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INCLUSION OF DISABILITIES IN DISASTER MANAGEMENT ORGANIZATIONS IN THE NETHERLANDS

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ABSTRACT

Recently, many things have changed or are changing with regard to the disaster management in the Netherlands. The Safety Region Act has been introduced, there is a reformation towards a participation state, and an increasing focus on self-reliance. It is important to investigate whether people with disabilities are included in the new working methods of disaster risk management. Therefore, the aim of this research is to investigate how the needs of disabled people are included in disaster management organizations in the Netherlands. The research question this research aims to answer is: 'how is meeting the needs of people with disabilities or reduced self-reliance incorporated in the practice of disaster management organizations in the Netherlands and what issues can be identified?'.

In order to answer the main research question, a qualitative research project has been conducted. Data collection was done with a mixed-method approach, combining data from interviews, literature, and non-scientific papers. To conduct this research the grounded theory of Glaser and Strauss has been used (1967). Interview participants were selected with use of purposive and snowball sampling. In total 14 interviews have been conducted with 15 participants.

The theory constructed from the data is the use of self-reliance. During the interviews it became clear that disaster risk management organizations do not work with the term disabled people, they use the extent of self-reliance of its citizens. This finding has direct influence on the rest of the findings, as they are all focussed on the self-reliance of the citizens and not on disabilities. This research shows that it can be difficult to meet the needs of reduced or non self-reliant people. However, many disaster risk management organizations are aware of the issues related to this, and are working on solutions. One of these solutions is using network coordination, this is facilitated by the safety regions. Within these networks the aim is to get reduced or non self-reliant people visible to the emergency services, by including for example disability organizations and home care organizations in these networks. One of the most difficult groups of people with disabilities to prepare for are reduced self-reliant people who live independently. Even more so when they live in retirement complexes, because no coordinating organization is responsible for these kind of complexes, as there is in care facilities. Moreover, if a disaster strikes such a complex, there will be a lot of reduced self-reliant people together, so they will be unable to ask their neighbours for help. There is an occurrence of citizen initiatives which focus on assisting each other during emergencies. This is often very locally oriented and therefore more inclusive towards reduced or non self-reliant people living in the neighbourhood. Last, it was found that training-, and information services for self-preparedness in case of a disaster are often not adapted to people with disabilities. The problem this brings is that these training and information services might not move people with disabilities to prepare.

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BAR = Barendrecht, Albrandswaard en Ridderkerk

CoPi = Commando Plaats incident

DCDD = Dutch Coalition Disability and Disaster

EM-DAT= Emergency Events Database

EPPM = Extended Parallel Process Model

ERT= Emergency Response Team

FRIS = Framework of Risk Information Seeking

GHOR= Geneeskundige Hulpverleningsorganisatie in de regio

RISP = Risk Information Seeking and Processing

RR= Rotterdam Rijnmond

WHO= World Health Organization

ZHZ = Zuid-Holland Zuid

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INLEIDING

Wereldwijd is er een toename in het aantal natuurrampen. Niet alleen komen rampen vaker voor, maar de intensiteit van de rampen neemt ook toe (UNISDR, 2015). Een mogelijke verklaring hiervoor is het opwarmen van de aarde. Zo zijn er in de periode van 2005 tot 2015 wereldwijd 700 duizend mensen overleden, en 1,4 miljoen mensen gewond geraakt als gevolg van een ramp. Tijdens deze 10 jaar hebben er meer dan 1,5 miljard mensen op verschillende manieren te maken gehad met gevolgen van een ramp (UNISDR, 2015). In Europa zijn er 894 natuurrampen gemeld bij de Emergency Event Database (EM-DAT) in deze periode, dit koste de levens van 150.000 mensen, en beïnvloede de levens van 14 miljoen mensen (EM-DAT, 2016).

De World Health Organization (WHO) laat zien dat mensen met beperkingen meer kans hebben om geraakt te worden door de gevolgen van een ramp (WHO, 2011). Momenteel leeft ongeveer 15% van de wereldbevolking met een vorm van beperking, en dit percentage is aan het toenemen (WHO, 2002). Deze toename wordt verklaard door de vergrijzing van de populatie (oudere mensen hebben meer kans op beperkingen) en het toenemende aantal chronische aandoeningen die geassocieerd worden met beperkingen, zoals diabetes, hart- en vaatziekten, en psychische aandoeningen (WHO, 2002). Zowel vergrijzing van de populatie als een toenemend aantal chronische ziektes spelen beide ook in Nederland (CBS, 2014). Dit heeft ertoe geleid dat er een verschuiving gaande is in Nederland, van een welvaartsstaat naar een participatiesamenleving, deze trend wordt kort uitgelegd in box 1.

Box 1. Verschuiving naar participatiesamenleving

Er is in Nederland een verschuiving te zien van een welvaartsstaat naar een participatiesamenleving (Delsen, 2012). Het participeren van de samenleving kan worden gezien als een effectieve methode om de kosten van de vergrijzende populatie te drukken en om sociale cohesie te versterken (Delsen, 2012). In een participatiesamenleving wordt er van inwoners verwacht dat ze actief betrokken zijn bij de samenleving (Boutellier, Steden & Stokkom, 2016). Deze trend is ook te zien in het organiseren van de veiligheid: er wordt van de inwoners verwacht dat ze de verantwoordelijkheid nemen voor hun eigen veiligheid met de assistentie van de overheid, in plaats van dat enkel de overheid verantwoordelijk is voor de veiligheid van de inwoners (Boutellier et al. 2016).

De laatste decennia is Nederland niet getroffen door hele grote rampen (Kerstholt & Koenders, 2009). Echter is er vanwege de ligging van Nederland (grotendeels onder zeeniveau) wel altijd een risico op een overstromingen (Garschagen, 2015). Deze ligging maakt Nederland kwetsbaar voor de stijging van het zeeniveau, één van de gevolgen van het opwarmen van de aarde. Echter is Nederland al jaren heel erg gefocust op de preventie van overstromingen, daarom is het relatieve risico op een grote overstroming niet zo hoog (Kolen, Hommes & Huijskes, 2012). Gezien de verantwoordelijkheid van de staat om bescherming te bieden bij een eventuele ramp, is het toch belangrijk om goed voorbereid te zijn. Om deze voorbereiding te verbeteren is in 2010 de Nederlandse Wet Veiligheidsregio's ingevoerd (Ministry of Security and Justice, 2010). Deze wet verdeelt Nederland in 25 veiligheidsregio's om zo de populatie beter te beschermen tegen rampen. Om de efficiëntie en kwaliteit te verzekeren, organiseert deze wet het crisismanagement, de brandweer en de ambulancediensten onder één regionale bestuurlijke instantie, die samenwerkt met de politie.. Binnen deze organisaties wordt er niet gewerkt met de term mensen met een beperking, maar wordt er gekeken naar de mate van zelfredzaamheid van de burgers. Het uitgangspunt hiervan is om burgers meer verantwoordelijkheid te geven bij het voorbereiden op rampen en ook tijdens een eventuele ramp (Ter Horst, 2009). De Nederlandse overheid definieert zelfredzaamheid als: de capaciteit van burgers om zichzelf en anderen te helpen wanneer er een ramp plaatsvindt, in plaats van

dat zij de hulp van professionele hulpverleners nodig hebben. Burgers die wel professionele hulp nodig hebben worden gelabeld als verminderd of niet zelfredzaam (Kolen et al. 2012). Hier zullen mensen met beperkingen vaker onder vallen dan de algemene populatie.

De gevolgen van een ramp zijn groter voor mensen met beperkingen dan voor de algemene populatie. Dit wordt onder andere veroorzaakt omdat mensen met een beperking minder goed kunnen omgaan met gebreken in de omgeving, en omdat ze minder goed in staat zijn om te vluchten en bescherming te vinden. Daarnaast hebben ze een groter verlies van autonomie als gevolg van een ramp (WHO, 2011). Echter wordt het grotere effect van een ramp niet alleen veroorzaakt door de daadwerkelijke beperking van mensen, maar ook door inadequate hulpverlening (WHO, 2007). Recentelijk is er wel meer aandacht gekomen voor het assisteren van mensen met beperkingen gedurende een ramp (WHO, 2007; Sphere project, 2011). Het is belangrijk om te realiseren dat mensen met een beperking een lastige groep zijn om op voor te bereiden in noodhulp. Dit komt omdat het geen homogene groep is, verschillende beperkingen hebben verschillende vormen van assistentie nodig (Sphere project, 2011). Een 'one size fits all' aanpak is daarom niet effectief bewezen (Sphere project, 2011; Njelesani et al. 2012). De verantwoordelijkheid van de staat om bescherming te bieden tijdens rampen is gelijk voor de algemene populatie, als voor mensen met een beperking. Daarom zouden mensen met een beperking net zoveel toegang moeten hebben tot noodhulp als de rest van de populatie (Sphere project, 2011).

DOEL VAN HET ONDERZOEK

De afgelopen jaren is er behoorlijk wat aan het veranderen in de organisatie van risicomanagement en -bestrijding van rampen in Nederland, zoals: de invoering van de Wet Veiligheidsregio's, de verschuiving naar een participatiesamenleving en de toenemende focus op zelfredzaamheid van burgers. Daarnaast laat literatuur zien dat mensen met een beperking vaak niet de hulp krijgen die ze nodig hebben tijdens een ramp (WHO, 2007). Het is daarom belangrijk om te onderzoeken of er wordt voldaan aan de behoeften van mensen met een beperking na alle veranderingen in deze hulporganisaties. Vooral omdat het aantal mensen met een beperking in Nederland toeneemt (WHO, 2002). Daarom is het doel van dit onderzoek om te onderzoeken op welke wijze de behoeften van mensen met een beperking worden meegenomen door de organisaties voor risicomanagement en -bestrijding van rampen in Nederland.

De hoofdvraag die dit onderzoek poogt te beantwoorden is: 'hoe zijn de behoeftes van mensen met beperkingen of verminderd zelfredzamen meegenomen in de praktijk van de rampen management organisaties in Nederland, en welke issues kunnen worden geïdentificeerd?'.

In box 2 wordt de onderzoeksmethode kort uitgelegd.

Box 2. Methode

Om de hoofdvraag te beantwoorden is er een kwalitatief onderzoek uitgevoerd. Dataverzameling is gedaan door informatie van verschillende bronnen met elkaar te combineren: interviews met experts uit de praktijk, literatuur en niet-wetenschappelijke artikelen. Om dit onderzoek uit te voeren is er gebruik gemaakt van de grounded theory van Glaser en Strauss (1967), dit houdt in dat er niet is gewerkt met een hypothese die moest worden geverifieerd, maar met het genereren van kennis direct uit de gevonden data.

Drie deelvragen zijn gemaakt om de hoofdvraag te kunnen beantwoorden: 'wat doen noodhulporganisaties voor mensen met beperkingen in de voorbereiding op en tijdens een ramp?'; 'welke issues worden hierbij geïdentificeerd door mensen die werkzaam zijn in rampenmanagement?' ; en 'hoe wordt dit verantwoord (bijv. (hoe) is het gebaseerd op bewijs?). De eerste twee vragen zijn beantwoord door middel van interviews met professionals werkzaam bij verschillende rampen management organisaties, gecombineerd met informatie uit literatuur en niet-wetenschappelijke artikelen. De laatste vraag is beantwoord door de resultaten van de eerste twee vragen te vergelijken met

bevindingen uit de literatuur.

In totaal zijn er 15 participanten geïnterviewd, waarbij er gedurende één interview twee participanten aanwezig waren. De interviews waren semigestructureerd, waarbij er is gewerkt met een topic-lijst van onderwerpen die besproken werden tijdens het interview (Emans, 2002). De organisaties waar de participanten werkzaam waren zijn: het Liliane fonds; de Dutch Coalition Disability and Disaster; Educen; Geneeskundige Hulpverleningsorganisatie in de regio (GHOR) Zuid-Holland zuid (ZHZ); politie ZHZ; Unesco-IHE; veiligheidsregio ZHZ; de reddingsbrigade; het ministerie van veiligheid en justitie; gemeente Dordrecht; gemeente Barendrecht, Albrandswaard en Ridderkerk; Inconnect; GHOR Rotterdam Rijnmond (RR); en het rode kruis.

BEVINDINGEN

Er zijn veel verschillende organisaties die zich bezighouden met het voorbereiden en reageren op rampen. Door de verandering van een welvaartsstaat naar een participatiesamenleving is het moeilijk voor deze organisaties om te voldoen aan de behoeften van verminderd zelfredzamen. Hoewel organisaties zich ervan bewust lijken te zijn dat deze doelgroep specifieke aandacht verdient, blijkt dit in de praktijk lastig omdat er veel factoren zijn die hier invloed op hebben.

Kort gezegd kun je een tweedeling maken in de focus van voorbereidingen door hulporganisaties op rampen voor verminderd zelfredzamen. Enerzijds kunnen de voorbereidingen gericht zijn op individueel niveau van burgers en anderzijds op organisatorisch niveau van de hulporganisaties zelf. Binnen deze twee niveaus bestaat ook overlap.

INDIVIDUEEL NIVEAU

Er zijn verschillende soorten training- en informatie diensten om individuele voorbereiding te bevorderen bij burgers, bijvoorbeeld de noodpakket campagne 'Denk vooruit' (Rijksoverheid, 2009) waarbij burgers werden gestimuleerd een noodpakket aan te schaffen. Echter blijkt dat dit soort trainingen of diensten zelden zijn aangepast voor mensen met een beperking, terwijl dit wel nodig is om deze groep te bereiken, dit wordt in box 3 uitgelegd aan de hand van het Extended Parallel Porcess Model. Door de heterogeniteit van deze groep is het lastig om algemene trainingen of diensten aan te bieden waarmee voldoende aan hun behoeftes wordt voldaan. Het Rode Kruis biedt wel activiteiten om zelfredzaamheid van burgers te verbeteren, dan kan worden gedacht aan activiteiten als: rondbellen in een contactcirkel, workshops om risico's in en om het huis te verkleinen, EHBO cursussen, een workshop om het eigen sociale netwerk te verbeteren (Rode Kruis[1]).

Vaak zijn de voorbereiding gefocust op de populatie als geheel, een homogene groep, waarbij individuele verschillen buiten beschouwing worden gelaten. Echter, voor mensen met beperkingen is het juist van belang om individuele verschillen mee te nemen. Dit niet doen kan er toe leiden dat deze groep niet de toegang krijgt tot de assistentie die ze nodig hebben. Vooral omdat deze groep vaak toch al verminderd zelfredzaam is, kunnen voorbereidende trainingen cruciaal zijn. Daarom is het belangrijk dat organisaties die focussen op trainingen en diensten gericht op individuele voorbereidingen niet alleen bewust bezig is met de groep verminderd zelfredzamen, maar ook gefocust is op de heterogeniteit van deze groep.

Box 3. Het Extended Parallel Process Model

Het Extended Parallel Process Model is ontwikkeld door Witte (1992). Dit model legt individuele processen en reacties uit op bedreigende/waarschuwende boodschappen, en waarom en waar overtuigende angstboodschappen wel of niet werken. Wanneer de informatie die wordt verschaft is gebaseerd op een overtuigende angst boodschap (zoals voorbereiden op een ramp om het risico op letsel

te voorkomen) zal deze alleen worden geaccepteerd als de inschatting van het risico en de inschatting van de werkzaamheid van de oplossingen hoog zijn (Gore & Bracken, 2005). Wanneer één van deze twee factoren worden ingeschat als laag, zal de boodschap worden verworpen. De boodschap zal dus worden verworpen wanneer ingeschat wordt dat de aanbeveling niet kan worden uitgevoerd. Voor verminderd zelfredzamen geldt daarom, dat wanneer de boodschap niet op hun kunde is aangepast, ze de boodschap zullen verwerpen en niet handelen.

Een moeilijkheid van focussen op individuele voorbereiding is de lage risicoperceptie van de gehele populatie in Nederland. Dit komt waarschijnlijk omdat er in de laatste decennia geen grote rampen zijn voorgekomen. Een lage risicoperceptie maakt het moeilijk om burgers te bewegen om zich voor te bereiden op een mogelijke ramp. Een bijkomstige moeilijkheid die van invloed is op de welwillendheid van burgers om zich voor te bereiden is het overschatten van de capaciteiten van de hulpdiensten tijdens een ramp. Voor de verandering van welvaartsstaat naar participatiesamenleving werd door de overheid aan de burger gecommuniceerd dat ze zich geen zorgen hoefden te maken en dat de overheid voor ze zou zorgen. Met de omslag naar een participatiesamenleving is deze boodschap verandert naar dat van burgers zelf meer verantwoordelijkheid wordt verwacht. Het overbrengen van deze verandering aan de burger is nog niet voltooid (Van Duin, 2011). Ook bestaat er een risico voor burgers die in het gewone leven gebruik maken van hulpmiddelen en daarom geen beperking ervaren. Maar wanneer er iets gebeurt en de hulpmiddelen zouden wegvallen, dan zouden deze mensen ook verminderd zelfredzaam zijn. In het dagelijks leven zijn zij zich hiervan niet bewust omdat ze altijd toegang hebben tot de benodigde hulpmiddelen. Dit leidt ertoe dat deze groep zich niet voldoende effectief voorbereid op een ramp.

Al deze factoren leiden ertoe dat er een gat gaapt tussen wat burgers verwachten van de hulpdiensten en waar hulpdiensten op voorbereid zijn als er een ramp gebeurt. De mate waarin burgers bereid zijn om zich voor te bereiden op een ramp sluit niet aan bij de focus op zelfredzaamheid in een participatiesamenleving.

Een gevolg van de participatiesamenleving is dat er van burgers wordt verwacht dat ze assertief zijn en zelf om hulp komen vragen wanneer dat nodig is. Dit is anders dan vroeger, toen de overheid niet uitging van de zelfredzaamheid van de burger en hulp kwam aanbieden. Een risico hiervan is dat verminderd zelfredzame burgers die niet assertief zijn niet de hulp krijgen die ze nodig hebben, omdat ze hier niet om vragen. Het is belangrijk dat hulpverleners zich bewust zijn van deze groep, en er voor proberen te zorgen hun diensten ook voor deze groep toegankelijk te maken.

Passend bij de focus op zelfredzaamheid in de participatiesamenleving is het bestaan van burgerinitiatieven, waarbij de lokale bevolking samenwerkt om elkaar te ondersteunen bij een ramp. Verminderd zelfredzamen zullen door de lokale focus van zulke initiatieven vaker betrokkenen zijn. Daarnaast kunnen ze hierdoor ondersteuning krijgen zonder dat zij afhankelijk zijn van professionals als ze hulp nodig hebben.

ORGANISATORISCH NIVEAU

Op organisatorisch niveau spelen de veiligheidsregio's een grote rol. Deze regio's verantwoordelijk zijn voor de netwerkcoördinatie van de verschillende organisaties die kunnen bijdragen aan de hulpverlening tijdens een ramp. Als er een ramp gebeurt zorgen de veiligheidsregio's dat de kernpartners (de brandweer, GHOR, politie, en gemeente) en andere organisaties goed communiceren met elkaar, zodat iedere partij weet wat er verwacht wordt. In de voorbereidingen is het belangrijk om te oefenen met het organiseren van een kortdurende multi-organisatie, waarin verschillende organisaties en experts van verschillende achtergronden gecoördineerd samenwerken (Giordano & Pagano, n.d.). Het is hierbij de bedoeling om verminderd zelfredzame mensen zichtbaar te krijgen door bijvoorbeeld zorghuizen of lokale gehandicapten verenigingen te includeren in het netwerk. Hiermee oefenen is nodig omdat het

gecoördineerd samenwerken met veel verschillende organisaties moeilijk is, en als er echt een ramp gebeurt dit snel en soepel moet verlopen.

Een gevolg van de meer lokale focus als gevolg van het invoeren van de veiligheidsregio's is dat er een verminderde nationale eenheid is. Een regionale indeling is efficiënt omdat in verschillende regio's verschillende risico's bestaan. Nationale afstemming van de verschillende veiligheidsregio's is belangrijk omdat het niet zou moeten uitmaken in welke regio iemand woonachtig is. Daarnaast leidt dit ook tot een afstemming over de kwaliteit van de geboden hulp en als laatste kunnen de regio's van elkaar leren.

De meer lokale focus is een kans om verminderd zelfredzamen meer te betrekken bij proces van plannen en beleid maken voor hen. Feedback van deze doelgroep is nuttig omdat ze zelf het beste weten waartoe ze in staat zijn. Het luisteren naar adviezen van lokale gehandicaptenorganisaties of woordvoerders en het vragen om feedback zal de effectiviteit van de plannen en beleid verbeteren.

Sommige verminderd zelfredzamen kunnen zelfstandig wonen, maar veel verblijven in een zorginstelling of in een ouderencomplex. Verminderd zelfredzamen die thuis wonen zijn voor voorbereidingen op organisatorisch niveau zeer lastig om inzichtelijk te krijgen. Dit omdat er geen registratiesysteem of database bestaat. Hierover wordt nog uitleg gegeven in box 4. Deze data moeten worden verzameld via de netwerkpartners binnen de veiligheidsregio. Over het algemeen zullen thuiswonende verminderd zelfredzamen bekend zijn bij minstens één organisatie vanwege aanvragen van bijvoorbeeld zorg of hulpmiddelen (bijvoorbeeld traplift, nierdialyse apparatuur, of blinde geleide hond). Echter, omdat deze informatie bij verschillende partners ligt, zal het lang duren voor de juiste informatie bekend is.

Box 4. Database verminderd zelfredzamen

Het bijhouden van een database voor verminderd zelfredzamen die thuis wonen zou voor hulporganisatie een belangrijk hulpmiddel zijn om zicht hierop te krijgen. Hierdoor zou de moeilijkheid, en daarmee gepaard gaande vertraging, van het verzamelen van deze informatie vanuit de verschillende netwerkorganisaties worden weggenomen. Echter, er zijn een flink aantal kanttekeningen te maken bij een dergelijke database. Als eerste moet gekeken worden welke organisatie verantwoordelijk zou moeten zijn voor het bijhouden van deze database. Data ten aanzien van verminderd zelfredzamen zijn telkens veranderend. Iemand die verminderd zelfredzaam is vanwege revalidatie kan immers weer hersteld zijn. Het bijhouden van een dergelijke database zal dan ook veel inspanning kosten, omdat telkens veranderende informatie moet worden bijgehouden. Daarnaast bestaat er een risico dat een dergelijke database bekend wordt bij criminelen. Tenslotte zijn er kanttekeningen bij een database met het oog op privacy. In een database zou immers de naam, het type handicap en het adres van verminderd zelfstandigen vermeld moeten worden.

Een mogelijke oplossing voor deze problemen zou zijn om een database bij te houden waarin enkel een indicatie van het aantal verminderd zelfstandigen in een bepaalde regio/buurt wordt bijgehouden, zodat hulporganisaties een indicatie hebben van hoeveel mensen eventueel extra hulp nodig zullen hebben bij een ramp.

Verminderd zelfredzamen die in een zorginstelling wonen zijn voor hulporganisaties beter zichtbaar. Om verminderd zelfredzamen in een zorginstelling te betrekken bij de voorbereidingen op organisatorisch niveau moeten door de veiligheidsregio ook de zorginstellingen in het netwerk meegenomen worden. Tijdens een ramp moeten ook de BHV-ers van de zorginstellingen geïnformeerd en geraadpleegd worden. Dit om ervoor te zorgen dat tijdens een ramp door de hulporganisaties passende hulp wordt geboden, die aansluit bij de behoeften van de verminderd zelfstandigen in een bepaalde instelling. Om dit te realiseren in het belangrijk om BHV-ers te informeren over wat er tijdens een ramp van hen verwacht wordt.

Verminderd zelfredzamen die verblijven in een ouderencomplex zijn voor hulporganisaties te moeilijkste doelgroep omdat er geen overkoepelende organisatie verantwoordelijk en er veel verminderd zelfredzamen bij elkaar wonen. Verminderd zelfredzamen die zelfstandig wonen kunnen hulp vragen in hun omgeving, bijvoorbeeld aan buren, maar in een ouderencomplex zijn de buren ook verminderd zelfredzaam. De locaties van ouderencomplexen zijn niet bekend bij hulporganisaties, zoals wel het geval is bij zorginstellingen. Als er in een dergelijk complex iets gebeurt, ontdekken de hulpdiensten pas dat het om een grote groep verminderd zelfredzamen gaat wanneer ze arriveren. Een gedeeltelijke oplossing van dit probleem zou zijn om woningbouwverenigingen of thuiszorgorganisaties te betrekken in het netwerk van de veiligheidsregio's. Een definitieve oplossing voor dit probleem is echter nog niet bekend.

CONCLUSIE EN AANBEVELINGEN

Zowel op organisatorisch als op individueel niveau zijn er problemen te identificeren met het bieden van passende hulp aan verminderd zelfredzame burgers. Het is de vraag of verminderd zelfredzamen in staat zijn om te voldoen aan de verwachtingen van de participatiesamenleving. Door de focus op zelfredzaamheid is het nodig dat verminderd zelfredzamen assertief genoeg zijn om aan te geven waarvoor zij assistentie nodig hebben. Ook wordt verwacht dat ook verminderd zelfredzamen gebruik maken van de mogelijkheden tot individuele voorbereiding zoals trainingen en voorzieningen, terwijl deze niet altijd aansluiten bij hun specifieke behoeften.

→ Hulpverleningsorganisaties kunnen er niet zomaar van uit gaan dat verminderd zelfredzamen voldoende assertief zijn om de benodigde assistentie te vragen en moeten in hun aanbod rekening houden met de specifieke behoeften en heterogeniteit van deze doelgroep..

Door de indeling in veiligheidsregio's kan op organisatorisch niveau worden aangesloten bij de lokale behoeften. Daarbij kan hierdoor rekening gehouden worden met de verschillende risico's in de verschillende regio's. Ook biedt de regionale indeling mogelijkheden om ruimte te geven aan lokale gehandicaptenorganisaties of woordvoerders om mee te denken over beleid, zodat beter aangesloten kan worden bij hun lokale behoeften. Wel is het hierbij van belang dat in alle regio's dezelfde mate van hulp en ondersteuning wordt geboden, omdat het voor burgers niet uit zou moeten maken in welke regio zijn woonachtig zijn. Dit biedt ook de mogelijkheid voor regio's om van elkaar te leren.

→ Veiligheidsregio' s moeten op nationaal niveau met elkaar afstemmen en van elkaar leren. Om dit te realiseren is het belangrijk om regelmatig op overkoepelend niveau met elkaar in gesprek te gaan. Op regionaal niveau moet ruimte geboden worden voor verminderd zelfredzamen om feedback te geven op beleid dat voor hen wordt geschreven.

Wanneer er een ramp gebeurt is het de bedoeling dat er een kortdurende multi-organisatie ontstaat met de veiligheidsregio als coördinator. Hierbij worden verminderd zelfredzame burgers inzichtelijk gemaakt door het betrekken van zorghuizen en lokale gehandicapten verenigingen in het netwerk. Tussen alle verschillende organisaties moet sprake zijn van samenwerking en overleg.

→ Om deze samenwerking soepel te laten verlopen moeten er regelmatig trainingen met rampscenario's worden gehouden waar de verschillende organisaties binnen het netwerk bij betrokken zijn..

Verminderd zelfredzamen die thuis wonen zijn voor hulporganisaties lastig inzichtelijk te krijgen. Tijdens een ramp moet hiervoor bij verschillende organisaties data verzameld worden. Doordat het opstarten van hulpverlening voor deze doelgroep enige tijd in beslag zal nemen zijn zij vaak aangewezen op hulp vanuit hun netwerk of omgeving. Burgerinitiatieven kunnen bijdragen aan het bieden van hulp voor thuiswonende verminderd zelfredzamen, omdat deze initiatieven vaak een zeer lokale focus hebben.

→ Hulporganisaties moeten zich bewust zijn van de belang die door de participatiesamenleving wordt gelegd op het hebben van een netwerk voor thuiswonende verminderd zelfredzamen en zouden burgerinitiatieven moeten promoten.

Zorginstellingen zijn verantwoordelijk voor de hulpverlening aan verminderd zelfredzamen die in een zorginstelling wonen. Deze doelgroep is voor hulpverleningsorganisaties inzichtelijker dan verminderd zelfredzamen die thuis wonen of in een ouderencomplex. Om samenwerking met zorginstellingen goed te laten verlopen moeten deze zorginstellingen in het netwerk van de veiligheidsregio meegenomen worden.

→ Hulpverleningsorganisaties moeten ervoor zorgen dat BHV-ers uit zorginstellingen weten wat er van hen wordt verwacht tijdens een ramp en dat zij voldoende zijn betrokken bij het netwerk.

Een zeer moeilijke doelgroep voor hulpverleningsorganisaties zijn de verminderd zelfredzamen die in een ouderencomplex wonen. Voor deze complexen is geen overkoepelende organisatie verantwoordelijk voor de bewoners. Daarbij bestaat er geen database van de locaties van zulke complexen voor hulpverleningsorganisaties, zoals deze voor zorginstellingen bestaat. Een definitieve oplossing voor dit probleem is nog niet bekend.

→ Hulpverleningsorganisaties moeten zoeken naar een oplossing voor het probleem van verminderd zelfredzamen die wonen in ouderencomplexen. Een gedeeltelijke oplossing kan zijn om woningbouwverenigingen of thuiszorgorganisaties te betrekken in het netwerk van de veiligheidsregio's.

Verschillende organisaties die betrokken zijn bij rampenmanagement kunnen verschillende dingen bieden om verminderd zelfredzame mensen te ondersteunen, daarom is het belangrijk dat organisaties zich bij het maken van plannen en beleid zich bewust zijn van de heterogeniteit van deze groep, en telkens nagaan wat zij kunnen doen om deze groep gepaste hulp te bieden.

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INTRODUCTION

DISASTERS AND DISABILITY IN GENERAL

Due to disasters, worldwide over 700 thousand people are estimated to have died, and over 1,4 million to have been injured, in the period 2005 to 2015. During these 10 year, more than 1,5 billion people have variously been affected by disasters worldwide (UNISDR, 2015). An increase in frequency and intensity of disasters is seen, which might be due to disasters being exacerbated by climate change (UNISDR, 2015). When looking at Europe, in the period of 2000 to 2015 there have been 894 disasters reported to the Emergency Events Database (EM-DAT), which were due to natural hazards. These cost the lives of nearly 150,000 people, and more than 14 million people were affected by these disasters (EM-DAT, 2016). Literature shows that people with disabilities are more likely to be harmed by disasters (WHO, 2011). Around 15% of the global population is currently estimated to be living with some form of disability, and this number is increasing. This increase is caused by an ageing population (as older people have a higher risk of disabilities), and by a global increase in chronic health conditions which can be associated with disability, e.g. diabetes, cardiovascular diseases, and mental illnesses (WHO, 2002). Both these trends can be seen in the Netherlands (CBS, 2014). The ageing population and the increase of chronic health care conditions, on top of more expensive treatments, lead to an increase in health care costs (Hartholt et al. 2012; CBS, 2014; Trivedi, 2016), which in turn leads to cost reduction in health care.

Moreover, not only do disabled suffer people more harm during a disaster, disasters also cause disabilities, both physically and mentally (WHO, 2007). The direct effects of a disaster are shown to be more severe for people with disabilities compared to the general population, for example: they are less capable to cope with the deteriorated environment; they are less able to flee or find protection; and they experience greater loss of autonomy (WHO, 2011). However, these higher effect rates of disasters on disabled people are not solely due to their disabilities, but also to the inadequacy and inability of the disaster management system to meet their needs. Disabled people are not always included at all levels in disaster management (WHO, 2007), even though disabled people should have equal access to support during a disaster as the general population (Sphere project, 2011). In recent years, there has been more attention for how to better provide aid for disabled people during disasters. For example; disabled people are referred to in each chapter of the Sphere Project Handbook, which contains internationally recognized and widely known sets of common principles and universal minimum standards which should be met in humanitarian responses (Sphere Project, 2011); and the World Health Organization (2007) provides a list of specific practical challenges for meeting the needs of disabled people in disasters and how to overcome these. It is important to note that disabled people are not a homogeneous group, and different disabilities have different needs, which makes the making of general policy more difficult. A 'one size fits all' approach is therefore not sufficient to meet all the needs (Sphere project, 2011; Njelesani et al., 2012). However, many of the needs disabled people have during a disaster are not much different from the needs of the general population (shelter, water, sanitation, food) (WHO, 2007).

THE NETHERLANDS

The Netherlands have not been struck by many major disasters, such as large floods, in the last decades (Kerstholt & Koenders, 2009). However, due to its location the Netherlands were ranked 12th in the world's "most exposed" countries, and the World Risk Index ranked the Netherlands 50th (Garschagen, 2015) based on components of exposure (to natural hazards), susceptibility, coping capacities, and adaptive capacities (Garschagen, 2015). The Netherlands have a vulnerable position with regard to rising sea levels due to climate change, since large parts of the Netherlands are below sea level and have to be protected by dykes. However, the Netherlands are very focused on flood prevention and the current level of flood protection is higher than ever, therefore the relative risk of a big flood is not that high (Kolen, Hommes & Huijskes, 2012). Nonetheless, it is important to prepare for the moment disaster does strike,

especially for people with disabilities, as they are proven to be more vulnerable to suffer from harm due to disasters (WHO, 2011). These preparations are necessary not just to prepare for a flood, but also for other disasters of which there is a relative risk of occurring in the Netherlands, such as: heat or drought; snow storms; a nationwide black-out; a pandemic flu; or a major fire in a natural area (Kolen et al. 2012).

SAFETY REGIONS

To improve the disaster preparedness in the Netherlands, the Dutch Safety Regions Act was entered into force in October 2010 (Ministry of Security and Justice, 2010). This act divides the Netherlands into 25 safety regions, see Figure 1. The goal of these regions is to better protect citizens against risks of fire, disasters and crises in the regions. The introduction of regions was decided upon as disasters often cross municipal boarders. In order to ensure efficiently and high quality, this act organizes the crisis management, fire services, and emergency medical assistance under one regional administrative authority. The evaluation rapport of the inspection of safety and justice from 2016 shows that the safety regions are positively developing in their preparedness for disasters and the consistency of their policies (Inspectie Veiligheid en Justitie, 2016). Safety regions can be seen as network organizations working closely with partners organizations to prepare for disaster.

FROM WELFARE STATE TO PARTICIPATION STATE

The Netherlands is reforming from a welfare state towards more of a participation state (Delsen, 2012). The focus shifted from income protection to labour participation, i.e. from welfare to workfare. Participation is considered to be an effective way of absorbing the costs of an ageing population and to encourage social cohesion (Delsen, 2012). In the participation state citizens are expected to be actively involved in society (Boutellier, Steden & Stokkom, 2016). This trend is also visible in relation to safety. For example; citizens receive subsidies to install better locks, insurance premium can be dependent on safety certificates, and both the police and local government facilitate WhatsApp neighbourhood prevention groups. All in all, more often citizens are expected to take responsibility with the governments assistance (Boutellier et al. 2016). Another example of this trend is the introduction of self-reliance[1].

SELF-RELIANCE

In disaster risk response organizations in the Netherlands, people with disabilities are indicated as reduced or non self-reliant citizens. The Dutch government project 'Zelf-redzaamheid bij rampen en crisis' aims to get citizens to take more responsibility in preparedness for disasters (Ter Horst, 2009). The Dutch government views self-reliance as the capacity of citizens to help themselves and others when disaster strikes, as opposed to emergency aid services or disaster professionals. Citizens who need the help of professionals are labelled as reduced or non self-reliant (Kolen et al. 2012). The Dutch Minister of Internal Affairs and Kingdom Relations, Mrs. Ter Horst informed the parliament about the efforts to increase the self-reliance of Dutch citizens in a letter sent in June 2009 (Ter Horst, 2009). However, in most cases the capacities of the citizens and the emergency aid organizations might have to be combined (Kolen et al. 2012).

RESEARCH AIM

All in all, many things have changed or are changing with regard to the disaster management in the Netherlands, both with the introduction of the Safety Region Act, the reformation towards a participation

[1] In Dutch the word 'zelfredzaamheid' is used. This literally translates to: 'the capability to look after or to save oneself'. However, there is no accurate English equivalent for this word. Therefore, the term 'self-reliance' is used in this paper to translate 'zelfredzaamheid', even though it does not cover the exact meaning.

state, and the increasing focus on self-reliance. It is important to investigate whether the needs of people with disabilities are being met in the new working methods of disaster risk management. Especially given the increasing numbers of people living with a disability (WHO, 2002). Therefore, the aim of this study is to investigate how the needs of disabled people are included in disaster management organizations in the Netherlands. The research question this research aims to answer is: 'How is meeting the needs of people with disabilities or reduced self-reliance incorporated in the practice of disaster management organizations in Europe[2] and what issues can be identified?'.

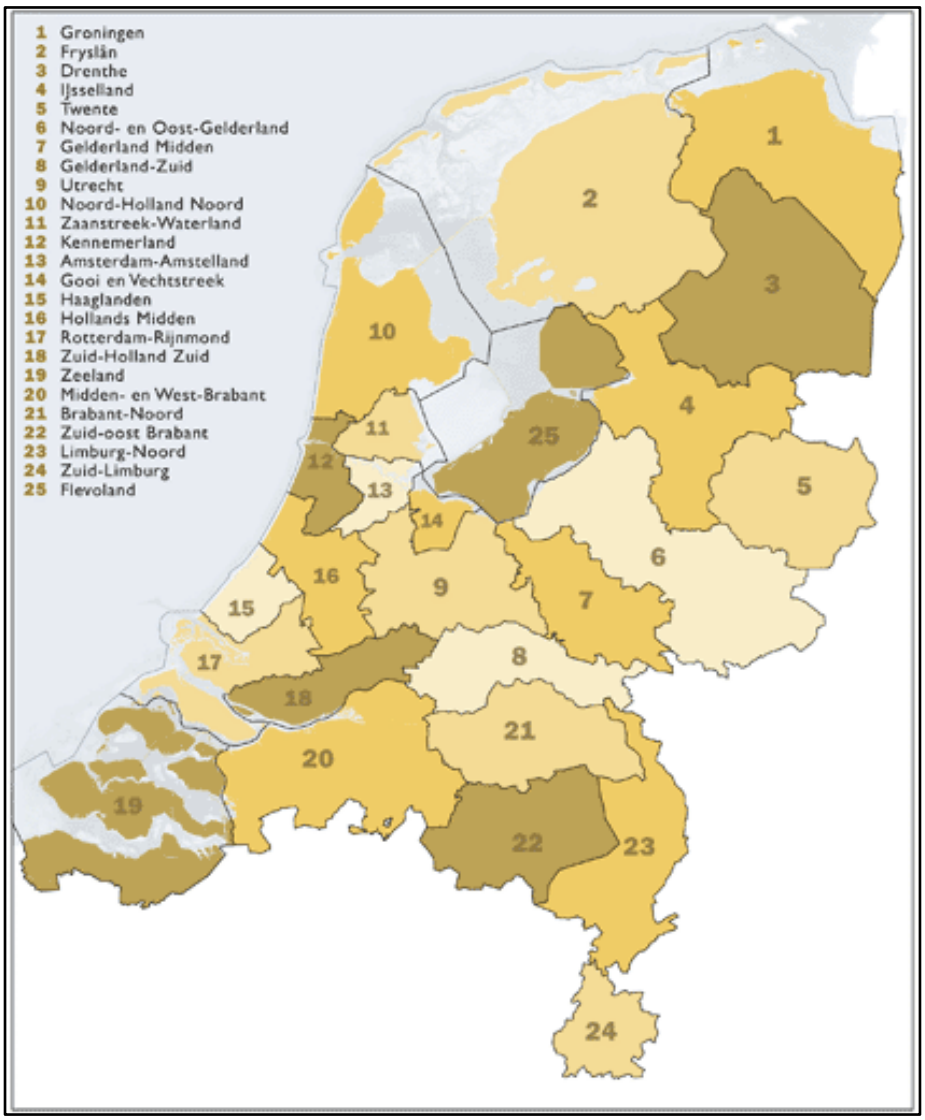

FIGURE 1: ***THE 25 SAFETY REGIONS IN THE NETHERLANDS***

[2] Originally this research was supposed to focus on Europe. However, during data collection it became clear that collecting the data necessary to answer this research question was not doable. It proved impossible to get in touch with the correct people, this was made more difficult by a language barrier and time constrains. It was decided to focus the research solely on the Netherlands. Therefore, this report is written with a focus on the Netherlands, and the main research question that will be used hereafter is: *'How is meeting the needs of people with disabilities or reduced self-reliance incorporated in the practice of disaster management organizations in the Netherlands and what issues can be identified?'*.

METHODS

In order to answer the main research question a qualitative research has been conducted. Data collection was done with a mixed-method approach, combining data from interviews, literature, and non-scientific papers. To conduct this research the grounded theory developed by Glaser and Strauss has been used (1967). Grounded theory can be seen as a technique, which directly generates knowledge from data instead of trying to verify hypotheses (Wasserman, Clair & Wilson, 2009). Therefore, this research is inductive, as these findings will be used to generalize.

To answer the main research question, three sub-questions have been conceptualized: 'What do organizations do with respect to people with disabilities in preparation for and when responding to disasters?' ; 'What issues do people, working in disaster risk management, see in this?'; and 'How is this justified? (e.g. (how) is it based on evidence?)'. The first two questions are answered during multiple interviews with different disaster management organizations and with use of non-scientific papers and literature. Thereafter, the third question is answered by comparing the outcomes of the two questions with findings from literature, in order to find out whether and how the used methods are grounded in literature.

PARTICIPANT SELECTION

Several disaster management organizations have been contacted in the Netherlands and in Turkey via existing contacts of the University of Wageningen. At first, a few interviews were conducted with people working in disaster management at international level, in order to get a clearer picture of what is currently happening globally. After these orientating interviews, the focus shifted to people working in disaster management in the Netherlands. During these interviews purposive and snowball sampling was used, as participants were asked whether they knew other organizations or people with whom it would be relevant to conduct an interview. For grounded theory it is important to have 'maximum variation' in the sampling of participants (Bowling & Ebrahim, 2005). Therefore the aim was to include a broad spectrum of organizations and people working in disaster risk management (see Table 1).

The inclusion criteria used for the interviews were as follows: the organization the participant works for had to have relevant ties to disaster and disability; the organization has to be based and working in a Western country; participant had to speak English or Dutch. Participants not meeting these criteria were excluded from participation. These exclusion criteria were decided upon because; participants had to have relevant information for this research on disasters and disabilities; the focus of this research is on the Netherlands; the researcher has a language barrier outside of English or Dutch.

DATA COLLECTION

In total 14 interviews have been conducted with 15 participants (Table 1). The interviews were conducted face-to-face if possible. However, if distance was an issue or the participant preferred it, the interviews were conducted over the phone or with use of Skype. Interviews were semi-structured with use of a topic-list following the guidelines of Emans (2002). Examples of topics that were discussed in these interviews are: inclusion of disabled people in planning (prior to disaster); decision of policies (why this way and who decides); inclusion of disabled people during a disaster and the rescuing/assisting; problems that may have occurred in the past or bottlenecks identified by the participant. The interviews were recorded (all participants authorized this) and transcribed afterwards (appendix I).

Using grounded theory means that this research began not with a hypothesis but with collecting data, which was coded and then grouped into concepts. The coding has been done with use of ATLAS.ti version 7.5.15. The combination of data collection and analysis is a dynamic process. This means that during the research, data was collected and analysed, following this, more data was collected which pursued the

issues and themes from the earlier data analysis. During the entire process data segments are compared to each other, this is called the method of 'constant comparison' (Bowling & Ebrahim, 2005; Wasserman et al. 2009). This process has been repeated until saturation was reached, and nothing new emerged from the data. By combining and comparing the codes a code tree has been created, the chapters of this report are based on this tree.

The inclusion criteria for the literature and non-scientific papers were the following: it has to have been written after 1980; the focus of the research has to be on developed countries (Europe, North America, Oceania); the source has to be reported and reliable; the text has to be in English or Dutch. These criteria were decided upon because; much of the disaster literature written prior to 1980 focuses mainly on nuclear disasters (Altay & Green, 2006); the focus on the developed countries is because this research focuses on the Netherlands, and disaster management in developing countries is very different from developed countries; the source of the paper must be known and found reliable to make sure the information it contains is accurate; the text had to be in English or Dutch because of the language barrier of the researcher.

This paper is structured as follows: first, the result section will describe the main findings of this research; next, the sub-questions and main research question will be answered in the conclusion; following this, recommendations will be offered; and last, discussion points will be identified.

TABLE 1: ***OVERVIEW OF PARTICIPANTS IN THIS RESEARCH***

	Organization	**Language**	**Particulars**	**Relevance**
1.	Liliane	Dutch		Orientation in the international disaster management field
2.	DCDD	Dutch		Orientation in the Dutch disaster management field
3.	Educen	English	Skype	Disability as a culture related to disasters
4.	GHOR ZHZ & police ZHZ	Dutch	2 participants	Working methods and possible issues of GHOR and police in region ZHZ
5.	Unesco-IHE	Dutch	Previous work: Red Cross & research floods	Information on working methods of Red Cross; international information on dealing with flood risk
6.	Safety region ZHZ	Dutch		Working methods and possible issues in crisis management of the safety region ZHZ
7.	Rescue team NL	Dutch		Working methods and possible issues of the rescue team in the Netherlands
8.	Ministry of safety and justice	Dutch		Working methods and possible issues of the Dutch ministry of safety and justice
9.	Municipality of Dordrecht	Dutch		Working methods and possible issues in crisis control of the municipality of Dordrecht
10.	Municipality of BAR	Dutch		Working methods and possible issues in risk management and population care of the municipality of BAR
11.	Inconnect	Dutch		Information on different types of training and information services in the Netherlands
12.	GHOR RR	Dutch	Phone	Working methods and possible issues of the GHOR RR
13.	Red Cross	Dutch		Working methods and possible issues of the Red Cross, with a focus on policy and quality of national emergency aid
14.	Red Cross	Dutch	Skype	Working methods and possible of the Red Cross, with a focus on self-reliance

RESULTS

Using graded theory means that the data found is constructed into a theory (Wasserman et al. 2009). The data consists of the views of the participants, consequently the theory is constructed from their views. First the main construct of the found theory will be discussed. The theory is thereafter used to explain the findings.

The other chapters in this results section are based on the main outcomes of the code tree, which has been constructed by combining the main topics of the interviews. This structure is as follows: first, the individual preparedness will be discussed; followed by a chapter on the differences of living in health care facilities versus living independently; next, the networking of the safety regions and other organizations will be discussed; and last, the bottom-up approach to disaster management will be explained. Each chapter is build up as follows: first, what disaster risk management organizations stated they do will be discussed; followed by what they stated actually should be done; following this, how they explain the gap between these two will be mentioned. All chapters end with a sub-chapter in which the findings are being related to evidence from literature.

The results chapter ends with the a summary of the unexpected findings of this research. It consists of topics which came up during the semi-structured interviews, which were not on the topic-list, but do contribute to answering the main research question.

THEORY CONSTRUCTED FROM DATA

This research set out to find the inclusion of people with disabilities in disaster risk management in the Netherlands. However, during the interviews it became clear that disaster risk management organizations do not work with the term disabled people. People working in the field use the extent of self-reliance of its citizens to organize them in their policies. This finding has direct influence on the rest of the findings, as they are all focussed on the self-reliance of the citizens and not on disabilities.

Self-reliance is the capacity of citizens to help themselves and others when disaster strikes, as opposed to needing assistance of emergency aid services or disaster professionals (Kolen et al. 2012). Citizens who do need the help of professionals are labelled as reduced or non self-reliant, and people with disabilities will often fall into this category. The concept of self-reliance will hereafter be used to describe the found data.

INDIVIDUAL PREPAREDNESS

As mentioned in the introduction, the current way the emergency aid is organized in the Netherlands is different from how it used to be. The government is less involved than before and there is more focus on citizens assisting each other. Being self-reliant is getting more important (Rode Kruis[1], n.d.), therefore it is important that disaster risk management organizations focus on increasing this. In order to achieve this, all kinds of training-, and information services are being organized to increase the individual preparedness of citizens. For example, different municipalities work on campaigns for disaster prevention and preparedness, with use of different methods, such as: flyers; workshops; and trainings. The BAR municipality organized gatherings for the elderly during which the fire department, the police, and the ambulance service gave presentations on safety in and surrounding the house. However, these types of training are often not specifically for people who are reduced self-reliant.

The Red Cross works on individual preparedness by offering five different advices to help prepare individuals for emergency situations. These consist of: tips on how to prepare for a flood; advice on how to deal with extreme weather; tips on how to create an emergency aid kit; a free first-aid APP; and offering activities to improve self-reliance (Rode Kruis[1], n.d.). There are five self-reliance improving activities which focus on individuals and neighbourhood (Rode Kruis[2], n.d.):

- *Rode Kruis aan huis.* A Red Cross employee visits people with reduced self-reliance at home, they work together on detecting risks and possible solutions in and surrounding the house.
- *Contact-cirkel*. For people with a small social network. Groups of people who lives in the same neighbourhood call each other to check up on them, without an extern facilitator. Starting the circle each day is their own responsibility. If one of the participants is unreachable, there is a key-person who will go visit.
- *Cursus sterk door je netwerk.* A training to teach people the importance of a strong social network and how to actively strengthen theirs.
- *Workshop risico's in en om het huis.* A workshop which focusses on general risk factors in and surrounding the house and tips on how to minimalize this.
- *EHBO op maat.* An active training in first aid for people with an increased risk during disasters, or who want to help others.

People with reduced self-reliance can also participate in these activities. Besides these activities the Red Cross also support local initiatives to increase self-reliance. Local initiatives will be discussed further in the chapter on the bottom-up approach.

What exactly should be done to increase individual preparedness is difficult to establish. However, it is clear that disaster risk management organizations find it a difficult task. Among other things, because most citizens do not feel the need to do it, due to a low disaster risk perception. On top of that, citizens have a lot of trust in the government and the emergency services (van Duin, 2011). Therefore the efforts to increase the individual preparedness do not always have the expected outcome.

Multiple participants mentioned that the disaster risk perception is very low in the Netherlands, as in recent years not many major disasters have happened. A low risk perception means that people perceive the chance of a disaster happing as low. This is a good thing, because it means few causalities and damage. However, it makes it very difficult to convince people to prepare themselves in case something does happen. For example, during one of the interviews it was mentioned that the government campaign on emergency supply kits did not have much effect. One of the participants explained it by using a hook-and-eye metaphor: something needs to happen to make citizens wanting to do something (the hook), and there needs to be the possibility to actively do so (the eye). He stated that if nothing happens it would be almost impossible to get citizens to want to prepare for disaster. Moreover, this low risk perception makes it also difficult to convince people with reduced-self-reliance to prepare for if something happens, and for them it is even more important to be well prepared than for the general population. Prevention is often not seen as a priority. Especially people with a low income or small pension have to make tough budget decisions, and investing in safety devices such as a smoke detector might be neglected.

Even though the Netherlands are changing from a welfare state to a participation state, as mentioned in the introduction, many citizens still have the idea that they live in a welfare state. Emergency service workers in this research mentioned that citizens expect that when they are in crisis and call emergency services, they will be saved immediately. With small incidents it usually works accordingly, however, when something bigger happens it will not. Citizens have to be able to help themselves, because emergency services cannot work that fast on a big scale. Emergency services will then be used for people who cannot survive on their own, such as patients in hospitals or those who suffered severe harm. The general population is expected to look after themselves for at least 48 hours. An example of this is vertical evacuation (Kolen et al. 2012). Vertical evacuation means that if there is flood risk, people are expected to go to the top floor of their houses, or other high buildings in the neighbourhood. As opposed to being horizontally evacuated to a shelter somewhere the water will not reach. This has to do with the fact that it will be nearly impossible to evacuate big cities (especially if there is little time), as there will not be enough roads for everyone to leave (Friso, van Zuilekom, Kolen, & Holterman, 2009). However, it also shows that people need to prepare to look after themselves. They have to arrange enough for supplies themselves, because it will take a while for emergency services to get to them.

A difficulty in increasing individual preparedness for a disaster is the group of people who are unaware that they might become reduced or non self-reliant if disaster strikes. The direct environment has a big effect on the extent of restrictions caused by a disability. For example, if the environment is supportive, impairments such as deafness or blindness do not have to be a disability. However, when the environment suddenly changes, which happens during a disaster, the prevalence of disabled in the area is affected (WHO, 2011). The DCDD explained that reduced self-reliance can also happen to people who experience no disability in normal life. People who live with a small impairment, for example a small visual disability which is solved by wearing glasses. These people do not realize that such impairments can turn into disabilities if something happens to the aids. Therefore, they are difficult to convince to prepare.

EVIDENCE FROM LITERATURE

During the interviews it was mentioned that the risk perception among Dutch citizens is low. However, the risk diagram of the Netherlands, which can be sighted in **Fout! Verwijzingsbron niet gevonden.**, shows that there are several disasters which are highly likely, likely, or possible in the Netherlands. On the other hand, it also shows that the disasters with the more severe consequences are more unlikely to happen (Kolen et al. 2012).

Some important aspects that influence risk perception are identified by Ruitenberg and Helsloot (2004): catastrophic potential or perceived dread; iniquity in consequences; uncontrollability; new risks versus known risks (e.g. new technology); hidden or deferred effects of the risk (e.g. cancer after years of exposure); and unclarity about social benefits of risky behaviour. More recently added are: (lack of) faith in or clarity of responsible authorities; and risk of accidents caused by purposely unsafe or criminal behaviour (Ruitenberg & Helsloot, 2004).

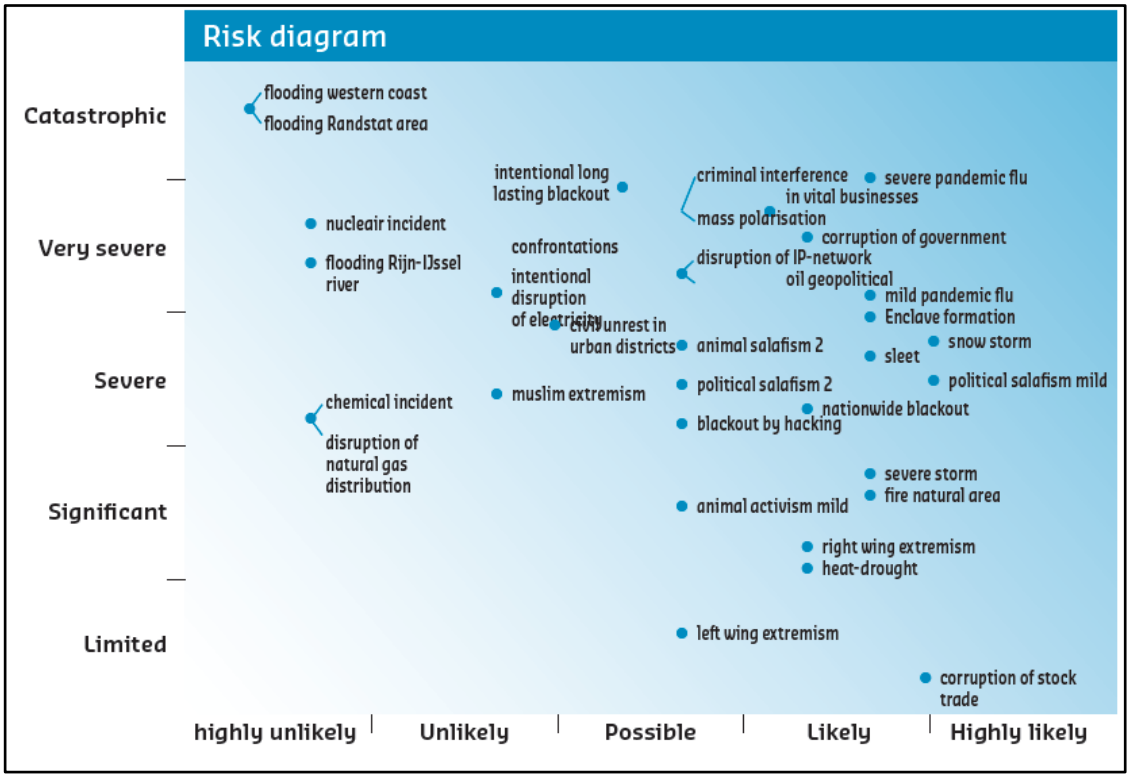

FIGURE 2: ***RISK DIAGRAM OF THE NETHERLANDS***

Risk perception and related concepts are important factors to cause or inhibit preventive behaviour. However, communication which solely focusses on risk awareness is proven to be insufficient. To get citizens to convert risk perception into effective behaviour that stimulates self-reliance, it is important to

also offer action perspectives in the messages (Gutteling, Terpstra & Kerstholt, 2015). In one of the interviews the emergency supply kit campaign was mentioned. This refers to the 'Denk Vooruit' campaign which the Dutch government launched in 2006. The aim of this campaign was to increase the awareness of citizens of the co- responsibility for their own safety and to provide them with an action perspective. This action perspective included among others the purchase of an emergency supply kit. The evaluation research for the campaign, which was held in 2009 showed that 75% of the Dutch citizens was familiar with the advice of the government to get an emergency supply kit; 56% of the citizens felt it was useful to have an emergency supply kit; and 42% showed interest in buying one if it were for sale (Rijksoverheid, 2009). A year later, 79% of the respondents knew of the message of the campaign, and 81% felt it was important to know. However, only 36% respondents stated they were planning on buying a kit (Ter Horst, 2010). The low buying interest might be explained by a lot of respondents stating they already owned a lot of the items on the emergency supply kit list, therefore they had no interest in buying a kit (Ter Horst, 2010). Moreover, when investigating how many people actually purchased an emergency supply kit, only 0.3% of the household turned out to have followed through (NOS.nl (2010) via Kolen et al. 2012). Low preparation intention is linked to three psychological mechanisms: low risk perception; low perception of own responsibility; and low perception of preparation effectiveness (Kolasinac Holsappel & te Brake, 2012). More recently the 'Denk Vooruit' campaign has been focusing on what items are already present in most households, since often a lot of the items on the list of the emergency supply kit are already present in normal households. This list includes items such as: food supply; flash light; spare batteries; and a battery-powered radio (Laat, 2009).

How people respond to shocking experiences can be predicted with use of four personal characterizations which all relate to resilience, which subsequently relates to self-reliance[3] (Kolasinac, 2012). These four factors are (Hoijtink, te Brake & Dückers 2011):

- *Psychological resilience*. This includes character traits such as self-confidence, discipline, and determination. Self-efficacy (belief own capabilities) (Bandura, 1997) is also of influence on psychological resilience. The belief that one can be self-reliant during an emergency influences the idea of control one has on their own faith. Which translates into action during an emergency.
- *Social context*. The perception people have of their own social environment, especially the social support they expect to receive when necessary, associates positively with resilience.
- *Faith in the government and its information services.* The amount of trust in the correct information provided by the government via different routes (newspapers, radio, tv, social media) influences resilience.
- *Expectations regarding own behaviour (and behaviour of others)*. The expected behaviour during a disaster, such as looking for information; adapt to changed environment; willingness to evacuate; and following governmental advice, and the expected behaviour of others such influences resilience.

For years the government stated that citizens do not have to worry, they would be taken care of. More recently this is changing to citizens needing to be more self-reliant. Changing this image of the government and of the way emergency services work is still in progress. This is supported by research: according to a survey conducted among 600 professionals in crisis management in the Netherlands, 87% of these professionals felt that the self-reliance of citizens has to be stimulated more by government policies, amongst other things because the expectations of the citizens of the emergency services are too high (58%) (Van Duin, 2011).

[3] In this context the used definition of self-reliance has no regard for physical disabilities that can prohibit someone from actually being self-reliant (e.g. being paraplegic).

To explain why individuals would look for risk information the Framework of Risk Information Seeking (FRIS) model can be used (Ter Huurne, 2008). The FRIS model is based on the Risk Information Seeking and Processing (RISP) model of Griffin, Dunwoody & Neuwrith (1999). The FRIS model can be sighted in **Fout! Verwijzingsbron niet gevonden.**. The FRIS model adds some determinants to the RISP model. It states that risk related information seeking behaviour can be summarized in a process of three phases: the first phase, the Risk Context Factors, is the awareness phase. In this phase risk perception, self-efficacy, and amount of involvement are important. These determinants influence the goal or the application for which one needs the risk information. The second phase, the Risk Information Utilities, which consists of cognitive-, (information sufficiency), affective-, (affective response), and social-, (subjective norms) information needs. Information sufficiency is the perception of a gap between the present knowledge and the knowledge needed to act adequately. Affective responses are reactions to risk based on emotions such as anger, worry, or anxiousness. The presence of these emotions motivate one to search for relevant risk information. Last, subjective norm is the need for information based on social environment (Ter Huurne, 2008).

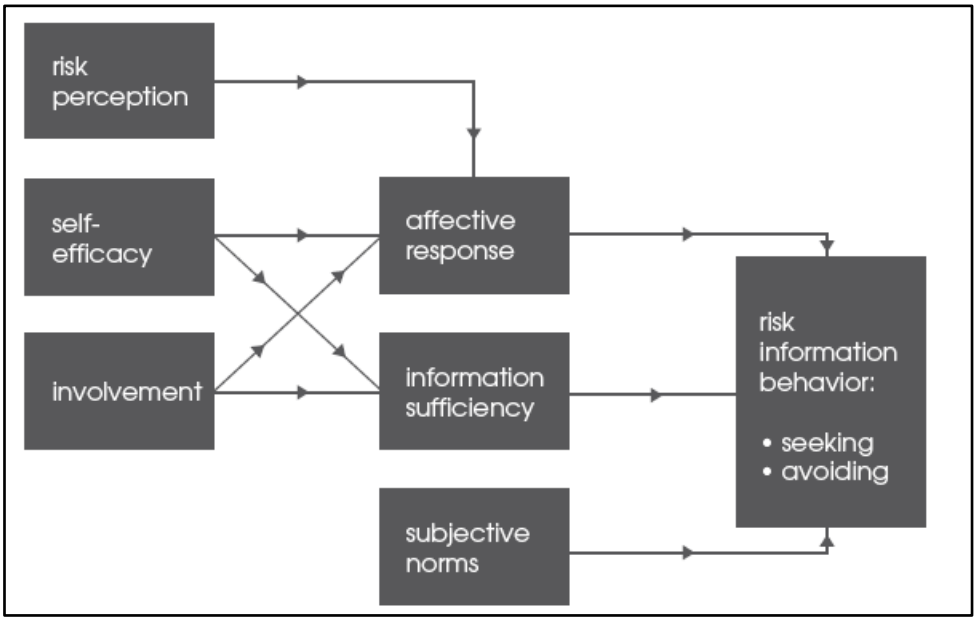

FIGURE 3: FRAMEWORK OF RISK INFORMATION SEEKING MODEL

Another relevant model is the Extended Parallel Process Model (EPPM) is a model created by Witte (1992), it can be sighted in **Fout! Verwijzingsbron niet gevonden.**. EPPM attempts to explain the individual processes and responds to threatening messages, and why and when persuasive fear messages work or do not work (Gore & Bracken, 2005). According to the EPPM, when an individual experiences a fear appeal, two cognitive appraisals of the message might occur, which are problem (threat) and solution (efficacy information). Of the perceived threat, susceptibility and severity are two critical factors. Moreover, the EPPM has two different efficacy types: response efficacy and self-efficacy. According to Gore and Barack (2005), response efficacy is the belief in the effectiveness of the recommended response to deter the threat, and self-efficacy is an individual's perception of their ability to perform the recommended response to forestall the threat. These two appraisals can result in one of the following three outcomes: 1) there is no response; 2) the message is accepted; or 3) the message is rejected. If an individual is exposed to a fear appeal, they will first appraise the threat of the message. If there is a high level of threat, the fear is provoked and the individual is motivated to being the second appraisal (evaluation of the efficacy) or the recommended response. However, if the threat is assessed as not relevant or as low, then there is no motivation to process the message, efficacy will not be evaluated, and there will be no response. Finally, if the EPPM predicts that a threat is high, individuals can follow one of

the two pathways: the danger control process-pathway, or the fear control process-pathway. When the level of threat and efficacy is high, an individual will follow the danger control process-pathway, meaning they will deal with the threat and possible solutions to avert it. When threat is high and efficacy is low, individuals will follow the course of fear control, meaning that the message will be rejected (Gore & Bracken, 2005).

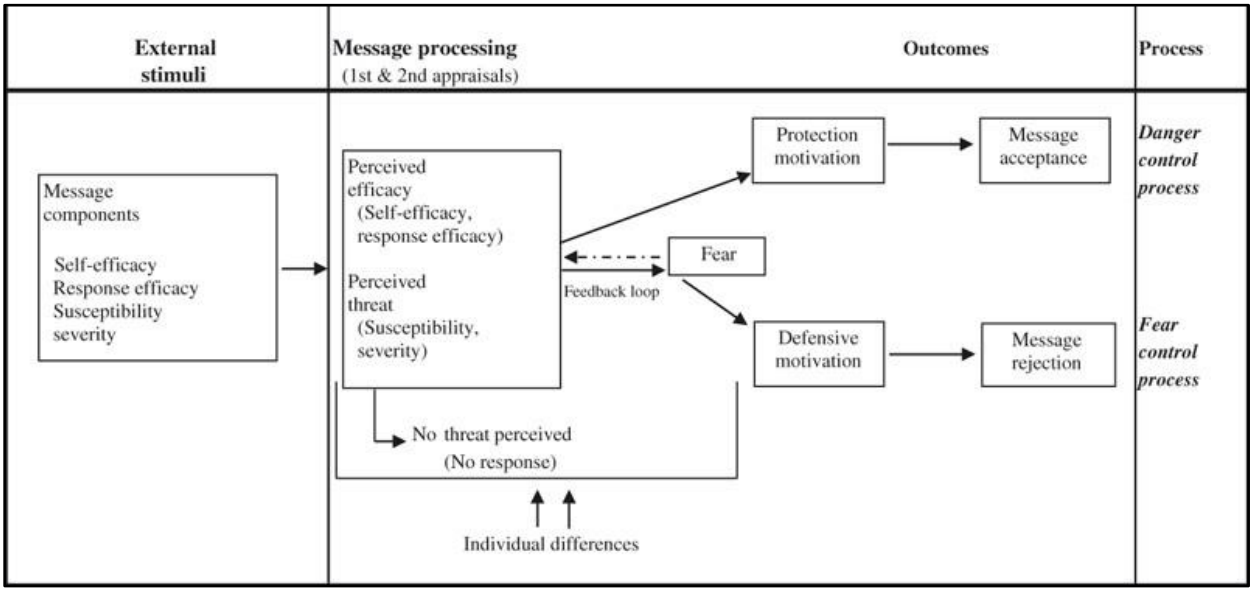

FIGURE 4: E*XTENDED PARALLEL PROCESS MODEL*

HEALTH CARE FACILITY

It makes a difference whether reduced self-reliant people live in a health care facility or live independently if disaster strikes. This has mainly to do with who is responsible for their safety and how visible they are to emergency services. In this chapter reduced self-reliant people living in health care facilities will be discussed, the next chapter focusses on those who live independently.

Health care facilities such as hospitals and care homes are always responsible for their own patients. Therefore it is important that they are prepared for if something happens. During one of the interviews it was mentioned that care facilities are supposed to be able to facilitate their care for 72 hours without external assistance. One of the tasks of the Geneeskundige Hulpverleningsorganisatie in de regio[4] (GHOR) is to assist with this. During an interview it was explained that the GHOR of ZHZ does this in many different ways, for example: by offering advice or trainings; by going through the existing plans; by organizing work conferences; and by holding road shows at municipalities, where all health care facilities in that region are invited to, so they can combine their plans. However, care facilities are not obliged to make use of the services the GHOR offers, which can be difficult. The GHOR is not responsible for checking the existing crisis plans, there is a seperate inspection responsible for that. This means that for example if the GHOR feels that a facility does not have its plans in order, but the facility refuses the services of GHOR, the inspection can be alarmed.

It is important for health care facilities to know what to expect from the emergency services, therefore they should be informed on this, this should be done by disaster risk management organizations. All facilities have an in-house emergency response team (ERT), however, not all of them know exactly what to

[4] Governmental organization responsible for leading and coordinating of the medical emergency services during disasters.

expect from emergency services. In the BAR municipality, a meeting was organized between the safety region and care facilities. During this meeting it became apparent that the perception of what would happen if there was a crisis at one of the facilities was very different. The facilities assumed that as soon as the emergency services arrived, they would take over. Whereas the emergency services assume that the in-house ERT of the facility would assist in the evacuation and can inform them of what difficulties to expect. This difference in perspective was mentioned in other interviews as well.

If there is a big incident at a facility a lot of different organizations will be involved. A trailer truck which serves as a conference room: the 'CoPi' (Commando Plaats incident), will be set up in front of the facility. Meetings between different emergency services such as: the police, the fire service, the medical assistance organization, and the public health director of the municipality, will be held here. It was stated to be very helpful when someone from the health care facility would also join these meetings, as a specialist on the type of clients in the facility. This because it would be useful to prepare the emergency services for what they might encounter, for example aggressive clients or clients that might hide when something unexpected happens. It might also prevent errors due to not fully informed emergency services, for example, the arrangement of regular busses when the clients cannot use these. However, for this to happen the health care facility staff needs to be aware that these meetings will be taking place in the CoPi, and there should be an agreement on who of the in-house ERT would attend these meetings. There is also a national database where care facilities can fill out general information about the clients in their facility, so the emergency services can prepare beforehand for what they might encounter. However, it is not mandatory for care facilities to fill this out. If facilities do not, emergency services will only have access to the most basic information, such as location.

The gap between what is being done and what should be done, was explained by the pressure currently on health care facilities. This can partly be explained by the budget cuts on health care which leads to a shortage of staff, on top of that the mean age of people in nursing homes is increasing. A consequence of this is that the need for care of the clients is increasing simultaneously (Rijksoverheid, n.d.). This leads to that if something happens, an increased number of clients needs more assistance. This leads to health care facilities have little time to focus on disaster risk prevention, as it is often not seen as a priority.

Evidence from literature

To discover the appeals of working as a nurse or care taker in the Netherlands, de Veer, Poortvliet, Vogel & Francke (2007) send questionnaires to a panel of nurses and care takers, they received a response of 650 participants. The nurses in this panel worked in general hospitals, psychiatric wards, and home care for among others disabled people. The care takers worked in home care, nursing and elderly homes. Almost half the participants (49%) stated that they knew that their team had a written safety policy, 16% said their team did not have one, and 35% claimed not to know whether there was a written safety policy. Especially the nurses in general hospitals (46%), and the care takers in home care(49%) stated not to know. Regarding safety and staffing, 29% of the participants thought that there was not enough staff present to guarantee the safety of the clients and the team. This was highest among the care takers in elderly homes (51%). Nurses and care takers in home care most often stated that they did not know, respectively 27% and 32%. Last, 23% of the participants stated that they felt there was not enough educated staff present to guarantee the safety of the clients, especially care takers in elderly homes felt this way (39%). To this question, also the nurses and care takers in home care most often answered not to know, 24% and 30% respectively (de Veer et al. 2007).

Living independently

One of the participants in this research stated that cost reduction in health care has led to more people with disabilities living in independent housing. For these people all kinds of aids will be arranged, such as a stairlift for people whose mobility is reduced. In normal life this is very helpful, however if something happens and the power cuts off, these people might get trapped in their house. Some participants

mentioned that reduced self-reliant people living in a neighbourhood will get the help they need from their neighbours, as they are probably used to helping in daily life. But others stated that this might not be the case everywhere in the Netherlands, and that it could be potentially dangerous if emergency services would count on that happening. One of the main tactics that is being used by the safety regions to reach this group is networking. This will further be discussed in the next chapter.

This is seen as one of the hardest groups to reach when something happens. They are not registered explicitly, so they are not easily located. However, a lot of data about reduced self-reliant inhabitants of the region which can be useful to locate them is already known by partner organizations of the safety regions. Some examples which were mentioned during interviews are: the municipality knows who in a neighbourhood received a subsidy for a staircase elevator; care-home organizations know the addresses of their patients; and drink water suppliers know who receives clean water for kidney dialysis. By getting access to this data, the safety region can gain insight in where and how many reduced self-reliant people live independently in the neighbourhood(s) in crisis. When something happens it is important to get access to the right information as soon as possible. Therefore, it is important for crisis management teams to be aware of what data is available at what organizations. In order to achieve this it is important to be aware of what is going on in the region, and to know the right people within the right organizations. It could take a few hours to obtain all information needed. This is caused by for example the municipality, where a lot of information is registered, but in different departments, and not in one database. It should be made easier to access the necessary information, so it can go faster when in need. An option might be combine all these different datasets into one database. However, this might cause the right to privacy to be invaded.

The gap between what is being done and what should be done has not explicitly been explained during the interviews. As for the database of reduced self-reliant people living independently, which could be a solution to them being hard to find: the topic of a database for reduced self-reliant people came up in multiple interviews. All participants agreed that having such a database would be very useful. However, all participants also identified a lot of difficulties with such a database. First of all, the question was raised who should be responsible for keeping it up to date. Reduced self-reliance is not consistent, for example: people may get better; get hospitalized; or pass away. Then there is a group of people who is only reduced self-reliant for a short period of time, for example with a broken leg. Keeping such a database up to date would be a lot of work. On top of that, it would be a very interesting database for criminals to get access to. Last, such a database might invade the right of privacy, as it would be necessary to register what type of disabilities people have, and their addresses. The Red Cross works with a social map on which all vulnerable buildings and facilities are registered, however this map does not include the reduced self-reliant people living independently, to reach those, the Red Cross is in contact with neighbourhood organizations.

EVIDENCE FROM LITERATURE

O'Sullivan, Kuziemsky, Toal-Sullivan & Corneil (2013) conducted a research to explore the complexity of disasters, and to determine levers for action, where interventions can be used to facilitate collaborative action and promote health among high risk populations in Canada. One of the facilities they considered was a database for people with disabilities. This could assist response organizations, and would include only basic information such as: names; family contacts; medication; and basic limitations. However, like the participants in this research, they identified strong opposing arguments for the development of such a database, based on privacy laws and other issues. An alternative strategy they offered is for disaster response teams to engage community organizations, which have already established relationships with high risk groups and will have contact lists (O'Sullivan et al. 2013). This idea is in line with the next chapter on networking.

NETWORKING

Networking is a relatively new method used to prepare for disaster. It is mainly organized and executed by the safety regions. One of the participants explained that crisis management is by definition unpredictable, that even the concept of crisis management is a contradiction. It is especially unpredictable in the Netherlands where not many disasters strike. Therefore, a lot of the preparations that are being done, are based on theories, calculations, and expectations. In the safety region ZHZ, they therefore aim to prepare not for situations but with use of a big network, that should be able to arrange for anything that might be needed during different disasters. During an interview with the safety region of ZHZ it was stated that: *'It is not called a crisis for nothing, it is chaos, it is big. A lot of things are happening that you did not foresee, and then what is the use of minuscule preparations for different target groups? It does not work, it never has.'* That is why safety region ZHZ is focusing more on networking with different organizations. They feel that a safety region should be seen as the conductor of crisis management, it should be the connection between all the different organizations involved in crisis management.

When a crisis happens there should be a coordinated involvement of organizations and experts from different backgrounds, these should work together in a short-term multi-organization (Giordano & Pagano, n.d.). It is very important that reduced-self-reliant people are made visible within this network, both the ones in care facilities as the ones living independently. However, the construction of the short-term multi-organization does not always go smoothly. The safety regions are supposed to be a united organization, but some people still think in the pillars of which it was constructed: the fire brigade, the police department, the GHOR, and the municipality. It was mentioned that crisis communication between these pillars can be difficult as they all use terms differently. For example, different teams have an operational leader, thus stating that the operational leader has been informed can lead to miscommunication.

The gap between what is being done and what should be done, thus for the multidisciplinary teams to function, one participant mentioned that it is also important to have regular practice runs of scenarios of different disasters. These should be provided by someone with experience in the field. It is important that the multidisciplinary teams learn to think fast and to have their networks clear in their heads. This, in case that if something happens, everyone is aware of what the people in their networks can contribute and how. Another participant mentioned that the trainings should include improvisation, as that is also necessary during real disasters, and they should focus specifically on known bottlenecks, such as interdisciplinary communication. Currently, there are still crisis management trainings provided for the municipality, which are separate from the trainings offered by the safety region. It was stated that it would be better if everyone was trained the same way, this would make communication between different organizations easier. Furthermore, one of the participants stated that, for the crisis management teams, it is important to be in contact with the different organizations that focus on preparedness of individuals for disasters. This way they know whether and how the citizens they encounter are trained to act during a crisis.

During several interviews it was mentioned that there are many different organizations which aim to help in the prevention of, the preparation for, and also during disasters, but all following own agenda. Multiple participants mentioned that if the organizations would work together more organized, more could be achieved. An example of two organizations that have a clear agreement and with that a smooth cooperation, are the Red Cross and the emergency services. They have clear agreements on who helps what kind of cases during a disaster: the Red Cross staff assists the not-so-severe cases, as a result of this the emergency services can focus on the severe cases. This clear division of tasks makes working together efficient and effective. Discussions should be facilitated between the different organizations in the network to make clear agreements. Which organizations would facilitate these discussions is not important, as ideologically in the end all will be used for in their strongpoints. Most likely to organize these would be the safety regions.

EVIDENCE FROM LITERATURE

A study which combines data from four empirical studies shows that the coordination processes during emergency response operations are multi-layered and dynamic (Wolbers, 2015). The coordination is multilayered because it incorporates coordination of activities, information, expertise, and relations. This study shows that in disaster response communication, it usually does not work to employ the existing command and control structure, as for most disasters organizational and jurisdictional boundaries need to be crossed. Therefore, networked coordination is proposed as a coordination method, as it is more capable to adapt to fluctuations in the environment which can occur during and after a disaster strikes. Network coordination is not based on policies or formal commands, but on mutual dependencies and trust. The different organizations in the network have limited authority over the actions of other organizations, and this could lead to coordination tensions. Moreover, it is important for actors in the network to recognize crucial interdependencies. This needs to be coordinated, and the different interests need to be discussed to align actions. For network coordination to work it is important to share information cross organizational and jurisdictional boundaries, while still keeping those in mind (Wolbers, 2015).

The rapport on the state of disaster management by the Inspection of Safety and Justice of the Dutch government of 2016 dedicates a chapter to evaluating the networking done by the safety regions (Inspectie Veiligheid en Justitie, 2016). Their assessment is split into four criteria:

- *Cooperation with network partners.* Co-working between safety regions and network partners is crucial. The core-partners (fire brigade, GHOR, police, and municipalities) within the safety regions are working closely together in general, both when making policies and during drills and trainings. They are also more intensely involved in the activities of the safety regions. However, at real incidents, some issues can still be identified, such as the definition of responsibility in practice, and the information exchange. The cooperation with the police force is proven to be more difficult. Because the police force is national and is being reorganized since 2015, many safety regions feel there is more distance between the police, and the safety regions and other partners. They are less involved in multidisciplinary clinics and trainings, and repelled the tasks as instructor in the CoPi. However, according to the report, these issues are discussed with the police force and are being handled.
- *Cooperation with municipalities*. In 2013 the position of the municipalities was found lacking. In the 2016 report the inspection states that the municipalities are catching up. The position of the municipalities in crisis prevention and management is much more well-defined. However, in practice it is proven to be difficult for teams of Population Care of the municipalities to connect to with the crisis organization.
- *Interregional cooperation.* The safety regions are more co-operative in the disaster preparation compared to a few years ago. Safety regions work together based on shared risks in the risk analyses, or because of advantages at an operational level. However, during an incident, this cooperation could still be improved, as became clear during the power-shortage in Noord-Holland (Inspectie veiligheid en justitie & Agentschap Telecom, 2015). In the rapport it is suggested to the regions to work collaboratively on scenarios which cross over region boarders, and to decide on who would coordinate and how the information exchange would work during these kind of incidents. Therefore, it would be useful to practice with these scenarios.
- *International cooperation*. In all safety regions which share boarders with Germany and/or Belgium there is cooperation with foreign emergency organizations. However, in many regions this cooperation is mono-disciplinary, whilst for an adequate response during an emergency, multidisciplinary cooperation is preferable. The lack of multidisciplinary cooperation is partly due to differences in governance structure.

BOTTOM-UP APPROACH

Working more locally was mentioned in several interviews. The implementation of the safety regions was executed to, among others reasons, have emergency management at a more local level. This is important, because not all regions face the same risks. For example, regions without flood risk, regions without harbours, or regions without airports do not need to focus on issues related to this. Moreover, one participant mentioned that if regions want to learn from each other, it is important that they work with different methods.

To get people with disabilities and the difficulties they face during a disaster visible to the safety region local organizations such as disability organizations and home care organizations should be included in the network of the safety regions. Including citizen initiatives in the network is also important, as these are focused very locally and therefore are aware of what is going on in a neighborhood.

People with disabilities and reduced self-reliance are a heterogeneous group, and this makes it difficult to prepare for them. Therefore, it would be very useful to involve the people themselves in the process of making plans and policies to assist them. It is important to ask for their feedback on plans which are created for them, as they themselves know best what they are capable of. During multiple interviews it was mentioned that implementing policies with use of a bottom-up approach will cause the policies to be more adjusted to the local situations, and additional it is effective to include local disability groups or spokespersons to warrant the effectiveness. However, this is not yet or hardly done now in the disaster risk management of the Netherlands.

Last, it would also be useful not to just work locally in the safety regions but to also unite nationally. The amount of care one receives during a disaster should not be dependent on in what region one lives. Synchronization and consultation between the different regions can be very useful. This way, safety regions can learn from each other, which is not possible if they all work exactly the same way.

Why people with disabilities are not included in making disaster policies now has not been discussed during the interviews.

EVIDENCE FROM LITERATURE

It is important for safety regions to work locally, in order to focus on the issue that are present in that region. The regional risk profile is an analysis of the biggest threats each region faces (Janssen, 2011). An overview of this can be sighted in **Fout! Verwijzingsbron niet gevonden.**. By locally implementing policies with use of a bottom-up approach, the policies will be more adjusted to the local situations (Anderson, 2014). Moreover, safety regions that face the same risks according to the risk profile are increasingly co-operating with each other (Inspectie Veiligheid en Justitie, 2016).

Dückers and Pröpper (2011) state that it is important for authorities to recognize citizen initiatives regarding disasters, as otherwise their policies might be incomplete and it might negatively impact the image of the authorities if they ignore it. Dückers and Pröpper (2011) explain that the current system in the Netherlands leaves room for citizen initiatives. During or immediately after a disaster the bystanders are fastest on scene. Therefore, it is most likely that citizens will take the first initiative, however in the acute phase of a disaster, the emergency services will most likely take over as soon as they arrive. Last, in the follow-up phase organizations will have to bring their processes to a close, but the citizen initiatives can continue if necessary (Dückers & Pröpper, 2011).

Wijkhuijs and Duin (2012) looked at several recent studies to find out how citizens have responded during incidents in the last two decennia in the Netherlands. They found that citizens were largely self-reliant during or after incidents, and that they came up with initiatives themselves in order to help others. However, no mention was made of people with reduced self-reliance or disabilities (Wijkhuijs & Duin, 2012).

Van der Land, van Stokkom and Boutellier (2014) identified some issues regarding citizen initiatives. First of all, it is difficult to reach the broad spectrum of 'passive' citizens. On top of that, there are still many active citizens who feel underappreciated, or who feel they do not get enough feedback on their initiatives. Professionals sometimes take over the citizen initiatives, or they expect too much of the active citizens. On the other hand, citizen initiatives increase social cohesion in neighbourhoods (van der Land et al. 2014).

TABLE 2: ***BIGGEST THREATS BY SAFETY REGION***

	Fire at reduced self-reliant citizen	Chemicals/ industry/ BRZO	Animal diseases	Events	Extreme weather	Harbour	Incidents on water	Wild fire	Flood/ high water	Panic in crowds	Railroad	Terrorism	Transport of hazardous substances	Utilities failure	Disturbing public order	Airport/ air traffic accident	Disease wave/ pandemic	No insight	**Total threats per region**
Groningen		X							X										**2**
Friesland				X	X		X										X		**4**
Drenthe		X											X			X			**3**
Noord-Oost Gelderland								X			X		X						**3**
Gelderland Midden									X				X				X		**3**
Utrecht	X									X		X	X	X		X	X		**7**
Kennemerland		X										X				X			**3**
Amsterdam-Amstelland				X								X	X			X			**4**
Gooi en Vechtstreek	X							X	X								X		**4**
Haaglanden																		X	**1**
Holland Midden									X		X		X			X	X		**5**
Rotterdam-Rijnmond		X				X										X			**3**
Zuid-Holland-Zuid	X										X			X			X		**4**
Zeeland		X							X		X		X						**4**
Midden- en West-Brabant		X									X		X			X			**4**
Zuidoost-Brabant			X					X			X			X	X	X	X		**7**
Limburg-Zuid		X							X							X			**3**
Total regions per threat	**3**	**7**	**1**	**2**	**1**	**1**	**1**	**3**	**6**	**1**	**6**	**3**	**8**	**3**	**1**	**9**	**7**	**1**	

UNEXPECTED FINDINGS

This chapter consists of a summary of the unexpected findings of this research. It lists topics which came up during the semi-structured interviews, that were not on the topic-list, but do contribute to answering the main research question. This chapter is structured as follows: first, the variation in the definition of self-reliance will be discussed; following this the issues related to shortage of staff in care facilities in case of an evacuation will be discussed; then the risks of retirement complexes will be explained; and last the Ready2help initiative of the Red Cross will be explained.

DEFINITION OF SELF-RELIANCE

One of the issues that came forward in many interviews is who exactly should be focused on: when exactly are people not or reduced self-reliant. It turns out that the definition of self-reliance is not the same for every organization, which could lead to miscommunications. For example, in the safety region ZHZ they recently changed the idea of who reduced self-reliant people are. Safety region ZHZ explained that people who they had labeled as non self-reliant often turned out to be very self-reliant: they had arranged everything beforehand; they had a social network surrounding them; and with one phone call to one of them they got the assistance they needed at that moment. On the other hand, people who the crisis

management labeled as self-reliant turned out not to be. Therefore, it was decided to change their definition of non self-reliance: everyone who came forward with a request for help during a disaster would be labeled as non self-reliant. The Red Cross defines reduced self-reliant people as people who cannot take care of themselves during an acute emergency. They explained that the differing of the definitions of self-reliance is something they struggle with. They aim to cooperate with many different organizations, but as they all use the term differently, it can be difficult for these organizations to work together as efficiently as possible. Other participants stated that they struggle with the same difficulty.

During one of the interviews the question was raised whether non self-reliant people even exist. If well prepared for a disaster, with the use of a strong social network, everyone should be able to independently arrange the help they need. However, immediately the question was raised whether the emergency services can assume that everyone would be assertive enough and have a strong enough network to achieve this, and whether the people in the network would still remember to help if a disaster strikes. It was concluded that emergency services cannot assume that this will be the case.

ASSERTIVENESS

As mentioned in the introduction, the Netherlands is becoming more like a participation state. A consequence of this is that it is necessary for people to be more assertive than before. For example, one of the improving self-reliance activities of the Red Cross consists of actively expanding one's social network; and the safety region ZHZ uses a definition of non self-reliance based on people actively asking for assistance. This could lead to people who are not assertive to not get the help they need. A participant, who has conducted research after the Queensland floods in Brisbane, explained that it is dangerous to assume that people will speak up. In Brisbane, the Salvation Army went door knocking and they encountered people who had not dared to ask for help, but were in need of it. When asked the question whether it is a risk, that you might miss people when it is assumed that people who do not come forward do not need help, the representative from the safety region ZHZ answered: *'You will always miss people, I am sure of it. Because you need to be aware that you cannot manage everything. Crisis management is 90% improvisation, by definition there are no guarantees.'* Different participants stated that it might be necessary to accept that not everyone can be saved and to add to the policies regarding disaster management to expect causalities if a major disaster strikes. This to prevent criticism afterwards. On top of that, it might also influence the ideal picture of emergency services that citizens have, which has been discussed previously. When asked the question whether the percentage of reduced self-reliant people that would decease would be higher than the general population, one of the participants answered to not know. It could also be that reduced self-reliant people would be more prepared, or that self-reliant people act more unsafe, by for example trying to get out of an area with high flood risk by car when this is discouraged by the emergency services.

SHORTAGE OF STAFF IN CASE OF EVACUATION

Another issue which was mentioned during the interviews, is the shortage of staff in health care facilities in case of an evacuation. On top of a shortage of staff, the mean age of people in nursing homes is increasing. A consequence of this is that the need for care of the clients is increasing simultaneously (Rijksoverheid, n.d.). Participants in this research mentioned that the clients in care facilities are overall more severely disabled than a few years ago, as the less severe cases stay in independent housing. This leads to that if something happens, an increased number of clients needs more assistance. This could be difficult, especially if something were to happen at night when there is less staff present. One of the participants mentioned a fire in an apartment building in Alblasserwaard. In this building a care facility was located on the 8th and 9th floor. The rest of the building was inhabited by regular citizens. During the evacuation the difference between the regular citizens and the reduced self-reliant people in the care facility became visible. The regular citizens walked out independently, but the clients of the facility almost all needed help. They got panicked, and were difficult to keep calm.

There are different initiatives to assist in such an event. An example that came up in one of the interviews is *'extra handjes in de nacht'*, an action plan developed by care facilities and the GHOR in Twente to assist care facilities if something happens during the night, when few staff members are present. This action plan focusses on alarming qualified care staff members in the neighbourhood, who know what to do in case of an emergency (Weustink et al., 2014). It was mentioned that it is helpful if the people who come to assist are at least a bit familiar with the clients of a facility. However, they do not have to be experts, for example it can also be local citizens who regularly volunteer at the facility. Although this is only possible with mild disabilities, for the severe cases expertise is needed.

After evacuating a care facility, the aim is to accommodate most of the clients in other nearby care facilities. Often clients also get offered shelter with family or friends for a while. It is necessary to arrange specialized housing because usually the clients are not able to go to regular shelters, as they need more care than can be provided there. As mentioned previously, the GHOR has access to a database with all care facilities, and uses this to find accommodations. However, during an interview it was stated that care facilities are often very full, and that therefore it might prove to be difficult to find suitable accommodations for a large group of disabled people.

Another possible problem might be arranging for special busses to transport disabled people in. If the care facility houses people who are not able to sit on a regular buss, special busses have to be arranged. It was mentioned that it already takes a while to arrange for normal busses, special busses are even harder to arrange, therefore it will most likely take a while to organize. Meanwhile the facility clients have to be housed somewhere locally, and accessible for all of them. In the preparation plan of municipalities there are shelters organized which are also accessible for people with reduced mobility, however in practice it often happens that spontaneous shelters are already arranged by bystanders and front liners in nearby buildings. These are not always accessible for people with reduced mobility.

RETIREMENT COMPLEXES

One of the risks many of the interviewees in this research mentioned are retirement complexes. These are customized flats or apartments in which many elderly live together. However, since these complexes are not care homes, there is no coordinating organization that is responsible for the safety of the residents. They are all responsible for their own safety. If something happens, there is a large group of reduced self-reliant people living together. The participants in this research foresee many problems if something like this were to happen. Some examples were mentioned: if the power goes down due to the disaster, many of them will not be able to leave the floor they are on, as elevators and stairlifts would stop working. On top of that, helping one's neighbour will not be possible for many, as the neighbour is probably also reduced self-reliant. Moreover, these complexes are not registered anywhere, because they are not official care homes. This leads to that if something happens, the emergency services do not know they are dealing with an retirement complex until they arrive at the scene. Last, the elderly living in these flats receive home care from many different organizations. Thus for the crisis management organizations it is not doable to contact all those to know what they are dealing with. Often the elderly do not know what organization they receive home care from, they just know the name of their nurses. This can also create a problem in the follow-up care after the evacuation. The GHOR ZHZ stated that they are aware of the risks these retirement complexes bring, but that they do not have a clear solution yet. None of the other participants had a clear solution either.

READY2HELP

A new initiative of the Red Cross is the ready2help network, which was set up in 2014. Ready2help is a method to regulate citizen participation during emergencies. In recent years citizens are more involved in emergencies, among other things because they are more informed and united due to social media. This can lead to serious problems if unqualified citizens start to interfere with emergency services. They could hinder the performance of the emergency services, bring themselves in danger, or even get harmed.

However, there is a large group of bodies who is motivated to assist during an emergency. Red Cross came up with ready2help to make use of these motivated citizens, but in an organized and regulated way.

The ready2help network is a national database of volunteers. The Red Cross can sent e-mails to invite the ready2helpers to assist in tasks related to emergency aid. Volunteer in this network can also be specialists, therefore the Red Cross can sent an request for people who know cardiopulmonary resuscitation, or are capable of first-aid, or who speak a certain language to act as interpreter. These requests can be sent out locally, as the addresses of the volunteers are registered. This way, problems can be solved locally and therefore fast. If the right type of volunteer is not available in the search area, this can be expanded.

The ready2help initiative is arranged with support of the ministry of Safety and Justice, and is only used when consented by the local emergency services. To keep the volunteers safe, ready2helpers are not used in the acute phase of a disaster, as this would be too dangerous. However, they have proven to be very useful in the preparations for and the aftermath of disasters (Rode Kruis[3], n.d.).

Conclusion

The main question this research aimed to answer was: 'how is meeting the needs of people with disabilities or reduced self-reliance incorporated in the practice of disaster management organizations in the Netherlands and what issues can be identified?' In order to answer the main question, three sub-questions were conceptualized: 'what do organizations do with respect to people with disabilities in preparation for and when responding to disasters?'; 'what issues do people, working in disaster risk management, see in this?'; 'how is this justified? (e.g. (how) is it based on evidence?)' First the sub-questions will be answered, followed by the main research question.

(Organizational) preparedness and response to disasters

The first sub-question was answered during the interviews. It explains the general methods that are being used to prepare for and respond to people with disabilities in disaster risk management.

In the preparation for disasters, there is a focus by organizations on individual preparedness and on organizational preparedness. Different organizations help prepare on the individual level, such as municipalities and the Red Cross. This is important, because the current way the emergency aid is organized is more focused on citizens assisting each other and being self-reliant. On an organization level there are different organizations involved, such as the safety regions, the municipality, care facilities, GHOR, the fire brigade, and the police.

For the individual preparedness there are different types of training-, and information services organized by municipalities, such as the emergency supply kit campaign 'Denk Vooruit' (Rijksoverheid, 2009). However, these are often not adapted to people with disabilities or reduced self-reliance. The Red Cross offers five advices to help prepare individuals for emergency situations: tips on how to prepare for a flood; advice on how to deal with extreme weather; tips on how to create an emergency aid kit; a free first-aid APP; and offering activities to improve self-reliance (Rode Kruis[1]) (consisting of five activities: Rode Kruis aan huis; contact-cirkel; cursus sterk door je netwerk; workshop risico's in en om het huis; EHBO op maat (Rode Kruis[2])). These are also applicable for people who are reduced self-reliant.

On organizational level there are also different things being done to prepare for disasters. The different safety regions are preparing on an organizational level, by forming a network of different organizations that can be of assistance during a disaster. The core partners in this network are: fire brigade, GHOR, police, and municipalities. This type of network coordination is relatively new in the Netherlands. The aim is to also get non and reduced self-reliant citizens visible in this network, by for example including care facilities, and local disability groups or organizations. In the preparation phase it is important to practice the formation of the short-term multi-organization, in which all the emergency services have to be included when disaster strikes. When responding to emergency situations this network coordination method will be used, with the safety region as conductor.

If a care facility is involved in the disaster, it is important that the ERT of the facility informs the emergency response team of the specifics of the situation. During an emergency, the CoPi will be put in place in front of the facility, this is where the emergency services meetings will be held. At least one member of the ERT should be present here, to be involved in the decision making. For this to happen, it is important that ERTs know about the CoPi. The GHOR offers to assist care facilities with their own preparations, as in the Netherlands care facilities are responsible for their clients when disaster strikes. The GHOR offers to help them prepare in different ways, some examples: by going through the existing plans; by organizing work conferences; by road shows at municipalities for all care facilities in the region. However, care facilities are not obliged to make use of the services of the GHOR.

An action plan to help during emergencies at care facilities at night is 'extra handjes in de nacht'. This was invented because in nighttime, there are less employees at care facilities, which could lead to problems if

the building would have to be evacuated, and many of the clients are non self-reliant. This action plan focusses on alarming qualified care staff members in the neighbourhood, who are aware of what to do in case of an emergency (Weustink, 2014).

For the reduced self-reliant people living independently, there are things being done on the individual preparedness level as well as on an organizational level. However, as said before, the training and information about individual preparedness is often not adapted to reduced or non self-reliant people. On the organizational level this consists mostly of network coordination. The network coordination is supposed to get them visible to the emergency services. As a lot of data on their whereabouts is already known to different network partners of the safety regions. When disasters strikes the aim is to get to the needed information as soon as possible. However, now all the data is located at different partners, which could mean it could take a while to get the right information. A solution might be to create a database of reduced or non self-reliant people. Unfortunately, there can be difficulties identified with such a database: it would be difficult to keep up-to-date; it would be a risk as criminals might be interested in the information; and it would compromise the right to privacy. Currently there is only an overview of reduced self-reliant people in care facilities and such, but it does not include the ones living independently.

Last, the ready2help network of the Red Cross is an effective method to regulate and organize the motivated citizens who are willing to help. Ready2help is a database of volunteers, which can be called upon when extra help is needed. The volunteers in the database are organized based on address, this way it can work locally. However, if necessary, the area can be expanded. Working locally can be very effective when dealing with people of reduced or non self-reliance, because they might be familiar in the neighbourhood. Consequently, volunteers might know where the people live who might need extra help if something happens. In order to keep the volunteers safe, the network will be used to prepare for or in the aftermath of, but not during the acute phase of a disaster (Rode Kruis[3]).

ISSUES

During the interviews, the participants discussed different issues regarding disaster risk management. These different issues can be identified on different levels of disaster risk management.

In the current system, people are expected to be more assertive than in the past. This follows the trend of the change from a welfare state to a participation state. It is therefore important that citizens are more able to help themselves. However, three issues were identified which make it difficult to increase the individual preparedness of the Dutch citizens: low risk perception; overestimation of emergency services; and impairments that turn into disabilities if environment changes or something happens to their aid.

Risk perception is low in the Netherlands, as in recent years not many major disasters have struck. This is a good thing in itself, as it means few casualties and damage. However, it makes it more difficult to convince people to prepare for when disaster does strike, as they feel no need.

Because many citizens overestimate the capacity of emergency services, there is a gap between what is expected of emergency services by citizens and what emergency services are prepared for. This is also an important issue that can be identified in disaster risk management. Citizens expect that if something happens, emergency services will immediately come and rescue them. With small-scale incidents, this is the case. However, with larger incidents or disasters, citizens will have to take care of themselves for a period of time. Different participants stated that it might be necessary to expect and accept causalities, and to add this to the policies. It is unknown whether in percentage more reduced self-reliant people would decease. On the one hand, they always need assistance, either from the people close to them, or from the emergency services. On the other hand, they might be more prepared, and the general population might act stupidly and harm themselves (for example try to evacuate by car when this is discouraged). However,

the actual numbers are unknown, as no major disasters have happened for the period of time the safety region system and networking coordination was implemented.

Last, a lot of people use aids in their daily live, such as lenses or hearing aids. However, when something happens to those aids, these people suddenly become reduced self-reliant. Moreover, people might be unaware of this risk.

All of these issues not only influence the individual preparation intention, but also the effectiveness of the campaigns and training to get people to prepare for disasters.

Aside from the issues that influence individual preparedness there were also issues identified on an organizational level.

First, the overestimation of emergency services can also be an issue at care facilities. The perception of what would happen if there were a crisis at the facility can be very different for the employees of the facilities and emergency services. Care facilities might overestimate what emergency services can do and underestimate what they have to prepare for.

Another issue that was mentioned in many interviews, is the retirement complexes. These are locations where many reduced or non self-reliant elderly live together, without a coordinating organization that is responsible for their safety. These complexes are not registered, so emergency services do not know where they are located. If a disaster strikes such a complex, the emergency services would only find out when they arrive on scene. There is not a clear solution on how to solve this issue yet, although organizations are aware of it. Possible options that were mentioned are to try to involve housing associations, or home care organizations in the networks of the safety regions.

Safety regions are implemented as a method of organizing emergency aid at a more local level. However there are a lot of different organizations and synchronization between all those can be difficult. These organizations all have their own agenda, and their own jargon. One of the issues that was identified is that people from different emergency aid organizations work with different definitions of reduced self-reliance. This can make co-operating together difficult and it can also cause miscommunications or misunderstandings.

A difficulty that arises with the more locally focused safety regions, is that these regions are not completely united nationally. National unification is important, because it should not make a difference in what safety region one lives in, for the level of preparedness in that region. However, as said before, synchronizing between all the different organizations, even on a local level, is difficult. Also, organizing more locally makes sense, as different regions face different difficulties. On top of that, organizing locally makes it possible to use a bottom-up approach in preparing for disasters. Therefor national unification is not the best solution, but it is important to ensure that the level of preparedness in the different regions does not differ too much.

JUSTIFICATION

To explain the justification of what is currently being done, a literature study has been conducted. The findings from this study have been combined with the data found during the interviews.

The generally low preparation intention can be linked to three psychological mechanisms: the low risk perception; the low perception of one's own responsibility; and the low perception of preparation effectiveness (Kolasinac, 2012). In preparing for disasters several organizations offer training-, and information services, among other things focused on trying to inform people about their own responsibilities during a disaster. However, these trainings are often not adapted to people with disabilities or reduced self-reliance, which could lead to them rejecting the messages.

For people with reduced self-reliance it could mean that the preparation intention is higher, as their risk perception might be higher and their preparation effectiveness might be perceived as more effective. Risk perception is influenced by catastrophic potential or perceived dread, iniquity of consequences, uncontrollability; new risks versus known risks; hidden or deferred effects of the risk; unclarity about social benefits of risky behaviour; (lack of) faith or clarity of responsible authorities; and risk of accidents caused by purposely unsafe or criminal behaviour. For reduced or non self-reliant people the catastrophic potential, the iniquity of consequences, and the uncontrollability might be perceived higher than by the general population. This could lead to a higher risk perception. According to the FRIS model high risk perception is one of the determinants that positively influence risk information seeking. However, another determinant in this model is self-efficacy, and this might be lower in people with reduced or non self-reliance.

Four factors which influence how people respond to shocking experiences are: psychological resilience; social context; faith in government and its information services; and expectations regarding one's own behaviour (Hoijtink, 2011). If the information provided is based on persuasive fear messages, the EPPM explains that the use of persuasive fear messages will only be accepted if the level of threat and efficacy is high (Gore & Bracken, 2005). If either of those are not perceived as high, the persuasive fear message will be rejected. For people with reduced or non self-reliance the perceived efficacy, consisting of the response efficacy (belief in effectiveness of the recommended response to deter the threat), and self-efficacy (individual's perception of their ability to perform recommended response to forestall threat) might be low, if the messages are not tailored to their abilities.

On an organizational level several participants mentioned the usefulness of a database for reduced self-reliant people. The idea of creating a database of reduced or non self-reliant people to assist during disasters is discouraged in the literature, it would be a very useful tool to have, but such a database would have too many disadvantages and risks, based on privacy laws and practical issues (O'Sullivan et al. 2013). An alternative strategy that was offered is to find reduced or non self-reliant people in communities making use of network connections. Organizing these connections is also what safety regions are currently focusing on. On top of that, it is proven that for disaster response communication it does not work to employ the existing command and control structure. For the management of most disasters organizational and jurisdictional boundaries need to be crossed. Therefore networked coordination is proposed as method for coordination, because it is not based on policies of formal commands and because it is proven to be more capable of fluctuations in the environment (Wolbers, 2015). However, even though it is necessary to share information across organizational and jurisdictional boundaries, it is still important to be aware of these boundaries.

The report of the inspectorate of the safety regions (Inspectie Veiligheid en Justitie, 2016) shows that the safety regions have improved their networking with different organizations compared to 2013. This assessment focused on four criteria: cooperation with network partners; cooperation with municipalities; interregional cooperation; and international cooperation. Not all safety regions face the same difficulties; therefore working locally is an effective method. When safety regions do face the same difficulties, they can cooperate with each other, or learn from each other. Learning from each other is only possible if not all of them use the same working methods.

Due to the shift from welfare state to participation state, citizen initiatives occur. The Red Cross supports these initiatives, as they can be very useful in preparation for or in the aftermath of disasters, and they increase the social cohesion in neighbourhoods. However, it is proven to be important for authorities to recognize these initiatives, as otherwise their policies might be incomplete and it can negatively impact their image (Dückers & Pröpper, 2011). There are also some issues identified regarding citizen initiatives: it is difficult to reach the broad spectrum of 'passive' citizens; active citizens can feel underappreciated; active citizens can feel like they do not receive enough feedback; professionals can (accidently) take over

the initiatives; or too much can be expected of the active citizens (Van der Land, 2014). It is important to keep these issues in mind when emergency management organizations support citizen initiatives.

FINDINGS ON MAIN RESEARCH QUESTION

How is meeting the needs of people with disabilities or reduced self-reliance incorporated in the practice of disaster management organizations in the Netherlands and what issues can be identified?

The current shift in focus towards a participation state and with that a focus on self-reliance in emergency aid, makes it difficult to meet needs of people with disabilities for the different disaster management organizations, as people with disabilities are often reduced or non self-reliant. However, most of these organizations are aware of the shortcomings that come with focusing on individual preparedness and are working on different solutions to include people with disabilities in their preparation for disasters. One of these solutions is to focus on the use of network coordination. Within these networks the aim is to get reduced or non self-reliant people visible to the emergency services, for example by getting disability organizations and home care organizations involved.

An important issue that can be identified in the current system is that training-, and information services for self-preparedness are often not adapted to people with disabilities. The problem this brings is that these training-, and information services might not move people with disabilities to prepare. Moreover, people with disabilities who do want to prepare can have a difficulty finding the information needed to effectively do so. People also need to be more assertive in the current system as it is based on networking and on social networks. If people are not capable of doing this, they might not receive the help they need.

The implementation of the safety regions led to the disaster management being organized at a more local level. This is useful, as it causes regions to be able to focus on the biggest threats in that region. However, regarding the development of local policies on how to assist people with disabilities during a disaster, it would be effective to use a bottom-up approach, as the plans will then be adapted to the local situation, and it is possible for local people with disabilities to get involved in the organization of plans created to assist them. On an organizational level there is an increasing focus on network coordination, facilitated by the safety regions. A difficulty with this is that there are different concepts and different organizations involved, which makes synchronization and cooperation sometimes complicated. A possible solution to this difficulty might be to create more clarity with regard to tasks. Possibly by organizing meetings between different organizations to increase the alignment of their plans and goals. And by organizing more multi-disciplinary trainings.

There is also an occurrence of citizen initiatives that focus on assisting each other during emergencies. This is often very locally oriented and therefore more inclusive towards reduced or non self-reliant people living in the neighbourhood. It also leads to more social cohesion in neighbourhoods, which might also have a positive effect on reduced self-reliant people living there, as the neighbourhood will be more aware of their disabilities, and of when they might need help. However, citizen initiatives can also lead to some issues: a difficulty to reach the 'passive' citizens; active citizens can feel underappreciated; active citizens can feel like they do not receive enough feedback; professionals can (accidently) take over the initiatives; or too much can be expected of the active citizens (Van der Land, 2014). The ready2help network of the Red Cross is a more structured and regulated example of a citizen initiative. This network can be very effective to assist reduced or non self-reliant people in preparation for or in the aftermaths of a disaster.

During this research it became clear that the most difficult group of people with disabilities to prepare for are reduced self-reliant people who live independently. Even more so when they live in retirement complexes, because no coordinating organization is responsible for these kind of complexes. Moreover, if a disaster strikes such a complex, there will be many reduced self-reliant people so they will be unable to ask their neighbours for help.

RECOMMENDATIONS

This chapter provides recommendations for the disaster risk management organizations in the Netherlands based on the findings of this research.

- In trying to influence citizens to prepare themselves individually, organizations focus on influencing the low risk perception, the low perception of own responsibility and the low perception of preparation effectiveness (Kolasinac, 2012), for example by the use of persuasive fear messages. However, literature suggests that it is important to tailor these type of messages for reduced self-reliant citizens, in order to effectively influence their preparation for disasters.
- As the Netherlands is reforming towards a participation state, the expectations of what citizens can and will do are increasing. This shift can also be seen in emergency response organizations. However, not all citizens are assertive enough to live up to those expectations. Therefore it is important for disaster management organizations to keep in mind the reduced self-reliant people who might not dare to ask for help, especially those with a small social network.
- Disaster risk management organizations need to be aware of the importance of having a social network for reduced self-reliant people in a participation state. Therefore, they should promote citizen initiatives.
- The idea of a database for reduced self-reliant people was discouraged in both the interviews and literature. However, a database would be a useful tool to have. Such a tool makes reduced self-reliant citizens faster and more visible to emergency services. A lot of the information necessary to create such a database is already present by the organizations in the network of a safety region. An option might be to keep an anonymous register of how many long-term reduced self-reliant people live in a certain area, not their specific disabilities and locations. This could be reached by linking the information that is already present at the network partners, and because it is anonymous their right to privacy is not invaded.
- When disaster strikes a coordinated short-term multi-organization has to be formed out of organizations and experts from different backgrounds, with the safety region as coordinator. For this to happen smoothly and fast, it is important to have regular multi-disciplinary practice runs of disaster scenarios. These trainings should be realistic, include improvisation, and focus on known bottlenecks (such as communication between different levels of the network). They need to be organized by experts out of different fields. If all organizations train together and in a similar way, it will make communication in the field easier.
- Cooperation of many different organizations can be difficult, but necessary for network coordination to work effectively. Multiple participants mentioned that if the organizations would work together more organized, more could be achieved. Conversations should be organized between the different organizations in the network, including disability organizations. This way, goals and methods can be openly discussed, perhaps plans can be more aligned, and jargon can be explained. This way, cooperation would get more efficient and effective. It does not matter who would coordinate these conversations, as long as they take place. The safety region would be most likely to do so, as they are the network coordinator.
- Safety regions have a local focus and implement local policies. Working more locally is an opportunity for people with disabilities to be more included in the process of making plans and policies for them, with use of the bottom-up approach. This way the policies will be more adjusted to local situations. The inclusion of disabled people in creating the policies will warrant the effectiveness, as they themselves know best what they are capable of.

DISCUSSION

The main findings of this research show that in the current shift to a participation state, it can be difficult to meet the needs of people with disabilities. However, disaster risk management organizations are aware of the issues related to this, and are working on solutions. One of these solutions is to focus on the use of network coordination. This coordination is facilitated by the safety regions. Within this network there are different concepts and different organizations involved. This can make synchronization and cooperation sometimes complicated. Within these networks the aim is to get reduced or non self-reliant people visible to the emergency services, by including for example disability organizations and home care organizations in these networks. This research found that one of the most difficult groups of people with disabilities to prepare for are reduced self-reliant people who live independently. Even more so when they live in retirement complexes, because no organization is responsible for these kind of complexes. Moreover, if a disaster strikes such a complex, there will many reduced self-reliant people so they will be unable to ask their neighbours for help. There is an occurrence of citizen initiatives that focus on assisting each other during emergencies. This is often very locally oriented and therefore more inclusive towards reduced or non self-reliant people living in the neighbourhood. Last, it was found that training and information services for self-preparedness in case of a disaster are often not adapted to people with disabilities. The problem this brings is that these training-, and information services might not move people with disabilities to prepare.

The current shift from welfare state to participation state is also visible in disaster risk management, with an increasing focus on self-reliance. Therefore, it is important to research whether people with disabilities who are reduced or non self-reliant are capable to carry out what is now expected of them. The responsibility of the state to provide assistance during disaster is equal for the general population as for disabled people. Disabled people should therefore have equal access to support during a disaster as the general population (Sphere project, 2011). Moreover, the implementation of safety regions has influenced the working methods of the disaster risk management. This research contributes to examining whether disabled people are effectively included in the new working methods. It is important to do so, as literature shows that this group is still often not included in disaster management preparedness (WHO, 2007). The findings show that although the inclusion of reduced or non self-reliant people is getting attention from disaster risk management organizations in the Netherlands, they are often not specifically mentioned in the preparedness plans. Often the preparations are focused on the population as a whole, a homogenous group, leaving out individual differences. However, for people with disabilities it is especially important to take individual differences into account, because not doing so might lead to excluding them from the assistance they need. For example, a lengthy power shortage should not be too big a problem for the general population, however it can be crucial to people with specific disabilities depending on aids, such as elevators, ventilators or kidney dialysis. Therefore it is important that the disaster risk management organizations in the Netherlands are not only aware that there is a group of people with reduced or non self-reliance, but also focusses on the heterogeneity of this group.

When the findings of this research were compared to other studies, it was found that this current research is more positive about the inclusion of disabilities in disaster risk management than the research of Wever, Jonker, Soomeren and van der Graaf (2006). However, it should be noted that that study was conducted in 2006, which was before the implementation of the safety regions. Wever at al. (2006) conclude that people with disabilities are not included in the policies or the information services and campaigns. The current policies are more inclusive with regard to people with disabilities, however the information services and campaigns could still be more inclusive. Wever et al. (2006) also mention it is important to increase the risk awareness of disabled people themselves, which is consistent with the findings of this research. The inclusion of the disabled people in making policies and plans is also mentioned by Wever et al. (2006). Alexander, Gaillard and Wisner (2008) conclude that the problem of assisting disabled people in disasters has been neglected, based on the fact that there are few large studies

conducted regarding this topic. Alexander et al. (2008) also state that it is important for people with disabilities to be made aware of this problem, and to make disaster policies more inclusive. In the Netherlands the problem is not neglected, as all organizations involved in this research were aware and working on the problems regarding this topic. However, the inclusive policies could still be improved.

LIMITATIONS

In this research a broad spectrum of participants was interviewed, from various backgrounds. However, the findings might not be generalizable for the whole target group of disaster risk management, as snow-ball and purposive sampling was used, which led to most of the participants from the safety region coming from the province of Zuid-Holland (Bowling & Ebrahim, 2005). On top of that, the method of participant recruitment might have caused only positive cases to be discussed, with organizations or people who have worked on the issues discussed in this research. Organizations that have not thought about issues of including people with reduced self-reliance in their plans (negative cases) might have rejected participation (Bowling & Ebrahim, 2005).

The assumption has to be made that the data collected in this research is influenced by the views of the organizations interviewed. As the graded theory was used, the direction of the research is based on their insights. As a consequence, if all organizations in the Netherlands have a blind spot for a certain problem, it will not be made visible by this research.

To increase the reliability of this research, one researcher conducted all the interviews and wrote the transcripts. On the other hand, this increased the risk of researcher confounding caused by the researchers political and social values (Wasserman et al. 2009). There is also the risk of researcher positionality, as the fact that the researcher was a highly educated, white, young female without visible disabilities might have had an effect on the interviews and therefore on the found data.

The plausibility of this research is increased with the use of selective member validation when outcomes were unclear or when participants asked for it. According to Bowling and Ebrahim (2005) member validation is conflicted, as it does increase the validity but it is also a burden for participants. Since most of the participants in this research had busy schedules, it was decided to use member validation only when necessary as something in the transcript was unclear. Therefore, not all outcomes have been validated by its participants.

The scope of this research is also limited by the circumstances in which it takes place. It has been a while since a major disaster happened in the Netherlands. Whether or not the plans and policies are effective can only truly be known by investigating after a disaster strikes. However, good preparations are important. On the other hand, as the risk of major disasters is relatively low in the Netherlands, one can question whether it is ethically correct to try to get non self-reliant people to prepare themselves for such an event. There is a relatively low risk that they will ever be involved in a disaster, and if they have to think about the preparations, some of them might get unnecessarily and unproportionally afraid of being struck by a disaster.

FURTHER RESEARCH

Including reduced self-reliant or disabled people was outside the scope of this research. However, one of the findings of this research was that it is important to include this group in research about them, as they might identify different issues. On top of that, it would be useful to discover to what extent reduced or non self-reliant people are prepared for disasters, as this should influence the organization of disaster risk management. Therefore, in further research on this topic they should be included.

Last, originally this research was meant to focus on the whole of Europe. However, during data collection it became clear that it was not doable to collect the necessary data. This was caused among other things

by: the lack of usable contacts; a language barrier; and time constrain. This lead to a more narrow focus solely on the Netherlands. However, it would be interesting to conduct this research again, but with a broader focus on the whole of Europe. In order to do this, more resources are needed, such as: a broad time-spectrum; contacts in many different European countries; and researchers who speak the languages.

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Table 1: Overview of participants in this research

Table 2: Biggest threats per safety region.

- Based on regional risk profiles via: Janssen, M. (2011). Risicocommunicatie bij veiligheidsregio's. Masterscriptie Communication.

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Figure 1: 25 safety regions in the Netherlands

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Figure 2: Risk diagram of the Netherlands

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Figure 3: Framework of Risk Information Seeking Model

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Figure 4: Extended Parallel Process Model

- Based on Witte (1992) via: Maloney, E. K., Lapinski, M. K., & Witte, K. (2011). Fear appeals and persuasion: A review and update of the extended parallel process model. Social and Personality Psychology Compass, 5(4), 206-219.

APPENDIX 1

Request for sighting.