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The Sendai Framework

Swedish Disaster Risk Reduction Governance

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The Sendai Framework – Swedish Disaster Risk Reduction Governance
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Studien har utförts av Utrikespolitiska Institutet (UI)

Författare: Amanda Haraldsson och Gunilla Reischl

Under 2017 gav MSB i uppdrag åt UI att genomföra en studie i syfte att öka kunskapen om hur Sendairamverket fungerar i praktiken. Analysen fokuserar på förutsättningarna för att omsätta ramverkets målsättningar i god styrning. Studien bidrar till stöd för Sveriges arbete med att implementera ramverket. Underlag till studien är intervjuer med svenska aktörer som arbetar med katastrofriskreducering.

MSB:s kontaktpersoner:

Petronella Norell, 010-240 40 81

Janet Edwards, 010-240 51 08

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Sammanfattning

Under 2017 gav MSB i uppdrag åt Utrikespolitiska institutet att genomföra en studie i syfte att öka kunskapen om hur Sendairamverket fungerar i praktiken. Analysen fokuserar på förutsättningarna för att omsätta ramverkets målsättningar i god styrning. I bred bemärkelse är studien avsedd att bidra till stöd för Sveriges arbete med att implementera ramverket. Underlag till studien är en genomgång av tillgänglig litteratur på området och intervjuer med svenska aktörer som är centrala för arbetet med katastrofriskreducering.

I mars 2015 antogs Sendairamverket för katastrofriskreducering 2015-2030 vid FN:s tredje världskonferens i Sendai, Japan. Tidigare fanns Hyogo Framework for Action 2005-2015, och Sendairamverket är en efterföljare till detta. Sendairamverket har sju globala mål (vad som ska uppnås) och fyra prioriteringar (metoder som ska användas för att uppnå målen). Sendairamverket syftar till att reducera riskerna för och minska konsekvenserna av olyckor och katastrofer. Det är bredare än föregångaren och omfattar både små- och storskaliga, frekventa och icke frekventa, plötsliga och långsamma katastrofer. Förutom naturolyckor ingår även teknologiska, biologiska, miljömässiga och hälsorelaterade risker. Detta täcker ett brett spektrum av de risker som aktörer inom samhällsskydd och beredskap arbetar med, men med två viktiga undantag – antagonistiska händelser och krig. Sendairamverket är således bredare och innefattar fler risker än Hyogo.

En sådan breddning av mål och prioriteringar ställer större krav på olika typer av expertis och samverkan mellan flera aktörskategorier, t ex för att lindra vissa typer av katastrofer kan samarbete mellan staten, samhällsplanerare och privata fastighetsägare krävas. Även om Sverige i ett internationellt perspektiv drabbas av få större naturkatastrofer står Sverige inför ett flertal utmaningar vad gäller hållbar samhällsplanering och det förebyggande arbetet för katastrofriskreducering. En av de prioriteringar som lyfts fram i Sendairamverket, men även i t.ex. Agenda 2030 om hållbar utveckling, är behovet av att utveckla formerna för styrning (governance) med effektiva processer för styrning, inriktning, samverkan och ansvarsfördelning inom och mellan den privata och offentliga sektorn, från den lokala nivån till den globala. Sendairamverket lyfter också fram vikten av ett kunskapsbaserat beslutsfattande kring hantering av katastrofrisker som en förutsättning för god styrning. För en sådan utveckling behövs en ökad kunskap om hur Sendairamverket fungerar i en svensk kontext och hur det förhåller sig till andra globala ramverk för global utveckling.

Studien "The Sendai Framework Swedish disaster risk reduction governance" analyserar Sendairamverket från ett styrningsperspektiv i syfte att öka kunskapen om hur ramverket fungerar i praktiken. Uppdraget är indelat i tre delar som sammantaget bidrar till en bredare kunskapshöjning: 1) en undersökning av Sendairamverket i kontexten av andra globala ramverk för hållbar utveckling, 2) en analys av hur Sendairamverket fungerar praktiskt,

samt 3) en diskussion om hur Sendairamverket kan bidra till att utveckla den nationella styrningen av katastrofriskreducering.

Analysen fokuserar på svenska förhållanden och baseras på intervjuer. Respondenterna består av fem aktörskategorier: statliga myndigheter, civilsamhälle, forskning, lokala myndigheter och aktörer från privatsektor. Urvalet skedde med hjälp av rekommendationer från MSB och från de olika aktörernas kommunikationsavdelningar, samt genom snöbollsmetoden (nyckelpersoner identifierades av de som redan kontaktats). Totalt genomfördes 31 intervjuer. Intervjusvaren ger en inblick i hur berörda aktörer upplever hur Sendairamverket fungerar utifrån respondenternas erfarenheter. Vi vill understryka att rapportens resultat reflekterar de intervjuade aktörernas perceptioner, d.v.s. de bygger på hur Sendairamverket upplevs av respondenterna. Sendairamverket är ett nytt internationellt ramverk som befinner sig i ett inledningskede. Det gör att vissa aktörer upplever en otydlighet om hur det fungerar i praktiken och vad syftet är. Studiens resultat speglar detta.

För att ge en kontext till Sendairamverket beskriver rapporten kortfattat den globala utvecklingsagendan, mot vilken ramverket bör förstås. Den globala utvecklingsagendan efter 2015 omfattar fyra huvudsakliga separata avtal, som alla är sammankopplade och vars genomförande är nödvändigt för att säkerställa effektiv global katastrofriskminskning. Utöver Sendairamverket ingår klimatavtalet som slöts i Paris 2015, Agenda 2030 och de globala målen, samt Addis Abebas-agendan för finansiering för utveckling. Behovet av att koppla katastrofriskreducering till hållbar utveckling och miljöskydd har länge varit känt. På senare år har klimatanpassning blivit en central del i diskussionerna om implementeringen av katastrofriskreducering. Implementeringen av de fyra globala ramverken ses som ömsesidigt beroende, d.v.s. för att implementera ett ramverk behöver även de övriga implementeras.

Generellt finns ett starkt stöd i såväl forskning som bland praktiker för fördelarna med att överväga framförallt klimatförändringar och hållbarhetsmålen tillsammans med Sendairamverket. Även i den här studien bekräftas att de som arbetar med katastrofriskreducering, klimatförändringar och hållbar utveckling i Sverige ser kopplingen mellan de globala ramverken som positiv och ömsesidigt förstärkande. Det finns dock en oro att katastrofriskreduceringen riskerar att försvinna i den bredare kontexten där klimat och utvecklingsmålen har högre politisk profil. En annan oro som respondenterna gav uttryck för är att utvecklingsagendan inte är tillräckligt integrerad i Sendairamverkets text, att det finns en avsaknad av strategiska kopplingar mellan texterna. Å andra sidan påpekar vissa respondenter att ramverkstexten är kort och att många aspekter av katastrofriskreducering berörs ytligt eller är exkluderad, men samtidigt återfinns en mer genomgripande diskussion om katastrofriskreducering i de andra ramverken. Sammanfattningsvis förefaller den politiska kraft som finns runt klimat och utvecklingsfrågor troligen kunna bidra till en bättre implementering av katastrofriskreducering.

I det fjärde kapitlet genomför vi analysen av styrningen av katastrofrisk. För att systematisera analysen av styrningen använder vi ett analysverktyg (GAF). Vi undersöker aktörerna, normutveckling, aktiviteter och problemområden. I rapporten gör vi en uppdelning av aktörerna i strategiska aktörer, relevanta aktörer och indirekta aktörer, d.v.s. hur centrala aktörerna är för att genomföra katastrofriskreducering på olika nivåer (internationellt, nationellt, läns- och kommunalnivå, samt individuell nivå). Uppdelningen baseras respondenternas svar på frågan om vilka aktörer de ser som viktigast för att genomföra katastrofriskreducering internationellt, nationellt, i län och kommuner samt på individuell nivå, samt hur viktiga de är för att nå Sveriges mål inom katastrofriskreducering. Respondenternas rangordning ger en bild av vilka aktörer som är synliga:

Strategiska aktörer: UNISDR; MSB; länsstyrelserna; Sveriges regering; statliga myndigheter i samverkanforum; EU och SIDA. Relevanta aktörer: övriga regionala och lokala aktörer från offentlig sektor; privatsektor; skolor; försvaret; media. Indirekta aktörer: fastighetsägare och individuella medborgare; internationell motsvarighet till respondentens organisation; civilsamhällesorganisationer; forskare och akademi. Vi undersökte även i vilken omfattning respondentens organisation samarbetar med andra aktörer och formen för samarbeten, samt hur viktiga är respondentens aktiviteter för att nå Sveriges mål inom katastrofriskreducering. I avsnitt 4.1 finns en detaljerad beskrivning av aktörerna.

I den del av styrningsanalysen där vi undersöker normutveckling försöker vi komma åt hur aktörerna karakteriserar spelreglerna (d v s normerna) för katastrofriskreducering. De normer som respondenterna förknippar med Sendairamverket är att samarbete och samverkan krävs för en effektiv styrning, man värdesätter också kunskap och information som vägledande för implementering av ramverket (se tabell 4). Vissa respondenter menar att Sendairamverkets principer och normer inte är ordentligt integrerade i det svenska systemet och att det behövs mer arbete för att genomföra en sådan integration.

Som en del av styrningsanalysen undersökte vi de aktiviteter som respondenterna upplevde viktigast för att lösa olika problem inom styrningen och externa faktorer. En central del av katastrofriskreducering inom Sendairamverket är internationellt samarbete och informationsutbyte. Sveriges deltagande i internationella och regionala samarbetsprojekt och forum framhålls som mycket viktigt. Vissa respondenter framhöll att Sverige skulle kunna ha en tydligare närvaro vid internationella forum. Kunskapshöjande är en annan viktig aspekt. Flera respondenter pekar på en kunskapslucka vad gäller katastrofriskreducering och Sendairamverket. För att öka kunskapen framhålls informationskampanjer som ett viktigt verktyg, t ex Krisberedskapsveckan som respondenterna tycker spela en stor roll i det sammanhanget. Respondenterna ansåg att den typen av aktiviteter bör fortsätta och eventuellt utvidgas. Tidigare katastrofer som har inträffat i Sverige framhålls som ett viktigt incitament för arbetet med katastrofriskreducering. Skogsbranden i Västmanland 2014 var ett exempel

som många respondenter tog upp som ett exempel på behovet av att förbättra beredskapen och en tydligare ansvarsfördelning.

I den sista delen av analysen undersökte vi centrala problemområden för styrningen. Vi bad vi respondenterna identifiera problem med styrningen av katastrofriskreducering. De sju problemområdena är:

- Otydlig struktur på samverkanforum
- Avsaknad av tydlig eller effektiv ansvarsfördelning
- Svårigheter att involvera nya aktörer och perspektiv
- Upplevd låg prioritering av DRR på nationell nivå
- Internationell-nationell uppdelning
- Låg förståelse och medvetande om DRR
- Kommunikation

I rapporten kopplar vi samman de problemen som respondenterna upplever som mest centrala med de rekommendationer som finns i Sendairamverket, dvs Sendairamverkets rekommendationer om styrning för att nå ländernas mål under ramverket. Som ett första steg för att komma till rätta med de upplevda styrningsproblemen är rekommendationerna en användbar utgångspunkt. Här gör vi vissa jämförelser med situationen i Kanada, Nederländerna och Norge (se kapitel 5). Vi har sammanfattat problem och rekommendationer i tabell fem.

I det avslutande kapitlet summerar vi rekommendationerna och riktar dem till olika aktörer, statliga myndigheter, departement och riksdag, samt bredare rekommendationer till alla aktörer som arbetar med katastrofriskreducering. De bygger på intervjuer och litteraturstudier, och tillhandahåller förståelse för hur implementeringen av katastrofriskreducering inom Sendai ramverket ska ske (se kapitel 6).

1. Introduction

Disaster risk reduction (DRR) is the concept and practice of reducing disaster risks through systematic efforts to analyze and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction. Governance of disaster risk reduction is shaped by the states participating in the United Nations International Strategy for Disaster Reduction (UNISDR). In 2015, a new global framework for Disaster Risk Reduction (DRR) was adopted at the Third UN World Conference in Japan. The Sendai framework will last for the next 15 years (2015-2030), and attracted a high level of political interest, which can be partly explained by a current converging dynamic between DRR, the Sustainable Development Goals and Climate Change issues. Together with Agenda 2030 and the sustainable development goals (SDGs), the Paris Agreement, and the Addis Ababa Action Agenda the Sendai Framework constitute a new framework for global development.

The Sendai Framework for Disaster Risk Reduction 2015–2030 replaces the previous Hyogo Framework for Disaster Risk Reduction 2005-2015. The new framework is broader, including seven global goals, four priorities and numerous suggested actions. It presents new challenges and opportunities for all levels and many sectors of society. The Sendai Framework is a 15-year, voluntary, non-binding agreement which recognizes that the state has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government and private sector actors. It aims for the following outcome: The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

According to Henstra and Thistlethwaite the Sendai Framework emphasizes the principles of risk management, and as such it requires the use of a range of policies that prepare for, mitigate, respond to and aid in the recovery from disasters (2017). "This expansion in objectives requires a shift in authority from governments to a plurality of stakeholders with more capacity and expertise in these policy areas." (Henstra and Thistlethwaite 2017: 1). For example, disaster mitigation requires cooperation between governments, land-use planners and developers to ensure property is constructed with measures capable of mitigating damage (Mees et al. 2016; Aven and Renn 2009). One of the priorities of the Sendai Framework is to develop the forms of governance, including more effective processes for governance, coordination and cooperation between private and public sectors. Sweden has agreed to implement the Sendai Framework. [Short on the role of MSB]

The aim of the report is to improve on the knowledge of how the Sendai Framework functions/works in practice. In addition, this study will contribute with a research-based analysis to support Sweden's work to implement the Sendai Framework, both nationally and internationally....The study focuses on the prerequisites needed to implement objectives of the framework into good governance.

The aim of this study is to increase the knowledge on the following areas:

- How the Sendai Framework connects to other global frameworks for sustainable development
- How the Sendai Framework functions
- How the Sendai Framework could contribute to develop national governance of disaster risk reduction.

To fulfil the aim, we conduct an analysis of the Sendai Framework from a governance perspective with emphasis on how Sweden addresses and follows up the results. We use the Governance Analytical Framework (GAF) as a point of departure to analyze central actors, norm development and decision-making processes. The data used in the study was collected through semi-structured interviews. The report is organized in the following way: Chapter two briefly introduces the Governance Analytical Framework and the methodological approach. Chapter three addresses the Sendai Framework in the context of the post-2015 global development agenda and broader implications for implementation of the Sendai Framework. In the fourth chapter we conduct an analysis of the governance of disaster risk reduction from a Swedish perspective. Here, we discuss actors, norms and decision-making processes, and identify some central governance problems. Chapter five goes through the recommendations of the Sendai Framework and analyzes the corresponding practices in Sweden. The sixth and final chapter summarizes recommendations for practitioners and policy-makers on implementation.

2. Methodology

The analysis draws on interviews with participants selected based on recommendations from MSB, organizations' communications departments and key persons identified by those already contacted. Six types of actors were reached out to: government/parliament, government agencies working with DRR related issues, civil society, research/academia, local level government and the private sector. In total, 65 individuals were contacted. Of these, 20 did not respond, 7 responded that they were unable to participate, 7 responded initially but did not respond when asked to set up a time for an interview and 31 people were interviewed. The breakdown can be seen in Table 1.

Table 1: Interview participants

Type of actor	Total number contacted	No response	Not able or no time scheduled	Interviews held
Government, parliament	11	5	6	0
Government agency	25	4	1	20
Civil society	15	6	5	4
Research, academia	5	2	0	3
Local level government	4	0	2	2
Private sector	5	3	0	2
Total	65	20	14	31

A set of core questions were asked to all interviewees, and then a second set of questions were asked depending on what type of actor they were. The interviews were semi-structured, lasting on average 30-50 minutes and conducted in person or by phone. The interviews were recorded, transcribed and analyzed through the GAF. All quotes from the interviews are attributed to an individual code for each interviewee based on actor type as well as a number: GA for government agency, CS for civil society, RA for research/academia, LL for local level, PS for private sector.

The Governance Analytical Framework (GAF) identifies governance as follows: "the processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions" (Hufty 2011, p.405). The GAF identifies actors, norms, nodal points and governance processes that are involved in specific governance problems. In this case, seven primary problems were identified. Issues were identified by interviewees during interviews and were then reconstructed as these seven main problems.

3. The Sendai Framework in the global development agenda

3.1 What is the post-2015 development agenda?

The global post-2015 development agenda comprises four main separate agreements, all of which are interlinked and whose implementation is necessary to ensure effective global disaster risk reduction (DRR). These are the Sendai Framework, the Paris Conference of the UN Framework Convention of Climate Change (UNFCCC), the Agenda 2030 Sustainable Development Goals (SDGs) and the Addis Ababa Action Agenda on Financing for Development (AAAA). As early as in the 1994 world conference on natural disaster reduction in Yokohama, some reference to the need for linking sustainable development and environmental protection with disaster reduction was made (Yokohama Strategy and Plan of Action 1994). By the time of the Sendai conference, this link had strengthened considerably. "The Sendai Framework is integral to upcoming major processes to mitigate and adapt to climate change and to agree to a new set of sustainable development goals" (Wahlström 2015, 201). DRR implementation requires implementation of the other global frameworks and vice versa.

This is most obvious when considering the link between the SDGs, the Paris Agreement and the Sendai Framework. Briceño (2015) recommends that governments must begin implementation of DRR, climate change adaptation (CCA) and sustainable development "by putting in place risk management strategies in order to undertake and ensure effective adaptation and mitigation policies. Unattended risk will make the objectives of the CC agreement and the SDG more difficult and expensive to achieve" (p.202-203). The UNISDR (2015a) has recommended a three-pronged strategy for implementing the frameworks coherently: "Establish political recognition for coherence and mutual reinforcement in international agreements" (p.1) through explicit references to all three frameworks in policies; "Link mechanisms for monitoring and reporting of linked goals and indicators" (p.2) through harmonization of national reporting systems to each of the three frameworks; and "Promote cooperation in implementation" (p.2) through building partnerships on different levels that support each of the frameworks.

UNISDR has also published detailed explanations of the linkages between each of the SDGs relating to DRR, as well as targets of the Sendai Framework that relate to the SDGs and how different levels of governance can be involved in ensuring their mutual implementation (UNISDR 2015a and 2015b). Many other sources similarly highlight the benefits of considering the SDGs alongside the Sendai Framework (for example MSB 2016; Carabine 2015; Kelman 2015). The AAAA also references the Sendai Framework: "We will develop and implement holistic disaster risk management at all levels in line with the

Sendai Framework. In this regard, we will support national and local capacity for prevention, adaptation and mitigation of external shocks and risk management” (Addis Ababa Action Agenda 2015, p.17). Frameworks and policies besides the four already mentioned are also relevant (United Nations 2017, 8).

3.2 Drawbacks of the post-2015 development agenda for the Sendai Framework implementation

The Sendai Framework is, according to some, not given as much importance in international and national strategies as Agenda 2030 and the Paris Agreement, while the AAAA is often ignored when academics discuss the post-2015 development agenda (Aitsi-Selmi et al. 2016; Aitsi-Selmi and Murray 2015; Guadagno 2016; Kelman 2015). This leads to a worry that DRR could disappear within the broader context of CCA and sustainable development work (GA5). Indeed, in the interviews, many interviewees (such as GA6, GA9, GA15, GA16, LL1) discuss CCA and DRR interchangeably, sometimes despite repeated attempts to steer the conversation back towards DRR. In other cases, interviewees clearly state that they will be discussing CCA rather than DRR for a particular question (GA5, RA2). Despite this, as shown in Table 2, a count of how many times interviewees mention CCA (or COP 21 or the Paris Agreement), sustainable development (or Agenda 2030 or sustainability goals) and DRR (or the Sendai Framework) reveals that on average, all interviewees say the words ‘disaster risk reduction’ and related phrases much more often than ‘climate change adaptation’ or ‘sustainable development’ and related. Out of all references to the three concepts, those working for government agencies on average make more than 3/4 of their direct references to DRR. This suggests that DRR is not being lost or confused with other, related work.

On the other hand, another issue that is brought up is the worry that the post-2015 development agenda is not integrated strongly enough in the framework texts:

RA1: “What could be a major issue in my eye is that what is missing is a strategic connection to the other post 2015 development frameworks”

The main way that the conferences on sustainable development and CCA are discussed in the text of the Sendai Framework (2015) is through lessons learned from Hyogo, rather than as part of implementation measures:

“It is recalled that the outcome document of the United Nations Conference on Sustainable Development, held in 2012, entitled “The future we want”, called for disaster risk reduction and the building of resilience to disasters to be addressed with a renewed sense of urgency in the context of sustainable development and poverty eradication and, as appropriate, to be integrated at all levels. The Conference also reaffirmed all the principles of the Rio Declaration on Environment and Development”; and

“Addressing climate change as one of the drivers of disaster risk, while respecting the mandate of the United Nations Framework Convention on Climate Change, represents an opportunity to reduce disaster risk in a meaningful and coherent manner throughout the interrelated intergovernmental processes” (p.11)

However, the UNISDR has elsewhere provided documentation as to how to integrate the three processes more concretely (see 3.1).

Table 2: Count of CCA, sustainable development and DRR mentions

	Climate change adaptation	Sustainable development	Disaster risk reduction
Count: Non-government agency	31	16	96
Share: Non-government agency	22%	11%	67%
Count: Government agency	78	15	304
Share: Government agency	20%	4%	77%
Count: All interviewees	109	31	400
Share: All interviewees	20%	6%	74%

3.3 Benefits of the post-2015 development agenda for Sendai implementation

This report will not detail the specific links between the different post-2015 development frameworks, but advises that the material by UNISDR, where these links are detailed, be consulted in order to help practitioners most effectively use aspects of the Paris Agreement, Agenda 2030 and the Sendai Framework together. The interviews show that those working with DRR, CCA and sustainable development in Sweden see the connection of these three frameworks as positive:

GA10: “So I do not see investments earmarked only for DRR, DRR is to always be working on the resilient society.”

RA2: [about considering the three frameworks in unison] “it is about complex systems, and different issues of these complex systems must of course be dissected to handle. But you cannot separate them without first understanding the connections and the entirety of it.”

Other development frameworks are not mentioned in the interviews. Aside from the fact that much of the content within the different frameworks are interrelated (and therefore, implementing measures from one framework will often automatically contribute to implementing measures of another), two additional factors explain why it is important for the implementation of the Sendai Framework to consider it within the post-2015 development agenda context.

Firstly, the Sendai Framework is concise at 37 pages long, meaning that several aspects of DRR are touched on only briefly or, in some cases, excluded. However, these aspects are often discussed more thoroughly in the other frameworks, meaning that a more all-encompassing DRR can be achieved. One example of this is conflict. Conflict is not mentioned in the Sendai Framework, something that certain interviewees express concern about (RA1, CS2). However, conflict can arise because of natural disasters and the resource shortages they can lead to, and some believe that addressing conflict directly should have been done in the Sendai Framework as the predecessor, the Hyogo Framework of Action (HFA), was criticized for excluding it also (Oxley 2015). The broad definition of disaster (see 4.4.6 and 5.1.4) used in the framework does not exclude conflict-related disasters, even though conflict-specific measures are not given in the text. Agenda 2030 does discuss conflict directly, for example by saying that special attention should be paid to conflict-ridden countries, the statement that “We must redouble our efforts to resolve or prevent conflict and to support post-conflict countries, including through ensuring that women have a role in peacebuilding and State-building” (Agenda 2030, p.9) and that the 16th goal includes the call for peace.

Secondly, as discussed earlier in this report, many interviewees are concerned about the low political mobilization around DRR in Sweden and scholars have found this to be a near universal issue (Olu et al. 2016; Thepot et al. 2016). The political mobilization around CCA and sustainable development, on the other hand, is considered higher (GA2). Table 3 shows that on the Swedish government website, regeringen.se, a search for the word ‘Sendai’ gives 40 matches, a search for “Agenda 2030” gives 509 matches and a search for “Paris avtalet” gives 26 matches¹, suggesting that the agreement on sustainable development is much higher on the political agenda than the agreements on CCA or DRR, despite all three coming into being in 2015.

GA10: “it should be both within the Government Offices that you work together on the questions and give the government agencies different assignments in line with the Sendai Framework and keep it together, and that the general directors have some kind of steering group for the work. I think that would be successful. And that can be coordinated with the climate work and Agenda 2030 work, I think that would only be a benefit”

¹ Documents are included in the search. Only results where the exact phrases are seen are returned, as double quotation marks are used in the search bar. The results are presumably repeated under the different searches (for example, ‘Sendai’ and ‘katastrofriskreducering’ will have many of the same articles and documents).

Table 3: Search results for phrases on regeringen.se

Exact phrase	Number of search results
Sendai	40
katastrofriskreducering	48
Agenda 2030	509
hållbar utveckling	3163
globala utvecklingsmål	73
Paris avtalet	26
COP 21	45
klimateanpassning	331

Ultimately, as expressed by GA14, there is a stronger political will towards DRR issues when they are in relation to CCA. GA14 therefore believes that by strengthening the connection between DRR and CCA, governance of DRR at the national level will be improved. It is likely that the political momentum around CCA (as expressed in interviews) and sustainable development (as suggested on the government website) will help foster stronger implementation of measures that also relate to DRR if these connections are made concretely in workshops, plans and strategies on the local and national level. For more information about research on how DRR and sustainable development can be co-implemented, the Stockholm Environment Institute's initiative on Transforming Development and Disaster Risk is a useful source for global information².

² www.sei-international.org/transforming-development-and-disaster-risk

4. Analysis of disaster risk governance

This section will use the Governance Analytical Framework (GAF) (Hufty 2011) to organize and interpret governance issues in Swedish disaster risk reduction (DRR) work that show where the recommendations of the Sendai Framework could be used to make improvements. One of the four priorities for action in the Sendai Framework is 'strengthening disaster risk governance to manage disaster risk':

"Clear vision, plans, competence, guidance and coordination within and across sectors, as well as participation of relevant stakeholders, are needed. Strengthening disaster risk governance for prevention, mitigation, preparedness, response, recovery and rehabilitation is therefore necessary and fosters collaboration and partnership across mechanisms and institutions" (The Sendai Framework 2015, p.17).

The GAF was chosen as a tool for analysis because it describes and analyses governance problems. The framework was studied through Hufty (2011) and other texts (Anzaldo Montoya and Chauvet 2016; Báscolo 2008). Additionally, remaining questions as to its application were asked to Dr. Hufty, who generously offered advice. For another approach to analyzing governance in the Sendai Framework, see Munene et al. (2016).

4.1 Actors

The GAF requires analyzing all actors (formal and informal) and categorizing main actors into three categories. Strategic actors are those that have the power and resources to impact norms and meta-norms. Relevant actors are those that "form part of the institutional fabric and have the necessary resources to be considered as strategic, but who do not use these resources or are dominated by others in the process" (Hufty 2011, p.412). Secondary actors "do not have sufficient power to change the rules of the game, or remain passive" (Hufty 2011, p.412). 27 of the 31 interviewees were asked directly what actors they thought were important to DRR work (generally or to their specific areas within DRR) on the global, regional, national, sub-national and individual level. What follows is a description of the strategic, relevant and secondary actors. For each actor, a number is given out of 27, to show how many interviewees identified that actor as important.

4.1.1 Strategic actors

Swedish Civil Contingencies Agency (MSB) (12/27)

MSB is the main strategic actor involved in most types of DRR activities, both directly and indirectly, including funding activities (MSB 2010). Interviewees highlight them as one of, if not the, only actor that can decide what aspects and actors in Swedish DRR work that are considered important. Interviewees consider MSB to be important to both the national and international DRR work. Moreover, MSB has substantial economic, human, social and symbolic³ capital. The interviewees from MSB all stated that MSB had enough resources to perform their DRR tasks, while some of the other respondents expressed that DRR issues are not delegated enough resources. This ambiguity reflects a perception that the resources needed for all DRR work are not allocated towards these ends, even if they could be, given the current amount of resources available to the agency overall.

The majority of actors interviewed speak positively about MSB. Some highlight that MSB is a cooperative actor, for example by being part of the board of the Centre for National Disasters, which includes different universities and other actors (RA1). MSB is still interested in considering new partnerships surrounding DRR issues, for example with private sector actors, but highlight that it is not in their mandate to do so, meaning that a culture shift would be necessary to facilitate it (GA11).

The Swedish government (9/27)

Although some interviewees question the political will at the ministry level (see 4.4.4), when agencies take the initiative and ask to be given a task in their key area of DRR, the government is likely to include this task in the agency's instruction.

GA11: "I don't know what you call our appointment with Sendai. I think it is bottom up, but I don't think that's very good to say that because the government should know about that and tell us how to coordinate. But in fact, since we have so much contact with UNISDR, it is more bottom up that we at the agency are asking the ministry to give us an order to cooperate."

It is clear to some actors that Sendai is not a high priority on par with Agenda 2030 or COP 21 (GA2, GA14).

Länsstyrelsen (10/27)

Länsstyrelserna, Swedish regional governmental agencies, are considered the most important actors on the sub-national level by most interviewees. They are involved with different levels and types of DRR work that touches on cultural preservation, economic interests, and local coordination (GA1, PS1, LL1, LL2). RA2 expressed that Länsstyrelsen could potentially help solve existing collective action problems on the local level that since they are responsible for sub-national coordination — e.g. when one geographic area is able to put in preventative measures that impact several other areas, who should not be

³ Symbolic capital refers to "the prestige an actor enjoys" (Hufty 2011, p.411).

expected to pay for the measures.. LL1 was critical of Länsstyrelsen when interviewed, saying that it does not shoulder the responsibility it ought to; GA10 believes there are not enough people working at länsstyrelserna to do what they need to. However, LL2 was instead critical of national level government for not giving real guidelines for Länsstyrelsen and local level public sector actors to follow.

Sida (5/27)

Sida finances much of the international DRR work. There is a large scale internal organizational shift at Sida discussed by interviewees, which affects where DRR issues will be discussed (long term development versus humanitarian). Just as with MSB, interviewees from Sida expressed that the agency has enough resources but some expressed that they would need more resources earmarked for DRR to achieve all they would want to. Although DRR is mentioned in the internal strategies at Sida (GA18), it is questionable how much the Sendai Framework impacts Sida's work:

GA9: "In my opinion, it [the Sendai Framework] has not come through enough. And it is evident as well that the Sendai Framework does not get referenced often when we write papers at Sida."

According to GA10, Sida could be more important in the future: "Sida has no role nationally, but for future reporting, we will have to report also what the country has done for other countries and their work [...] so Sida will become more important in the reporting."

Government agencies in the coordination forums (7/27)⁴

The national level DRR work is currently organized through an already existing network of coordination forums within the Swedish system for civil contingency management. Most of the actors included in these forums are government agencies, however each of the six forums includes at least one other actor (MSB 2009). The interviewees repeatedly bring up the importance of having their general director represented in these coordination forums in order to have any real decision-making power in relation to DRR (GA6, GA10).

GA13: "For our agency, in my experience the biggest difference is that we do not belong to any coordination forum, we are not participants in that. So what we lose out on from not having the arrangement we had in the past is that our GD [general director] cannot at all be engaged in these issues, since those GD meetings that are held on the level of the coordination forums, we have no connection to those anymore unfortunately. Before, our GD was engaged in the steering group for the national platform, and we had that natural connection there."

⁴ 8/27 interviewees mentioned (or listed) government agencies working with DRR issues; 7 of these interviewees mentioned specific agencies within the coordination forums (not including Sida or MSB), while 3 of them mentioned specific agencies that were in the previous national platform but have no official role in the coordination forums.

However, GA5 is from an agency that is represented expressed that DRR is not a priority for the agency “because we have so many other things we do here”. GA8 who is also from an agency that is represented states that they do not prioritize funding DRR activities enough in their agency.

UNISDR and the UN bodies that have signed on to the Sendai Framework (14/27)

UNISDR and UN Development Programme (UNDP), as well as several other UN bodies were recognized by about half of the interviewees. GA10 states that 26 other UN organizations have signed on to implement the Sendai Framework, showing a clear commitment to DRR on the global level from the UN institutions. Their impact on Swedish DRR work is multifold, including guiding cooperation for international and information-sharing projects.

For the region of Europe, the European Forum for Disaster Risk Reduction (EFDRR) is the regional DRR actor. EFDRR is a voluntary forum supported by the UNISDR. In response to the Sendai Framework, the EFDRR both produced a roadmap guiding “Europe’s implementation of the four priorities of action and seven global targets of the Sendai Framework” (EFDRR 2015, p.1) and requested the UNISDR to conduct a baseline survey report of the national focal points to establish the current level of implementation of DRR in Europe (UNISDR 2017). For more information about DRR on the European level, the EUR-OPA Major Hazards Group review of risk governance in Europe as of 2011 is a useful resource (EUR-OPA 2011).

The EU (5/27)

For the region of Europe, the EU is important because they write legislation that impacts national legislation on DRR in Sweden and other member countries. For example, the EU floods directive from 2007 (European Commission 2016) guides member-states on how to reduce flood risks as well as prepare for floods. Several interviewees discuss this directive (GA10, RA2). Although not mentioned in the interviews, there are several directives with relevance for DRR and a broader set of disaster risks, e.g. the Seveso Directive covering major accidents involving dangerous chemicals.

4.1.2 Relevant actors

Relevant private sector representatives (8/27)

Even though some private sector representatives, such as Länsförsäkringar, are actively engaged with issues of DRR, it is clear from the interviews that private sector stakeholders do not consider themselves central to DRR work in Sweden, and there is a mixed message as to whether they want and are able to do more. Both PS1 and PS2 stated that their organization had enough resources to deal with DRR issues that relate to their work, but that companies in general in Sweden have other social priorities that trump DRR. PS2 stated that they have particularly worked with climate related risks in cooperation with government agencies, but ultimately the private sector is only as engaged in DRR as the public sector is organized and transparent: “if you have not decided on risk

levels in a good way — a reasonable way, that ensures that you can adhere to it politically — then it will not be possible for those who make decisions within businesses to do as good of a job as they would need to from a risk reduction perspective.”

Other regional and local public sector actors (besides Länsstyrelsen) (21/27)

By far the most mentioned actor, when asked what actors are important for DRR work, is local government or local public sector actors. Regional actors, such as city planning offices, have significant impact on DRR, especially in terms of preparedness and education. Municipalities in particular are often referred to as integral to DRR (GA1, GA7, GA9, GA10, PS1, CS3).

GA3: “there isn’t actually any responsibility [sub-nationally] other than for municipalities you could say, when it comes to both planning and emergency services.”

However, interviewees give no evidence to suggest that regional and local actors have the power to impact norms or national dialogue; rather, the local level executes the activities decided at the national level. Both LL1 and LL2 stated that they did not have the resources needed to do what they want to with DRR issues in their region, and moreover that income inequalities between different municipalities are worrisome.

Schools (5/27)

More interviewees state that schools are more important actors for DRR than research centers and universities. GA10 and CS4 both express that schools are important because they impact societal development through increasing the knowledge base of the country as a whole— in other words, schools are seen as impacting the norms of society in a powerful way.

Media (0/27)

Although most actors do not discuss media (those who talk about media still do not mention it as an actor that impacts DRR work), the lack of political will around any issue can be traced partially to the media attention it garners. For example, McCombs and Shaw (1972) produced an influential study on agenda setting theory, which showed that the issues on the media agenda were more likely to be considered by citizens as important national problems, the results of which have been seen in different contexts in subsequent studies. GA9 and PS1 discuss how media helps improve knowledge of risks. CS2 questions whether media is successful at making DRR understandable to the general public. Regardless of how invested they are in DRR issues currently, the media are a powerful actor in setting the national agenda.

Military (1/27)

The military is only mentioned as an important DRR actor by one interviewee. However, a few interviewees discuss the military’s role in DRR generally. Some are critical to the over-reliance on militarized solutions internationally (CS1) while others talk about how the military has the capacity to help in different ways if a disaster is to occur in Sweden (RA2).

4.1.3 Secondary actors

Researchers and academia (3/27)

Only three interviewees remember universities, research centers or academia in general when asked about important actors— one researcher and two government agency representatives. Research and information sharing are vital aspects of adhering to the Sendai Framework. Researchers into DRR are particularly adept at utilizing, and creating, international and regional networks of researchers, as well as other DRR actors. For example, to collect data for research into a framework for joint modelling of hydro-meteorological hazards (Breinl et al. 2015), they had to form relationships with the local fire service, insurance companies for the geographical area and the Austrian weather service. While researchers feel supported by MSB and other financiers of DRR research (RA1), there is a worry from researchers that the flow of information to other actors with decision making power is not what it should be. This is linked to a concern that research does not reach practitioners.

RA1: “I would like to see societal improvements based on my work. That is difficult sometimes because you do research and you try to relate it to the society by closely collaborating with stakeholders and practice, but it is still not always possible to see a direct societal impact thereafter.”

RA3: “But more support, more money towards research but also good pilot projects that don’t simply get boiled down into scientific articles [are necessary], because often that does not reach community planners, city planners or those within the water sector, who actually do the implementation.”

Civil society organizations (CSOs) (6/27)

It is clear from interviews that those CSOs that already engage in DRR issues are committed, passionate stakeholders. The civil society lacks, apart from financial resources, the necessary knowledge base to be more actively engaged in DRR issues, though if this lack of knowledge could be resolved, CSOs have the potential to provide necessary perspectives: “I think our knowledge about this is too poor. The resource we are missing is knowledge ... We have in some ways an easier time driving forth politics, we make issues political, we put pressure on political representatives” (CS3). This view is shared by GA9: “in some ways, it may be that the civil society has almost become better at this than the government organizations, because they have greater flexibility, I would say, than government agencies do.”

However, the CSOs that are working with DRR internationally (rather than working with domestic issues) are considered valuable partners in providing support to countries that face significant disaster risks (CS4). One reason why internationally active CSOs may be more educated and invested in DRR could

be that the Sendai Framework is referred to in the 'Policy framework for Swedish development cooperation and humanitarian assistance'⁵ (CS2).

Property owners and individual citizens in general (10/27)

A concern brought up by different types of actors in the interviews is that a large burden of responsibility in preparedness and repair falls on the individual property owners, but that citizens are unaware of their own responsibility and believe that the state or municipality will take actions (GA13, LL2, RA2). Moreover, the majority of interviewees from government agencies cannot think of projects and collaborations they have with the purpose of including, informing and being informed by indigenous groups, people with disabilities, women or youth groups. According to GA9, the inclusion of these groups has gotten worse with time: "we say that it will be mainstreamed, but in reality, it disappears completely then."

International counterparts to the interviewee's own organization (7/27)

When asked about important actors, many interviewees talk about regional or international networks of government agencies (GA9, GA11, GA12), of cities (such as the Making Cities Resilient network) (GA10, GA11, LL2, CS2) and of researchers (RA1). These are considered vital for sharing of information and best practices, even if they do not independently shape norms.

4.2 Norms

The concept of norms used in the GAF is one of how normatively prescribed behavior by actors come to be, what these accepted and expected behaviors are and what they imply for the governance process.

4.2.1 Constitutive norms

Constitutive norms are "the organizational or institutional mechanisms related to the operations of the issue under analysis" (Hufty 2011, p.410). For government agencies, they include the various laws that guide DRR work, such as the 'Plan och bygglag' (Planning and building law), writing Risk and Vulnerability Assessments and the instructions from the government on what DRR tasks the agency is expected to perform. However, there is some degree of worry that the constitutive norms for agencies are not strong enough.

GA10: "I don't really know what policies we have in Sweden right now, so how could we follow up that they are being followed? We have signed the Sendai Framework, it was UD [the ministry of foreign affairs] that negotiated, but no one that worked with the issues at UD are still there. So the issues are not being actively engaged with by UD, and actually they didn't do that during negotiations either."

⁵www.government.se/49a184/contentassets/43972c7f81c34d51a82e6a7502860895/skr-60-engelsk-version_web.pdf

No other actor has clearly mandated, formal constitutive norms to follow, at least not as far as the interviews revealed.

4.2.2 Regulatory norms

Regulatory norms are more informal and “specify what is appropriate or inappropriate in terms of behavior” (Hufty 2011, p.410). When asked about the values, unwritten rules, morals or similar attributes of DRR in Sweden, several key words were used as seen in Table 4. When interviewees were uncertain, the word cooperation was given as an example. However, the word cooperation is brought up independently by all types of actors, in reference to different types of cooperative relationships needed. It is encouraging that actors in Sweden are invested in working together on DRR, and that openness to new partnerships is on the list of norms; in the Sendai Framework, one of the guiding principles of the framework is that “Disaster risk reduction requires an all-of-society engagement and partnership” (Sendai Framework 2015, p.13). An example of this partnership is the research center CNDS, the Centre for Natural Disaster Science, which received support from the government and different authorities from day one (CNDS 2014).

Table 4: Most prevalent words to describe DRR norms in interviews

	Government agency rep.	Other	All
cooperation	7	4	11
long term perspective	3	2	5
knowledge	1	3	4
plans/planning	4		4
coordination	3		3
open to new partnerships	2	1	3
proactive	2	1	3
sustainability	3		3
determination/persistence	1	1	2
information	2		2
need for political will	2		2
prevention	2		2
responsibility	1	1	2
universal tools/methods/standards		2	2

Researchers in the field explain the necessity and prevalence of including different scientific disciplines in the work, rather than working separately and not learning from each other. RA1 explained, using the example of growing heat waves in Sweden (and the risk of malaria therefore spreading here and resistance to anti-malaria medication) to highlight that “there is no sense in panicking, but these are risks that we need to understand so we need to invest

into future scenarios, and ... put together different disciplines in social and natural science in a more integrative way to really understand what is going to happen and how we can deal with it". This awareness of the need to think outside of natural science disciplines is seen also by GA8: "during a disaster, you have to know how people think, it is not just about technology." Interdisciplinary research is one example of DRR-cooperation.

After cooperation, the second most prevalent norm identified is the need for a long term perspective. As GA9 puts it, "this is a question you have to work long term with, when the disaster happens it is too late."

Coordination is another important norm in DRR work. However, there are mixed messages about how well coordination of DRR issues is conducted. For example, GA10 discusses how "there is not enough coordination between those working to support DRR issues in other countries and those working with the issues domestically. It could be better, we tried to work with it quite a lot in the past, but it has been difficult for some reason."

Overall, the norms are aligned with what the Sendai Framework requires for effective governance: cooperation and coordination, a proactive approach, and a high value placed on knowledge and information guiding its implementation. However, the Sendai Framework may not be ingrained in the Swedish DRR system enough for the UNISDR norms to be as influential as they maybe should be:

GA11: "Sendai has to come into our processes, it has to come into our steering documents and things like that. It has to come into the talk at the ministry level. It is not really there, people aren't talking about it at the ministry level yet, it has to be integrated in lots of places and integrated into the work of the private sector and NGOs."

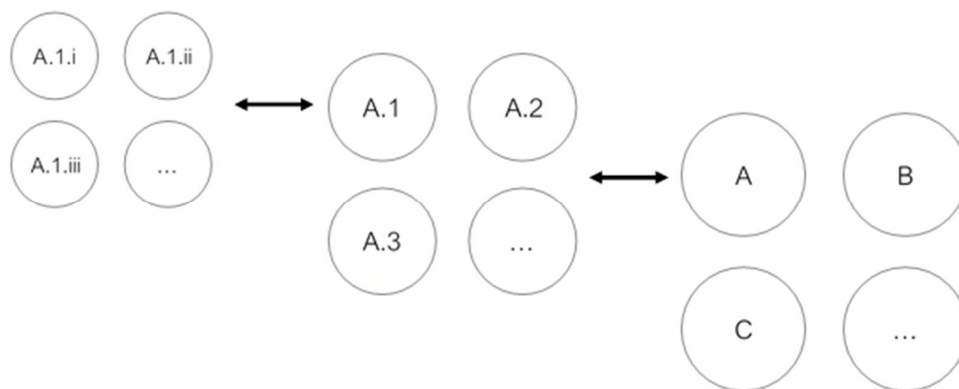
RA3: "Different businesses, different offices have their own core issues and policies and action plans and strategies, and many issues cross over into different categories. You have to work much more with integration."

4.3 Nodal points and processes

Many interviewees bring up that it is an interesting and challenging time for DRR in Sweden and the world: during the interviews, many of those participating were going to attend the Cancun Global Platform meeting; President Trump pulled out of the Paris agreement; the terror attack in Stockholm put terrorism into (and other risks out of) the spotlight in some people's opinion. These and many more outside factors impact the discussions and contribute to the meeting points of Swedish DRR workers. Nodal points are "physical or virtual spaces where various problems, actors, and processes converge, and where decisions are taken, agreements concluded, and social norms created" (Hufty 2011, p.413). Different nodal points interact with one another, and actors are impacted by norms and decisions made in other nodal points. Over time, as actors interact in the nodal points, this forms nodal chains that facilitate decision-making, and leads to governance processes within DRR.

As an example of how to visualize nodal chains, consider the nodal chain in Figure 1, adapted from the figure and example given by Hufty (2011, p.415), as representing the chain that leads to the coordination forum of transportation. The final nodal point in this chain includes actors A, B, C and so on, representing Trafikverket, MSB, local governments and so on. These actors meet and create norms on the national level for the prevention and preparedness of risks impacting transportation. However, Trafikverket has, in the middle nodal point in Figure 1, met and discussed their specific interest areas, where departments within the agency (A.1, A.2, A.3 and so on) have developed norms and made decisions internally such as a climate change adaptation strategy. And within each of these departments, actors (A.1.i, A.1.ii, A.1.iii and so on) have met, for example those working in the investment department have met and decided on new projects to prioritize. Each of the actors A, B, C and so on have met previously, and continue to meet after, interacting within the coordination forum.

Figure 1: A nodal chain with three nodal points



What this example has highlighted are that different nodal points interact, and therefore a broader context of decision-making, norm setting and cooperation must be considered when highlighting the governance process on the national level through the coordination forums.

4.3.1 Swedish participation regionally and internationally

An important part of DRR under the Sendai Framework is international cooperation and information sharing. Meetings of the global platform, EFDRR, the Making Cities Resilient campaign and various research projects are among the most important for Swedish participation regionally and internationally. Sweden is present in these nodal points, but some actors feel that they would enjoy more frequent or more in depth participation with their counterparts in other countries, particularly other EU countries (GA12). Others feel that Swedish representation at for example the global platform meeting in Cancun was underwhelming: “even though many people were present and we give a lot of money, we had a surprisingly low profile during the meeting” (GA20). Sweden could benefit from being a stronger presence in global conferences.

something that some actors feel is under-prioritized today (GA18, GA19, GA20).

4.3.2 Campaigns and events for spreading awareness

Because of the importance of increasing knowledge surrounding DRR issues in Sweden (see 4.4.5 and 4.4.6), awareness campaigns and similar events are important nodal points. This is often in the form of MSB informing other agency actors on how to implement DRR into their agencies (GA11), research centers developing educational programs for children and youth (RA2) or events such as the Crisis Preparedness Week (Krisberedskapsveckan) where different types of actors help citizens to learn how to prepare for and handle a crisis (GA2, LL1, LL2). As there is still a knowledge gap as experienced by many interviewees, these types of educational activities are vital to continue and, perhaps, expand. As GA11 explains, the more MSB has educated other actors about the Sendai Framework, the more actors have begun to ask for information, showing the dynamic nature of these education campaigns.

4.3.3 Disaster events

Many interviewees bring up concrete examples of past disaster events in Sweden as extremely influential in producing incentive to work with DRR issues. In particular, the forest fire in Västmanland is considered to be a learning example of the need to be better prepared and the need for more clear responsibility delegation (GA1, GA3, GA5, GA12, PS1). For actors that work internationally, global disaster events are influential for future work (GA9, RA3). Disasters are therefore clear nodal points that impact norms and decision making. However, since Sweden has little experience with grave disasters, this can lead to complacency (see 4.4.6).

4.4 Governance problems

4.4.1 Unclear structure of the coordination forums

When interviewees, both involved in the coordination forums and not, discuss their opinions on the national coordination of DRR, some express that they are 'concerned' (GA5, GA6, GA12), 'disappointed' (GA8) or unsure of what it entails (GA1, GA3, GA12). The Sendai Framework recommends national and local platforms for DRR, but only requires that relevant actors coordinate in coordination forums (Sendai Framework 2015, p.17). Three main issues about working in the coordination forums are brought up in the interviews. Firstly, interviewees whose general directors are no longer involved in the coordination forums feel let down as they feel that they no longer have any decision-making power in the network of government agencies (GA6, GA12, GA13).

Secondly, some consider that these forums have too much to work with already and do not have the capacity or time to give to DRR. GA2 explains that MSB

intend for the Sendai Framework to meld into the work already being done in the coordination forums, but GA3 believes this may not be entirely possible.

GA8: "I mostly know about the coordination forum for transportation, and I know that there the opinion was that all that [DRR related work] is something MSB has to do themselves, we don't want it as our responsibility. We have enough to do anyway."

GA10: "it [DRR] is too small a part of the large agenda they are expected to have... those agencies and actors that really have the resources and ability to steer the preventative work are not in the coordination forums."

Despite these criticisms of the coordination forums, GA11 states that "when the year is out, everybody will understand the new way of working and they will have their vulnerabilities and measures to be taken pretty much assigned and can begin working on those". In other words, the confusion surrounding how to work with the Sendai Framework and DRR through the coordination forums could be a temporary issue and not a central problem. Indeed, CS1 believes that there is an over-emphasis on administrative issues surrounding DRR, when the actual issue is a political one about power structures.

4.4.2 Lack of clear or efficient responsibility delegation

Related to the confusion some interviewees express regarding the coordination forums, there is a repeated theme in the interviews of unclear responsibility on local and national level.

RA2: "that is what I saw in a study I did, that those actors who are on the ground and making plans on the [sub-national] regional level, they seem to not always be aware of their formal role, but rather some almost think they have the right to decide on flood risk measures on the local level. So a clarity and more consciousness of responsibility and mandate and roles, that is what I consider to be needed for this to work."

However, the interviews suggest that it is often not that actors are uncertain of who has responsibility, but rather that the system of responsibility delegation in place may not be as efficient as it could be.

An example of this is that GA4 describes how their agency is not able to write laws for their area of DRR because they only have a mandate to give advice, but that they advise the agency where GA3 works because that agency does have the mandate to make decisions; however, GA3 has expressed that "we do not work directly or indirectly with these [DRR] issues, I would say. We probably lie quite far out on the periphery there. We are not operative in that way".

What this example shows is that actors invested in DRR issues are not always the ones with mandate to make decisions, and that the actors who do have that mandate may be unaware of it or prioritize DRR issues very low regardless.

GA2 states that MSB has an important task in ensuring that others take on their responsibilities. What the interviews (in particular those with GA3, GA4, GA6) show is that government agencies need certain changes to be made.

Firstly, actors do not at this point know what their responsibilities are, therefore a clear communication about who is expected (or required) to do what should be a priority. Secondly, those actors that have responsibility to coordinate the work in their particular area of DRR want this responsibility matched by a specifically assigned budget.

The inefficient or unclear delegation of responsibility may have evolved into a culture in the Swedish context, causing actors to do less than they may have done if responsibility was more strictly assigned. As GA12 states, “I think we have a tendency to look too much to each other when something happens” and “it probably builds very much on voluntary, optional measures, and maybe that is a good thing but it also means there is a risk of losing certain actors”. As stated, the coordination forums are new for DRR and the issues of responsibility may clear up with time.

However, if actors remain uncertain of what responsibility they, and other actors, have in 2018, it may be necessary to make significant adjustments or find a new structure.

4.4.3 Difficulty involving new actors and perspectives

Despite calls to the importance of involving new actors and perspectives (GA2, GA8, GA11), this is something that remains a struggle. It is clear from interviews with those working for government agencies that there is a difficulty considering untraditional DRR actors as partners (GA3, GA6, GA7, GA9, GA10).

GA11: “it hasn’t been discussed really, what is the right way to get the other actors in so that they stay in and so they don’t interfere with the regular work that we are doing. Because the regular work is commissioned by law. Working with other actors in DRR is not required by law.”

GA13: “It may become more difficult to get things done, but it gives the opportunity to bring up new issues that you may normally not have thought of. But of course, there is a limit to how big it [the network of DRR workers] can become, how many different influences can be included before it becomes too difficult to get things done.”

This is not a new issue to the coordination forums, but a reluctance to actively embrace a broader cooperation is still seen. Part of the reason for this reluctance is that actors are concerned that making too many stakeholders part of the DRR work would make it hard to reach consensus (GA8, GA10, GA13). For CS1, it is also an issue that when CSOs are included in the work, they are “controlled in every detail” from the agencies providing finance, leading to an inability to be flexible (despite flexibility, as discussed in 4.1.3, being one of the main benefits of civil society participation). RA3 believes that MSB or another agency should have a responsibility to create a new forum where all different types of actors, including government agencies, that should be involved in DRR work are brought together in order to a) increase awareness, b) increase the desire and courage to invest resources in DRR and c) provide long term

cooperation. Perhaps such a forum⁶ could exist alongside the coordination forums, so that the coordination forums could remain a smaller, more focused group.

4.4.4 Perceived low political prioritization of DRR on the national level

It could be that the unclear responsibility delegation results partly from government agencies not feeling incentivized by the government to take action. Several ministries in the government have a stake in the DRR work being done on national and local level in Sweden, as well as the international work through aid. Some interviewees are quite critical to the government, feeling that there is a low prioritization of DRR on the highest level in Sweden (GA20, CS3, RA3, PS2). Different types of actors interviewed express this concern about a lack of political will, despite only those representing the civil society being asked directly about it.

CS3: "For coherent governance, leadership and prioritization from the government is after all a requirement."

LL1: "We are waiting for a discussion around goal conflict, I think, where we see that the issues are now downplayed. [...] at the end of the day, this is a political question, what level of security you want in your city planning. And it has not really been taken up. And the political discussion is especially necessary when there are no national guidelines [...] it is actually too complex a question to make political, but we need laws and guidelines."

GA2: "Right now we do have a lower level of ambition than what we maybe used to have, because we have other issues that are also prioritized by the government and that we have to invest in, such as civil defense. Maybe the government does not prioritize the Sendai Framework the highest, I would say."

Many (GA12, GA13, RA2, LL2) attribute this to the fact that the average Swedish citizen does not feel concerned about disaster risk, therefore the political system does not feel the need to make concrete promises relating to DRR in election periods and, in the long term, does not become more invested in using sufficient resources to learn about and reduce disaster risks.

GA13 expressed that there was no legal requirement for them to be involved in DRR work at all, but that they have an interest in working with these issues regardless. Actors on the local level feel they need to wait for political prioritization before they are able to take the actions they need to (LL1, LL2).

Over time, a lack of political prioritization of DRR could lead to DRR tasks being absent in the instructions of government agencies and a greater difficulty

⁶ Although the interviews reveal that networks and working groups between different actors exist, interviewees do not mention a forum where all DRR actors are included.

in engaging actors that have not been traditionally involved with DRR issues, but whose knowledge and experience make them important stakeholders.

Both of these issues could greatly impact Sweden's ability to adhere to the Sendai Framework.

Moreover, as the framework calls for national strategies on DRR (see 5.1.2), it would be beneficial to include clear language on DRR in a national strategy (perhaps the national security strategy or similar). Ultimately, government agencies will prioritize what their instructions from government tell them to, they will not act simply because a global framework like the Sendai says they should (GA6, GA15).

During the Sendai conference, GA14 felt that having a DRR or Sendai ambassador was "a clear signal that you had a person, albeit for a limited time only, that was very engaged in supporting UNISDR and GFDRR and other fronts. That was an important signal that this was a high priority in Sweden". This could mean that having a permanent ambassador, or similar role, for the implementation of the Sendai Framework could be a way to showcase both externally and within the country that DRR is a priority on the highest level.

4.4.5 Issue seeing DRR as a domestic, and not only an international, priority

The interviews reveal a clear divide between the level of prioritization, as well as knowledge and engagement of DRR issues for those working internationally and domestically. This is especially prevalent among the CSOs (see 4.1.3). The divide is made apparent when interviewees are asked about how much they personally, and the organization or sector they work in generally, know about the Sendai Framework. Those that are most knowledgeable work mainly outside of Sweden with DRR issues: Swedish factions of international CSOs, government agencies working with aid and international support or involved in international DRR projects and researchers that have a regional or global perspective. Much of the reason why domestic actors are not as knowledgeable and engaged in DRR issues could be that it is seen as separate from other interest areas such as culture, education and development (CS4).

The international/domestic divide is also apparent when interviewees discuss issues that limit the understanding of DRR in Sweden and that limit DRR investment. For many people (GA3, GA4, GA5, GA6, GA8, PS1), the issue for priority 1 and 3 of Sendai (understanding DRR and investing) is the same: that there is not an understanding of why Sweden needs to do this when we have few serious natural disasters. GA8 suggests that what is needed is better economic modelling of the consequences of the disasters that we do have, to show that even in Sweden it would be much more cost effective to prevent and prepare better for disasters.

Clearly, many DRR actors in Sweden believe that DRR is not a Swedish problem, but a problem that Sweden can help others deal with — perhaps this is one of the causes for the difficulty in coordinating activities between

international and domestic actors as described in 4.2.2 by GA10. Resolving this misconception would provide the momentum to improve engagement with DRR issues and thereby facilitate good governance. While it is a strong positive note that Sweden is so engaged with international DRR, this is simply one aspect of the Sendai Framework.

CS1 gives insight as to why this international/domestic divide may exist. When many people in Sweden hear the word disaster, they imagine the types of disasters we do not encounter in Sweden: earthquakes, tornadoes, extreme drought, tsunamis. With this image in mind, CS1 argues, people feel that it is unnecessary to work with domestic DRR issues, and a change in narrative so that the picture of disaster can look like Swedish disasters is imperative.

4.4.6 Low awareness and understanding of DRR issues

In Sweden, ironically, one of the biggest issues for improving governance of disaster risk reduction is the lack of experience with disasters; as many interviewees bring up, Sweden is a country spared from continuous, life threatening and economically devastating disasters on the scale of European neighbors. Therefore, while Sweden is a prosperous country that has a plethora of actors interested and invested in DRR, there is not an obvious consensus on the importance of working to prevent disasters in Sweden.

GA9: “maybe that is partially what the problem is in a country like Sweden where we do not have enough disasters. We have this organization and we have built in a way so that there are not enough disasters for us to be on the alert and be prepared.”

CS2: “we have to understand that this is not just something you do when a disaster is occurring, we have to do it before, during and after a disaster situation.”

Beyond this difficulty in engaging actors because Sweden is not as impacted as other countries, the interviews show a worrisome lack of understanding about what DRR is and how other issues are related to DRR. Different interviewees from government agencies that have been working with MSB on DRR for years are, for example, unaware that migration flows relate to DRR (GA9) or consider DRR to be about reducing deaths from natural disasters only (GA16).

4.4.7 Communication issues, especially those linking sectors and actors

Many interviewees, when asked what they consider to be the greatest governance issue for DRR work in Sweden, discuss issues relating to communication. Researchers interviewed explain their frustration that the system they are rewarded for in their career is one that hinges solely on academic publications (RA2, RA3), which makes it more difficult to prioritize sharing information with actors outside of academia. All three researchers interviewed highlight the necessity for the research world to not be separate

from practitioners. RA3 suggests that scientific journalism may be the key to communicate research to practitioners, but that making more specific requirements for communicating research to stakeholders could also be part of budgets for research projects.

An all of society approach to DRR is also hindered in part by communication issues. For example, representatives of civil society organizations interviewed express that they are not included in forums and networks due to their lack of experience and, in some cases, they feel their perspective is not valued (CS1). Interviewees are interested in reaching out across sectors, from the national to the local level and to individuals, but are not sure on how to best and most effectively approach this cross-sectoral communication (GA8, GA13). PS2 discusses how private companies would be more likely to participate and invest more in DRR if the government and government agencies were better versed in the needs and incentives of the private sector. GA11, however, explains that it would require vast resources to ensure that their agency kept up to date with private sector developments and trying to create new partnerships with them, and that doing so is not currently in their mandate.

A clear barrier to effective communication is seen to be terminology. Some actors are reluctant to use Sendai terminology, perhaps because they are worried it would mean having to make changes to day-to-day work: “we do work with it [DRR] in different ways from our own interpretation but we don’t say it like that. And we will probably not try to use those terms, we will instead keep working like we have been doing and use our terms” (GA16). One interviewee who is very familiar with Sendai and UNISDR terminology as a whole, CS2, believes that the technical language can intimidate actors.

One final communication issue brought up in the interviews is in relation to feedback. GA11 states that when working with actors outside of government agencies, “those we don’t work with every day, maybe we are not good at something but they haven’t told us, so we don’t know”. In short, many issues around communication are seen. There is a need to not only work with other actors but to know how to educate, incentivize, and respond to their feedback.

5. Sweden and the Sendai Framework in practice

The Sendai Framework's text gives eleven recommendations of how to achieve good governance on the national and sub-national level in order to achieve a country's goals under the framework. This section will go through each of these recommendations and analyze the corresponding practices within Swedish DRR governance. The purpose is to examine how well Swedish practices align with what is recommended by the global framework, as well as highlighting steps that could be taken to utilize the recommendations. A brief conclusion will link this to the seven governance problems identified in the previous section.

5.1 Sendai Framework governance recommendations

5.1.1 Laws, regulations and public policies

"To mainstream and integrate disaster risk reduction within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies, which, by defining roles and responsibilities, guide the public and private sectors in: (i) addressing disaster risk in publically owned, managed or regulated services and infrastructures; (ii) promoting and providing incentives, as relevant, for actions by persons, households, communities and businesses; (iii) enhancing relevant mechanisms and initiatives for disaster risk transparency, which may include financial incentives, public awareness-raising and training initiatives, reporting requirements and legal and administrative measures; and (iv) putting in place coordination and organizational structures" (p.17)

Currently, Sweden has a number of legal frameworks that already govern DRR. The LEH⁷ (2006:544) ensures that municipalities and counties are prepared for and can handle extraordinary events. One of the requirements is Risk and Vulnerability reports to be written. The LSO⁸ (2003:778) requires action plans in the event of an incident/hazard, highlighting responsibilities on individuals, municipalities and the state. PBL⁹ (2010:900) is the law regarding planning of water and ground developments in a sustainable manner among other things.

⁷ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-2006544-om-kommuners-och-landstings_sfs-2006-544

⁸ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-2003778-om-skydd-mot-olyckor_sfs-2003-778

⁹ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/plan--och-bygglag-2010900_sfs-2010-900

Krisberedskapsförordningen¹⁰ (emergency management ordinance, 2006:942) refers to the requirements of government agencies to reduce vulnerabilities, handle risk and to be able to continue to function in (non-conflict) crises. Översvamningsförordningen¹¹ (flooding ordinance, 2009:956) refers to the flooding risks, requiring mapping as well as reducing consequences.

MSB writes instructions for how to adhere to these regulations (GA11), however most interviewees from agencies are not able to name the regulations or laws that they work under, making it difficult to assess how well they themselves judge that they follow them. A 2015 assessment by Riksrevisionen¹², which assessed the implementation and adherence to LEH, LSO and the emergency management ordinance, found among other things that the Risk and Vulnerability reports were not used efficiently and that financing of municipalities' crisis preparedness was insufficient.

According to a study by Hedelin (2016), implementation of information sharing practices within the flood directive in Sweden was considered by county-level actors to be top-down, i.e., that information was only flowing from the national to the local level with a degree of power imbalance as experienced on the local level. Fostering a bottom-up culture of dialogue and cooperation between actors on different levels as the Sendai Framework recommends could be one step towards finding the right balance of power and improving the implementation of lessons from the Risk and Vulnerability reports.

The scope of the Sendai Framework shows a broad understanding of disaster that includes the types of natural and man-made incidents and hazards experienced in Sweden:

"The present Framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors." (Sendai Framework 2015, p.11)

Were laws, regulations and policies to use the terminology of DRR, this may produce a norm shift that helps actors adopt the sense of urgency that is needed in Sweden, with the disaster events that are prevalent here (LL1).

As regards public policies and regulations relating to all sectors, including private, there is a long way to go. As was pointed out in Chapter 4, in a strict sense it is not in the mandate of government authorities to engage private companies to participate in DRR. However, private companies in

¹⁰ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2006942-om-krisberedskap-och-hojd_sfs-2006-942

¹¹ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-2009956-om-oversvamningsrisker_sfs-2009-956

¹² www.riksdagen.se/sv/dokument-lagar/dokument/skrivelse/riksrevisionens-rapport-om-lansstyrelsernas_H30388/html

transportation and energy sectors are motivated to participate (PS1). This motivation should be awarded with positive incentives rather than negative consequences. a) to ensure it is more lucrative to reduce risks rather than move them elsewhere when penalized in a particular venture, and b) so that the ebbs and flows of the economy do not necessarily jeopardize private sector DRR initiatives (PS2).

Another way to engage the private sector in absence of a clear mandate to include them is to follow the example of Canada, and involve them in the writing of certain DRR plans where their participation is most needed¹³. In 2014, a Plan for the Movement of People and Goods During and Following an Emergency (Public Safety Canada 2015) was established in Canada. The private sector, the Chamber of Commerce and several different government agencies are among the actors involved in writing and agreeing to this text.

In relation to the four sub-points in Sendai's recommendation of how to mainstream DRR across private and public sectors: i) would at least partially be achieved by including stronger DRR terminology in laws, regulations and policies, assuming this would lead government agencies and the public sector in general to do the same; ii) has been addressed for private sector actors, but individuals and communities are likely to be incentivized if education about their individual responsibility (as outlined for example in LSO) is focused on; iii), in so far as it refers to awareness initiatives, is already being addressed by different types of actors as seen by interviewees (GA2, LL1, LL2, RA1, RA2, CS2), and should perhaps simply be increased in the manner it is already performed; and iv) exists in the form of the coordination forums, but other actors could be better incorporated in these, as will be discussed further in 5.1.8.

5.1.2 Strategies

"To adopt and implement national and local disaster risk reduction strategies and plans, across different timescales, with targets, indicators and time frames, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience" (p.17)

On the national level, as has been discussed, there is currently no national disaster risk reduction strategy, nor a direct mention of the Sendai Framework in Sweden's national security strategy (although it does mention disaster risk) (Regeringskansliet 2017). The only other national strategy in place that interviewees bring up as relevant is the international aid strategy. A few interviewees directly state that they feel a national DRR strategy is needed (GA6, GA10, LL1). Chapter 4 discussed the worry some interviewees felt that there was a shift away from prevention in Sweden, which could signify that more attention should be paid to prevention in future plans and strategies.

¹³ Interview data did not gleam whether this is already the case in Sweden as well; if so, the recommendation is to continue this practice.

The language of the recommendation suggests strategies and plans specifically for DRR, however GA10 believes that it would be equally effective to include DRR language more concretely in the national security strategy like in Norway. Canada could also be a valuable example to learn from: "A governance structure that engages and enhances local-level responsibility is more effective than a top-down approach, especially considering the many opportunities for partnering in local mitigation projects" (Government of Canada 2008, p.4). Canada's National Disaster Mitigation Strategy also includes four DRR areas (leadership, public awareness, research, cost-sharing) with priority actions under each. Moreover, several plans and management systems are outlined in documents, accessible to the public (Public Safety Canada 2017).

In the Netherlands, national and local strategies are combined, the national DRR strategy considers local and national risk "covering all hazards, all government and all society" (UNISDR 2017, p.17). A dialogue between Swedish DRR workers on the national and local levels should decide whether a formal strategy for local and national level DRR would be advantageous.

In Sweden, the five legal frameworks mentioned in 5.1.1 do not discuss local strategies as such, though advocating for preparedness plans. However, internal strategies for DRR do exist on the local level in some form (LL1, LL2). Also in Norway, "most municipalities have DRR strategies integrated into local development plans" (UNISDR 2017, p.20). Norway and Sweden may be able to learn from one another on how to ensure that targets with clear indicators and timeframes are included in these local strategies.

5.1.3 Assessment

"To carry out an assessment of the technical, financial and administrative disaster risk management capacity to deal with the identified risks at the local and national levels" (p.17)

In Sweden, the national Risk and Capability Assessment is produced annually by MSB, as instructed by the government. The assessment is not specifically for DRR, but includes all aspects that this recommendation requires, including assessing both national and local capacity. The findings of the 2017 assessment can be found summarized on the MSB website (MSB 2017a)¹⁴.

Three areas where assessments can be improved were brought up in interviews. Firstly, the need for better synchronization of those who develop plans and those who have the responsibility to act (RA2). This may not necessarily mean that only those with responsibility to act should be involved in creating and assessing plans, but that there should always be an open dialogue with those responsible for actions in order to ensure that plans are realistic. Secondly, making strategic connections between actors from different sectors but work with similar issues, as this is seen to occur often in DRR work (RA3). Thirdly, plans that are developed in areas that impact disaster risks need to consider

¹⁴ www.msb.se/sv/Forebyggande/Krisberedskap/Nationell-risk--och-formagebedomning/

DRR early on in the planning process in order to use resources cost effectively (LL1, GA13).

GA10 states that despite guiding what the focus of DRR work should be, the Risk and Capability Assessment is not straight forward enough, and that Sweden is strong on planning for preparedness but not for prevention. An example of how the Risk and Capability Assessment may be considered vague and not instructive enough is the recommendations it gives for how to better prepare for crises:

“In order to be better able to handle societal disturbances, actors in society must be better able to map out their needs in terms of material and human resources, to secure the access to private actors’ services and to have routines for asking for and accepting reinforcement resources” (MSB 2017b, p.4)

It is not only the Risk and Capability Assessment that is critiqued by interviewees. GA12 discusses a concern that, unlike other European countries, “in Sweden, we have no plan for the mapping of shallow coastal zones. That is a shortfall”. LL1 and LL2 feel that the Risk and Vulnerability Assessments are too narrow for the local level, the scope covering only the physical work environment rather than the whole city or area.

The Sendai Framework highlights the necessity of including not only more types of actors in a multi-stakeholder effort, but discuss in the guiding principles the need for an inclusive, all-of-society approach: “A gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted” (Sendai Framework 2015, p.13). As one interviewee who works specifically with gender issues expressed: “I don’t know if the Risk and Vulnerability analyses in Sweden can really be said to include a gender perspective, the impression I have is that we have not done that to any significant extent” (GA7). Including gender analyses in Risk and Vulnerability Assessments as standard practice is one way to improve progress reporting.

5.1.4 Compliance mechanisms

“To encourage the establishment of necessary mechanisms and incentives to ensure high levels of compliance with the existing safety-enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning, building codes, environmental and resource management and health and safety standards, and update them, where needed, to ensure an adequate focus on disaster risk management” (p.17)

When asked in the interviews what mechanisms are in place to ensure that policy regarding DRR are followed, interviewees do not give many indications of such mechanisms existing today apart from government instructions given to agencies. Sweden would benefit from making an assessment of what compliance mechanisms and incentives exist and how successful they are.

One way to achieve the recommendation is to understand that DRR governance is not limited to natural disasters in the Sendai Framework, but rather

considers other forms of disasters and factors that impact disasters. For example, Aitsi-Selmi et al. (2016) explore how disasters linked to mass gatherings are treated in the framework, noting that over thirty references to health risks and disasters are made, with health outcomes expected to be a shared responsibility in the text. The specific health risks that can be linked to mass gatherings include travel-related infectious diseases, injuries due to crowd density, inadequate infrastructure, extreme weather events, crowd violence, and more.

A second consideration to take is that disaster risk management should be based on science and information sharing. Huge emphasis on using science and research to guide policy-making is seen in the Sendai Framework; for example, through a ministerial roundtable during the conference on 'Governing Disaster Risk: Overcoming challenges' where research and education are seen as means to improve DRR governance ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.53) and the session on 'Measuring and Reporting Progress' ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.79). Although certain areas of DRR may be more intuitively linked to science-based policy implications, the collecting of statistics and promotion of research are central aspects of all long-term DRR in the Sendai Framework and therefore it is important that DRR leaders encourage and promote science-based decision-making. Overall, "when compared with the HFA, it is immediately apparent that the SFDRR [Sendai Framework] has an enhanced role for science and knowledge ... Science is called to action repeatedly in the text, be it in DRR education and training, post-disaster reviews, research into disaster scenarios or early warning systems ... There is also renewed emphasis on training and, within this, on integrated approaches" (Haigh and Amaratunga 2015, p.3).

Sweden could potentially look to the Netherlands for inspiration as to how to use information sharing as part of compliance mechanisms. The Netherlands is involved in a high number of information and 'best practice' sharing projects on different levels of cooperation. For example, on the international level, as discussed during the Sendai conference's session on 'Integrated Water Resource Management' the Netherlands are responsible for launching the 'Delta Coalition' platform for exchanging "lessons learnt and best practices regarding the sustainable management of deltaic areas" ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.77) while, on the local level, the Netherlands National Platform for Disaster Risk Reduction funds a program for NGOs building local resilience (NCTV 2017).

5.1.5 Progress reporting

"To develop and strengthen, as appropriate, mechanisms to follow up, periodically assess and publicly report on progress on national and local plans; and promote public scrutiny and encourage institutional debates, including by parliamentarians and other relevant officials, on progress reports of local and national plans for disaster risk reduction" (p.17)

Action plans are typically based on the Risk and Vulnerability Assessments on the national level (GA11) as well as crisis preparedness plans that every agency has (GA12). Expert agencies and researchers also support regional and local actors, in particular länsstyrelser and municipalities, in making their plans (GA4, GA6, GA13, RA2).

Despite good systems in place to fulfil this recommendation, some interviewees shine light on where improvements can be made. Firstly, RA2 discusses how making DRR data more uniform (both regionally and between different agencies) would make it easier for other actors, including researchers, to compare progress in different areas and sectors.

Secondly, those who are legally obliged to make action plans and strategies seldom has a complimentary obligation to ensure that the general public is informed about these plans (GA3).

This is similar to the issue brought up in 2.3.3 and 2.6.7, that researchers and academia have no financial incentive to devote their resources towards educating practitioners about their research. Making DRR data more easily understandable or comparable as well as creating incentives for informing society about progress made are vital for achieving this goal.

The ‘intergovernmental expert working group on indicators and terminology relating to disaster risk reduction’ issued a report¹⁵ in 2016 which explains how the targets of the framework should be measured. Swedish DRR practitioners, researchers, and other stakeholders should use the working group’s “easy to follow report” where relevant to design and evaluate plans for achieving the goals of the framework.

Finally, the recommendation includes encouraging public scrutiny of the national and local plans for DRR. Currently, media attention to DRR is relatively low because of the seldom occurrence of disasters. However, reporting on DRR related events in the light of prevention becomes newsworthy when political figures speak up about them. For example, on the 9th of July, a test of a warning system accidentally went off in Stockholm with sound rather than without sound as usual, and most people were unaware of what the alarm signified (Andersson et al. 2017) and earlier in the year, a report was published showing that only about half of the most popular museums in Sweden have enacted the safety measures given in a 2009 fire preparedness plan (Zuiderveld et al. 2017): both these events were discussed on national news by political figures. If discourse around DRR at the highest levels includes discussions about the state of national and local plans and progress, it is more likely to trickle down to all levels for public scrutiny.

5.1.6 Role of communities

“To assign, as appropriate, clear roles and tasks to community representatives within disaster risk management institutions and processes and decision-

¹⁵ www.unisdr.org/files/50683_oiewgreportenglish.pdf

making through relevant legal frameworks, and undertake comprehensive public and community consultations during the development of such laws and regulations to support their implementation” (p.17)

As has been discussed (see, for example, 4.1.2), the local level is considered by many to be the most important actor for carrying out DRR. DRR work is therefore already people rather than state centric to a large degree. However, the extent to which different communities are given legally mandated roles even on the local level of DRR is fairly low in Sweden, perhaps because the public sector is very large and includes all levels, meaning that different communities in Sweden have influence in different ways that may be more indirect.

An open discussion between Ban Ki-moon and eight UN Executive Heads, acknowledged that a “key challenge” to achieving the goals of the Sendai Framework is “to scale-up effective models of cooperation and to ensure coherent and collective support to countries’ and communities’ efforts to build resilience” (‘Proceedings Third UN World Conference On Disaster Risk Reduction’ 2015, p.89). Perhaps more guidance from UNISDR in the future will help clarify how a country like Sweden, where social cleavages are not formed between communities to the extent it is in many other places, can best take this recommendation into consideration.

The Canadian Platform for Disaster Risk Reduction (CPDRR) is an example of how to include communities more in national and sub-national DRR work. The CPDRR was established in 2009 “as a multi-stakeholder national mechanism that coordinates and advises on areas of priority requiring concerted action” whose vision is “A safer and more resilient Canada through the reduction of risks and leveraging of capacities and opportunities across all levels of government, the private sector, academia, non-governmental organizations, professional associations, Indigenous groups, and the general public” (Public Safety Canada 2016). The legislation supporting DRR work includes an Emergency Management Act and provincial/territorial legislation that reinforce each other, and a group of ministers on the subnational level are responsible for emergency management (Government of Canada 2008, p.2).

5.1.7 Coordination forums

“To establish and strengthen government coordination forums composed of relevant stakeholders at the national and local levels, such as national and local platforms for disaster risk reduction, and a designated national focal point for implementing the Sendai Framework for Disaster Risk Reduction 2015–2030. It is necessary for such mechanisms to have a strong foundation in national institutional frameworks with clearly assigned responsibilities and authority to, inter alia, identify sectoral and multi-sectoral disaster risk, build awareness and knowledge of disaster risk through sharing and dissemination of non-sensitive disaster risk information and data, contribute to and coordinate reports on local and national disaster risk, coordinate public awareness campaigns on disaster risk, facilitate and support local multi-sectoral cooperation (e.g. among

local governments) and contribute to the determination of and reporting on national and local disaster risk management plans and all policies relevant for disaster risk management. These responsibilities should be established through laws, regulations, standards and procedures” (p.17)

Before addressing how well Sweden has implemented the points in this recommendation, we briefly describe the benefits and shortcoming of the previous national platform. Many actors appreciated the previous national platform and were disappointed that it was discontinued — one interviewee even expressing that it was one of the best forums they had ever been part of (GA8). However, it also had a number of shortcomings, e.g. vague objectives and progress could not be monitored. These examples are taken from a study of the platform’s benefits and shortcomings (see Markör 2015). A comparison of national platforms in Europe from 2012 (UNISDR Europe Office 2012) is useful for comparing to other countries’ experiences.

The platform did not adhere to many of the tenets of DRR that were new to the Sendai Framework, such as including all types of relevant actors and not focusing on natural disasters disproportionately. Though the platform could perhaps have been moderated to fit the new recommendations, as the following paragraphs will show, the coordination forums are likely to be successful at achieving many of the requirements under the framework.

This recommendation includes several points to consider. Firstly, that the coordination forums chosen are composed of relevant stakeholders. “The aim of National Platforms is not to take over the responsibility for stakeholder’s commitments but to reduce overlaps and use common resources in a productive, coordinated way towards strengthening resilience” (UNISDR 2016, p.13). Actors outside government agencies are included in the coordination forums, but not all relevant actors are sufficiently represented. The Netherlands have come further towards representing stakeholders: for meetings of their national platform, different stakeholders are grouped together and represented by a few key actors in their area (UNISDR 2017, p.13), all ministries are represented and the private sector has a permanent seat reserved as well (UNISDR 2016, p.21).

Secondly, national and local level DRR should be considered within coordination forums. Aitsi-Selmi et al. (2016) address the failure of UNISDR to, before 2015, provide policy for local and national capacity of reducing disaster risks related to mass gatherings but that the “Sendai Framework offers an opportunity to galvanize member states and local authorities to achieve common goals by offering a clearer vision and narrative for concerted action and funding reform” (p.104). These specific measures can be seen throughout the framework’s text, but Sweden has already taken measures to ensure the inclusion of local stakeholders by having local actors be members of the coordination forums, sometimes as adjunct actors.

Thirdly, that a focal point for the implementation of the Sendai Framework is chosen. This focal point is MSB, both under the HFA and Sendai, and other actors are on the whole supportive of MSB in this role (see 4.1.1).

Fourthly, that several key responsibilities are assigned and established through laws, regulations, standards and procedures to: identify risks; build awareness; contribute to and coordinate reports on local and national risk; coordinate public awareness campaigns; support local multi-sectoral cooperation; and contribute to reporting of plans and policies. From the interviews, the overall impression is that all of these are already part of the work done by MSB and other agencies within the coordination forums, and laws were discussed in 5.1.1. However, much more should be done to build awareness of DRR within the general public.

5.1.8 Civil society and other groups' participation

"To empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with civil society, communities and indigenous peoples and migrants in disaster risk management at the local level" (p.18)

Civil society, indigenous and other groups are not, as has already been discussed, included in national level DRR work and projects very often, unless in an international support capacity. Networks for civil society participation in DRR do exist, such as SNKR, the Swedish Network for DRR and Resilience (CS2). However, not enough interviews on local level were conducted to gauge an idea of how well the local level has incorporated these groups into DRR. If local authorities are supported by a budget and national government instruction (or similar incentive) to ensure an all-of-society approach to DRR, the framework itself and DRR research shows where to begin.

The Sendai Framework clearly advocates for a broader and more inclusive representation, which helps to integrate groups that previous agreements overlooked and who are often most vulnerable (Blanchard et al. 2015). Among these previously ignored actors are migrants, who were seen before as only a problem to solve while Sendai recognizes their agency: "the references to human mobility within the SFDRR show an evolution in the way the issue is considered within global policy dialogues. Both the potential of population movements to produce risk and their role in strengthening the resilience of people and communities are now clearly recognized" (Guadagno 2016, p.30). The impact of migration flows in Sweden (and globally) is seen as a factor that needs to be considered by a few interviewees (GA9, PS1, RA1). Another group is women. During the conference, a panel titled 'Mobilizing Women's Leadership for Disaster Risk reduction' was held, which called for, among other things, gender budgeting in DRR ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.57-58). A third marginalized group is youth, whose agency was represented in the conference during working sessions such as "Don't Decide my Future Without Me" ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.66), "Commitments to Safe Schools" ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.67) and a stakeholder affirmation, the "Sendai Call from Children and Youth" ('Proceedings Third UN World Conference On Disaster Risk Reduction' 2015, p.151).

A fourth marginalized group that the Sendai Framework considers is indigenous people. “Indigenous peoples, through their experience and traditional knowledge, provide an important contribution to the development and implementation of plans and mechanisms, including for early warning” (‘Proceedings Third UN World Conference on Disaster Risk Reduction’ 2015, p.29). In Sweden, the Sami are experts in caring for and working with nature, which are essential aspects of DRR. As of yet, it appears that the involvement of the Sami in DRR has been indirect, for example through the communication network on ecosystem services under the Swedish Environmental Protection Agency (Sametinget 2017). Ecosystem-based DRR has become more relevant in risk areas from flooding to climate change (Ágústsdóttir 2015). As Sweden rearranges DRR governance in light of the Sendai Framework, including the Sami as important stakeholders and actors is essential. The Sami are not only sustainability experts, but also contribute to long-term DRR work such as building according to the local environment (Sametinget 2009, p.11-13).

A fifth group to consider is persons with disabilities. According to Stough and Kang (2015), people with disabilities are at higher risk during disaster events, disaster events can cause new disabilities and “actions taken on behalf of people with disabilities can be beneficial for other vulnerable groups” (p.147). The authors celebrate the Sendai Framework for making the event more accessible than previous conferences, considering the intersectionality of disability with for example age and gender, making direct and indirect references to people with disabilities throughout the text and more. The Norwegian Association of Disabled (NAD) is a valuable example of stakeholder involvement in DRR: “NAD will work with local partners and experts to build capacity in this area and ensure that disabled persons are included in DRR processes” (NAD 2014, p.3). DSB works often on the international and regional levels not only through the UN and EU but also through NATO (DSB 2012). In Sweden, the CSO MyRight¹⁶ works with DRR issues in several ways, including at least one collaboration with MSB to educate practitioners about disabilities in emergencies (GA7), and could be a valuable partner to local authorities wishing to make DRR work more inclusive on the local level.

5.1.9 Parliamentary participation

“To encourage parliamentarians to support the implementation of disaster risk reduction by developing new or amending relevant legislation and setting budget allocations” (p.18)

The legislation surrounding DRR was discussed in 5.1.1. One way to motivate those implementing legislation to work with DRR is to clearly use DRR terminology in future amendments to these laws and policies, allowing it to trickle down to practitioners.

Interviewees have discussed that the lack of resources set aside for, or made available for, DRR in budgets can be an issue for prioritizing the

¹⁶ www.myright.se

implementation of DRR measures (GA4, GA6, GA10, CS1, CS2). Therefore, using the expertise of government agencies such as MSB and those working in municipalities to inform where budgets are most needed for DRR could facilitate better implementation.

However, as discussed in 4.4.4, interviewees often feel that there is little support, understanding and prioritization of DRR on the highest political level. Though some parliamentarians are working diligently to ensure that DRR measures (whether calling them such or not) are being taken (see, for example, the motion regarding antibiotic resistance¹⁷) and different ministries are working with DRR related issues, many still consider the Swedish government and parliament to need to be more actively involved.

This is by no means a Swedish issue, rather a near universal one, even for countries whose citizens are in urgent danger from disaster risks. The Sendai Framework could prove useful in changing this. Two case studies highlight how different aspects of DRR that had suffered from a lack of political will were reinforced in Sendai governance. Firstly, throughout Europe and in Sweden, flood risk is a primary DRR concern due to the high cost of flood damage. In Paris, flood risk is likewise a primary disaster risk, yet flood risk prevention has been under-active because the last devastating flood in the region was over a hundred years ago (Thepot et al. 2016). As examined by Thepot et al. (2016), the introduction of the Sendai Framework led to a reexamination of flood prevention that resulted in a review and strengthening of the government initiatives of flood prevention

The main actions undertaken on the recommendations of the Sendai Framework were both concrete and discrete, including: inclusion of new actors, creation of a legal structure for sustainability, visualization of an interface for knowledge sharing, production of analyses of disruption to society from potential flooding and plans for creating “post flood reconstruction networks” were put in place.

Secondly, a key consideration of DRR in the Sendai Framework has been health risks. A large-N study of health disaster risk management (DRM) in 47 African countries found that even though 58% of countries had incorporated health DRM into national strategies or even created specific units for the implementation of health DRM in ministries of health and the Regional Committee for Africa adopted commitments to health DRM under the HFA, implementation did not reach the targets set. “Key challenges in implementing the strategy were inadequate political will and commitment resulting in poor funding for health DRM, weak health systems, and a dearth of scientific evidence on mainstreaming DRM and disaster risk reduction in longer-term health system development programs” (Olu et al. 2016, p.1). However, Olu et al. (2016) argue that implementation under the Sendai Framework will achieve what the HFA could not. They point out that political will in the new framework is increased through: “harnessing human capital” (p.7), increasing investment

¹⁷ www.riksdagen.se/sv/dokument-lagar/dokument/motion/antibiotikaresistens_H4022634

and communication on the local level and building a health system that can be used in the long-term.

Even in the interviews for this study, GA11 stated that “politicians are very important, I think UNISDR has been great about pushing us to get politicians involved”.

More politicians learning about the specifics of the Sendai Framework from practitioners and researchers will likely make the language and norms of the framework part of the dialogue and paving way for more legislation regarding DRR.

5.1.10 Quality standards

“To promote the development of quality standards, such as certifications and awards for disaster risk management, with the participation of the private sector, civil society, professional associations, scientific organizations and the United Nations” (p.18)

The interviews did not reveal any certifications or awards specifically for disaster risk management. An international example of a disaster risk management award, targeted at CSOs, can be seen in Canada, where a new award has been set up:

“The CRHNet “Canadian Disaster Risk Management Volunteer Award” is presented annually to nationally recognize exemplary volunteerism in the betterment of Canadian disaster risk management. This award is offered by the CRHNet membership to encourage disaster risk management volunteerism in Canada and to profile exceptional contributions either through direct volunteer work, volunteer initiatives, and/or voluntary programs.” (Canadian Risk and Hazards Network 2017)

This type of award has several benefits, beyond simply encouraging participation of volunteer organizations; it helps spread awareness of DRR within CSOs and it supports and celebrates different stakeholders and their unique contributions to DRR. Were Sweden to set up a similar award for CSOs, or indeed any stakeholder group, this could lead to the same benefits Canada is likely to see.

Finding the right quality standards to develop certifications should be done on a cooperative basis, between researchers and policy-makers, disciplines and geographical regions (Blanchard et al. 2015). Global partnerships are vital for ensuring the proper usage of science in implementing Sendai. According to Carabine (2015), the key themes that are needed for effective international science partnerships are: the science policy interface; inclusivity, engagement and communications; governance structure; collaboration in-between partnerships; funding; capacity building functions; monitoring and evaluation.

The private sector is a vital partner: not only is the private sector responsible for a majority (often between 70-85%) of investment into DRR work (DRR-PSP 2015, p.3), representatives of the private sector are often influential leaders in

communities. A position paper by the DRR-Private Sector Partnership (DRR-PSP, 2015) highlights five visions for a 'resilient future' for long-term success: 1) private-public partnerships on all levels representing different stakeholders; 2) enacting public standards on building for resilience for private sector to follow; 3) risk-sensitive financial investment from both public and private sectors; 4) 'resilience-sensitive' business; 5) transparency in private sector risks as standard operating procedure.

An interesting addition to the discussion of science-based DRR is brought up by Tozier de la Poterie and Baudoin (2015) who argue that the bottom-up approach to DRR that Sendai calls for is undermined by the fixation on science-based decision-making. This is because many local actors have a perspective that may not fit the "broader shift toward investments in technological solutions" (p.128), which means that local actors can be further discouraged from contributing to DRR in a science-fixated atmosphere. It is therefore important to include all stakeholders in the development of potential certifications, and to reward multitude of contributions.

5.1.11 Prevention and relocation

"To formulate public policies, where applicable, aimed at addressing the issues of prevention or relocation, where possible, of human settlements in disaster risk-prone zones, subject to national law and legal systems" (p.18)

Although Sweden has few disasters that warrant relocation, prevention and relocation are still relevant because a) they are still a necessary focus for the future disasters that Sweden will experience and b) Sweden supports many countries (with research and aid) that do experience such severe disasters regularly. However, as the recommendation refers to public policies nationally, the first step of addressing this recommendation is for expert agencies to continue to be supported in the mapping of disaster risks, and for relevant ministries to be regularly informed of developing risks. As mentioned in 5.1.2, Sweden could benefit from considering prevention more alongside preparedness in all DRR regulations and activities.

5.2 Recommendations in view of governance problems for proposed interventions

In chapter 4, we outlined a set of governance problems identified by the respondents. This report would recommend that these seven national governance problems should be considered alongside the recommendations discussed in 5.1.1.-5.1.11.

As can be discussed above, DRR governance issues in Sweden (and in general) are often interrelated. The communication issues between actors and from actors to the general public has led to awareness of DRR issues within Sweden being low; this has perpetuated a misinformed general opinion that DRR work within Sweden is not important; political prioritization of domestic DRR work is lower

than it would be if DRR rhetoric was more urgent; this contributes to a) a difficulty of knowing what should be done and by whom and b) new actors not being as easily included in DRR work; both a) and b) contribute to an uncertainty about the ability of the coordination forums to effectively govern DRR work; this escalates the communication issues between actors and to the general public. In table 5 (see next page), each of the seven governance problems are followed by bullet points of which of the above recommendations can be used to help resolve the problems.

Table 5: Swedish governance problems and related recommendations based on the Sendai Framework

Problems	Recommendations
4.4.1: The coordination forums exclude some actors, do not give enough attention to prevention and have too many other tasks	5.1.2: prevention given greater focus in DRR plans and strategies
	5.1.2: dialogue between local and national level on joint DRR strategy
	5.1.11: prevention and preparedness linked in DRR activities
4.4.2: The delegation of responsibility is unclear and government agencies in particular want more concrete communication surrounding this as well as budgets if their responsibility requires it	5.1.1: bottom-up approach to ensure implementation of lessons from Risk and Vulnerability reports
	5.1.3: need for better syncing of those who develop plans and those who have the responsibility to act
	5.1.9: using the expertise of government agencies such as MSB as well as those working in municipalities to inform where budgets are most needed for DRR could ensure better implementation
4.4.3: The difficulty, and sometimes reluctance, to include more and different types of actors in DRR work	5.1.1: approach private sector through positive incentive
	5.1.1: include private sector in writing of appropriate DRR plans
	5.1.10: awards for different types of stakeholder engagement
4.4.4: Interviewees felt that the political prioritization of DRR was much too low to ensure that the resources needed for DRR would be available	5.1.5: discourse on highest level should include progress of plans on local and national level
	5.1.8: budget and instruction specific to DRR to local authorities
	5.1.9: politicians should learn about the specifics of the Sendai Framework from practitioners
	5.1.11: support to expert agencies mapping risks and regularly inform relevant ministries of developing risks
4.4.5: DRR considered an issue for other countries, not Sweden	5.1.1: laws, regulations and policies should use DRR terminology, to try to produce a norm shift
	5.1.4: educate DRR workers that the Sendai Framework is not limited to natural disasters
4.4.6: Awareness of DRR issues in Sweden very low	5.1.7: much more should be done to build awareness of DRR within the general public
4.4.7: Communication issues (reluctance to use DRR terminology, researchers' difficulty communicating with practitioners, etc.)	5.1.3: more integration between practitioners from different sectors
	5.1.4: include science in disaster risk management
	5.1.5: making DRR data more uniform would make it easier for other actors to compare progress in different areas and sectors

6. Concluding remarks and summary of recommendations

“The SFDRR emerged from an immense but difficult effort in the years leading up to the conference. ... but now the difficult task really begins: the SFDRR must be implemented, monitored, evaluated, and especially critiqued” (Kelman and Glantz 2015, 105). This report has discussed Swedish DRR governance and how implementing the Sendai Framework can help Sweden to overcome many of these issues. The governance paradigm of the Sendai Framework has been summarized in six dimensions by UNISDR (2015c, p.16):

1. “Definition of roles and responsibilities as well as incentives to ensure and facilitate active participation by all stakeholders, including institutions, through appropriate regulatory instruments of a binding and voluntary nature.
2. An enhancement of coordination in disaster risk management across institutions which is instrumental to stimulate coherence in implementation across agendas and foster a multi- hazard and multi-sector understanding of disaster risk. This includes the establishment and strengthening of disaster risk reduction coordination mechanisms, such as national and local platforms for disaster risk reduction, which be endowed by law with the necessary powers to ensure a coordinated approach to, and reporting on, disaster risk reduction.
3. The recognition of the need to establish or strengthen the institutional framework at national and local levels, including compliance mechanisms. This may also include considerations for national independent authorities for disaster risk reduction or chief risk officers.
4. The adoption of national and local disaster risk reduction strategies and plans and public reporting on their implementation. Such strategies and plans do not necessarily need to be stand-alone policies and plans, and can actually be sector strategies and plans for development, growth, environmental and natural resources management, climate, etc. which, if based on an understanding of risk and related drivers, also prevent and reduce disaster risk.
5. The further strengthening of action at local level through the continued empowerment of local authorities and enhanced partnerships among institutions, the private sector and civil society, including volunteers.
6. The institutionalization of debates within relevant executive and legislative institutions concerning the development and implementation of strategies, plans and laws and aimed at exercising oversight, monitoring and reporting on progress. The public nature of such debates would allow for public scrutiny and transparency, also called for in the Sendai Framework.”

Interviews with DRR practitioners, researchers and others as well as a review of literature provides recommendations for how to implement DRR governance as

outlined in the framework. The report ends with a summary of the main recommendations.

6.1 Summary of recommendations to government agencies

As coordinator and focal point, MSB could benefit from:

- Producing a new study fielding all DRR actors in present day, similar to the review made when the national platform was started, with the aim of including these actors in some way in the coordination forums, including civil society organizations that will contribute the knowledge of youth, the Sami, persons with disabilities and more;
- Including gender analyses in Risk and Capability Assessments as well as recommending to other agencies to include these in Risk and Vulnerability Assessments;
- Considering the creation of a new, broader DRR forum with all actors (if the coordination forums are preferred to keep at their current size);
- Creating awards for actors from civil society, private sector, research and other sectors for their unique contributions to DRR, in order to motivate and reward participation;
- Reviewing the current state of compliance mechanisms and incentives different actors have;
- Evaluating the coordination forums as the main nodal point for DRR governance in 2018, to ensure that this is an appropriate forum that is functioning as well as the national platform did.

All government agencies working in the coordination forums or otherwise with DRR are advised from the findings of this report to:

- Consult material from UNISDR and others on how to combine efforts for DRR with climate change adaptation and sustainable development and include advice from these materials to workshops, plans and strategies locally and nationally;
- Ensure that DRR data from expert agencies are uniform across agencies and (where applicable) sectors;
- Expand the educational activities (such as awareness campaigns) being undertaken;
- Take more responsibility for actively including other perspectives in their own internal DRR activity, beyond simply making data available for all interested actors;

- Work more holistically on DRR plans and strategies, for example by syncing those who make and those who implement plans and to include DRR considerations as early in planning processes as possible.

6.2 Summary of recommendations to relevant ministries and parliamentarians

Ministries responsible for aspects of DRR (the ministry of justice, foreign ministry and others) could:

- Establish more direct communication around DRR responsibilities for agencies they give instruction to and local authorities and, where relevant, include guidelines about DRR budgets and resource allocation;
- Request regular meetings with MSB and expert agencies with the purpose of being informed on the specifics of the Sendai Framework, the progress of disaster risk mapping and the progress of national and local plans, and use these to provide more support where needed;
- Consider a DRR ambassador (from UD or another ministry) or similar role on a permanent basis for the implementation of the Sendai Framework, or another way to increase the global presence of Sweden;
- Include in agencies' instructions measures that incentivize educating the general public and media about DRR and progress being made.

Parliamentarians and ministries in general wishing to contribute to ensuring that DRR becomes more integrated into Swedish decision-making in related areas (infrastructure, critical services, building, planning, environment etc.) could:

- Use terminology from the Sendai Framework and UNISDR in laws, regulations and policies and amendments to these as well as in plenary debates, with particular emphasis on a sense of urgency and prevention;
- Consult with the private sector, civil society, researchers and local government in creating laws and quality standards that relate to DRR, to ensure that these are as effective as possible, that policy is based on science and generally to implement a bottom-up culture of dialogue with these actors.

6.3 Summary of recommendations for all DRR actors in Sweden

Recommendations in the report show how all actors can contribute more to the implementation of the Sendai Framework.

- Actors responsible for and/or able to should produce economic modelling of financial consequences of disasters and educate others about these, to show savings in the long run of spending on prevention now.

- Investments into scientific journalism as well as higher budgets in research projects for educating practitioners about findings in Sweden should be made.
- National and local DRR practitioners should begin a dialogue about whether there is a need for a DRR strategy encompassing both levels.
- Actors should use the report from the working group on indicators and terminology and other materials from UNISDR to learn more about their roles in, contributions to and progress in their area of DRR.

In general, **all actors** should work together to:

- Change the narrative of what a disaster is, to match what a disaster in Sweden looks like, with guidance from the UNISDR concept of disaster;
- Make the general public more aware of disaster risks in Sweden, in order to improve all-of-society preparedness and engagement with DRR issues;
- Work to continue and expand the existing efforts in Sweden of linking DRR actors in different sectors, to complement work on DRR issues being taken from different perspectives.

Bilaga 1: Reference lists

Two reference lists are given, the first for grey sources and the second for academic publications.

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Interviews

The interviews were made under the promise of anonymity, therefore a full list of interviews will not be provided. The list of category and date of interviews can be provided by the authors upon request.

Bilaga 2: List of abbreviations

AAAA	Addis Ababa Action Agenda on Financing for Development
CBRNE	Defence against Chemical, Biological, Radiological, Nuclear, and Explosive materials
CCA	Climate change adaptation
CNDS	Centre for Natural Disaster Science
COP 21	The 21st session of the Conference of the Parties
CPDRR	Canadian Platform for Disaster Risk Reduction
CRHNet	Canadian Risk and Hazards Network
CSO	Civil society organization
DRM	Disaster risk management
DRR	Disaster risk reduction
DRR-PSP	Disaster Risk Reduction Private Sector Partnership
DSB	Norwegian Directorate for Civil Protection
EFDRR	European Forum for Disaster Risk Reduction
EU	European Union
EUR-OPA	EUR-OPA Major Hazards Agreement
GAF	Governance Analytical Framework
GD	General Director
HFA	Hyogo Framework for Action
LEH	Lag (2006:544) om kommuners och landstings åtgärder inför och vid extraordinära händelser i fredstid och höjd beredskap
LSO	Lag (2003:778) om skydd mot olyckor
MSB	Swedish Civil Contingencies Agency (Myndigheten för samhällsskydd och beredskap)
NAD	Norwegian Association of Disabled
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organizations
PBL	Plan- och bygglag (2010:900)
SDG	Sustainable Development Goals
SFDRR	the Sendai Framework for Disaster Risk Reduction
Sida	Swedish International Development Cooperation Agency

SNKR	Swedish Network for Disaster Risk Reduction and Resilience
UD	Ministry for Foreign Affairs (Utrikesdepartementet)
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction

Interview code used for interviewees

CS	Civil society organization representative
GA	Government agency representative
LL	Local level public sector representative
PS	Private sector representative
RA	Researcher/academic representative

