization to assist beneficiaries in emergency contexts (Béné et al., 2018: 21; Bowen et al., 2020: 79f; Costella et al., 2021: 28; Longhurst et al., 2021: 11; O'Brien et al., 2018: 24f; Smith and Bowen, 2020: 9).

Overall, the conceptual framework on SRSP suggests that the prerequisites of leveraging SP programmes in responding to shocks are a strong institutional framework that supports their scalability, adequate IMS that covers a large proportion of the population including those exposed and vulnerable to climate hazards, robust delivery structures in places and flexible funding. This framework influences the search for, and analysis of SRSP in the Philippines In *Chapter 4*.

3.6. Linking Social Protection and Forecast-based Financing

Indeed, an emerging research topic is how to bridge anticipatory relief mechanisms, such as FbF, and nationally owned systems to respond to shocks, such as SP. To explain this, Costella et al.'s (2017) theoretical framework is the most prominent one. According to the framework, FbF can enhance SP through its pre-defined triggers, pre-planned actions and prepositioned funding. By linking triggers to SP, programmes can activate plans and distribute anticipatory cash transfers through their own delivery structures to existing or new beneficiaries. Households can also be identified easier with the risk, vulnerability and impact assessments conducted for FbF projects, thereby allowing better targeting (ibid). Furthermore, FbF's prepositioned funds can serve as additional money that guarantees actions to be undertaken (ibid). Additionally, Costella et al. (2017: 3 & 2018: 35f) also argue that FbF can focus on various layers of risks if different levels of thresholds and triggers are set in the SOPs. Specifically, this conceptual framework is relevant to those programmes that are already shock responsive and scalable to some extent, so the next step could be transition from rapid response to anticipatory relief.

Apart from Costella et al., (2017), Weingärtner et al. (2019: 46) for instance discuss the role of SP in delivering cash transfers and financing forecast-based actions (FbA) for floods, while WFP is searching for potential ways of synergizing AA and SRSP in order to ensure the sustainability and integration of AA within national systems (WFP, 2019: 16). The report issued by WFP (2019) agrees with Costella et al. (2017) in stating that FbF can strengthen national SP programmes'

targeting through risk analysis and impact assessments. Moreover, Wilkinson et al. (2018: 19) and Daron et al. (2020: 4) argue for the role of EWS and climate forecasts to enhance SP's role in responding to shocks. Daron et al.'s research, however, concludes that due the "nascent and fragmented nature of social protection programmes across the region" (2020: 4), it was difficult to find entry points to integrate seasonal climate forecasts in the Sahel into SP programme design that could trigger early actions. Their recommendations include better coordination across sectors, more refined understanding of climate impacts and the need for sustainable funding (ibid: 6). Furthermore, Gros et al.'s (2018: 89f) paper revealed that out of the countries studied - Malawi, Ethiopia, Kenya and Zambia-, only Kenya was able to scale up its SP programmes based on available forecasts, and thus the results highlight the need for further research on the linkages between SP and FbF. Even though there are some success stories, in most cases SP were scaled up to deliver cash assistance after the disasters had already happened, and not in anticipation (FAO, 2019: 18; Costella et al., 2021: 18).

3.7. The Humanitarian-Development Nexus

Literature on SRSP often emphasizes three different sectors; disaster risk management (DRM), humanitarian development (HA) and SP. DRM refers to the policies and strategies that reduce the possibility of disasters, mitigate the adverse impacts of hazards on lives as well as livelihoods, and improve people's capacity to cope with them (UNISDR, 2019), while HA is supposed to be a short term delivery of assistance by external actors to save lives and provide basic emergency support (e.g. food, shelter, water, health and/ or cash assistance) to individuals after disasters or man-made crises (GHD, 2003)[5].

A topic of growing interest is to link DRM systems to SP programmes to trigger and deliver assistance in emergency contexts, whilst reinforcing local ownership over crisis management (OPM, 2017: 9; Ulrichs and Sabates-Wheeler, 2018: 8). In other words, more frequent and severe weather events (*see Introduction*) call for immediate attention to new approaches that connect development projects, such as those offered by SP, and DRM strategies preferably with anticipatory characteristics, such as FbF. Secondly, the changing risk landscape continues to blurry the boundaries between the objectives, length, mandates and target groups of SP and HA (Costella et al., 2021: 26; EC, 2019: 12; TRANSFORM, 2020). SP and HA also relates via the

[5] Good Humanitarian Donorship (GHD). (2013).

instruments they use to assist populations in need (IFRC, 2020: 138; Longhurst, 2020: 16; O'Brien et al., 2018: 8f). Social transfers provide conditional and unconditional cash (or in-kind) transfers to beneficiaries on a regular basis, while cash is also becoming popular in humanitarian response, as well as a type of AA (Longhurst, 2020: 16; Weingärtner et al., 2019: 12). Cash is the easiest to be scaled up and have positive impacts on coping strategies, which is why social transfers are the most relevant SP programmes to be considered for emergency assistance (ADB, 2018: 6; IFRC, 2020: 138; Ulrichs et al., 2019: S365; Weingärtner et al., 2019: 12).

Therefore, within the broader framework of the development-humanitarian nexus, the overlap amongst DRM, HA and SP gives the rationale for the idea behind bridging AA and SP to achieve a more holistic approach towards managing disasters and providing timelier response (Costella et al., 2021: 22; Longhurst, 2020: 8).

3.8. Conclusion

In reference to the key variables and the relationships outlined, FbF has several challenges that need to be overcome before being incorporated into wider systems on the country level, while SP programmes have important criteria to comply with, outlined in *section 3.5.* Further, the humanitarian-development nexus encourages the link between FbF and SP to enhance early actions for climate hazards.

Chapter 4

4. Research Background on the Philippines

This section presents the results of the literature reviewed on the Philippines. It provides a background on the Philippines's risk profile, and overviews AA initiatives in the country, past experiences using SP programmes for shock response, as well as ongoing efforts to link AA to SP in the country, in order to situate the case of the Philippines in regards to the propositions outlined in the conceptual framework. As the country rather uses the term 'anticipatory action', the study will proceed using it interchangeably with 'forecast-based financing'.

4.1. Hazards and Exposure

The Philippines is the world's second largest archipelago, with high exposure to hazards due to its geographic location; it lies in the world's most active area for intense storms, the Western Pacific Ocean, and along the Ring of Fire (Center for Excellence in Disaster Management and Humanitarian Assistance [CFE-DM], 2021: 19). Therefore, both climate-related -flood, typhoon, drought, landslide-, and geophysical hazards -earthquake, volcanic eruption, tsunami- are present in the country, with around 60% of the population exposed to them (CFE-DM, 2021: 19f). Its capital city, Metro Manila, is one of the most vulnerable cities in the world (World Bank Group [WBG] and ABD, 2021: 18).

The Philippines is also one of the most adversely affected countries by CC, which contributes to sea-level rise, destruction of ecological systems, and is expected to cause more frequent heavy rainfall and extreme weather events (ibid: 18). Ranked 113th out of 181 countries on the ND-GAIN Index[6], the country has high vulnerability to CC and other global challenges in combination with low readiness to improve its resilience to shocks. Changes in climate are predicted to have lasting impacts on livelihoods and well-being by worsening water resources availability and soil erosion (CFE-DM, 2020: 18; WBG and ABD, 2021: 21). In light of these future climate scenarios, emergency costs can increase by as much as 50% (WBG and ABD, 2021: 18).

[6] Philippines | ND-GAIN Index

4.2. Vulnerability

In the Philippines women, children, people living with disabilities, internally displaced persons (IDPs), indigenous groups and informal settlers with limited resources are the most vulnerable groups demographically to climate hazards (CFE-DM, 2021: 13f; WBD and ADB, 2021: 20). In addition, around 17% of the Philippines' citizens live below the national poverty line, which is one of the key determinants of extreme vulnerability to hazards, because of their tendency to resort to negative coping capacities in times of crisis (e.g. selling assets, reducing spending for health care, education and food consumption, taking on loans) (OPM, 2017: 8; UNDRR, 2019: 9). Furthermore, dependency on agriculture, forestry and fishing means that more frequent flooding and drought events as a result of CC can easily interfere with production as well as food supply (UNDRR, 2019: 9; WBD and ABD, 2021: 22). Between 2013 and 2021, typhoons, volcano eruptions, floods and then the Covid-19 pandemic continued affecting people's lives, livelihoods and disruptions to the economy as well as social services (ibid).

4.3. Disaster Risk Management and Climate Change Adaptation (CCA)

In light of the aforementioned exposure to climate hazards, CCA and DRM policies are strategic priorities in the Philippines, and significant efforts have been made to align the institutional frameworks of these sectors[7]. The National Disaster Risk Reduction and Management Council (NDRRMC)[8] is chaired by the Secretary of the Department of National Defense (DND), and is responsible for coordinating the DRM processes, including prevention and mitigation, preparedness, response, rehabilitation and recovery (CFE-DM, 2021: 27).

The Department of Environment and Natural Resources (DENR) is the agency responsible for CC (WBD and ABD, 2021: 3). In response to evidence showing the Philippines's extreme vulnerability to CC, the Climate Change Act was enacted in 2009 to address rising environmental threats, and established the Climate Change Commission (CCC) to develop policies on CC as well to coordinate programmes (ibid: 3). The National Disaster Risk Reduction and Management Plan 2011-2028

[7] See the Philippines Development Plan 2017-2022

[8] Consistent with the National Disaster Risk Reduction and Management Plan 2011-2028

(NDRRMP) and the National Framework Strategy on Climate Change 2010-2022 (NFSCC) [9] are the most recent policy frameworks for DRM and CCA (ibid: 3).

Administrative divisions in the country consists of regions, provinces, cities, municipalities or local government units (LGUs) and the smallest political units, barangays (villages) (UNDRR, 2019: 6). Both the DRM and CCA sectors mandate LGUs as frontline leaders in disaster planning, implementation and response within their jurisdictions, with resources and funds supported by the national government (Bowen, 2015, in UNDRR, 2019: 15).

4.4. Anticipatory Action

The high-risk profile necessitates the Philippines to support innovative DRM approaches. In fact, the Philippines Disaster Risk Reduction and Management Act of 2010 (Republic Act 10121) emphasizes the need to focus more on preparedness and risk reduction, and strengthen local level DRR/ M capacities through the formation of the National Disaster Risk Management Council (NDRRMC) at the national level, the Disaster Risk Reduction and Management Office (DRRMO) at provincial level, and the Barangay Disaster Risk Reduction and Management Committee (BDRRMC) at the local level (IFRC, 2021: 6).

Since 2015, several humanitarian organizations have set up AA projects (see the list in Annex 2), which mirrors engagement, strong partnership with national stakeholders and great potential to shift from a reactive humanitarian response to anticipatory humanitarian relief in the country. Furthermore, in 2016 the technical working group (TWG) on FbF – which has been renamed and now called AA TWG - was established to generate evidence on AA and provide technical guidance to its design (Anticipation Hub, 2021). Members include FAO, DSWD, the Office of Civil Defense (OCD), the World Food Programme (WFP), Philippines Red Cross (PRC), and the Start Network, while the technical sub-groups (TSG) within the AA TWG are represented by government counterparts[10] (ibid). The TWG was integrated into the disaster preparedness structure by NDRRMC in 2021, serving as a platform for coordination (ibid). Strong partnership with PRC also leaves room for advocacy on AA from the national down to barangay level (Anticipation Hub, 2021: 2). In 2021, LGUs and the PRC signed a Memorandum of Agreement (MoA), which defines

[9] National Climate Change Action Plan 2011-2028

[10] Triggers (Dept of Science and Technology (DOST), Financing (Department of Finance), Early Action (DSWD) and M&E (OCD) (Hobson et al., 2021: 6; IFRC, 2021: 11f)

how and when LGUs will fund and implement AA (ibid). In regards to technical capacities needed for AA, the country's National Meteorological and Hydrological Services agency, PAGASA, is working on how to integrate comprehensive climate information into forecasting (IFRC, 2021: 9). The challenges for further progress on the scaling up of AA are (i) lack of understanding of risk profiles on the local level, (ii) problems with technical capacity (iii) fear of acting in vain, and (iv) unsustainable source of funding (IFRC, 2021: 16; OCHA, 2021: 23).

4.4.1. Funding Anticipatory Action

In the Philippines a minimum of 5% of the National Disaster Risk Reduction and Management Fund (NDRRMF) is allocated for DRM. Of this 5% budget 70% is for preparedness, mitigation, and recovery, while the remaining 30% is the Quick Response Fund (QRF) - standby fund- for emergency response (Anticipation Hub, 2021). The former is subjected to the central approval of the President, while the QRF is not (ibid). Similarly, the Local Disaster Risk Reduction and Management Fund (LDRRMF) mandates LGUs to set aside 5% of their revenue allotment to use for their own DRM activities (OPM, 2017: v). Despite this structure of funding, national budget allocated for AA is still uncertain, and it is rare that LGUs release funds in anticipation (Anticipation Hub, 2021: 1; Hobson et al., 2021: 22). The TSG on finance is looking at identifying different sources of financing for AA, which are listed in table 5.

4.5. Social Protection in The Philippines

The Philippines' SP system has largely improved over the last decade and is now one of the most robust SP systems in the East Asia Pacific Region (Smith and Barca, 2017:1). The responsible department for SP is the Department of Social Welfare and Development (DSWD), which is also involved in relief efforts and supports LGUs in disaster response (EC, 2021: 3; Smith and Barca, 2017:1). The DSWD's role in DRM operations facilitates a better understanding and coordination of policies, programmes, roles and responsibilities between DRM and SP sectors (OPM, 2017: iv).

Table 5: Disaster risk financing instruments

NAME	DESCRIPTION
CAT-DDO	The Disaster Risk Management Development Policy Loan with a Catastrophe Deferred Drawdown Option (CAT-DDO) can be accessed if a state of calamity is declared by the President.
Catastrophe Bond	The Catastrophe Bong can provide a maximum payout of US$ 225 million - US$150 million for tropical cyclone and US$75 for earthquake protection.
Southeast Asia Disaster Risk Insurance Facility (SEADRIF)	SEADRIF is a regional insurance pool that is currently being explored to arrange funds for early actions in advance of a predicted climate-related hazard.
Parametric Insurance Policy	Covers a maximum of P20.49 billion (US$400m) for national and local government assets in selected disaster-prone provinces (earthquakes and typhoons).
Philippine City Disaster Insurance Pool	Initial coverage includes earthquakes and typhoons based on their physical features. The insurance pool provides rapid access to funds (within 15 business days) to support early recover, but scale-up plans do not exist.
Philippine Crop Insurance Corporation	Agriculture insurance provided to farmers by the Department of Agriculture (DoA). Claims are paid within two weeks after the declaration of a disaster.

Source: IFRC, 2021

The Philippine SP Operational Framework and Plan 2020–2022 serves as a guidance for agencies and LGUs to implement and evaluate SP policies and pogrammes. The IMS that identifies poor and vulnerable households is the National Household Targeting System for Poverty Reduction, or otherwise called Listahanan (Hobson et al., 2021: 52). Data for the Listahanan was updated and extended in 2011, 2016, and 2022[11] (OPM, 2017: 10; Smith and Barca, 2017:1). By now the list covers around 75-80% of the population, and the government has mandated all agencies in the country to use Listahanan for beneficiary selection (Smith and Barca, 2017:1).

4.6. Shock Responsive Social Protection and Linkages to Anticipatory Action

The Pantawid Pamilyang Pilipino Program (4Ps)[12] is the largest social assistance programme in the country, which was successfully scaled up vertically in 2013 to rapidly respond to Typhoon Haiyan, with the support of UNICEF and WFP (O'Brien et al., 2018: 56). WFP channeled humanitarian funds to DSWD, which then delivered the cash top ups through the 4Ps regular delivery channels

[11] DSWD Listahanan 3
[12] Pantawid Pamilyang Pilipino Program

to 4Ps beneficiaries in the 60 worst affected areas (EC, 2021: 4; O'Brien et al., 2018: 56; OPM, 2017: 23f). Horizontal scale-up, however, was not possible because of administrative, policy and technical issues, and therefore WFP assisted non 4Ps beneficiaries through parallel systems (EC, 2021: 9). Vertical expansion was repeated in 2014 after Typhoon Hagiut (Hobson et al., 2021: 13).

Then, in 2018, the EWEA project in the provinces of Cotabato and Maguindanao, led by FAO in cooperation with the government, successfully mitigated the impacts of El-Niño induced drought (FAO, 2020: 6f). The government gave access to Listahanan, the Registry System for Basic Sectors in Agriculture, and the Department of Agrarian Reform Beneficiaries database, enabling faster beneficiary pre-identification and selection of activities fully aligned with national DRM, poverty and vulnerability reduction objectives (FAO, 2020: 8). In exchange, FAO provided updated exposure and vulnerability data in relation to livelihood activities (FAO, 2020: 24). The project was an important contribution towards attention on the need to strengthen the SP system's capacity to deliver anticipatory assistance, under the RISRSP project listen in table 5 (FAO, 2020: 24).

Furthermore, in 2020 the Roadmap for an adaptive and shock responsive social protection (ASRSP) system was adopted by the government with DSWD and the NDRRMC[13] being the lead agencies on its operationalization, with technical assistance received from FAO (PDP, 177, in Hobson et al., 2021: 9). It is a 5-year plan which prioritizes resilience-building to hazards[14] by reducing vulnerabilities of at-risk populations and increasing capacity to cope with, absorb and recover from shocks (Hobson et al., 2021: 4). To achieve these objectives, the Roadmap identifies four building blocks; (1) combined information systems, (2) flexible delivery mechanisms, (3) flexible financing, and (4) institutional capacity and coordination (ibid: 4), which are similar to the suggested framework on SRSP in *section 3.5*. The Roadmap has three stages, (1) Short, (2) Medium and (3): Long-Term (years 5+)[15], with various actions under each stage (ibid). Even though *Anticipatory Action* or *Forecast-based Financing* are not explicitly named within, actions such as strengthening trigger-based thresholds, risk-informed data collection and linkages to EWSs ultimately refer to the embedding of FbF elements into the SP system. This way the Roadmap seeks to enhance capacities of the national SRSP system to respond to hazards in anticipation.

[13] NDRRMC Resolution on the ASRSP Roadmap

[14] Covering storms, floods, droughts, and potentially in the future volcanic eruptions, conflicts, earthquakes and pandemic

[15] Short term (years 1-2) to establish the framework and test shock responsive approaches, Medium term (years 3–5) to transition to ASRSP approaches at scale, and Long Term (years 5+) to integrate approaches and develop systems (Hobson et al., 2021: 9)

Apart from the 4Ps programme[16], the Roadmap considers to scale up the Assistance to Individuals in Crisis Situations (AICS)[17], the Sustainable Livelihoods Programme[18] and the Special Area for Agricultural Development (SAAD)[19] programmes.

In 2021, the Philippines also conducted a simulation exercise to trigger anticipatory cash transfer through existing SP systems, in which PAGASA and the DSWD also participated (Anticipation Hub, 2021). Lessons learnt encourage the need for better data sharing across programmes and stronger coordination between DSWD and LGUs to understand local level challenges (ibid).

4.7. Conclusion

The Philippines is at high risk of climate hazard, and is vulnerable to their impacts, which is why, as the research background reveals, the government demonstrates active engagement in both AA and the strengthening of SP's shock responsive characteristics. In relation to the conceptual framework, it seems that the basic concept of AA is well-established with several ongoing projects, yet funding is still uncertain as it was proposed in *section 3.2.2.* as well. While there is no detailed information on policies, targeting or deliver, the possibility to scale up programmes vertically has already been demonstrated for typhoons. Lastly, the proposition to bridge FbF and SP unfolded in *section 3.6.* seems to be well fitting for the Philippines, as the process is guided by the ASRSP Roadmap.

[16] Pantawid Pamilyang Pilipino Program
[17] Assistance to Individuals in Crisis Situations
[18] Sustainable Livelihoods Programme
[19] Special Area for Agricultural Development

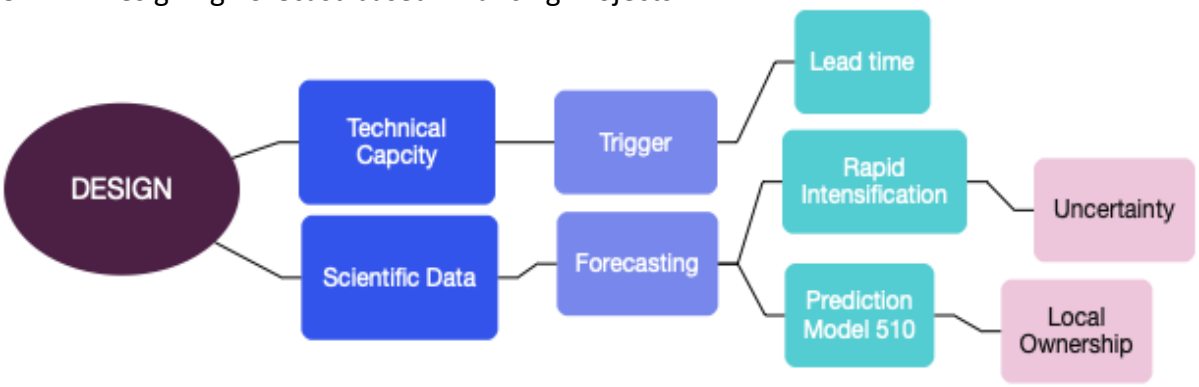
Chapter 5

5. Results

This chapter brings together the research findings on the Philippines from the semi-structured key informant interviews (KIIs). Presentation of the results is separated into two parts; the first part (4.1) is related to FbF and the second (4.2.) to SRSP, based on the order of the conceptual framework. Each section is structured according to the themes and codes within, assigned by the researcher and stated in a logical sequence, starting from the most frequently appeared codes in the data analyzed. Within each larger theme section, coding trees are presented to display the main codes and sub-codes more explicitly. The researcher remains objective and transparent about disclosing the information KIs shared.

5.1. Forecast-based Financing

5.1.1. Designing Forecast-based Financing Projects



To design FbF programmes, KIs stressed the importance of available forecasting data and technical capacity. KI6 emphasized the need for a trustworthy source of scientific data from which the prediction models for hazards (e.g. typhoon, flood, drought) can be established. Currently, AA projects use the 510's foreign model to pre-assess the danger level and impacts of a forecasted typhoon. However, respondents expressed concern about relying on external data to set national triggers and thresholds, because in order for AA to be widely accepted at country level – or even institutionalized-, the forecasting data should come from PAGASA, the local hydrometeorological agency, based on which the trigger model is developed.

"It uses European data, forecast data. It doesn't use the national forecast data, because we didn't have access to it, it just didn't match exactly what we needed for the trigger. So, in that way, it's not something that can be used by the government because it needs to be linked with their own Hydrometeorological Agency, their own national early warning system needs to trigger the anticipatory action". – KI4

"The more localized the forecast and the triggers are, the more reliable they are, the more the local institutions will trust them and it will be obviously better aligned with the government priorities." -KI1

Consequently, KIs highlighted the need for key stakeholders on the national level to agree on a set of triggers and thresholds, upon which appropriate actions can be undertaken based on available funding and resources. However, finding the right time when a meeting for such purpose can take place seems to be difficult because of the government's tight schedule. KI6 also added that once the technical components are set, it is important to allocate roles and responsibilities, because now it is unclear who makes the decision for instance on activating the model. Discussions about triggers with respondents also made it clear that triggers play an important role in bridging AA and SP, as they could enable SP programmes to activate anticipatory action plans and the prepositioned funding linked to them (if available).

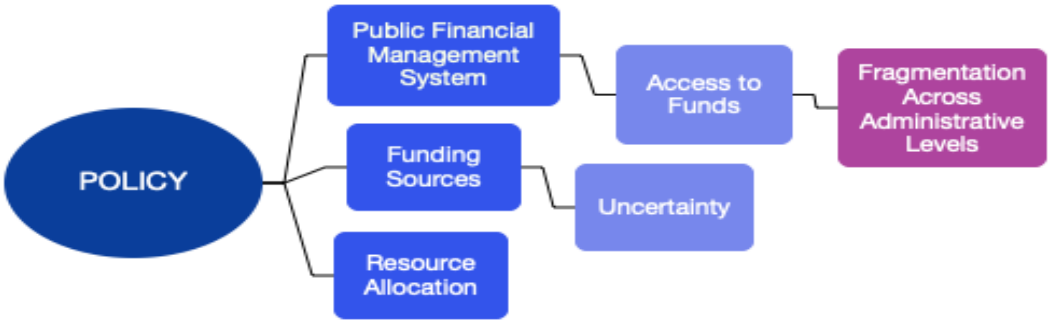
While KIs referred to good forecasting capacity in the Philippines, they expressed worry about the short lead time and rapid intensification of typhoons that has so far prevented a successful activation of the EAP for typhoon. The threshold for typhoons is four days, and once it offsets the trigger, there is only 72 hours lead time to take actions. This was described as a very narrow window of opportunity, especially because the rapid intensification cannot be captured by the triggers, and nor does the country has the necessary instruments to observe natural phenomena, for instance the temperature of the sea, that may influence rapid intensification of typhoons.

"The most destructive typhoons actually undergo rapid intensification 48 to 24 hours before landfall. The most recent typhoon, Typhoon Rai was only a category two typhoon at negative day four. And that was the threshold. So just imagine all the preparations, all the agreements, all the contracts all the logistics that have been pre-positioned to be activated at negative four, if the typhoon becomes a category four at negative day four. However, at negative four, it was still a

category two, meaning low grade typhoon, but 24 hours before landfall it rapidly intensified into a category five typhoon". – KI2

"[…] for typhoons, sometimes triggers are not so clear, or also for example, for heat waves. If it is three days with 40 degrees for activation, okay, but what if it is two days with 40 degrees and one day with 39? So, flexibility of triggers, it is also something that should be better determined in the country."-KI1

5.1.2. Policies and Funding



Moving away from the design to institutional and policy constraints, all KIs stated that lack of reliable sources of funding is a major barrier to scale-up AA. Although the Philippines is one of those few countries where the government funds AA, the amount allocated from the national budget is still very much limited. Furthermore, the various sources of external funds earmarked for AA projects in the Philippines are not reliable in the long-term.

'If you look carefully at what is available in terms of funding in the Philippine, it is still mostly coming from the humanitarian and development sector. I mean, you can see that there is the CERFAA, Central Emergency Response Fund, available for two years, but we don't even know what will happen next year. […] And we are not sure that it will be continued after 2022. We have the funding of the Red Cross, the FBA by the DREF, but that's only for the Red Cross. Start Network has bit of funding, but the accessibility of this funding is a bit different and bit complex. So, all in all, this financing is still limited."-KI3

KIs also highlighted significant gaps within the Public Financial Management (PFM) system. Justification for the use of NDRRM funds is based on a declaration of a state of calamity - the confirmation that an event escalated into a disaster-, which is determined by damage, loss and

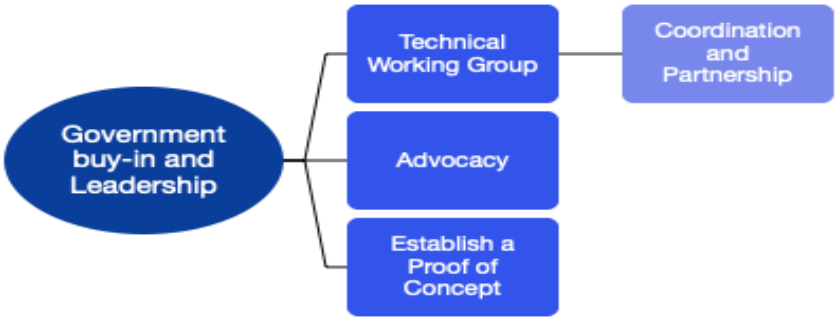
needs assessments. For this reason, guidelines issued by implementing agencies do not cover how, when, and from what sources the mobilization of disaster risk funds ex-ante is adequate. In fact, KIs identified PFM rules as major bottlenecks in further progress with the institutionalization of AA. If LGUs use response funds in anticipation of a hazard, respondents explained that the Commission of Audit (CoA) is highly likely to disallow it, possibly even force LGUs to pay back the funds they had used if guidelines do not justify the actions. This makes LGUs reluctant to mobilize resources in anticipation, as well fragments coordination of DRR/ M activities across administrative levels.

> "[…] when we started discussing this with some of the policymakers, it was one of the identified issues that if we want to introduce this concept (anticipatory action), we should also be looking at revising some of the internal, PFM rules and procedures in terms of accessing funds, downloading funds and utilization funds, to ensure that there's the policy cover […]" - KI5

To overcome PFM challenges, respondents pointed out the ongoing review of the Memo 60, the Revised Guidelines for the Declaration of a State of Calamity. This policy would enhance LGUs decision-making power by allowing them to declare the state of calamity instead of having to wait for the central government to do so. This would mean access to the QRF – which is currently regarded as a response fund- in anticipation, and preparatory actions could also start much faster. However, the policy was not yet enacted at the time of the interviews.

KIs further highlighted that availability of funds and resources very much differ amongst LGUs (e.g. significantly higher resource allocation to bigger cities while isolated areas can be completely neglected), which also makes it difficult in several provinces to act in anticipation. Nevertheless, from this year onward (exact date unknown), the Mandanas Ruling policy will take effect to find solutions for resource allocation amongst LGUs by computing the Internal Revenue Allotment share of LGUs based on the entire national taxes. This means expanding LGUs' share of the national revenue, so they could possibly allocate additional funds for either AA or SRSP.

5.1.3. Government Buy-in and Leadership



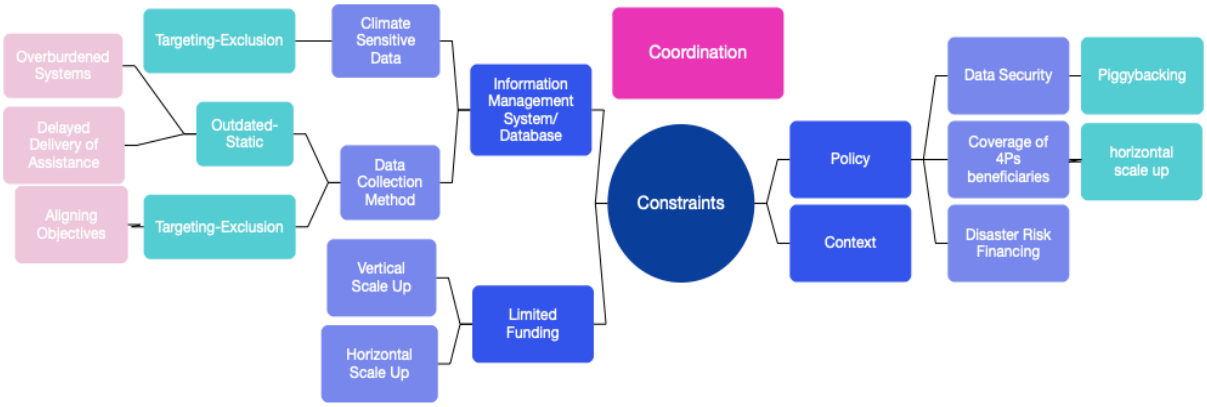
Apart from challenges, KIs highlighted significant enabling factors for AA in the Philippines. In general, they agreed that the government is proactive, engaged in strengthening AA and that the concept is well established in the country on all levels, including local level. Most LGUs have already integrated AA into their local DRM plans, regardless of the aforementioned policy and resource constraints. However, because the concept is still new, there is a need to continue building robust evidence for its wider institutional support. Since the EAP for typhoons was not activated in December 2021 ahead of the most recent typhoon (Typhoon Odette/ Rai), demonstrating the values of AA to the government is further delayed.

> "It's a sector that is still growing and getting kind of all the lessons learnt and gathering, so it can be better integrated." -KI1
>
> "It's not always that easy to convince people. But the more we will test, the more evidence hopefully we bring and we might be able to transform a little bit the way we deal with disasters." -KI3

Furthermore, KIs brought up the AA TWG as an essential platform for advocacy and coordination on the institutionalization of AA. The TWG is integrated into the government disaster response cluster, which is a major breakthrough in the emerging field of AA. KIs also found the TWG essential in fostering partnership amongst the DSWD, The Department of Budget Management, the Department of the Interior and Local Government, the Department of Science and Technology, the Office of Civil Defense and the humanitarian agencies involved, such as WFP, FAO, The Red Cross Red Crescent Movement and Start Network.

"In any case, this is the group that is responsible for advising the government on their policy related issues and how they can finance, institutionalize AA. And it's an entry point for advising thus the government on how they can use the lessons learnt, the best practices, from anticipatory action into designing social protection systems that can be flexible and can be scaled up in response to scientific triggers […]". -KI4

5.2. Shock Responsive Social Protection



5.2.1. Information Management System (IMS) and Policies

When KIs were asked about shock responsive social protection (SRSP), the most frequently appeared code in the findings was related to information management system (IMS) and data. KIs highlighted that even though the Listahanan - the national database - covers a large segment of the population, it is not frequently updated, and further it identifies poor households based on an observable set of characteristics (proxy means testing), which does not necessarily cover the most vulnerable and exposed households to climate hazards. These problems with the database limit the successful use of SP programmes for responding to shocks. **To make the Listahanan adequate for shock response through rapid targeting of populations exposed to hazards -either ex-ante or ex-post-, KIs have consistently emphasized the need for the national database to capture hazards, vulnerabilities and anticipated impacts.**

"If you want your registry to actually capture the beneficiaries of existing social protection and potentially your future affected population, then you must ensure that your poverty, poverty registration should actually include or capture risks and hazards and vulnerabilities." -KI5

Consequently, the government is planning to transition from Listahanan to a community-based monitoring system (CBMS). In this new IMS system, LGUs will be responsible for household data collection within their communities, making it easier to keep it up-to-date and more comprehensive by including information on risks, hazards and vulnerabilities. KI5, however, could not yet tell when the CBMS will come into effect.

The importance of data also came up when KIs were asked about their understanding of linking FbF and SP programmes. According to them, one way to do this is that FbF's risk-informed data complements Listahanan's beneficiary list to support the prioritization of the most vulnerable groups in disaster prone areas, prior to the occurrence of the anticipated hazard. However, KI5 explained limitation to this approach. Firstly, strict data security policies prevent external organizations from accessing national databases, and secondly, only 4Ps beneficiaries are allowed to be drawn from Listahanan to assist disaster affected areas through existing SP programmes, which as aforementioned are not necessarily the ones who would suffer the most from climate hazards. Interestingly, when asked about the linkages between FbF and SP in regards to targeting, KI1 drew attention to the different values inherent in the humanitarian and SP interventions by saying that:

> "We don't want to politicize the system." – KI1

She explained that while humanitarian agencies are guided by the principles of humanity, neutrality, and impartiality, with a *leave no one behind* approach, geographically isolated communities and people living in informal settlements are often excluded from Listahanan - and therefore from social assistance programmes- which can jeopardize aligning objectives.

Another way of delivering AA through SP explained by KIs is using SP's payment channels, just like during Typhoon Haiyan. The idea is that if humanitarian organizations channel the money to DSWD in anticipation of a hazardous event, DSWD can distribute that money through 4Ps existing structures to 4Ps beneficiaries. However, KI3 explained that during a 2021 simulation exercise - in which anticipatory cash relief was planned to be distributed through 4Ps -, it turned out that DSWD's financial service providers were not ready to deliver cash within the 72 hours lead time because Listahanan's inaccuracy required manual tracking of anticipated beneficiaries, which was time-and resource consuming.

Whether the aim is to deliver assistance immediately after a hazard or in anticipation, for now it is only UNICEF working together with the government on how to directly leverage the 4P's delivery channel – which is the Land Bank of Philippines-, but KI5 admitted that it is a very long process requiring data sharing and other policy agreements. However, KIs hope that if UNICEF manages to demonstrate how to piggyback on existing programme structures – either in anticipation or ex-post-, then other agencies would also be able to follow their example.

> "Among the UN agencies in the emergency response pilot, UNICEF is actually the one who opted to use partner national social systems to channel assistance. All the other UN agencies were using parallel systems, they built parallel mechanisms, beneficiary targets, cash delivery systems. They can readily activate them, because everything is within their control, but for UNICEF it's quite difficult and challenging because the issues around data security, data sharing agreement, which until now we're still trying to finalize. But when we look at it from the perspective that if we're able to actually demonstrate this, then we are demonstrating to everyone else that if you want to reach as many people as you could, then this is the way to go."-KI5

5.2.2. Funding

Findings revealed budgetary constraints for SP's scalability. KI5 referred to the recent example of Typhoon Odette, when the Department of Budget and Management allotted almost PHP5 billion to assist households affected, but this amount only covered 53% of the affected population. DSWD wanted to cover the remaining 47% gap through the AICS cash assistance programme, which is currently the primary channel used by DSWD to provide financial assistance to typhoon affected families. Eventually, DSWD did not have the budget available, so UNICEF had to step in to cover the excluded households through *horizontal expansion* of the AICS. Meanwhile, UNICEF is also planning to assist *vertical expansion* - cash top-ups to 4Ps beneficiaries - who have also been affected by Typhoon Odette, once resources are available. KI5 emphasized that UNICEF has been following DSWD's ECT guideline for SP's scalability to align beneficiaries and cash transfer values with government standards. In light of this, UNICEF's involvement is:

> "[…] beyond the immediate objective of providing financial assistance to poor households and their children. It's also about Systems strengthening, building the capacity of the existing social protection system to be able to expand in times of emergencies." – KI5

Despite all these challenges, the Adaptive and Shock Responsive Social Protection Roadmap came up repeatedly as an important plan for establishing a system that bridges AA and SP in the Philippines. KIs agreed that a significant step forward and an important milestone was when the Roadmap was adopted by the government and DSWD. Even though respondents identified the Roadmap as an enabler for strengthening anticipatory and shock-responsive systems, they also acknowledged that its operationalization is still a long way to go.

> "[…] so, there's already a Roadmap on SRSP that was endorsed and adopted by the Philippines government. Again, essentially, it has to do with the vertical expansion, horizontal expansion in anticipation of shocks or could be both natural hazards or manmade, and then trying to link it all with early warning and then the triggers for activating the response. Right now, the policy is there, but in terms of actually operationalizing it, it's not yet being fully operationalized." – KI5

5.2.3. Coordination and Context

The coordination and contextual factors themes were highlighted as a fundamental aspect of working towards a system that can respond to shocks either in anticipation or immediately after shocks. Advanced coordination is necessary to share databases, review existing policies, avoid parallel systems, and align objectives, whilst context determines when and how SP should be utilized in emergencies. For instance, KI3 believes that acting in anticipation would not be a sustainable approach for all types of hazards, especially in the Philippines where in a year there are several typhoons making landfall. Instead, AA could focus on smaller scale hazards or complementary interventions to reduce the need as well as costs of emergency response, while also helping households to recover faster after disasters.

> "If we have the data available, we can already release funds before but it doesn't stop us from using the SP system to also be able to release funds immediately after the disaster or a few months after the disaster."-KI6

From the research findings it is clear that several challenges remain related to both AA and the use of SP programmes to deliver emergency assistance either immediately after a disaster strikes or in anticipation. Considering these findings, an analytical discussion follows in the next chapter (Chapter 6), in which answers will be provided for the research sub-questions.

CHAPTER 6

6. Discussion

Using the case of the Philippines, the intent of this research was to understand how to bridge SP and FbF/ AA in order to enhance early response to climate hazards. Two research sub-questions were developed to guide the research process:

A. What are the challenges of scaling up anticipatory actions?

B. What factors enable or hinder SP programmes from becoming more responsive to shocks?

The following section interprets the previously detailed research findings in relation to the conceptual framework in Chapter 3 and the research background in Chapter 4. On the one hand, the discussion in this chapter is a deeper analysis of the case of the Philippines, answering sub-Q1 (section 6.1.) and sub-Q2 (section 6.2), eventually instructing answers for the main research question.

6.1. Anticipatory Action

6.1.1. Local Ownership

Although the literatures reviewed on FbF stressed the importance of forecasting capacity (Costella et al., 2018; Daron et al., 2020; Lopez et al., 2017; Tanner et al., 2019; Wilkinson et al., 2018), they did not highlight the relationship between data, triggers and localization, and thus local ownership over project design is an important theme that appeared from the data. Using the external model issued by 510 is a challenge to integrating AA into broader policies and systems in the Philippines, provided it cannot be acknowledged and utilized by the government. While the need for robust triggers also appeared in Levine et al. (2019) and Wilkinson et al.'s, (2018) research, they rather discuss them in relation to expense minimization to offset the risk of acting in vain, as opposed to emphasizing national ownership over them. If the objective is to implement AA at scale, an important aspect to consider is that the design and implementation cannot happen in isolation, but instead they need to be tailored to national priorities and capacities, with the decision-making power on what actions should be taken when a specific danger level is forecasted being in the hands of national agencies. PAGASA, LGUs and other local stakeholders should be

actively engaged in the planning and design procedures to make sure that there is no fragmentation across administrative divisions in the country when it comes to understanding response through anticipatory triggers, and how their measurements are done. By using models which integrate local data, the government is more likely to support, or even institutionalize AA, thereby sustaining its use within the country even after the current programmes piloting in the Philippines (e.g. CERFAA) come to an end.

6.1.2. Flexibility of Triggers

Another important point of discussion pertains to the flexibility of the triggers as essential components of FbF projects. While *sub-section 3.1.1.* in the conceptual framework draws attention to fear of acting in vain because of weak forecasting capacity, findings suggest that in the Philippines, the direction as well as speed of typhoons can be predicted accurately. The bigger problem is accredited to the inability of triggers to capture the rapid intensification typhoons often go through. Therefore, the study demonstrates an important correlation between triggers, rapid intensification, evidence building, and scaling up AA as opposed to the proposed relationship between forecasting capacity, fear of acting in vain, evidence building and scaling up AA in the conceptual framework *(see section 3.1.).* From the results it seems that triggers in the Philippines are rather rigid, leaving little room for flexibility, which is also contradictory to Costella et al.'s (2017) statement that FbF allows a risk layering approach through various levels of thresholds that focus on hazards with different intensity. Because of the inflexibility of triggers and lack of capacity to forecast the possibility of rapid intensification, the EAP was not activated last year for Typhoon Rai regardless of all the preparations made. This also means that evidence on the values and benefits of AA could not be documented, which, as highlighted in the conceptual framework, is necessary for the government to acknowledge AA's role within national DRM strategies. Possible solution, as written in the AA Framework for 2021-2022, could be the integration of scenarios on rapid intensification to measure potential impacts, which could also serve as an indicator for activation (OCHA, 2021: 9). Starting with low regret actions could ensure that only limited resources are used, which could even be considered as an investment in households, as suggested by Ulrichs et al.'s (2019) research on building resilience through anticipatory cash relief.

6.1.3. Institutional Structures and Policy Constraints

The results build on existing research on that the absence of a sustainable source of funding is one of the biggest challenges in applying AA at scale (see in Gros et al., 2018; Levine et al., 2020; Tanner et al., 2020; Wilkinson et al., 2020). In the conceptual framework, lack of funding is mostly attributed to the fact that further evidence is required to convince the government that AA is an approach worth investing in (*see section 3.1.2.*). While findings support this correlation and emphasize the need for robust evidence, they also contribute to a clearer understanding of the relationship between the PFM system, guidelines and access to funds. Current institutional structures and policies do not leave room for the release of funds ex-ante, in spite of the Republic Act 10121 emphasizing the need to strengthen preparedness *(see section 4.4.1).* Funds can only be released after the government declares a state of calamity, which demonstrates how internal bureaucracies limit rapid decision-making when there is such a short window of opportunity (72 hours lead time to act in anticipation). LGUs' response could be more efficient and faster if they were allowed to mobilize resources without having to wait for approval from the central level, yet it seems that institutional structures are still leaning towards reactive rather than proactive approaches to respond to hazards. Similar results on limited structural entry points for AA, and how they affect its institutionalization were found in Levine et al.'s (2020) research focusing on Bangladesh.

Furthermore, the results also clarify that even if these policies are being reviewed (e.g. Memo 60), step-by-step guidelines are also required to justify access to resources. Even though in some reports (Anticipation Hub, 2021; IFRC, 2021) the decentralized nature of the government – or in other words LGUs' role as first-tier respondents in emergencies - is an enabling factor for the future of AA in the Philippines, data makes it clear that policy constraints for now significantly influence LGU's ability to take early actions, leaving a gap between theory and practice in the country. In the analysis of the Philippines' readiness for AA *(see section 4.3.),* the MoA between the PRC and LGUs was also highlighted as an important step towards local level funding as well as implementation of AA. Instead, however, results imply that there is a lack of understanding and coordination across administrative levels on the triggers, thresholds, early actions, funding sources and the forecasting communication.

6.1.4. Government Buy-in and Leadership

Despite the limitations, data revealed essential opportunities in the Philippines for scaling up AA. Primary data indicates a very positive attitude and strong national appetite for AA, which is demonstrated by the various project initiatives in the country, listed in *Annex 2*. The Government of the Philippines has already established the leadership necessary to strengthen AA, and it is reasonable to conclude that this existing political will, and coordination through the AA TWG will serve as the primary success factors for establishing an institutional framework which supports the institutionalization of AA. As for every new strategy, however, further evidence building, lessons learnt and rigorous monitoring and evaluation (M&E) are important, from which lessons learnt as well as best practices can be shared across sectors and even countries in the region. Coordination amongst stakeholders, access to finance and evidence building were also essential themes discussed in Phadtare and DeCoste's (2020) research on FbF in the ASEAN region. Similarity between findings might suggest common issues to focus on when it comes to anticipatory humanitarian relief, not only in the Philippines but in other neighboring countries as well.

6.2. Shock-Responsive Social Protection

Based on the framework suggested in the conceptual framework (*see section 2.1.9*), in order for SP to be more responsive to shocks, (i) robust institutional framework and coordination, (ii) comprehensive IMS, (iii) adequate targeting, (iv) timely delivery of assistance and (iv) prearranged funding are essential. These building blocks together contribute to SP's scalability in ways listed Table 4 in order to provide extensive assistance to people in crisis interventions. Results, however show major deviations in the Philippines.

6.2.1. Climate Sensitive Targeting

The first important correlation to be discussed is between the database, adequate targeting and timely delivery of assistance. Both primary and secondary data reviewed designate significant attention to the need to understand risk, hazard and vulnerability information for more adequate targeting of households exposed to climate hazards through SP programmes (see Béné et al., 2018; Bharadwaj et al., 2012; Costella et al., 2021; O'Brien et al., 2018). On the contrary, findings reveal that in the Philippines, Listahanan is not yet 'climate sensitive', meaning that households

that do not fall below the poverty line yet their lives and livelihoods are still exposed to and vulnerable to hazards, are not necessarily covered by the database. Results are limited to display the exact percentage of overlap between households covered by Listahanan and households in geographic areas vulnerable to climate hazards, but from the primary data it seems that a big portion of the population would be excluded if assistance is delivered only to households enrolled in the Listahanan database. Furthermore, the database is updated in cycles of 3-5 years, therefore it is too static to capture people's changing circumstances, and could possibly exclude households whose vulnerability and exposure has changed over the years. Such database, according to ADB (2019), fails to consider the changing patterns of hazards and how they impact livelihoods, therefore it loses its value to be used for a shock response. Similar targeting and registry barriers have been found for instance in Nepal too, which suggests a great need for further research on how to improve national registries and enable the enrollment of new beneficiaries in order to expand SP programmes (Merttens et al., 2017).

Additionally, when targeting is inaccurate, it affects delivery of assistance as well. Timely delivery is only possible if those affected by hazards are preidentified, which, as aforementioned is limited in the Philippines. For instance, during Covid-19 those covered by Listahanan received relatively fast delivery of assistance, while other households who were equally affected by the pandemic experienced delay in assistance (Beazley et al., 2021). Beneficiaries should also have phones or bank cards with easy access to ATMs as suggested by O'Brien et al. (2018: 39f) through which they can collect the cash received. Data suggests, however, that this may not be the case with marginalized communities, such as households in hard to access geographic areas or informal settlements. This indicates exclusion errors in targeting again, especially if the Land Bank of Philippines – the primary delivery channel for the 4Ps programme- do not have these households within its client segment. When transitioning to a CBMS system, it would be essential to include these households too in the new database so that the most vulnerable to shocks can also be assisted.

From a wider analysis, the fact that Listahanan is neither climate sensitive nor does it cover marginalized communities limits the linkages between the SP and humanitarian sectors. As opposed to the suggestion in the conceptual framework, that target groups of the two sectors are increasingly overlapping (*see section 3.7*), SP's coverage of geographically vulnerable areas to hazards seems to be still limited.

6.2.2. Policies Enabling Scalability

The second important correlation demonstrated in the data is related to policies and scalability of programmes. Results indeed provide a more in-depth understanding on institutional structures and how they affect SP's shock responsive characteristics. While the conceptual framework identifies various ways of using SP programmes in humanitarian response (see Table 4), data revealed that flexibly scaling up programmes or piggybacking on existing programme structures in the Philippines for now is restricted through various policies. Firstly, horizontal expansion – adding new beneficiaries temporarily to an existing programme from disaster affected areas – is restricted through the policy covering 4Ps - the flagship social assistance programme in the Philippines -, which only allows cash support by SP to households that are drawn from the Listahanan, and enrolled in the 4Ps porgramme. Secondly, piggybacking on SP's existing structures – in this case on the Listahanan database and the Land Bank of Philippines delivery channels – is still not yet possible in the absence of the necessary data sharing agreements between DSWD and UNICEF. Lastly, because of funding restrictions, DSWD cannot support vertical expansion – cash top up for existing 4Ps beneficiaries –, which is discussed further in *section 6.2.4.* Even though previous research identified scalability of SP programmes as an essential feature for strengthening their capacity to respond to shocks, a significant gap remains between theory and practice. Moreover, when it comes to scaling up programmes in anticipation, while previous research focused on how FbF can complement national databases with its own risk-informed data (see Costella et al., 2017 & 2018), these results clearly indicate that such a synergy is limited at policy level.

6.2.3. Terminology – Scaling Up Programmes

An important point to discuss is related to the terminology of scaling up SP programmes. The respondent from UNICEF calls top up provided in June or July to 4Ps beneficiaries affected by Typhoon Odette as vertical expansion, even though the typhoon hit the Philippines in December 2021. This can be confusing if compared to the meaning of shock responsiveness as laid down in the conceptual framework, since the literature refers to shock response as a very early response immediately after the hazards had occurred, yet the support UNICEF plans to provide is six months after the typhoon had struck. In that sense it is more like a traditional humanitarian assistance but it does aim to leverage existing SP structures in the country. This could either mean

that agencies use different terminologies for SRSP and there are conceptual gaps between SRSP and emergency response, or that SRSP is currently also limited in how fast it can deliver assistance after disasters. Both national as well partner agencies could benefit from a strictly defined timescale on shock responsiveness versus a traditional humanitarian emergency response.

6.2.4. Funding

As presented in the conceptual framework, in order to improve SP's shock responsiveness, there needs to be a sustainable, prepositioned funding source so that programmes can be leveraged in a timely manner. Based on findings, however, it seems that the government in the Philippines cannot identify sufficient local financial sources to meet the increased demands of the population by expanding coverage to all those affected by hazards. Lack of funds limit both horizontal and vertical expansion of SP programmes, hence the need for humanitarian agencies to step in and assist the remaining households, just like recently during Typhoon Rai (*see section 4.2.*). Indeed, funds are also related to climate sensitive targeting, because without understanding the potential impacts of hazards and thus the scale of the population that need to be targeted when disasters occur, SP systems cannot prepare for responding to shocks, neither can it plan the budget needed to assist households. Data suggests that possible consequences include delays in scalability as well in delivery of assistance, and fragmented coordination because of a system that is not ready for emergency response but instead it has to improvise and aid households in an ad-hoc manner. Similar results were found in Nepal's SRSP as well (scaled up after the 2015 earthquake), where problems related to SRSP remain with financing sources, coordination across sectors, beneficiary selection and payment mechanisms (Merttens et al., 2017).

Primary data disagrees with Costella et al.'s (2017 & 2018) argument that FbF with its prepositioned funding can complement and guarantee anticipatory funds needed for SP's scaled up response (*see section 3.6.*). Data has revealed that neither DSWD has enough funds that would cover all hazard affected households, nor funding pools reserved for AA in the Philippines (CERFAA, FbF by the DREF, Start Fund) can be used to scale up SP programmes. Due to the lack of data focusing on specific funding sources, the results however cannot offer in-depth discussions on different types of DRF instruments that could be used for SRSP. For further inquiry, Longhurst et al. (2021)'s paper discusses financing options for SRSP, with sections on early actions in an in-depth manner.

Chapter 7

7. Conclusion

After Chapter 6 answering the research sub-questions relative to the specific case of the Philippines, sections 7.1. and 7.2. of this chapter provide a general conclusion for them, while they also answer the research question both from a specific (the Philippines context) and a more general perspective.

7.1. What are the challenges of scaling up anticipatory action?

Reviewing secondary data with a focus on challenges limiting the expansion of AA delivered by FbF at scale, and triangulating it with primary data from key informant interviews (KIIs), there is an overlap between what previous research has found on the challenges of FbF in regards to (i) funding and (ii) evidence. The study highlights the need for further research on finding the most appropriate option for funding AA in the long-term, whether it should be from internal, external or a mixed source, as it remains uncertain for the time being. Furthermore, results justify the importance of generating data on the values and benefits of AA, thereby building a strong proof of concept to advocate for the institutionalization of the approach. Additional challenges found that deviate from those revealed in the conceptual framework include (iii) lack of local ownership over the design, (iv) inflexible triggers and (v) institutional constraints on the mobilization of resources ex-ante. The study offers a good understanding of current policies that limit opportunities for disaster response in anticipation on the local level, which indicates the need to look into, review and/ or adjust policies so they are harmonized across programmes as well as administrative levels to enable early response. Localization of the triggers and forecasting data could be a major breakthrough for AA's institutionalization and geographic expansion, while generalizability of the results on rapid intensification is limited, as it is a specific characteristic of tropical storms. Even then, looking into how triggers could be more flexible when it comes to hazards and how to adjust thresholds for different categories of hazards could be an important point of discussion.

7.2. What factors enable or hinder SP programmes from becoming more responsive to shocks?

In relation to the proposed framework in the conceptual framework for improving SP's shock responsiveness, with the primary data collected it became clear that limitations remain with all aspects; institutional framework and policies, information management system (IMS), targeting, delivery and funding as well. Results provided an in-depth overview of how the national database is static and missing climate sensitive information, which is why it is inadequate for timely identification of beneficiaries in hazard prone areas, and thus delays delivery of assistance. Furthermore, respondents revealed existing policies that prevent rapid enrollment of new households whose lives and livelihoods are vulnerable to changes in climate patterns. The analysis also revealed that on top of these existing policies, national funds for scaling up SP programmes in response to large-scale disasters are not available, hence the continuous need for external support from humanitarian actors. Conclusively, the results suggest the need to reconsider the validity of national databases from which SP programme beneficiaries are selected, and check the level of overlap between households exposed and vulnerable to hazards, and households that regularly receive cash assistance from SP programmes. Furthermore, similarly to what the results indicate on funding sources for AA, it is reasonable to say that a fiscal solution for expanded SP programmes in times of disasters is also essential so that programmes can flexibly adjust when it is needed. For these changes, ex-ante planning - as suggested in the conceptual framework -, coordination across DRM, HA and SP and systems capacity building are areas to be improved.

7.3. What are the constraining and enabling factors of linking forecast-based financing to shock responsive social protection programmes?

The answers to the research sub-questions demonstrated challenges as well as entry points associated with FbF's operationalization at scale, while also identified several challenges that hinders progress on scaling up SP programmes so they can deliver timely assistance to disaster affected areas. These findings help to better understand answers for the research question.

7.3.1. Constraining Factors

In relation to local ownership, the study provides a clear justification of how design influence linkages between FbF and SP. Both secondary and the primary data collected highlight that linking

forecasting data and triggers to SP programmes can allow them to trigger early action plans and release anticipatory cash assistance once certain thresholds are exceeded. However, relying on a model that issues European forecasting information to set up triggers and thresholds runs the risk of undermining national capacities and priorities, and lowers trust towards the technical components of FbF projects. This partly explains why the government is still hesitant to institutionalize AA within the national DRM system as a sustainable approach, as well as to why FbF mechanisms – forecasts, triggers, action plans – are not yet linked to SP programmes. Designing projects with national leadership appears to be crucial to safeguard the sustainability and long-term support of AA.

Moving onto policies, the study clearly explains the challenges that the current institutional framework and bureaucracies across administrative levels in the Philippines poses for successfully linking FbF and SRSP. For one, the release of funds ex-ante is held back because policies still require tangible losses before allowing resource mobilization, and guidelines are missing on clear roles and responsibilities. Consequently, it is well-founded to say that the institutional framework and resources are still skewed towards response rather than risk reduction and anticipatory relief, which also makes it difficult to deliver anticipatory cash through SP programmes. Data revealed further challenges at policy level that are related to selecting additional beneficiaries to assist, or in other words to horizontally expand SP programmes ahead of a predicted hazard. Since households can only be chosen from Listahanan, exclusion of beneficiaries is highly likely, yet strict data security policies stand in the way of merging SP and FbF's database. With this nuanced understanding of policies, the analysis provides answers to why (i) horizontal expansion of SP programmes in anticipation is not feasible for now in the country as well as why (ii) anticipatory delivery of cash assistance within the short lead time of 72 hours is not possible with a database that is neither climate sensitive nor up-to-date.

Moreover, data suggests that it is still unclear how FbF and an either vertically or horizontally scaled up SP programme would be funded in the future; from what sources, and which departments or sectors would be responsible for funding them. Fiscal envelopes are limited in the Philippines, while DRF before and after shocks have different speed, timelines and budget frameworks, which makes it difficult to understand the most suitable option for funding an anticipatory cash assistance delivered through scaled up SP programmes. This indicates the need for further research on how existing and new humanitarian funds can be used flexibly, how money

moves through PFM systems and how AA fits within national DRF instruments in order to provide a sustainable solution to the question of funding a system that bridges FbF and SP.

The national database's erroneousness, restrictions on enrolling new beneficiaries and monetary restrictions pose logistic challenges that prevent the operationalization of scaled up SP programmes in anticipation of hazards by overburdening administrative systems, and fragmenting delivery of assistance because of having to decide on a priority group for assistance. This suggests that SRSP programmes only function in an ad-hoc manner instead of being predesigned as flexible and scalable, which is why challenges remain in practice to use them for channeling through anticipatory cash transfer.

The findings indicate a pressing commitment for better vertical coordination across administrative levels, and between humanitarian agencies and national stakeholders including the local hydrometeorological agency (PAGASA), the SP (DSWD) and the DRM (NDRRMC) departments to harmonize plans and policies across programmes or smoother implementation of actions. Clearly, close partnership between external and internal actors exist, but further work is required to align objectives across sectors. Despite efforts made, AA and SRSP are still treated as silo concepts, owned by separate sectors with isolated objectives, and operationalized through different timelines (the former providing short-term assistance before hazards, while the latter is designed for long-term support). Confusion on terminology of what it means to link AA and SRSP, or what the timeframe is for a shock response can easily fragment communication, and thus hinder efforts to link FbF and SRSP.

7.3.2. Enabling Factors

Strong institutional framework for DRM and SP in the Philippines, basic structures in place for AA and SRSP, and the adopted ASRSP 5-year Roadmap indicate that the country has long-term plans to establish an anticipatory shock responsive system. Political willingness and the appetite for AA and SRSP in the country are one of the strongest enabling factors to advance linkages between the two approaches. This willingness enables ongoing discussion on reviewing policies and technical advice on issuing guidelines for successful operationalization. There is an already established leadership in the country with the DSWD and NDRRMC, while close partnership with humanitarian organizations enable further capacity development, evidence building and coordination across sectors as well as programmes. The AA TWG provides an important platform

for advocacy on the institutionalization of AA and how to integrate it within the SP system. It helps to build mutual trust between national and external stakeholders and to share lessons learnt, best practices and challenges on the policy, programme and operational level.

Chapter 8

8. Recommendations

Although there are limitations to the generalizability of the findings, there are some opportunities for further research on linking forecast-based financing anticipatory action and shock-responsive social protection beyond the specific context of the Philippines.

a. Ex-ante agreements should be put in place to ensure SP's programmes scalability, and allow administrative systems, delivery structures and policies to be more flexible as well adaptable in the rapidly changing contexts of emergencies, otherwise systems will be overwhelmed and delivery of assistance chaotic. Furthermore, if climate and disaster information is not incorporated, the changing patterns of hazards and the future impacts they will have on geographic areas as well as the livelihoods of communities will not be understood, and thus will prevent stakeholder to prepare targeting, actions and funding in advance.

b. While significant progress has been made to establish the foundations for AA and SRSP, continued work is required to understand how to tap into DRF instruments, and where ex-ante funding should come from. If not, the national and international community will not move from short to long-term support that builds the resilience on the system and community levels to shocks.

c. Building an adaptive and shock responsive social protection systems that integrates FbF mechanisms, such as trigger-based thresholds and forecasting information at policy, programme and operational level is detailed in the ASRSP Roadmap. This could potentially be utilized to guide future projects as well, especially in the ASEAN region.

d. More should be invested in rigorous M&E, documentation of lessons learnt as well as best practices, facilitating learning across countries for better knowledge management, and capacity building to understand and apply the concepts in practice, because this will advance government buy-in and sustainable support for both FbF and SRSP.

e. Aligning humanitarian, DRM and SP sectors requires feasibility studies and further empirical testing on the appropriateness of using SP programmes to deliver assistance either ex-ante or ex-post. If objectives are not adjusted, it could result in further targeting exclusion or undermine local power structures and national priorities. Additionally, stressing governments the need for an inclusive - leave no one behind- approach and giving voice to socially excluded communities is essential in order to improve disaster response and preserve development gains against the growing number of climate hazards.

Conclusively, this study contributes to the field of FbF and SP in two ways. Firstly, the extra case study of the Philippines is now added to the list of existing cases on exploring anticipatory humanitarian relief through SP structures, at this time presenting findings from a perspective that summarizes constraining and enabling factors. Secondly, the thesis serves as a guidance for relevant stakeholders to identify these factors -if exist- at design and policy level when working on operationalizing an anticipatory SRSP programme in other country contexts as well. The paper encourages further empirical testing of pre-planning systems, harmonizing programmes and amending institutional and policy frameworks to make countries suitable for anticipatory action and shock-response.

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10. Annexes

Annex 1: Key Informants

Reference	Organization
KI1	The German Red Cross (GRC)
KI2	Start Network
KI3	Food and Agriculture Organization (FAO)
KI4	World Food Programme (WFP)
KI5	United Nations Children's Fund (UNICEF)
KI6	Food and Agriculture Organization (FAO)

Annex 2: Anticipatory action project initiatives in the Philippines

ORGANIZATION	PROJECT	DESCRIPTION
United Nations for the Coordination of Humanitarian Affairs (UNOCHA)	Typhoon anticipatory action framework, funded by the Central Emergency Response Fund (CERF) 2021-2022	The Philippines was chosen as a pilot location for implementing the CERFAA to mitigate losses caused by typhoons on people's lives and livelihoods in Region 5 (Bicol) and Region 8 (Eastern Visayas). The pilot programmes also brought significant budgetary support of AA to the country.
Philippines Red Cross (PRC) with the support of German Red Cross (GRC)	Forecast-based Financing (FbF) project 2017-2022 funded by FbF by the Disaster Risk Emergency Fund (DREF)	To assist AA based on the EAPs developed for floods (2021) and typhoons (2019). Activities include shelter strengthening, livestock evacuation, early harvesting of matured crops, and temporary relocation of stocks for small businesses. The EAP for typhoon currently covers 19 provinces on the eastern parts of the country.
Food and Agriculture Organization (FAO)	Early Warning Early Action (EWEA) for El-Niño-induced drought 2018-2019, funded by Special Fund for Emergency and Rehabilitation Activities (SEFRA)	Acting in anticipation in coordination with LGUs in the provinces of Cotabao and Maguindanao to mitigate the impacts of the drought on smallholder farmers. Early actions involved distribution of drought-tolerant rice seeds and fertilizer, supply of tools and irrigation as well as cash for wok. This project initiated the work on enhancing adaptive and shock responsive protection, and the establishment of the project called Joint SDG Programme 'Ensuring Inclusive and Risk-informed and Shock-responsive Social Protection (RISRSP)'. (see section 4.7 on shock responsive social protection)

Oxfam, Plan International, Global Parametrics	The Building Resilient, Adaptive and Disaster Ready Communities - B-READY Pilot	Launched in 2019, the project aims to combine weather forecasting and cash transfer to mitigate the impacts of typhoons on poor and demographically vulnerable households in nine coastal villages in Region V. It was tested on 2019; beneficiaries received pre-paid cards with funds prepositioned on them three days before landfall of typhoon.
World Food Programme (WFP) with support from the German Federal Foreign Office	Forecast-based Emergency Preparedness for Climate Risks	Initially supported ten provinces in developing their FbF Standard Operating Procedures (SOPs) indicating triggers and anticipatory actions for typhoon-induced floods (These provinces have also set plans to institutionalize the FbF approach in their respective areas). Furthermore, the project supported 40 LGUs in developing DRM systems, policies and plans.
Start Network	FOREWARN, funded by the Start Network Crisis Anticipation and Disaster Risk Financing	Developing a new DRF tool for typhoons and a network of experts with an interest in AA to support early actions appropriate to context. They also focus on epidemic outbreaks (e.g. conduct dengue assessments).

Sources: Hobson et al., 2019; IFRC and REAP, 2021