

Jenni Koivisto

# Navigating in the Midst of Uncertainties

Challenges in Disaster Risk Governance in Mozambique





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DOCTORAL THESIS | Karlstad University Studies | 2018:39

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## **Abstract**

Disasters cause heavy losses for societies and may quickly erode any development efforts. Consequently, disaster risk reduction (DRR) is an integral part of development work that should be addressed at multiple levels. Global DRR frameworks, scholars and practitioners all advocate disaster risk governance (DRG) strategies that are multi-stakeholder, polycentric and multisectoral. While various substantive knowledge gaps and questions arising from multiple risks and the crosscutting nature of DRR have been relatively well addressed, uncertainties relating to multiple DRR actors operating and collaborating at different scales have gained less attention in previous studies.

This thesis investigates the uncertainties in DRG in Mozambique, a low-income country that regularly faces natural hazards. These hazards often cause heavy loss of life and livelihoods and economic damage. The four articles that together constitute this thesis focus on different sets of uncertainties and factors that have constrained or allowed Mozambique to take major steps in this policy area. By exploring strategic and institutional uncertainties related to stakeholder involvement, coordination and policy disputes, this thesis reveals different challenges and opportunities that affect DRR policymaking in Mozambique.

This thesis concludes that Mozambique has managed to take important steps in DRR. However, as a consequence of the different challenges to DRR practice in Mozambique, policymaking can be short-sighted and makes slow progress, thus increasing the disconnect between theory, policies and practice. This thesis thus argues that DRG research and practice need to better take into account power-relations; coordination and capacity issues; and responsibilities and transparency across scales, both in Mozambique and elsewhere.

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Jenni Koivisto, Örebro, September 2018

## List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Koivisto, J. E., & Nohrstedt, D. (2017).<sup>1</sup> A policymaking Perspective on Disaster Risk Reduction in Mozambique. *Environmental Hazards*, 16(3), 210-227, DOI: 10.1080/17477891.2016.1218820 (first published online 10 August 2016).
- II Koivisto, J. E. (2014). A Stakeholder Analysis of the Disaster Risk Reduction Policy Subsystem in Mozambique. *Risk, Hazards & Crisis in Public Policy*, 5(1), 38-58.
- III Koivisto, J. E. Round and round we go – the impacts of staff turnover on disaster risk governance. Under revision to *International Journal of Disaster Risk Reduction*.
- IV Koivisto, J. E. Whose Voice Do We Hear? Obstacles to multi-stakeholder and multi-level disaster risk governance in Mozambique. Manuscript.

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<sup>1</sup>The paper is the result of collaborative efforts between the authors. The bulk of the writing was carried out by Jenni Koivisto, as was data collection and analysis. Daniel Nohrstedt contributed theoretically and provided smaller sections of text.

## Abbreviations

ACF	Advocacy Coalition Framework
AG	Adaptive governance
ARSDRR	Africa Regional Strategy for Disaster Risk Reduction
AU	African Union
CTGC	<i>Conselho Técnico de Gestão de Calamidades</i> , Technical Council for Disaster Management
DPCCN	<i>Departamento de Prevenção e Combate as Calamidades Naturais</i> , Department for the Prevention and Combat of Natural Disasters
DRG	Disaster risk governance
DRR	Disaster risk reduction
FRELIMO	Ruling party, originally <i>Frente de Libertação de Moçambique</i> , Mozambique Liberation Front
GoM	Government of Mozambique
HFA	Hyogo Framework for Action – Building the Resilience of Nations and Communities to Disasters (2000-2015)
INGC	<i>O Instituto Nacional de Gestão de Calamidades</i> , National Disaster Management Institute
IMF	International Monetary Fund
RENAMO	The main opposition party, originally <i>Resistência nacional Moçambicana</i> , Mozambican National Resistance
SADC	Southern African Development Community
UNDP	United Nations Development Programme
UNISDR	United Nations Office for Disaster Risk Reduction
WB	The World Bank

# 1 Introduction

Since the great flood prompted Noah to build his ark (if not before), individuals and societies have strived to better understand, manage, cope with, and recover from disasters stemming from natural hazards. Disasters place heavy burdens on societies in terms of human and economic loss. For example, in 2017 there were 318 “*natural disasters*”<sup>2</sup> around the globe causing over 9,500 deaths and economic damage of US\$314 billion, affecting the lives of 96 million people (CRED, 2018). It also seems that disasters are increasing, not only in number but also in type and impact (Cutter et al., 2015; UNISDR, 2015a). This makes the reduction of disaster risk an important area in terms of research, policies and practice. A better understanding of natural hazards, the management of risks and disasters and the disaster risk reduction (hereafter DRR) can help mitigate future disasters. Effective and well-functioning disaster risk governance (DRG) can play an important role in the wider frame of sustainable development and can help tackle issues constraining sustainable development (Hoffman, 1999; UNISDR, 2015b). This makes it an important concept also in the field of *risk and environmental studies*.

The way we understand disaster events, and the prevention and management of and recovery from such events, has varied considerably over time and in different cultural and political settings. At one end of the spectrum disaster events are seen as acts of god or nature, and recently as a consequence of climate change – fundamentally exogenous, largely unexpected and impossible to prevent (Comfort et al., 1999; Ghafory-Ashtiany, 2015; Lavell & Maskrey, 2014; McEntire, 2001; O’Keefe, O’Brien, & Jayawickrama, 2015). At the other end of the spectrum disasters are seen purely as failures in societal structures: “unresolved development problems” (Lavell & Maskrey, 2014). From this opposite “social turn” perspective disasters are not only *not natural* but also do not exist independently as objects (O’Keefe,

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<sup>2</sup> There is a strong agreement among scholars that there is no such thing as “natural disaster”, as the natural hazards, such as earthquakes, droughts, heavy precipitation etc. cause only disasters when met by societal vulnerabilities. Yet in the EM-DAT database the term is used to separate those disaster events from “man-made disasters”, such as riots, armed conflicts or technical disasters. However, it should be noted that it is not always possible to tell “natural” and “man-made” disasters apart as they can be heavily intertwined.

Westgate, & Wisner, 1976; Oliver-Smith, Alcántara-Ayala, Burton, & Lavell, 2016; Raju & da Costa, 2018). Since the 1970s, a pro-active approach to disaster management has increasingly gained attention and in the last decade of the twentieth century, the concept of DRR has become the mainstream way of dealing with disasters. The focus lies more on risks and vulnerabilities rather than disaster preparedness and recovery (Jones, Manyena, & Walsh, 2014). While the understanding of DRR has expanded, DRR as policy issue is still relatively new and to some extent unorganised (Raju & da Costa, 2018). The role of DRR as a guiding principle of disaster management is perhaps best seen at the UN with its specific DRR coordination office for DRR, the United Nations International Strategy for Disaster Risk Reduction, UNISDR, which defines DRR as:

the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (UNISDR, 2009).

How much emphasis is put on DRR and what measures are taken at country level depends on context specific factors, including the hazard types countries are exposed to, the frequency and intensity of hazardous events, as well as economic, political and social realities and institutional settings for decision-making. Low income countries are generally more affected by hazards than high income countries and, for example, the Global Climate Risk Index 2018 reveals that between 1997 and 2016, nine of the ten countries most affected by weather-related events were countries with low or lower middle income per capita (Eckstein, 2018). High disaster mortality risk is also closely correlated with low income (UNISDR, 2015a). Some of these countries are repeatedly hit by extreme weather and have no time to fully recover before they face the next hazardous event (Eckstein, 2018). This can lead to a vicious circle of increasing vulnerability and reduced capacity to manage and recover from disasters. Reducing disaster risks is therefore of extreme importance for many poorer countries in particular since not only do disasters cause major setbacks in pursuing their development goals but also, due to the prevailing socio-economic structures, people are often vulnerable in the face of natural hazards (Holloway, 2003). While poverty does not automatically equal

vulnerability, studies reveal that throughout the world the poor are much more exposed to natural disasters than the non-poor (Hannigan, 2012; Oxfam International, 2009; Kim, 2012). Climate change, which is predicted to change weather patterns and increase the frequency and intensity of climate related natural hazards, makes DRR a topical development issue (Lavell & Maskrey, 2014; Lavell et al., 2012).

Africa as a continent is exposed to various natural hazards, and climate change is expected to worsen the situation in many countries (UNISDR, 2014). With multiple vulnerabilities, even smaller hazards can have catastrophic consequences (UNISDR, 2014). Efforts at different levels have been made to highlight the importance of DRR in development, and for example African Union (AU) adopted an Africa Regional Strategy for Disaster Risk Reduction (ARSDRR) in 2004 (AU & NEPAD, 2004). Scaling further down to sub-continental level, Southern Africa faces recurring hazards which, in combination with poverty (9 out of 15 southern African countries are considered to be “least developed” countries) makes the region vulnerable to disasters (UNDP, 2014). One of the countries in Southern Africa most exposed to hydro-meteorological hazards, and one of the poorest, is Mozambique. Recurrent disaster events have taken a great toll on the country. But it has also been on the front line in dealing with the challenges hazards pose (Scott & Tarazona, 2011).

### **1.1 Aim of the Thesis**

DRR as a public policy issue particularly tricky: it entails dealing with complex and intractable societal and environmental questions and problems that span across governmental silos, institutional boundaries, mandates and disciplinary perspectives (Benouar et al., 2009). It is also overlapping and intertwined with issues such as development, climate change adaptation, and disaster response and recovery. These various obscurities characterise the DRR policy process and, consequently, DRR has proven difficult to conceptualise and organise in practice. The uncertainties are in part linked to the substantive knowledge gaps raising from the fact that disasters occur in the nexus of nature and societies and, therefore, disaster management and risk reduction require knowledge and holistic understanding of both natural phenomena and the factors that make

societies vulnerable to such hazards. Since effective DRR requires context specific solutions there are often knowledge gaps in relation to the nature of the problem, causal relations and suitable solutions (Head & Alford 2008; Van Bueren et al. 2003). Such substantive uncertainties and knowledge gaps can partially explain why policy makers have allowed unsafe conditions to arise and why the social causes of vulnerability have not been addressed in DRR (Wisner, Blaikie, Cannon, & Davis, 2004).

To overcome the substantive uncertainties a multi-stakeholder approach to DRR has been widely advocated by disaster researchers and practitioners. Similarly, the importance of good governance of disaster risks has been emphasised (Tierney, 2012). Disaster risk governance (DRG) refers to institutions, policies and frameworks to guide and coordinate DRR (UNISDR, 2017). Several international organisations and global DRR frameworks heavily and increasingly focus on DRG. These call for a wide participation of stakeholders expanding “upward, downward and outward” from national governments (Jones et al., 2014). As such, DRR systems are typically based on polycentric, multi-level, multisectoral and multi-stakeholder strategies. While this approach ensures that the requisite institutional diversity is embodied in the governance system, engaging many stakeholders in policy-making brings other uncertainties beyond the lack of substantive knowledge (Koppenjan & Klijn, 2004; Ney, 2009; Ney & Verweij, 2014).

When multiple actors, all with different strategies, perceptions and preferences regarding the process, take part in the decision-making the effects of interactions between the actors are unpredictable (Van Bueren et al. 2003, Head & Alford 2008). These *strategic uncertainties* are coupled with *institutional uncertainties*: Complex effects of multiple policy arenas, networks and regimes and the different, and often simultaneous, processes in reaching decisions. (Head & Alford, 2008; Koppenjan & Klijn, 2004). Both the institutional and strategic uncertainties are directly related to the known problems of DRG, such as coordination and ownership (see UNISDR, 2011, 2015a, 2015b)

The importance of well-functioning DRG is highlighted as key to successful DRR in the Sendai Framework for Disaster Risk Reduction 2015-2030, and, accordingly, one of its four *priorities for action* is

“strengthening disaster risk governance to manage disaster risk”, focusing on the importance of well-functioning DRG at different levels (UNISDR 2015). But while there is an increasing emphasis on enhanced DRG, the institutional and strategic uncertainties brought by a multi-stakeholder approach to DRG have not been adequately addressed in previous studies. Taking the strategic and institutional uncertainties in DRG as a starting point, this thesis makes an effort to bridge knowledge gaps. The aim of the thesis is to investigate the uncertainties as perceived by actors involved in DRG. It does so by combining empirical material from the Mozambican DRR policy subsystem with different bodies of literature. The overarching research puzzle this thesis revolves around is this: How does the multi-stakeholder DRG and the various uncertainties therein affect DRR policymaking in Mozambique? More specifically, the issues investigated include enabling factors and barriers to policymaking; policy disputes and coordination challenges; the effects of staff turnover; and diversity and the challenges of inclusive DRG.

The four papers this thesis is built around all tackle more specific research puzzles. Paper I investigates the long-term development of DRR policy in Mozambique as perceived by multiple stakeholders. By combining insights from adaptive governance research it identifies barriers and enabling factors influencing the DRR policy process over time. The stakeholder perspective on different enabling factors and barriers gives a good overview of the different sets of challenges (and possibilities) as seen by DRR actors.

Paper II focuses upon stakeholder involvement, political context and prevailing policy disputes within the DRR policy subsystem in Mozambique. It does so by conducting a stakeholder analysis through the lens of the Advocacy Coalition Framework (ACF) and, consequently, answers some of the key questions of governance: who has power, who makes decisions and how do other players make their voices heard?<sup>3</sup>

Paper III tackles the puzzle of high staff turnover among actors within the DRR policy subsystem in Mozambique. By delving into how the stakeholders perceive staff turnover and its possible implications

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<sup>3</sup> See e.g. <https://iog.ca/what-is-governance>

for DRG this study contributes to the wider understanding of the impacts of staff turnover and its role in capacity loss, retention and development – factors highlighted in the Sendai Framework for Disaster Risk Reduction as key in preventing new and reducing existing disaster risk (UNISDR, 2015b).

Paper IV follows paper II in looking at stakeholder involvement and policy disputes. However, the focus lies upon the voices that are currently excluded from DRR policy-making in Mozambique. It contrasts the DRG practices in Mozambique with the calls by the Sendai Framework for Disaster Risk Reduction among others for an “all-of-society engagement” in DRR and connects DRG to wider political processes.

## **1.2 Outline of the thesis**

This is a compilation thesis, based on four research papers presented in the end section. The introductory part of this thesis is organised as follows. The next section provides an overview of the case: disaster risk governance in Mozambique. It outlines the political and societal situation in the country, gives an overview of the various hazards and disaster it faces, and summarises the disaster management structures in the country. The third section outlines a theoretical framework and provides an overview of previous research in related fields. Section four describes the methodological choices made in this thesis. The main findings from the four papers this thesis is based upon are summarised in section five, while section six discusses some of the findings in more detail. The final section summarises the main conclusions and contributions of this study and points to interesting future research avenues.

## 2 Setting the Scene: Case Mozambique

This section provides a short overview of the country context of this case study. It first outlines relevant recent history and current social and economic situation. This provides a backdrop for this case study and the policymaking context for DRR in Mozambique. It then provides a short description of the different hazards Mozambique is exposed to and vulnerabilities therein. Lastly, it outlines how DRR and DRG have developed in Mozambique over the years.

### 2.1 Historical and political context

Mozambique presents a remarkable paradox within global schemes of governance. A post-Cold War, post-Socialist, postconflict democratic transition driven by the international community has generated an official recognition of traditions that had been berated as “obscurantist” by the same political elites who had been in power since independence and has authorized the return of “traditional authorities” previously banned by the Socialist regime for being an instrument of colonialism. (Obarrio, 2014, p. 26)

The area now called Mozambique comprises numerous historic and contemporary empires, societies and language groups. The first Portuguese arrived in Mozambique in the 15<sup>th</sup> century and it eventually became a Portuguese colony. The borders were drawn in 1891 as a result of the Anglo-Portuguese boundary treaty but they did not control the whole area prior to the 20<sup>th</sup> century (Finnegan, 1992; Newitt, 2017). Portuguese colonial rule was oppressive and they did little to develop the country (Finnegan, 1992). One of the poorest and weakest colonial powers, the Portuguese relied heavily on exploiting peasant labour (Hanlon, 1991).

The Mozambican Liberation Front (*Frente de Libertação de Moçambique*, Frelimo) was established in 1962, launching a war against Portugal in 1964. This anti-colonial struggle for independence was also a struggle against the Salazar dictatorship in Portugal (Hanlon, 1991). Mozambique won independence in 1975, in the aftermath of a Portuguese military coup and the subsequent fall of colonial regime (Coelho, 2013). Frelimo transformed from a liberation front to a ruling party, and has remained in power ever since. Over 90 per cent of the Portuguese living in Mozambique fled, often destroying factories, machinery, cattle and other non-portable assets as they went



Frelimo had a difficult task to transform the country. They adopted a strict single-party Marxist-Leninist platform, nationalised all social services (Hanlon, 1991). Ambitious programmes were launched to educate the people, improve health care and lift the country out of poverty (Coelho, 2013).

The biggest threats Frelimo faced were, however, external. The white rulers of neighbouring Rhodesia and South Africa, both old Portuguese allies, saw Mozambique as an enemy (Mozambique supported the national movements in both countries) and were determined an African Marxist state should not succeed (Coelho, 2013). Rhodesia created and trained a guerrilla group that came to be known as Renamo (*Resistência Nacional Moçambicana*, Mozambican National Resistance), which started attacking Mozambique in 1976. As a consequence, Frelimo found itself embroiled in a civil war (or a war of destabilisation as it is also known, given the notable role other countries, including Rhodesia, South Africa, USA and USSR played in it. This was particularly clear in 1983 when South Africa took over the role of main supporter of Renamo). The war was also a proxy for the Cold War, with communist countries backing the Frelimo's Marxist government and USA among other western countries supporting Renamo guerrillas attempting to topple the Marxist regime. Frelimo found itself in an impossible situation in the early 1980s, under the pressure of International Monetary Fund (IMF), among others, was forced to start transform Mozambique into a more market-oriented economy (Newitt, 2017). The adoption of structural adjustment programmes was the price for economic aid desperately needed in the war-ridden country (Obarrio, 2014).

The civil war finally ended in 1992 and Mozambique became a multi-party democracy. However, the transition from single-party state to a multi-party democracy has not been easy since the boundaries between state and party have become blurred (Astill-Brown & Weimer, 2010). Despite the massive transformations in Mozambique, a number of challenges remain, most with direct impacts on policy-making and governance. Despite recently discovered natural gas and other natural resources that have hoped to lift the country out of poverty, Mozambique remains one of the poorest countries in the world (Cunguara, 2012; Cunguara & Hanlon, 2012). The current (2016) Human Development Index for Mozambique is 0.418, ranking it 181th

of 188 countries listed (UNDP, 2016). The total population is about 29, 7 million of which 68, 7 per cent live in absolute poverty (less than 1.90 USD a day) (UNDP, 2016; UNFPA, 2016, 2017). The low economic situation makes Mozambique heavily dependent on external assistance and slows capacity building in all policy domains, including DRR, leaving gaps in knowledge and expertise (Hanlon & Smart, 2008; INGC, 2013).

The strong presence of donors and aid dependency has complicated national policy-making throughout Mozambique's history (Hanlon, 1991; Hanlon & Smart, 2008; Manning & Malbrough, 2012). While Mozambique is a multi-party democracy there are notable problems in how power is executed. Mozambique, like many other developing countries, is struggling not only with inadequate resources (economic and human development) but is also characterized by low levels of democracy and policymaking capacity (Newitt, 2017). One indicator of a country's development status is the 'polity score', which gives an approximation of how the country is doing in terms of democratisation. The polity score given in Polity VI dataset places countries on a scale ranging from -10 to 10, the lowest being a total autocracy and highest fully democratic, respectively (Marshall & Cole 2014). The polity score given to Mozambique in the Polity IV database rose rapidly from -6 at the end of the war to +6 in 1994, the year of first multi-party democratic elections. In 2010 the score had dropped to +5, which indicates weak democracy characterised by challenges in executive power, restrictions on political participation and shortcomings in the application of the rule of law to, or by, opposition groups (Marshall & Cole, 2014). Indeed, the dissatisfaction and mistrust between Frelimo and Renamo caused an outbreak of armed conflict again between 2013 – 2016, and, despite a 2016 ceasefire tension between the parties remains severe (Orre & Rønning, 2017).

The flawed nature of Mozambican democracy and lack of trust has been highlighted both by opposition parties and by international observers (Newitt, 2017). For example, both Freedom House and The Economist Intelligence Unit's democracy indices describe Mozambique as following a notable downward trend in political rights

and civil liberties, in part because of increased political tension and abuse of civilian populations in the armed conflict<sup>4</sup>.

As a symptom of democratic and governance weakness corruption is widespread in Mozambique (Transparency International's Corruption Perceptions Index 2017 ranks Mozambique 153<sup>rd</sup> of 177 countries included<sup>5</sup>), which necessarily affects the success of development efforts (USAID, 2005). For example, in 2013 the government took on debt secretly and, after this was revealed, most donors, including the IMF, halted their direct budget support leaving the country in a difficult economic position (Hanlon, 2017). This episode has severely damaged the trust between donors and the government of Mozambique, the till-then donor-darling that previously responded so well on external aid (Hanlon, 2017; Orre & Rønning, 2017). Corruption is also one factor explaining the deep mistrust between people and the government in Mozambique (Moore Gerety, 2018; Cunguara, 2012; Cunguara & Hanlon, 2012).

## 2.2 Natural Hazards in Mozambique

Since independence in 1975, there have been 74 registered 'natural disasters' (excluding epidemics) in Mozambique<sup>6</sup>. This includes 34 floods, 23 storms, 13 droughts, 2 landslides and 1 earthquake and wildfire, respectively (EM-DAT, 2018). Yet in this thesis I make no claim regarding how "natural" any of the above mentioned disasters were. Rather, the focus lies upon "people's interaction with these pertinent threats" (Collins, Manyena, Jayawickrama, & Jones, 2015, p. 5). Mozambique's exposure to such hazards stems from its

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<sup>4</sup> <https://infographics.economist.com/2018/DemocracyIndex/>  
<https://freedomhouse.org/report/freedom-world-2018-table-country-scores>

<sup>5</sup> See: [https://www.transparency.org/news/feature/corruption\\_perceptions\\_index\\_2017](https://www.transparency.org/news/feature/corruption_perceptions_index_2017)

<sup>6</sup> For a disaster to be registered to the EM-DAT (an international disaster database maintained by Centre for Research on the Epidemiology of Disasters, CRED) at least one of the following criteria needs to be confirmed: 10 or more people dead; 100 or more people affected; the declaration of a state of emergency; a call for international assistance (EM-DAT, 2018).

geographical location: seven major river systems that drain vast areas of south-eastern Africa cross Mozambique on their way to the Indian Ocean and the 2500 km long coastline - a third of the whole coast of eastern Africa - makes the country prone to floods and tropical storms (Newitt, 2017). With most people and economic activities concentrated in the fertile coastal and low-lying areas, both lives and assets are exposed to hazards.

Yet the floods in recent years are not entirely “natural” of origin, as water resource management plays a big role. Many of the major rivers in Mozambique and elsewhere in Southern Africa are influenced and controlled by dams. For example, the Zambezi River’s flow (Zambezi is the fourth biggest river in Africa, flowing eastwards across the continent into Mozambique and finally discharging to the Mozambican Channel, an arm of the Indian Ocean) is heavily affected by major dams (FAO, 1997). The most important of these is the Kariba (on the border between Zambia and Zimbabwe) and Cahora Bassa in Mozambique. Together, these dams have the potential to moderate or exacerbate annual floods and variations in water level (Long & Tinga 2007). Yet flood risk remains high; since the dams were completed water levels have fluctuated rapidly and there have been a number of catastrophic floods (Swain, Swain, Themnér, & Krampe, 2011). There are also plans to build new dams and growing concerns regarding the conditions of the current ones. In particular, the state of Kariba dam is reported to be of particular concern and a dam burst of that scale would be devastating to anything and everyone downstream (Mozambique News Agency, 2015).

Mozambique’s vulnerability in the face of (mainly) climate related hazards, in turn, is connected to its social, economic and political conditions. Poverty, low levels of development and dependency on rain-fed subsistence agriculture cause vulnerability among people in the face of climate related hazards (Shankland & Chambote, 2011; UNDP, 2007). Various disaster events have caused severe economic losses and changes to the lives of people living in the affected areas in Mozambique (Mozambican Council of Ministers 2006a; AU & NEPAD, 2004). Recurrent flood events, in particular, have often had catastrophic consequences. For example, during the major floods in 2000 approximately 800 people died, 650 000 were displaced and 4,5 million people were affected in one way or another (EM-DAT, 2018;

GFDRR, 2014). The recurrent disaster events have also considerably slowed down the pace of development (Christie & Hanlon, 2001). The struggle for independence and the war that followed also damaged infrastructure vital to disaster preparedness. For example, in 1973 there were 849 meteorological stations in operation but by 1999 only 57 of these were still functioning (Christie & Hanlon, 2001). The loss and damage on infrastructure has severely complicated the management of risks and disasters.

### **2.3 Managing Risks and Disasters**

Disaster management in Mozambique has developed through the years. As disasters are recognised as a notable problem in fulfilling the country's development objectives, measures have been taken to improve response to natural hazards and to reduce the number and consequences of future disasters (GoM, 2011; Hellmuth, 2007). Yet DRR as a public policy issue has previously gained limited attention.

After independence and during the civil war (1976-1992) the disaster management approach was mainly reactive and oriented towards the emergencies resulting from the war (Christie & Hanlon, 2001). The governmental disaster relief agency DPCCN (*Departamento de Prevenção e Combate as Calamidades Naturais*, Department for the Prevention and Combat of Natural Disasters) was created to provide humanitarian and logistic assistance. Despite its name, most of the help it provided went to those affected by the war (Christie & Hanlon, 2001). The department was placed under the Ministry for Foreign Affairs with a mandate to coordinate all humanitarian agencies (mainly foreign) and activities (Wiles et al., 2005).

A more proactive approach to disaster management and the first traits of DRR started to appear slowly in the 1990s in Mozambique, although it took some time before it translated into implementation. This change can be understood as a product of two simultaneous events: 1) the end of the war in 1992, which allowed more resources to be used for development rather than heavy disaster response structures, and 2) the International Decade for Natural Disaster Reduction, which raised DRR's profile on the international agenda (Wiles et al. 2005). New challenges, such as climate change, recurrent

natural hazards and man-made disasters also contributed to this paradigm shift and the need to cope with these challenges gave increased room for more proactive disaster management approaches. Thus the DPCCN underwent a significant reform, which led to the creation of National Disasters Management Institute (*O Instituto Nacional de Gestão de Calamidades*, INGC) and the first disaster management bill in 1999 (Christie & Hanlon, 2001; GoM, 1999). Unlike DPCCN, INGC was to focus more on coordination rather than delivery (Wiles et al., 2005).

The creation of INGC marks a first clear institutional shift of emphasis from disaster response to disaster preparedness and risk reduction (Hellmuth, Moorhead, Thomson, & Williams, 2007). This new emphasis is highlighted in an old proverb that INGC chose as their motto “*mais vale prevenir do que remediar*” (prevention is better than cure). The disastrous flooding in 2000, however, revealed that the newly established INGC was not ready to manage major disasters or coordinate large-scale relief operations. Consequently, international organisations took the lead in coordinating disaster response and humanitarian operations on the ground (Christie & Hanlon, 2001). This served as an important wake-up call to the Mozambican government as it highlighted the scale of impacts natural hazards can have and revealed serious gaps in the country’s disaster management system that needed to be tackled (Murray et al., 2012).

The paradigm shift towards more proactive policies became more obvious from 2005 onwards. Structural changes took place: INGC was removed from Ministry for Foreign Affairs and put under the ambit of the Ministry of State Administration. It also went through an organisational reform with specific departments created for risk reduction (one on disaster prevention and mitigation and one for the development of arid and semi-arid areas) (GoM, 2007). Another major step was the creation of a National Master Plan for Disaster Risk Reduction (*Plano Director para Prevenção e Mitigação das Calamidades Naturais*), which was approved by the Council of Ministers in 2006. This document was the first official document on DRR in Mozambique and it guides the long-term DRR activities in the country (Mozambican Council of Ministers, 2006a).

Since 2005 DRR and vulnerability reduction have also been included in different development plans and strategies. The country’s

poverty reduction strategy PARPA II (for 2006-2010) had DRR as one of its cross-cutting themes and key components for poverty reduction (Mozambican Council of Ministers, 2006b). Vulnerability reduction, in its turn, was mentioned as a key in poverty reduction in most recent poverty reduction strategy paper of the country (PARP 2011-2014) (GoM, 2011). DRR was added as a cross-cutting issue in the government's previous five year plan (2010-2014) and the current five year plan 2015-2019 has vulnerability reduction and risk prevention and preparedness as strategic objectives (GoM, 2010; 2015).

At the local level, DRR has been integrated into strategies and operational plans of the provinces and districts (INGC). In 2012 DRR was included as one of the main pillars of Mozambique's national strategy for climate change mitigation and adaptation, which also brings the two policy areas, DRR and climate change adaptation, closer to each other (Becker, Abrahamsson & Hagelsteen, 2013; GoM, 2012). In 2014 the parliament of Mozambique accepted a new disaster management law (GoM, 2014). While the focus is on disaster response, the law highlights the integral and important role of DRR in disaster management.

However, despite these efforts, DRR policies and interventions have not always been successful. Since the floods in 2000/2001, and increasingly after 2007/2008, one of the main measures taken by the Mozambican government to reduce direct impacts of future floods has been extensive relocation. People who have traditionally lived on the floodplains have been relocated to higher ground, thereby reducing their exposure to floods. However, the resettlement has not been entirely successful. While it has led to increased safety from future floods, issues have emerged relating to droughts, differences in risk perceptions, impoverishment, increased vulnerability and inequalities (Arnall, 2014; Artur & Hilhorst, 2012; Patt & Schröter, 2008; Stal, 2011).

The failures of resettlements can, in part, be explained by the fact that it is involuntary and that local people have few opportunities to voice their concerns, and proffer their preferred solutions. Flood induced resettlement also represents a continuation of a long history of (unpopular) relocations in Mozambique. These began in the colonial era when Portuguese overlords appropriated the best lands for themselves. Later, during the struggle for independence, colonial

*aldeamentos* – concentrated settlements – were created to control the rural population and to prevent any contact between them and the guerrilla forces (Coelho, 1998). The *aldeamentos* were extremely unpopular and, as soon as opportunities arose, people started to leave them to move back to the pre-war, scattered way of settlement (Coelho, 1998).

Soon after independence in 1975 the new socialist government launched a communal village (or “villagisation”) programme with the aim of creating tight villages with collective or cooperative production, distinct residential and productive areas and institutions of local administration (Coelho, 1998). The main idea behind the socialist villagisation programme, which lasted till 1980s, was to create more effective productive units (Swain et al., 2011). The new communal villages were often established around old *aldeamentos* and populated with refugees returning from neighbouring countries; people from former Frelimo bases; and those subject to “political mobilisation”. Some of the villages were built as a consequence of disasters, such as Limpopo River floods in 1977 in Southern Mozambique and the Zambezi flood of 1978 (Coelho, 1998; Swain et al., 2011). The communal village programme was also unpopular because it was seen as direct continuation of colonial *aldeamentos*, because the views of local people were not respected, and because people were unimpressed by the idea of exchanging fertile river land for places they knew to be less productive (Coelho, 1998).

Besides resettlements, the DRR “success story” in Mozambique elicit questions regarding how much of the progress within the Mozambican DRR sector is real and how much of it is delusion, a self-reinforcing *hyper-reality*? (Baudrillard, 1994; UNISDR, 2015a). While success and progress may be reported, what does it mean in practice? Laws or policies may be in place, but this does not mean that they are implemented (Lavell & Maskrey, 2014). Similarly, including DRR and vulnerability reduction as objectives in development strategies does not mean real efforts are made to pursue them (Newitt, 2017).

Previous research on Mozambique has discussed DRR and related challenges from different perspectives. Most studies focus on climate related disasters and the management and consequences of such events at different levels (see e.g.: Arnall, 2014; Arnall, Thomas, Twyman, & Liverman, 2013; Artur & Hilhorst, 2012, 2014; Patt & Schröter, 2008)

or climate change (Boyd, Ensor, Broto, & Juhola, 2014; Hahn, Riederer, & Foster, 2009; Sietz, Boschütz, & Klein, 2011; Osbahr, Twyman, Adger, & Thomas, 2008). However governance and public policy aspects have received less attention.

### 3 Governing and Framing DRR

While DRR is relatively new concept and policy area it has been studied from a wide range of different perspectives (see e.g. Sarewitz, Pielke Jr, & Keykhah, 2003; Wisner et al., 2004). Much of the previous research on DRR in social sciences is built on a perspective that emphasises the different drivers of vulnerability, including social, political, economic and environmental conditions, and highlights the need to look at hazards and vulnerabilities together (Collins, 2009; Wisner et al., 2004). The proponents of the perspective that sees disasters as “the unfinished business of development” understand disaster risks and disasters essentially as products of unbalanced development rather than “natural” phenomena (Lavell, 2012). Following on from this perspective, risks and disasters need to be dealt with under social, development and planning frameworks (Alexander, 2015; Lavell, 2012). This perspective also stresses the ability of communities to reduce their exposure and vulnerability in the face of natural hazards (Wisner et al., 2004). This thesis draws on different bodies of literature on (disaster risk) governance, policy processes and DRR. In doing so, it also contributes to these bodies of literature, further advancing our understanding.

One of the central concepts within this thesis is governance. While the concept governance has been understood and defined differently over time and within different disciplines (Renn, 2008; Stoker, 1998), it is understood here as “the sum of laws, norms, policies, and institutions that define, constitute, and mediate relations among citizens, society, market, and the state—the wielders and objects of the exercise of public power” (Weiss & Thakur, 2010, p. 5). Governance can be understood to include three main components: authority; decision-making and accountability (Raju & da Costa, 2018). In essence, by determining “who has power, who makes decisions, how other players make their voice heard and how account is rendered” (Raju & da Costa, 2018, p. 279) it creates “conditions for ordered rule and collective action” (Stoker, 1998, p. 17). The concept of governance is often connected to other, more defining concepts that refer to certain type of governance or governance within a specific field. This section provides an overview of some of these concepts and theoretical frameworks as well as earlier research integral to this thesis.

### **3.1 Disaster Risk Governance**

Much of disaster research has focussed on specific legal arrangements or governments, while governance has been neglected until recently (Raju & da Costa, 2018). Disaster risk governance (DRG), sometimes also shortened as *disaster governance*, is a term that has slowly emerged in disaster literature within the past 10 years. It is close to and related to the concept of risk governance (Renn, 2008).

DRG as a concept is also close to, or complimentary to that of DRR (Lassa, 2010). In comparison to DRR, DRG puts “greater emphasis on the decision-making process regarding disaster reduction policy and regulations with greater acknowledgement of the complexity, conflicts, and interests of actors, multidimensionality and interplay of various institutions and actors at multiple levels as well as the polycentric nature of decision making regarding disaster risk reduction” (Lassa, 2010, p. 30). In that sense, DRR is embedded in DRG.

Like governance, DRG, too, has numerous definitions that slightly differ from each other. According to the UNDP, DRG is the exercise of political, economic and administrative authority in the management of DRR at all levels (UNDP, 2010). It comprises mechanisms, processes and institutions through which citizens and groups can articulate their interests, exercise their legal rights, meet their obligations and mediate their differences (UNDP, 2010). Tierney’s definition “disaster governance consists of the interrelated sets of norms, organizational and institutional actors, and practices (spanning predisaster, transdisaster, and postdisaster periods) that are designed to reduce the impacts and losses associated with disasters” (2012, p. 344), is also commonly used. This thesis adopts the DRG definition from the UNISDR’s updated terminology (a process agreed in the Sendai Framework), which simplifies it as “the system of institutions, mechanisms, policy and legal frameworks and other arrangements to guide, coordinate and oversee disaster risk reduction and related areas of policy” (UNISDR, 2017).

#### **3.1.1 DRG – Good, adaptive, collaborative?**

Previous literature has suggested there is a need to address issues in DRG and to come up with more innovative governance approaches to deal with complex DRR problems (Djalante, 2012; Djalante, Holley, &

Thomalla, 2011; Raju & da Costa, 2018; Renn, 2008; Tierney, 2012). Concepts such as collaborative governance, adaptive governance and good governance are often connected to successful DRG and, accordingly, the DRG literature draws heavily on these bodies of literature.

The concept and discussion of governance, not least in the fields of development studies and DRR, is often connected to the notion of “*good governance*”. This normative concept adds standards and values – that most people would agree are desirable – to governance. Weiss and Thakur define good governance as governance that “incorporates peoples’ participation and empowerment with respect to public policies, choices, and offices; the rule of law and an independent judiciary to which the executive and legislative branches of government are subject, as are citizens and other actors and entities; and standards of probity and incorruptibility, transparency, accountability, and responsibility” (Weiss & Thakur, 2010, p. 6). UNISDR also highlights participation, inclusiveness and transparency as features of good governance and emphasise that the DRG should be “collective and efficient to reduce existing disaster risks and avoid creating new ones” (UNISDR, 2017).

The collaborative governance literature, which is also based on the idea of governance as joint effort between government and other stakeholders, including private sector and communities, highlights trust among participants as an important feature in successful governance (Ansell & Gash, 2008; Klijn, Edelenbos, & Steijn, 2010; Torfing & Ansell, 2017). Much attention is put on trust among the participants: how this can influence their commitment to a collaborative process but trust is also seen as one of the key outcomes of long-term effective collaboration (Klijn et al., 2010; Nohrstedt, 2018; Siddiki, Kim, & Leach, 2017; Weible, Siddiki, & Pierce, 2011). Given the emphasis on collaboration in DRG, collaborative governance approach has been applied in a number of studies on DRR and crisis management (Bodin & Nohrstedt, 2016; Hermansson, 2018; Hutter, 2016)

*Adaptive governance* (AG), is yet another term frequently connected to successful DRR by scholars (Bakkour et al., 2015; Djalante, Holley & Thomalla, 2011). Like the DRG literature, AG literature highlights polycentric and multi-layered institutions;

participation and collaboration; and self-organisation and networks as being conducive to DRR. Generally, these factors offer prescriptions on institutional designs supporting effective DRR. The greatest emphasis is, however, put on learning and innovation that are identified as key to successful DRR (Bakkour et al., 2015; Djalante et al., 2011). Much prior research from the AG perspective focuses on identifying conditions for learning and fostering participation and collaboration, while issues related to public policymaking have generally received less attention – studies recognise the importance of technical and financial support by higher levels of government but few examine the more fundamental issue of why and how DRR policies develop over time (e.g. Djalante et al., 2011). This is an area this thesis in part tackles.

International frameworks and bodies such as the UNISDR have emphasised certain ways to organise DRG, but needs and realities vary from one context to another. How a society prepares for, manages and recovers from hazards and disaster events depends on a number of factors. One of the benefits of the AG approach is that it can be used in different contexts and organisational and administrative structures (Thomalla et al., 2018). This makes it a useful approach for DRR given the existence of different ways of governing, i.e. countries that differ from the open democracy / western ideal – countries such as Mozambique.

### **3.1.2 A Brief History of Global DRG**

As mentioned in the previous section, DRG is understood to occur at different levels, from local to global. “*Global governance*” refers to existing collective arrangements and attempts at international arenas to steer social processes and solve problems (Galaz et al., 2017; Weiss & Thakur, 2010). This can be through development of international institutions such as norms and international law (Galaz et al., 2017). Although there rarely, if ever, is any overarching central authority, existing collective arrangements are thought to bring predictability, stability, and order to transboundary problems in particular (Weiss & Thakur, 2010).

The global DRG is understandable as continuum of events, development and documents starting from the late 1980s, when the United Nations (UN) declared the 1990s as the International Decade

for Disaster Risk Reduction (IDNDR) (Alexander, 2015). This highlighted the need for activities for risk reduction. In 1994, the UN organised the first World Conference on Disaster Risk Reduction, which adopted the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation. To continue the efforts begun during the IDNDR, the UN established the International Strategy for Disaster Reduction, UNISDR, to coordinate efforts and to provide guidance in DRR work around the world. The next major step in global DRG was the second World Conference on Disaster Risk Reduction in 2005 where UN member states adopted the Hyogo Framework for Action – Building the Resilience of Nations and Communities to Disasters (HFA) for 2006-2015. The HFA, which soon became a key instrument for implementing DRR around the world, had common goals, priorities of action and cross-cutting issues that provided guiding principles for DRR policy development in signatory countries (Alexander, 2015; Jones et al., 2014; UNISDR, 2005).

The current international DRR framework, the Sendai Framework for Disaster Risk Reduction 2015-2030, was adopted in the third World Conference on Disaster Risk Reduction in 2015 (UNISDR, 2015b). The framework's goal is to

prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience (UNISDR, 2015b, p. 7).

Compared to its predecessor the HFA, the Sendai framework places greater emphasis on DRG, highlighting the need to strengthen good governance in DRR at different levels (Raju & da Costa, 2018; UNISDR, 2015b). However, despite the increased emphasis given to DRG and the growing number of recognised challenges therein, there are still knowledge gaps in understanding why and how national systems modify their practices, alter the relationship between different actors or adopt new strategies and policies (Lal et al., 2012; UNISDR, 2011).

There are also regional and sub-regional frameworks, agreements and action plans, often connected to those at the global level. For example the Africa Regional Strategy for Disaster Risk Reduction, ARSDRR, has been implemented through programmes of actions,

which have been extended to be in line with global frameworks – first with the HFA and, subsequently, with the Sendai Framework (AU & NEPAD, 2004; AU, 2016). An example of sub-regional collaboration and agreements on DRR in Africa is the work by the Southern African Development Community (SADC). Through its Disaster Risk Reduction Unit SADC coordinates regional preparedness and response and hosts a Regional Platform for Disaster Risk Reduction (UNISDR, 2014).

### **3.2 Subsystem approach**

We now have a definition for DRG but to better understand “who has power, who makes decisions, how other players make their voice heard and how account is rendered”, this thesis draws on public policy and policy process literature. This literature provides theoretical frameworks on stakeholder involvement and policy process. Policymaking in modern societies is complex and occurs at different levels and arenas, which are often context and issue specific. DRR makes no exception here. One way to simplify the complexity of public policymaking and actor involvement in DRG is through a *policy subsystem approach*.

According to Sabatier and Jenkins-Smith (1993, 1999) decision-making occurs in multi-level policy subsystems, such as a DRR policy subsystem. These policy subsystems are theoretical constructs with substantive (such as disaster management) and geographical boundaries (disaster management in Mozambique) (Sabatier & Jenkins-Smith, 1993). However, it can sometimes be difficult to identify or draw the subsystem boundaries since they are often nested in wider or “upper level” subsystems and overlap with other policy subsystems (Sabatier & Weible, 2007). Policy subsystems consist of a large number of actors who are concerned with certain policy issues and who regularly seek to influence governmental decisions and public policy within a specific issue area (Sabatier & Jenkins-Smith, 1993).

The way people act in order to change policies or to gain more power is conditioned by different institutional, social and cultural patterns and cognitive factors (Keeley & Scoones, 2003; Weible, Heikkila, deLeon, & Sabatier, 2012). While the actors are rational, they operate under normative belief systems (Sabatier, 1988; Weible,

Pattison, & Sabatier, 2010). This thesis takes the Advocacy Coalition Framework (ACF) understanding of a DRR policy subsystem as a starting point when investigating the interplay between stakeholders involved in the DRG and policy process in Mozambique. The ACF offers useful concepts and definitions for understanding actor behaviour, policy oriented learning and policy change. The Advocacy Coalition Framework postulates that actors, bound together by similar values, beliefs and policy goals, form *advocacy coalitions* (Beverwijk, 2005; Breton, Richard, Gagnon, Jacques, & Bergeron, 2008; Buse, 2008; Sabatier & Weible, 2007). Policy process is then understood as competition between two or more coalitions over a long period of time (Weible et al., 2012). Coalition beliefs can sometimes be manifested through *policy narrarratives* crafted by the coalitions to communicate the problem and preferred solutions and to impact the opinions of individuals (Jones & McBeth, 2010) (Jones, 2014; Jones & McBeth, 2010; Shanahan, Jones, & McBeth, 2011).

Typically there are two or more parallel competing coalitions in a policy subsystem, though occasionally only one (Meijerink, 2005). Each coalition attempts to reach their policy goals, and to do so, they need to coordinate their activities and develop joint strategies (Beverwijk, 2005). The coalitions have varying resources and power over the political processes within the subsystem and usually one of the coalitions is more dominant than others (Adam & Kriesi, 2007; Beverwijk, 2005).

Sometimes there are many centres of decision-making that are formally independent of each other (Ostrom, 2010). This “polycentricity” adds to the complexity of DRG (Galaz et al., 2017; Koontz, Gupta, Mudliar, & Ranjan, 2015; Mathias, Lade, & Galaz, 2017) and makes it a challenging task to map all the actors within the subsystem and to scrutinise how they participate in the process and operate with each other.

There are also important structures outside of the subsystem that determine the work of coalitions and form a part of the arena within which policies are shaped (Princen, 2007). In the field of DRR in particular the global and regional institutions and structures have a notable influence on the governance and policies being implemented at the national level. These structures are important when trying to understand the policy process in a DRR subsystem in low income

countries in particular. There are some major international organisations, such as the UN and Bretton Wood institutions (i.e. the World Bank (WB) and the IMF), which typically have a notable impact on the policy process and implementation at national level (Ainuson, 2009). Similarly, some international (binding or otherwise) agreements and conventions, such as the Sendai Framework for Disaster Risk Reduction or the UN Sustainable Development Goals, guide national decision-making within the context of DRR and are influential in guiding the DRR policy development. There are also a number of frameworks related to, for example, climate change adaptation that are largely interlinked with those of DRR, further increasing and influencing the arena within which policy is formed (Artur & Hilhorst, 2012).

Although there is a growing body of literature on policymaking around the world, the main part of policy process literature and empirical applications of the ACF and other theoretical frameworks comes from North America and Europe (Pierce, Peterson, Jones, Garrard, & Vu, 2017). These countries are characterised by pluralist democratic regimes where policy debates are largely free and open. Applying these frameworks in different settings may be problematic. However, some scholars have used, for example, the ACF in recently democratised countries such as Hungary (Albright, 2011) and in low income countries (for example Ainuson, 2009; Babon et al., 2014; Beverwijk, 2005; Castro-Reyes & Marin-Raventós, 2016; Klaphake & Scheumann, 2006; Mockshell & Birner, 2015; Villamor, 2006) in spite of differences in political system (for a recent review of applications across the world, see Pierce et al., 2017). These examples indicate that the theoretical frameworks are applicable to different country contexts, though it is important to bear in mind differences that may limit the use of them.

### **3.3 Policy process and change**

The issue of governance is close to that of policy process. The role of actors involved in DRG is to design, agree upon, pursue and implement different policy tools for DRR. Policy process research can be understood to be “the study of change and development of policy and the related actors, events, and contexts” (Weible et al., 2012). Policy

changes are important indicators of progress in the field of DRR. There are many different approaches to understand policy processes in modern societies each providing different “lenses” through which the processes can be examined (Sabatier, 2007).

Policy change can be understood as the enactment and implementation of new or revised legislative guidelines and associated goals, strategies and plans. The ACF assumes that policies are translations of beliefs within coalitions and thus a change in policy is an outcome of a change in the policy core beliefs (Weible & Nohrstedt, 2013). The ACF recognises four possible ways for policy change to occur: an event external to the policy subsystem; an event internal to the subsystem; policy-oriented learning; and negotiated agreements (Sabatier & Weible, 2007). These pathways for policy change are not unique to the ACF: some other policy process frameworks, such as the Institutional Analysis and Development (IAD) framework, have identified similar explanations (Weible et al., 2012).

As mentioned in the introduction, there are still knowledge gaps in how and why DRR policies change. Many approaches described in the policy process literature, including Kingdon’s Multiple Streams approach (Kingdon, 2011), Birkland’s work on Focusing Events (Birkland, 2006, 2009) and Sabatier and Jenkins-Smith’s Advocacy Coalition Framework (Sabatier, 1988; Sabatier & Jenkins-Smith, 1993, 1999; Sabatier & Weible, 2007), entail an understanding that a shock, such as a disastrous event, can lead to or at least partly initiate policy change (but see also Birkland and Warnement, 2014). This approach puts disasters in centre focus when exploring policy changes in DRR policy subsystems. It highlights the dualistic nature of natural disasters: while causing loss of life and livelihood, they can also be constructive, creating opportunities to address different aspects of DRM. Kingdon (2011) has in his famous ‘streams’ metaphor postulated that separate streams of problems, policies and politics come together at critical moments, creating ‘policy windows’, openings for a policy change to occur. Problems are not always visible without a ‘little push’, such as crisis or disaster, which Kingdon in this context labelled as a ‘focusing event’ (Kingdon, 2011). As noted above, external shocks are also one possible pathway to policy change according to the ACF. This part of the framework follows largely the logic of “focusing events” literature, locating events, such as disasters, in the centre of policy

change as they attract public attention (Sabatier & Weible, 2007). However, unlike the “focusing events” literature, ACF takes the position that the events are insufficient to create change in and of themselves but there are causal mechanisms that link events to major policy change (Nohrstedt, 2011; Nohrstedt & Weible, 2010). These mechanisms include redistribution of political resources, “skilful exploitation” of the event and changes in policy core beliefs through learning (Nohrstedt & Weible, 2010).

Although shocks are often understood as explanations for major policy changes in the policy process literature, the causal mechanisms linking disasters and any subsequent possible learning and policy change are not well known (Birkland, 2006; Nohrstedt, 2008). Birkland in his work around ‘focusing events’ dwells upon the question of what particular factors make an event more or less influential to the policy agenda, and how disasters can lead to policy changes (Birkland 2006). Some scholars argue that policies in the disaster management domain do not really benefit from disaster events since the related policies are understood to be ‘policies without public’ (May, 1991; Birkland 2006). By this May refers to policy areas with limited interest groups, mainly technical and scientific communities. This, he argues, makes it probable that there is only one advocacy coalition, which in its turn slows down political discussion and the policy process (May, 1991; Birkland, 2006; Sabatier & Jenkins-Smith, 1993).

Despite the focus given to DRR in the recent years, empirical studies focusing on changes in DRR policies are still scarce. Kingdon’s (2011) notion of policy windows has been utilised in some previous papers discussing changes after natural disasters. For example, Birkmann et al. (2010) examined the changes that occurred both in Indonesia and Sri Lanka after the 2004 Boxing Day tsunami in South East Asia and concluded that the bigger the disaster the greater the chances are for a (policy) change to occur. Manyena (2013), analysed the consequences of the 2008 cholera epidemics in Zimbabwe and concluded that if the “window of opportunity” was opened by the disaster, it was not utilised due to shortcomings at policy and administrative level. The work of Scolobig, Linnerooth-Bayer, and Pelling (2014) draws upon Sabatier’s work in addressing the need of coalitions to come up with plans and to utilise the possible “window” a natural disaster may open. The ACF has in recent years been utilised to

explain various policy changes stemming from or related to crises (see e.g. Albright, 2011; Johnson, Tunstall, & Penning-Rowell, 2005; Meijerink, 2005; Nohrstedt, 2005; Penning-Rowell, Johnson, & Tunstall, 2006) but not in studies of DRR policy subsystems as such.

The role of learning is often highlighted in conjunction with changes in DRR policies. Learning and policy change after a disastrous event are complicated, even more so when looked at in a low-income country context, given the constraints in resources and shortcomings in governance (Birkland & Wernement, 2014). Learning is often a desired (or even expected) outcome after a disaster event. But identifying and measuring post-disaster learning is difficult. Birkland defines learning as “a process in which individuals apply new information and ideas, or information and ideas elevated on the agenda by a recent event, to policy decisions” (Birkland, 2006, p. 22). Following this, one can assume that policy change after a disaster event (as focusing event) is evidence of learning. However, countries can also learn from experiences elsewhere, and in the context of DRR, given the emphasis on peer networks and fora for meeting counterparts across the world facilitated by the UNISDR, policy diffusion, i.e. learning from elsewhere should be mentioned as one key concept (Dolowitz & Marsh, 1996; Dolowitz & Marsh, 2000).

## 4 Research design and Methods

### 4.1 Case selection

There were multiple reasons to select Mozambique as the case study. According to Neuman (1997), there are three important factors to consider when selecting a field research site: richness of the data, unfamiliarity and suitability – all of which are present in the case of Mozambique's DRR policy sub-system. While numerous disaster events; multiple actors working on DRR; and steady DRR policy development since independence ensure rich data exists to be delved into, there are surprisingly few previous studies focusing on DRG in Mozambique, which makes the field relatively unfamiliar. I also felt that it is friendly and, despite political restlessness and recurrent hazards, still a safe environment, thus providing suitable setting for a case-study.

A theoretically grounded reason for my choice was that the majority of research on disaster risk governance and policy process are from western countries, where most of the theories on governance and policy processes originate. In contrast, DRR policy processes and DRG are less studied in the African continent (with South Africa as an exception, see e.g. Botha & van Niekerk, 2013). The challenges African countries have in organising effective DRR policy and practice are sometimes dismissed as resulting from a lack of resources. While this is certainly true in many African countries – and in fact the lack of resources has been highlighted as a problem around the globe (UNISDR, 2013) – this notion overlooks other challenges as well as the opportunities that African countries have for the development of policy and practice (Becker & van Niekerk, 2015; Holloway, 2003; UNISDR, 2014).

Mozambique faces recurrent natural hazards. While, or perhaps because, it is one of the most disaster prone countries in the world (Dilley et al., 2005; Eckstein, 2018) Mozambique has carried out considerable work on enhancing DRR (INGC, 2013). In fact, based on the information collected from the HFA progress reports from 2007-2013, Mozambique appears to be a high-performing country - in terms of DRR process in general and, in particular, in the development of both policies and legislation (INGC, 2009, 2011, 2013, 2014). Likewise, organisational arrangements to integrate DRR with other policy areas

has been measured as making progress above both the African and global averages. Given the challenges of implementing DRR in southern African countries (Becker & van Niekerk, 2015; Holloway, 2003; Tall, Patt, & Fritz, 2013), this makes Mozambique a particularly interesting case. However, the need for empirical research on DRG is further justified by limitations associated with the HFA process (Alexander, 2015). The national progress reports were based on self-evaluations, which causes problems of validity (see e.g. Twigg, 2009). The HFA reports also focused primarily on documenting challenges and progress directly related to the predefined performance targets. As such, the reports may overlook other areas of DRG. Mozambique thus presents a good study site for examining the DRR policy process and the development of DRR policies.

The Sendai Framework for Disaster Risk Reduction 2015-2030 stresses the importance of capacity and competence development and retention for reducing risk of and losses from future disasters in African countries in particular (UNISDR, 2015b). Previous studies have identified some challenges, including high staff turnover and problems in capacity retention, that appear to be common in governmental organisations at different levels in Africa, and that pose a barrier to DRR and climate change adaptation (Becker & van Niekerk, 2015; Mysiak et al., 2012; Tadele & Manyena, 2009; van Riet & van Niekerk, 2012). While generalising results from single case studies has limitations, studying these challenges and their impacts to DRG and policy process in Mozambique can contribute to a wider understanding of DRR with broad relevance to other countries with similar DRG structures, similar economic or political situations, and/or exposure to comparable natural hazards (Flyvbjerg, 2006). A better understanding of these challenges will also help in identifying actions that would allow countries to meet the goals set by the Sendai Framework.

#### **4.2 Approach and Design**

To obtain detailed information and in-depth knowledge on how the uncertainties in DRG manifest themselves and how the stakeholders perceive these uncertainties in Mozambique, the research design was conceived as a case study with fieldwork (Yin, 2003). Fieldwork allowed data collection in natural settings among the people working

on DRR on daily basis, allowing direct communication with people and a close-up observation within the contexts that were being studied (Creswell, 2007, 2009). As a downside, carrying out such fieldwork is also time-consuming (Creswell, 2007; Gobo, 2008).

A case study research design allows for the use of several data collection methods to examine the research subject from multiple angles and to go into interesting areas in-depth (Creswell, 2009; Neuman, 1997). As DRR actors, and the way they perceive and interpret the situation, challenges and changes, were placed at the centre of the study, I chose semi-structured interviews as the main data-collection technique. Semi-structured interviews are a good way to gain in-depth information and the personal perceptions of individual respondents. Using an interview guide containing the topics or themes to be covered rather than readily worded detailed questions, allowed me to directly target the research topics while still remaining flexible towards issues raised by respondents (Kvale, 1996; Yin, 2003). This makes semi-structured interview process flexible but, at the same, more subjective. To mitigate this subjectivity, I also used other data-collection techniques, including participant observation. I also went through various policy and programme documents with an aim to triangulate the interview and observation data (O'Reilly, 2012). The next sections provides a more detailed description of data selection and collection.

### **4.3 Data Selection and Collection**

Since data sampling and focusing on the right things becomes easier after being in the field (Neuman, 1997), a short, three week 'pilot study' to the field site was organised in late 2012 before commencing the fieldwork period proper. During this pilot study I met two key informants from UNDP country Office in Mozambique and carried out 11 short interviews with actors participating in DRR work in Mozambique. These respondents represented the Mozambican National Disaster Management Institute, UN organisations, universities and donor organisations. I also interviewed a DRR officer at SADC in the SADC headquarters in Gaborone, Botswana for a broader picture of DRR questions and collaboration in Southern Africa. I also went through a number of policy and programme documents and

attended two conferences (one in South Africa and one in Mozambique) aimed at both scholars and practitioners. This gave me an opportunity to learn more about the latest DRR research and development in Mozambique and more broadly in Southern Africa and served as a good opportunity to make new connections.

This short field study was helpful in many ways. Meeting with the key informants was central to ensure that later data collection was successful. The key informants could also be called 'gatekeepers', persons in a critical position able to provide access to data and data collection sites, that provided insights that shaped the direction of the study (Neuman, 1997). They helped with making initial contact with various actors and provided me with a good overview of the situation and the challenges in the DRR policy process in Mozambique. The pilot study also helped in defining the borders of the unit of the analysis – the DRR policy subsystem – and to set the limits to analysis. As such, while being aware of the large number of actors working at the regional, provincial, district and community level, only actors participating in DRR policy process at the national level in Mozambique were included in this study. Given the size of Mozambique, time constraints and limited resources, this appeared to be the most feasible unit of analysis. The discussions, collected documents and interviews with a few initial DRR actors also served to identify and to get to know more stakeholders, to learn more about the situation, to evaluate the feasibility of my research plan and to clarify my research questions. It also helped me to come up with interview themes and formulate an interview guide.

I have also spent time in Mozambique prior to my PhD studies: in 2008 I spent 6 months in Mozambique as part of my master's studies in international development and management at Lund University. During this period, I did an internship at the UNDP country office in Maputo and collected data for my MSc. thesis on flood induced resettlements along the Zambezi river valley. This earlier work helped me a lot before and during PhD fieldwork as it provided me with extensive knowledge of the cultural and political setting, historical events, field of disaster management in the country and, perhaps most importantly, helped me to establish contacts prior to fieldwork.

Most of the data for this dissertation were collected during two fieldwork periods in Mozambique, in 2013 and 2015, respectively. On

both occasions I was based in Maputo, the capital city of Mozambique. The first fieldwork period, four months in length, took place in January-May 2013. During that time, I was attached to the UNDP country office in Mozambique, which allowed for participant observation, provided good access to documents, enabled daily chats with key informants and aided in getting in touch with other stakeholders. The second fieldwork period took place in April-May 2015 during which I stayed for one month in Maputo, and interviewed and met with more actors.

Respondents for this study were selected utilising purposive sampling (O'Reilly, 2012): The first people and organisations were pointed out by the two key informants. Subsequently, respondents were selected mainly utilising snowballing technique, where the previous respondents provided new names of actors they considered important or collaborated with (O'Reilly, 2012). The respondents were drawn from ministries and other governmental institutions, non-governmental organisations, UN and other inter-governmental agencies, bilateral donor organisations and academia. Total number of interviews was 44, 31 in 2013 and 13 in 2015. Table 1 shows a breakdown of respondents by organisation type. Some of the interviews were conducted in small groups, depending upon the wishes of people in various organisations, which increased the total number of respondents to 52 (38 in 2013, 14 in 2015). In addition, I had the opportunity to speak with a number of people that have been writing about Mozambique and its floods; people with extensive knowledge of the NGOs or donors in Mozambique; and people somehow involved in DRR activities. I did not record these chats and they are not listed as interviews. Rather, they have provided me with background information or directed me forward, in one way or another.

Most of the interviews listed in table 1 were recorded with a voice recorder, with respondents' consent. This allowed me focus more on the interviews and to take additional notes. I also wrote down general comments about the atmosphere, how I felt, what seemed to work and what not, immediately after each interview. In a few cases, it was not possible to use a voice recorder, either because there was too much background noises or because the respondent did not want to be recorded or because the interview was organised spontaneously. In these cases, copious notes were taken. I also kept a diary during the

fieldwork period to put down thoughts, feelings and initial observations and conclusions. These helped me to reflect and improve the ways I was approaching some of the more difficult topics. The notes were also helpful during the transcription and analysis of the data.

*Table 1. Respondents by organisation type and year*

Organisation	2013		2015	
	Number of respondents	Additional information	Number of respondents	Additional information
Ministries	4			
Government agencies	9	Includes 3 group interviews and 2 individual interviews	3	
Non-governmental organisations	8	Includes 2 group interviews and 2 individual interviews	3	
International organisations	11		6	2 interviews not recorded
Bilateral donor organisations	3	Includes 1 group interview and 1 individual interview		
Academia	3		2	A group interview
<i>Total</i>	<i>38</i>		<i>14</i>	

Interviewing presents notable challenges and some caveats should be mentioned here. It can be frustrating if the respondent gives vague answers, does not understand, appears to avoid telling the truth or gives very general accounts of events. Time – or rather, the lack of it – is always a limiting factor when conducting interviews. On the one hand I wanted to keep the questions as open as possible to allow free accounts, making follow-up questions and discussing some matters in-depth. On the other hand, there were often some certain questions I

absolutely wanted to ask or themes to cover in more detail, so I felt I somehow had to delimit discussion. Indeed, one is often given only a limited time frame for an interview with a busy respondent. As such, I needed to find a way to keep interviews on-topic without completely stopping the natural flow of respondents' discussions.

Matters were further complicated by language. Not all the respondents spoke English (or were willing to do so) and my Portuguese, whilst competent, is somewhat limited in technical contexts. However, attempting to force unwilling respondents to speak English tended to limit respondents answers, with a tendency to avoid offering detailed accounts. As such, I allowed the respondents to choose the language the interview would be conducted in, between English and Portuguese, with the idea of making it as easy and comfortable for them as possible. Although this simultaneously made it harder for myself.

While the main data collection technique was semi-structured interviews, other data-collection techniques were also utilised for two purposes. Firstly, multiple techniques allow for triangulation – the crosschecking of research findings (Bryman, 2008). Secondly, to obtain a richer account of the DRR policy process and governance in Mozambique. As such, I collected both qualitative and quantitative data from various documentary sources to get important background information about the DRR policy process in Mozambique but also more generally about Mozambique, DRR, past disasters, and socio-economic and political status in the country. These documents include law-texts, governmental plans and reports, different project and programme documents and previous studies on Mozambique.

Participant observation and discussions with informants were also important in many ways. Firstly, it made it possible to interpret many of the points made by the respondents better. For example, the frustration over the CTGC (Technical Council for Disaster Management) meetings was easier to understand having been there myself (time consumption because of traffic and delays, who gets to speak, who participates, etc.). It also allowed me to ask more direct questions about issues I could observe, such as power-relations between the different actors. I was also able to meet and speak with other actors and see how the actors communicated and worked with each other. This allowed a richer description of the case.

Fieldwork presented several challenges. Contacting prospective respondents was time consuming and difficult to organise. It is difficult to find names and contact details without “being in the DRR/DRG system”. I realised soon that without UNDP backing I would have not been able to carry out all the interviews. Although I was not formally affiliated with UNDP my connection opened many doors for me. First, I got some help in figuring out who to contact and how to contact them. The key informants at the UNDP introduced me to people – without which I likely would have not got interviews or even received responses to my emails. By being able to join some meetings also allowed me to meet some of the actors I wanted to interview face-to-face, allowing me to introduce myself and my project and then agree upon a date for an interview. Another challenge for my fieldwork at the beginning was the severe flooding in Mozambique in early 2013. Many of the actors were very busy and, having postponed their holidays due to the floods, went on to holidays as soon as the situation got stable. It thus took more time than expected to carry out interviews with key people in the DRR subsystem.

Finally, it should also be noted that some material and information are difficult to access in Mozambique. It can be difficult to locate public documents from the ministry and government organisation websites, which were regularly down or did not work well. Also, people in higher positions in particular are cautious about saying anything critical about the government. This meant that I had to probe in different ways, and often turn off the voice recorder, to ensure I received an honest account.

Recorded interviews were transcribed, verbatim whenever possible. In case an interview had not been recorded, I retyped my notes on computer. Interviews that were carried out in Portuguese were translated in conjunction with transcription. The transcription process revealed clearly one of the downsides of qualitative interviews as a method: it is, as Bryman (2008) says, time-consuming and labour intense. But as a reward, you learn to know your data very well. I used a qualitative content analysis when reading the material from different documents, reports and other secondary sources. While analysing the primary documentary sources and organising and synthesising the data I also tried, as well as I could, to evaluate the quality of it (Neuman, 1997).

The data were then coded, with the assistance of a QSR International's qualitative data analysis software NVivo (versions 10 and 11). Coding categories were generated abductively moving between theoretical literature and the data itself. The coding was done in phases moving from fairly general codes (nodes in NVivo), such as, “approach to/definition of DRR”, “barriers” or “turnover” to more detailed ones. The coded data were then organised and categorised on the basis of concepts and themes, which reduced the raw data and allowed development of new concepts, new questions and, in the end, theoretical generalisation (Neuman, 1997; Rubin & Rubin, 2005).

#### **4.4 Ethical considerations**

One thing I have reflected before, during and after the fieldwork was my own possible influence on respondents and the responses I got. How did the conduct of the interview, in English and semi-structured, affect the answers I got? Similarly, the fact that I come from a western country, and was connected to UNDP, may also have influenced the answers I got.

I tried to get around this in several ways. Firstly, I tried to create an atmosphere that would allow respondents to answer as freely as they could. This entailed explaining carefully what my research was about, why would I like to interview them, by allowing them to choose the language and offering to anonymise their answers. Secondly, I employed several techniques to elicit responses. For example, I sometimes had to provide examples or to “play up” or “play down” my knowledge of DRR, politic and DRG in Mozambique to tease out more detailed answers.

Regarding respondent rights and safety, I always requested respondents' consent, informed them about my research, asked permission to use their names and to record the interview (O'Reilly, 2012). Transcriptions of interviews were sent for validation to those respondents who had asked to see them. However, no respondent requested any changes, deletions or additional information. Some of the respondents asked me to turn the voice recorder off before speaking critically about certain issues, for example in making reference to high level politicians or decisions by the government. In such cases I made

notes by hand, have avoided direct quotes and been extra careful in writing the results in a way that renders respondents untraceable.

## **5 Summary of the Papers**

This section summarises the main findings from the four papers included in this thesis. For more detailed information about these studies, please see the attached full texts.

### **5.1 Paper I: A Policymaking Perspective on Disaster Risk Reduction in Mozambique**

Various social, ecological and economic costs of natural hazards have led to an increasing emphasis on DRR initiatives at different levels of society. 'Adaptation' is often understood as particularly important for reducing the risks and impacts of natural hazards (Schipper & Pelling, 2006; Yohe & Tol, 2002). As such, a rich academic literature has been developed to advance the understanding of different dimensions of adaptation in relation to DRR. Similarly, the role of public policy in DRR is often emphasised but less often studied and more empirical research is needed to advance the understanding of the conditions for DRR policy change. As academics looking at DRR seldom engage with public policy literature there is limited understanding of what factors influence the development of DRR policy. Combining insights from adaptation research and public policy theory, this study contributes to a deeper understanding of DRR as a public policymaking issue. Building upon interviews with 37 stakeholders this case study investigates the long-term development of DRR. It focuses on stakeholders' perceptions of what has influenced the DRR policy process in Mozambique, both positively and negatively.

Based on the interviews, six enabling factors for policy development were identified. The majority of respondents mentioned past disasters as one of the most important enabling factors for DRR policy development. A majority of respondents also mentioned international agreements, such as the Hyogo Framework for Action (HFA) and regional agreements, as important drivers for national policy development. The third most commonly mentioned enabling factor, was technical assistance. Specialist expertise was seen as important in bridging knowledge and capacity gaps, providing new ideas, and enforcing implementation of international frameworks in Mozambique. Political support and participation of stakeholders from

different sectors and other governmental organisations in DRR work were also important factors mentioned by the respondents. Increased knowledge and awareness and policy diffusion were also mentioned as important enabling factors by the respondents.

Similarly, based on interviews, six important factors constraining DRR policy change in Mozambique were identified. Lack of resources was mentioned most frequently. The second most commonly mentioned barrier was a lack of coordination and insufficient information-sharing between organisations. This, according to the respondents, reduces accountability and the ability to collaborate across organisational boundaries. One third of the respondents mentioned that DRR decision-making is constrained by Mozambique's hierarchical political system. Twelve respondents mentioned challenges relating to unclear mandates of various ministries. Some respondents emphasised that the ambiguity of the DRR concept (cross-cutting, obscure and constantly evolving) creates barriers to policy development and a few respondents mentioned that despite strong rhetoric of shifting focus from disaster response towards risk reduction, this was not reflected in reality as priority is still given to disaster response.

The analysis highlights DRR policymaking as a process of public adaptation. Specifically, the findings demonstrate how DRR policymaking in Mozambique has been driven by a combination of proactive and reactive adaptation, including predictions of the nature and likelihood of future hazards as well as experiences from past disasters (see Grothmann & Patt, 2005). Several of the enabling or constraining factors identified in this study are not new to public policy research but corroborate with several well-established insights in the public policy literature (e.g. Birkland, 2006; Dolowitz & Marsh, 2000; Kingdon, 2011) and findings elsewhere on the role of disasters in policy development (Johnson et al., 2005; Scolobig et al., 2014). The study therefore suggest that further insights regarding the drivers of DRR and factors affecting DRR policy-making in different countries and settings can be gained by promoting closer dialogue between DRR research and policy process research.

## **5.2 Paper II: A Stakeholder Analysis of the Disaster Risk Reduction Policy Subsystem in Mozambique**

Disaster Risk Reduction policies address complex problems that require inputs from a variety of stakeholders and hence a multi-stakeholder approach has been advocated widely. However, DRG has proven problematic. Studies from various policy areas state that policy debates on intractable policy issues, such as DRR, are often driven by value differences rather than technical deficiencies (see for example Meltsner, 1972; Sabatier & Jenkins-Smith, 1999; Weible, 2007). As such, tools to document and analyse the differences in values and approaches of actors participating in the policy-making are needed.

The aim of the paper is to explore the political context and prevailing policy disputes within the DRR policy subsystem in Mozambique by conducting a stakeholder analysis using the advocacy coalition framework (ACF) approach. The analysis is based on semi-structured interviews with 40 actors involved in DRG in Mozambique, qualitative content analysis of various policy and organisational documents, participant observation and discussions with key informants. The analysis was conducted through three main themes: (1) subsystem boundaries, (2) policy core beliefs and (3) advocacy coalitions.

The Mozambican DRR policy subsystem is nested under regional and international subsystems of DRR as well as the disaster management subsystem. As a subsystem, it also overlaps with those of development and climate change. Based on the interviews, actors involved in the DRG in Mozambique could be divided into two coalitions formed around extant approaches to DRR: one that understands DRR as disaster management issue (Disaster Management Coalition) and one that frames DRR as a participatory development issue (Development Coalition). Although two coalitions could be identified, there was some ambiguity and the membership did not appear to be permanent but gradually shifting. While the coalitions approached DRR slightly differently the belief differences between the coalitions were fairly small, allowing cooperation across the coalitions.

Some of the challenges and ambiguity can be explained by the fact that DRR as a policy issue is overlapping with other policy issues, for example climate change and some of the actors were simply treating DRR and climate change adaptation as one and the same, using

concepts such as “resilience”. Similarly the DRR policy area is still new and the DRR subsystem is still nascent with the discourse of DRR constantly evolving. These factors together explain some of the confusion among the actors.

Uncertainties relating to DRR beyond a lack of scientific knowledge cause major problems and there is a persistent need to find ways to cope with the challenges of DRG. The more broadly DRR is defined, the more difficult it is to frame it as a separate policy issue and to pinpoint all the actors involved. From this perspective, a stakeholder analysis that maps actors, their beliefs and coordination mechanisms provides crucial information as a means of simplifying how a policy subsystem is understood to operate.

The study concludes with reflections on the applicability of an ACF approach to stakeholder analysis and as a tool for understanding policy disputes and coordination challenges in complex settings, such as DRG. This type of research is scarce but can be useful in answering some of the questions highlighted globally. Hyogo Framework for Action mid-term report, for example, noted that policy making in DRR is difficult owing to issues related to coordination, cooperation, institutional organisation, among other things (UNISDR, 2011). By describing actors, their beliefs and the coalitions they form, it was possible to reveal some underlying disagreements that hinder coordination and decision making between organisations. In doing this paper II contributes to the DRR literature by providing a possible tool for understanding policy disputes and specific issues in the policy subsystem that cause stalemates and hinder decision-making processes. These problems are common to countries around the world, irrespective of their wealth. As such, a similar approach to stakeholder analysis, concentrating on issues that tie actors together or keep them apart and are related to their power relations, could be utilised in any given country.

### **5.3 Paper III: Round and Round We Go – the Impacts of Staff Turnover in Disaster Risk Governance**

While a number of challenges in disaster risk governance (DRG) have been acknowledged and reported around the world, the effects of staff turnover are rarely discussed. Staff turnover is often connected to

organisational performance and capacity development (Hagelsteen & Becker, 2013; Meier & Hicklin, 2008; Park & Shaw, 2013). Since capacity development and retention are often highlighted in DRR, studying the implications of staff turnover is crucial in finding ways to meet internationally set DRR goals. The aim of this paper is to shed light on the possible effects that staff turnover has on DRG and policy process, and how actors involved in DRG perceive these effects. Studies on staff turnover at the institutional level are scarce and have often settled in naming turnover as a factor with simple positive or (more commonly) negative consequences. Unlike previous studies from the DRR field, this paper puts staff turnover, and more specifically the perceptions of DRR subsystem actors in centre focus. Drawing on the personal experiences of 14 actors actively involved in DRG in Mozambique in 2015, this paper empirically analyses both the positive and negative effects of staff turnover on DRG.

Respondents were well aware of the high staff turnover within the Mozambican DRR subsystem and its myriad impacts, both positive and negative, on the performance of organisations and the DRR subsystem as a whole. The respondents mentioned a variety of negative impacts associated with staff turnover, including the loss of knowledge or personal capacity, which affect the organisations' ability to fulfil their role in DRG and implementation. It also creates fluctuation in general staff capacities and skills and when several skilled and knowledgeable people move away concurrently it is negatively felt by the whole Mozambican DRR subsystem. High staff turnover also caused some variability in cooperation between organisations depending on how familiar the people involved are with DRR issues and the country context and how well the group of people work together. The importance of personal relationships and the loss of personal connections when people move on was also highlighted. Several respondents mentioned the loss of institutional and organisational memory as a severe negative impact connected to high staff turnover. Many respondents mentioned problems such as poor capacity and skill retention, the need constantly repeat capacity development projects and a continuous need for various types of training. Some of the respondents also mentioned that turnover often breaks the continuity of different initiatives, institutions with joint projects or initiatives tend

to lose momentum in their work as a consequence of staff turnover and that staff turnover, in many ways, slows down the work.

Among the positive impacts mentioned by the respondents were internal turnover (people are moving from one organisation to another but remaining within the Mozambican DRR subsystem), which was thought to be particularly beneficial for international organisations and allow good contacts and relationships between organisations. While organisational memory may be lost, the embodied knowledge of DRR in Mozambique remains in the system. Also, when people move temporarily out of the organisations/DRR system it may temporarily weaken the home organisation but strengthen the organisation in the long run as returning staff members bring new views, skills and ideas that can more broadly benefit the organisation. It was also thought that when organisations manage to hire skilful people it strengthens the organisations and the whole DRR subsystem. Thus getting new people on board can positively affect cooperation and governance.

Despite these positive aspects mentioned by the respondents, negative impacts appeared to outnumber the positive ones. However, it was not staff turnover as such that was deemed negative, but the sheer number of people moving in and out of organisations and out of the DRR subsystem. Based on previous literature, it was assumed that actors' organisational affiliations would affect their perceptions of the effects of staff turnover. For example, that those from humanitarian sector would be more used to turnover. However, this appeared not to be the case. Another assumption, from collaborative governance literature, was that staff turnover erodes trust and information flows between organisations and therefore negatively affects the DRG (Ansell & Gash, 2008; Klijn et al., 2010; Siddiki et al., 2017). The interview data appears to confirm this when it comes to external turnover. However, staff turnover did not appear to negatively affect trust and communication flow when staff turnover was internal.

The results of this study beg questions of how the negative implications of staff turnover could be mitigated in future and how to retain organisational and institutional memories. One key challenge related to high staff turnover is the loss of institutional and contextual memory that can severely harm future work and undermine any "lessons learned". These are considered key features in developing and improving DRR practice and policies. High staff turnover can severely

undermine capacity development projects and their benefits, especially in the long run if trained staff are not retained in the organisation. This can have notable implications, for example in failing to meet the goals set in the Sendai Framework (UNISDR, 2015b). It also raises questions on the usefulness of people-centred capacity development programmes.

#### **5.4 Paper IV: Whose Voice Do We Hear? Obstacles to multi-stakeholder and multi-level disaster risk governance in Mozambique**

The role of good disaster risk governance (DRG) in enhancing disaster risk reduction (DRR) has been increasingly emphasised by scholars, practitioners and global frameworks. However, such frameworks entail certain normative prerequisites for successful DRR such as democracy, transparency and citizens' ability and will to participate, which are largely predicated on notions of pluralist democracy. As such, there has been less discussion about how good DRG predicated on wide public participation are being implemented in countries where democracy and policymaking capacity are limited (Birkland & Warnement, 2014). This paper addresses this research gap by exploring participation and "all-of-society engagement" in DRR in Mozambique by asking: how have calls for a wider participation in the DRR system been actualised in Mozambique and what factors affect this? To answer this question, the paper outlines three examples drawn from the DRR system in Mozambique. Material for this qualitative case study consists of interviews and secondary data, including studies, policy and project documents. Semi-structured interviews with DRR actors involved in DRG in Mozambique were carried out in 2013 and 2015.

Decentralisation is often understood as a central plank of widening participation, good governance and a way to find more innovative and integrated governmental approaches to deal with the complex challenges posed by disasters (Djalante, 2012; Renn, 2008). Collaborative style governance, which brings different stakeholders together in different forums to engage in consensus-oriented decision-making, has been highlighted in several different theoretical approaches (Ansell & Gash, 2008; Djalante, 2012; Galaz et al., 2017). Polycentric governance systems are expected to help manage risks spanning across scales and

address the complex interrelationships within social and environmental systems, such as DRR (Heikkila, Villamayor-Tomas, & Garrick, 2018).

The first example in this paper focus on the inclusion of different views in flood risk management in the Zambezi River Valley in Central Mozambique. Extensive relocation of people living on floodplains has been one of the main measures utilised by the Mozambican government to reduce the direct impacts of future floods. The proponents of this *relocation* approach see it as necessary due to increasing flood risks and as part of a “modernisation” project. However, this relocation approach has been criticised and there are differing views on what are the real risks to people in flood-afflicted areas and likewise what would be the best approach to tackle them. For example, many of the local people would prefer to continue living by the river. This approach is labelled here as *Living with floods – traditional*. While they understand the risks of flooding, they evaluate these risks against those entailed in livelihood reconstruction, poverty and the loss of identity and sense of belonging. As a compromise, international organisations and NGOs advocate a *Living with floods – improved* approach. They reject resettlement but agree with the government that flood risk needs to be addressed. They emphasise training, safer buildings codes and novel infrastructures.

Example 2 revolves around *local risk management committees*. These committees consists of community level volunteers and their role is to mobilise communities in an emergency. The establishment of the local committees has been highlighted as a positive example of community involvement and DRR activity at the local level. However, there are a number of challenges related to these local committees, which render them unsustainable. The local DRM committees approach has also been criticized for focusing on disaster response rather than DRR, and for largely excluding these committees from policymaking.

Capacity at provincial, district and municipal level is the third example in this article. Redistribution of power and resources to province, district and municipal level has not been prioritised and as such, there are notable challenges and gaps. The DRR system in Mozambique is not truly decentralised but led by the National Disaster Management

Institute (INGC) at all levels, with the local administrators or the government units remain weak and passive. The weakness of the sub-national levels is understood as both a consequence of inadequate decentralisation and as a reason for not decentralising the DRR system. The limited training and involvement was speculated to be at least partially a political question about the location of power and right to wield it.

The results of this paper reveal that the DRR system in Mozambique is very hierarchical and centrally led, in part because it is closely connected to disaster management. Having one organisation in such a central role can be problematic, preventing DRR from becoming a truly cross-cutting issue spanning different scales and government sectors. While at the national level there is wide stakeholder participation and parallel decision-making arenas, there has been little emphasis upon decentralisation of the DRR system across the various policy scales. Many of the outlined challenges relate to limited transparency and lack of trust. While participation is a central question in DRG studies, trust, transparency, accountability and collaboration across sectors and scales should be better addressed. Since many of the challenges are features of wider political, economic and cultural settings, DRG cannot be studied in isolation from political processes. This paper calls for future DRG studies to take a wider scope.

## **6 Discussion: Challenges and Opportunities**

This thesis sought to study the different sets and effects of uncertainties within DRG in Mozambique. In this section I discuss some puzzling aspects in more detail.

### **6.1 Focus on individuals or systems**

The papers this thesis is based upon highlight on the one hand the role of individuals and on the other hand the role of organisations. Individuals play an important role in DRG. The findings of this thesis have pointed to the importance of active involvement and commitment from political leaders, managers, and technical staff in DRG. This has helped maintain DRR's place on the policy agenda and facilitated development of new policies in Mozambique. Over time, these actors have strengthened their capacity to acquire knowledge about DRR issues and utilise that knowledge in the policy process. Through "skilful exploitation" of disaster events and opportunities they have pushed DRR high on the national agenda and managed to develop important policy documents (Nohrstedt & Weible, 2010). Such individual skills are rarely discussed in the literature on DRR policymaking and therefore deserve more attention in future research. This thesis thus emphasises the importance of a more subtle individual-centric perspective, focusing on the capacity of individual managers and decision-makers (papers I-III).

At the same time it can be risky for the system to rely on capacity at individual level or to aim capacity development programmes solely on individuals. As noted in paper III, high staff turnover can result in a rapid loss of capacity and prevent the accumulation of embodied context-specific knowledge. This embodied knowledge and capacity is needed to ensure a long-term perspective in DRG. With this in mind, paper III raises questions about the usefulness of people-centred capacity development programmes. These questions underscore a need to develop strategies supporting inter-organisational collaboration and closer stakeholder dialogue regarding DRR policy priorities. The results of paper III also elicit the question of how the negative consequences of high external staff turnover can be mitigated in future. The paper calls for improvements in practice, notably in daily

operational practices as well as in specially designed capacity development programmes. It also highlights the importance of mainstreaming DRR across governmental silos and creating a collaborative system that is less dependent on individuals (cf. Nohrstedt, 2018).

## **6.2 Recurrent Disasters**

In Mozambique, as in many other countries too, DRG still focusses much on disaster preparedness, response and recovery rather than risk reduction (Raju & da Costa, 2018). There are many reasons for this. First, the change from disaster centred thinking towards more risk and vulnerability centred thinking (and action) is still ongoing, and some actors still find it confusing (paper II). Second, while the vocabulary has been changed to be more in line with that of DRR, many of the structures and institutions in Mozambique still support the reactive disaster management way of organising the work (Scott & Tarazona, 2011). For example, the same organisations and platforms that coordinate disaster preparedness and response are also responsible for coordinating DRR (paper IV). Third, while legislation and other policy documents have been developed, the implementation of these policies is very limited, mainly because of limited resources and capacities. In the worst case, the documents serve only as box-ticking exercise to show apparent progress whilst providing few tangible changes in risk reduction on the ground.

The fourth and perhaps the most important factor explaining the slow progress from disaster management to risk reduction is the presence of recurrent natural hazards. With disaster events occurring almost annually, the Mozambican DRR subsystem is “stuck” in the preparation-response-recovery cycle. This eats into a lot of existing resources and exhausts the system (again, it is by and large the same organisations that are dealing with disasters and DRR, see paper I&II). In addition, despite changes at the global level emphasising risk reduction, most funds are still available for disaster response and early recovery, which makes it difficult for poorer countries such as Mozambique to break free from disaster management thinking (paper 1).

As mentioned earlier, disasters can also be positive in sense that they make space for learning and changes to occur. The recurrent disasters may bring ample opportunities for learning. While it is sometimes said that lessons learned from disaster events may decay over time (Birkland, 2009), in a country such as Mozambique new disasters serve as regular and cruel reminders. However, while recurrent disaster events offer many possibilities “to learn”, it is less clear who is learning what; what conclusions are being drawn; and if it leads to any action (Birkland, 2009; Birkland, 2016). Also, disaster events alone are not enough to engender learning: skilful and resourceful actors are required that can exploit the situation and mobilise for action (Birkland & Warnement, 2014; Nohrstedt & Weible, 2010). Frequent disaster events may lose their “shock factor” and thus it may be that only major events become focusing events providing “a window of opportunity” for change. In addition, given limited democracy and low policymaking capacity in Mozambique, the public has less opportunities compared to pluralistic systems to demand post-disaster changes (paper IV, see also Birkland & Warnement, 2014).

### **6.3 Multi-level and multi-stakeholder approach**

While total societal engagement in DRR and the expansion of DRG *downward*, *upward* and *outward* have been heavily advocated, there are still many challenges to be addressed (Blackburn, 2014; Jones et al., 2014; UNISDR, 2015b). The DRR subsystem in Mozambique has been built following a multi-level approach to DRR consisting of global, regional, national, provincial, district and local levels. However the sub-national level has little resources or power (paper IV).

UNISDR and other global and regional agencies have played a key role in bringing DRR into focus, providing different guidelines and frameworks to support work at the national level. But global DRG has also brought with it some further uncertainties for national agencies to deal with. These include issues such as fluctuating funding and changing priorities. Since many poorer countries in particular, such as Mozambique, are heavily dependent on external assistance for DRR any changes in funding makes planning at the national level difficult. Similarly, changes in the focus of themes that are highlighted and funded can make it difficult for the countries to focus on issues

important within their own specific contexts. Instead of focusing on issues of national (or local) importance, national agencies plan and implement programmes focusing on issues that will be funded by donors. In essence, this means that a lot of the decision-making power has shifted, or remain, above the national level. When countries' performance is measured by globally agreed indicators on specific issues, it makes sense to focus on activities that will show progress on these specific indicators. The global community form a public the Mozambican government is eager to please and, to a certain extent, appear to be more accountable to than their actual (domestic) public. While the public in Mozambique may have a hard time in getting their opinions heard (paper IV), the government appears to be far more willing to accommodate the requests of the international community.

Expanding DRG downwards, i.e. decentralising power and resources, is often understood as central to successful DRR. Paper IV calls for better dialogue between DRR stakeholders at all levels, including beneficiaries. It argues that different voices in the process are not simply a nuisance for DRG but that accepting and allowing the full variety of voices might help in achieving more sustainable policy decisions. Being aware of and understanding different voices, narratives and approaches to DRR (paper II & IV) can help overcome some policy disputes and stalemate. However, decentralising DRG can be difficult owing to differing country contexts, which entail specific laws and governance structures and formal and informal institutions. Limited resources or capacity at lower levels can severely inhibit any decentralisation process. Finally, trying to decentralise DRG without a wider decentralisation of resources and political power to lower levels is unlikely to succeed, a potential issue in Mozambique.

Collaboration across different governmental silos and with other actors, including civil society and the private sector is still limited in Mozambique. The private sector's involvement in DRR has not extended beyond participating in occasional public discussions where business opportunities, such as road construction projects, have been expected to emerge (INGC, 2014). This said, the insurance sector is slowly making its way to Mozambican DRR scene (Matera et al., 2018). The participation of civil society (apart from international NGOs) actors is however limited in part by geographical factors (it can be

difficult to attend activities in Maputo) but also by other barriers, including resources.

## **7 Conclusions and Contributions**

The uncertainties related to different aspects of DRR create major challenges for DRG. While there is an increasing emphasis on effective DRG, the institutional and strategic uncertainties inherent to DRG have not been adequately addressed in previous studies, a gap this thesis has contributed to bridging. This thesis has presented a case-study of the Mozambican DRR policy subsystem and explored different uncertainties and their impacts on DRR policymaking as perceived by the actors involved in DRG. The four papers have brought light to different sets of uncertainties. More specifically, they have investigated stakeholder involvement, collaboration and policy disputes (paper II and IV); barriers and enabling factors for policy development (paper I), and the effects of staff turnover (paper III). By outlining these challenges, it paves a way to find solutions and ways forward.

### **7.1 Conclusions**

The actors involved in DRG in Mozambique face myriad challenges within policy process (paper I). While uncertainty can be seen as an inherent characteristic of modern society, it should be emphasised that uncertainties in DRR are not simply about gaps in knowledge or information. Rather, they also relate to strategic and institutional features of the DRG settings in which these problems are articulated and dealt with (cf. Koppenjan & Klijn, 2004). It is therefore an interesting notion that despite, and perhaps exactly because, a lot of research around DRR focuses on specific hazard types and challenges around them, substantive uncertainties were rarely highlighted as important challenges or limitations for DRG in Mozambique by the respondents of this study. On the contrary, the substantive problems and knowledge gaps appeared to be the easiest to handle. However, two exceptions should be noted here. First, given that most of the hazards Mozambique is exposed to are hydro-meteorological, climate change and its possible and cascading effects constitute a major substantive uncertainty. Another substantive uncertainty is integral to the DRR term itself. Since DRR as a policy issue often overlaps with other policy issues, such as climate change, development or disaster management, some of the actors found it difficult to distinguish between them. Some

actors were simply treating DRR and climate change adaptation as one, using concepts such as *resilience* that are common to both policy issues. Similarly, the DRR as a policy issue is still new, the DRR subsystem is still nascent and the discourse over DRR is still constantly evolving, which explain some of the confusion among DRR actors. The more broadly DRR is defined, the more difficult it is to frame it as a separate policy issue.

The greatest challenges in Mozambican DRG revealed by this study all related to strategic and institutional uncertainties. The strategic uncertainties in the DRR subsystem in Mozambique relate to coordination, collaboration, information-sharing and the inclusion of all stakeholders in decision-making processes. Currently the system is set so that it limits many voices from being heard. While limiting participation may be tempting – it becomes easier to agree when one keeps dissenting voices out - it is perhaps not sensible in the long-run. Examples from Mozambique and elsewhere show that people are more willing to collaborate when they are part of the decision-making process and that including plural perspectives in governance tends to lead to more sustainable solutions (see e.g. Patt & Schröter, 2008; Verweij & Thompson 2011).

Polycentricity in DRR and DRG increases institutional and strategic uncertainties. The more there are arenas for different stakeholders to meet and the more stakeholders are involved, the more opinions, perceptions and coordination work there is. However, the more arenas there are to collaborate at different scales, the more there are possibilities for an “all-of-society engagement”. It also highlights the importance of trust between different stakeholders and transparency across scales. The success of DRR policy processes and implementation also depend on the Mozambican political landscape. DRR policy changes require political will and it is therefore central that DRR is kept high on national politics and policymaking agenda – something that Mozambique has succeeded doing well. This aspect has not been addressed well in previous DRG and DRR literature (cf. Tierney, 2012).

By making DRR a truly cross-cutting issue that would actually penetrate across governmental silos would enable more actors to participate. With actors beyond those involved in reactive disaster management on board would allow continues work despite recurrent hazards that so often eats capacity from those involved in

preparedness, response and recovery. This also highlights the importance of integrating DRR and vulnerability reduction to development strategies: DRR does not belong to the disaster management sector alone.

This thesis concludes that low and fluctuating capacity in the DRR subsystem, limited resources and disagreements over what DRR is, i.e. what aspects should be included and highlighted and who should be included in decision-making, have all affected the DRG and DRR policy process in Mozambique. There have been some very positive developments within Mozambican DRR, including the development of the Master plan for DRR (2006), the Disaster Management Bill (2014) and the addition of DRR as a cross-cutting issue within many development strategies. However, long-term DRR interventions have been limited in scale and scope. Likewise, the existence of DRR policy documents does not necessarily lead to concrete actions – due to lack of resources or political will (Newitt, 2018). Consequently, the DRR policy process in Mozambique can be short-sighted and makes slow progress. This, in turn, increases the disconnect between theory, policy and practice.

This thesis thus argues that DRG theory and practice should better take into account diverse issues such as power-relations, accountability and transparency across scales. Likewise, focus is needed upon the inclusion, coordination and capacities of different stakeholders, both in Mozambique and elsewhere. While the body of literature on DRG has grown rapidly in recent years, this thesis has identified several aspects of DRG deserving of greater attention in the field of risk management and disaster studies.

## **7.2 Contributions**

This thesis has revealed a number of uncertainties and different challenges at different levels. It has also utilised different theoretical tools across disciplinary boundaries that could advance our understanding of DRG and help in overcoming some of the challenges. It therefore advocates a closer dialogue between disaster science and other disciplines. This thesis has demonstrated how DRG could benefit from different policy process frameworks (paper I & II) (e.g. Birkland, 2006; Dolowitz & Marsh, 2000; Kingdon, 2011; Sabatier, 1988). It has

also presented a stakeholder analysis (paper II) that maps actors, their beliefs and coordination mechanisms as a useful tool for studies on DRG. While not providing exhaustive information of the policy area, it can be utilised as a first step to understanding any political context. By providing a tool to describe and simplify the political context, it can help scholars to pinpoint some of the specific issues within the policy subsystem that are causing stalemates and hindering decision making processes. It can thus help in finding ways to overcome the persistent coordination problems and challenges related to implementation and the integration within DRR subsystems.

While studies of DRG have started to emerge, studies that connect it to public policy and policy process literature or that focus on strategic and institutional uncertainties remain scarce. This thesis has then contributed by connecting different bodies of literature to better operationalise the concept of DRG. By connecting DRG to policy process literature, it can help DRR practitioners and scholars to better reduce, navigate within and to resolve some of the pertinent uncertainties related to DRR and DRG.

Studies on staff turnover at the institutional level are scarce and have often settled in naming turnover as a factor with simple positive or (more commonly) negative consequences. By shedding light on the effects of staff turnover on DRG and policy process, and how actors involved in DRG perceive these effects (paper III), this thesis tackled the understudied question of how staff turnover affects DRG. Identifying the differences between internal and external staff turnover allows for a more detailed and nuanced analysis of its implications, thus contributing also to literature on organisational capacity and performance. While internal turnover might have negative implications at the organisational level, it might not be so at the institutional level, since knowledge and social relations remain within the system. Future research into the implications of staff turnover in any given domain would benefit from this conceptual division.

### **7.3 Future research avenues and ways forward**

This thesis has also highlighted interesting research avenues and questions that remain to be explored. First, given the single case-study research design, interesting future research could include studies of

DRR subsystems beyond Mozambique. Although the findings in Mozambique cannot be generalised directly to other countries or settings, they do offer some useful lessons and guidance for future research. For example, high staff turnover is a striking feature of the Mozambican DRR policy subsystem, and it greatly affects DRG capacity, but is it a typical feature of DRR systems elsewhere? How have other countries succeeded in widening participation in DRG?

Another interesting research area to examine relates to the normative underpinnings of global DRR frameworks, such as the Sendai Framework for Disaster Risk Reduction. How can these frameworks be integrated in DRR policy and practice in different country settings? The wider political settings within which DRR is to take place demand more attention in future studies. Another theme and challenge rising from this thesis, albeit indirectly, is the question of how to make DRR part of normal ways of doing things and not an ancillary issue simply 'stuck on' to other policies. Such a change is often emphasised as an ideal situation but what would this entail and what would be the implications of such a development?

Going back to Mozambique, if I can add something to my "wish-list", I would also like to see the DRR subsystem to become more transdisciplinary by better including local academia in DRG. Including more Mozambican researchers' voices might help addressing issues such as vulnerability that have historically gained less attention in Mozambique. There is a growing group of Mozambican scholars that I believe have much to give to the current DRR policy and practice in Mozambique.

There is so much left to be done in Mozambique and elsewhere, but there is also great potential and positivity, with significant progress already made. This this thesis thus concludes on a call to keep searching for ways to overcome the many challenges and to continue the struggle for a safer world: *a luta continua!*

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## Navigating in the Midst of Uncertainties

Global disaster risk reduction (DRR) frameworks, scholars and practitioners advocate multi-stakeholder, polycentric and multisectoral strategies for disaster risk governance (DRG). However, previous studies have not adequately addressed uncertainties relating to multiple DRR actors operating and collaborating at different scales. This thesis investigates the uncertainties in DRG in Mozambique, a low-income country that regularly faces natural hazards that often cause heavy loss of life and livelihoods and economic damage. The four articles that together constitute this thesis focus on different sets of uncertainties and factors that have constrained or allowed Mozambique to take major steps in this policy area. By exploring uncertainties related to stakeholder involvement, coordination and policy disputes, this thesis reveals different challenges and opportunities that affect DRR policymaking in Mozambique. This thesis concludes that Mozambique has managed to take important steps in DRR. However, as a consequence of the different challenges to DRR practice in Mozambique, policymaking can be short-sighted and makes slow progress, thus increasing the disconnect between theory, policies and practice. It thus calls for increased attention to be paid to DRG in Mozambique and elsewhere.

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