



GNDR
Global Network of Civil Society
Organisations for Disaster Reduction



VIEWS FROM THE FRONTLINE REPORT

A case study of Maraenui, Napier, Hawke's Bay



THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND



RESILIENCE
TO NATURE'S
CHALLENGES

Kia manawaroa
– Ngā Ākina o
Te Ao Tūroa

National
SCIENCE
Challenges

VIEWS FROM THE FRONTLINE REPORT

New Zealand

A case study of Onerahi, Whangarei, Northland

June 2020

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I. Views from the Frontline - Project Background and Approach

Project background

The Views from the Frontline (VFL) programme was initiated by Global Network of Civil Society Organisations for Disaster Reduction (GNDR)¹ in 2009 to highlight the views from the most vulnerable and marginalised populations. This programme empowered local actors to monitor progress against targets under the Hyogo Framework for Action (HFA) through quantitative and qualitative surveys. This community consultation process is conducted at regular intervals of two years. Since 2014, GNDR shifted their approach, from closed questions measuring the progress of the HFA targets to more open-ended questions regarding priority threats, consequences of those threats, the actions needed, and the barriers in reducing risks from the perspectives of local actors. This new approach highlighted everyday disasters, which are small scale, recurrent, and result not only from natural hazards but also social, economic and political threats.

The aim of VFL 2019 was to strengthen the inclusion and collaboration between at-risk people, civil society and governments in the design and implementation of policies and practices to reduce disaster risk and strengthen resilience. Through surveys and consultations with local communities, local civil society organisations and the local government authorities, it collects the diverse perspectives around three key themes: risk profile, inclusiveness, and enabling environment (Fig. 1).



Figure 1. Themes of investigation (GNDR 2018)

While local voices from the less wealthy countries were raised in the previous VFL programmes, this is not the case for more affluent countries. Thus, the VFL team, through the University of Auckland, wanted to pilot the VFL programme in New Zealand. This will place a foundation for expanding this VFL programme to more affluent countries, and accordingly, increase the chance for the local voices

¹ Global Network of Civil Society Organisations for Disaster Reduction (GNDR) is the largest International Network of organisations committed to working together to improve the lives of people affected by disasters

to be heard. As a pilot project, the GNDR approach was adjusted and conducted on a smaller scale in New Zealand.

Process of implementation

The project has been implemented in four locations: Onerahi (Whangarei, Northland), Maraenui (Napier, Hawkes Bay), Petone (Lower Hutt, Wellington), and Haast (Westland, West Coast). The project team collaborated with the four partners, Civil Defence and Emergency Management (CDEM) groups to carry out the field data collection activities using the VLF standard questionnaires for households, government staff, civil society organisation staff, and community² consultation. These questionnaires were adapted to fit with local contexts and the participants’ background. The CDEM groups’ support included contacting and inviting participants for interviews and the organisation of group consultation meetings.

In Maraenui (Fig. 2), the project team carried out household interviews over the phone or online survey. The online household survey link was then posted on the Facebook group page of the Maraenui community with the support of the partner CDEM Group. It was also circulated via email to residents in Maraenui by some of the project interviewees and the CDEM staff. The total number of responses received is 13 (Table 1). One community consultation meeting (i.e. focus group discussion – FGD) was held with 9 local resident participants at Pukemokimoki Marae on 15th April 2019. Furthermore, face-to-face and phone interviews were conducted with 9 stakeholder representatives (from both government and non-government sectors) operating at different levels, from the local to regional.

Activity	Number of participants	Time
Household survey	13 (5 males, 7 females and 1 other)	March – June 2019
Community consultation	9 (4 males and 5 females)	15 th April 2019
Interviews with stakeholders	9 (4 males and 5 females; 5 participants from regional and district councils and CDEM offices, and 4 participants from civil society organisations, e.g. Red Cross, Richmond school, Roopu a Iwi Trust, and East Coast Lab)	March – June 2019

Table 1. Numbers of participants and time of the project activities in Maraenui

Given the small number of the participants in this project location, this study has some limitations in capturing the diverse perspectives of the study community. The data from all of the interviews, surveys and consultation were entered to the online database of the Global Network of Civil Society Organisations for Disaster Reduction (GNDR) for analysis. To explore the VFL data of New Zealand, please go to this website: <https://vfl.world/explore-vfl-data/>.

² ‘Community’ in this report is defined as a group of people living in the same place or having a particular characteristic in common (GNDR, 2018)

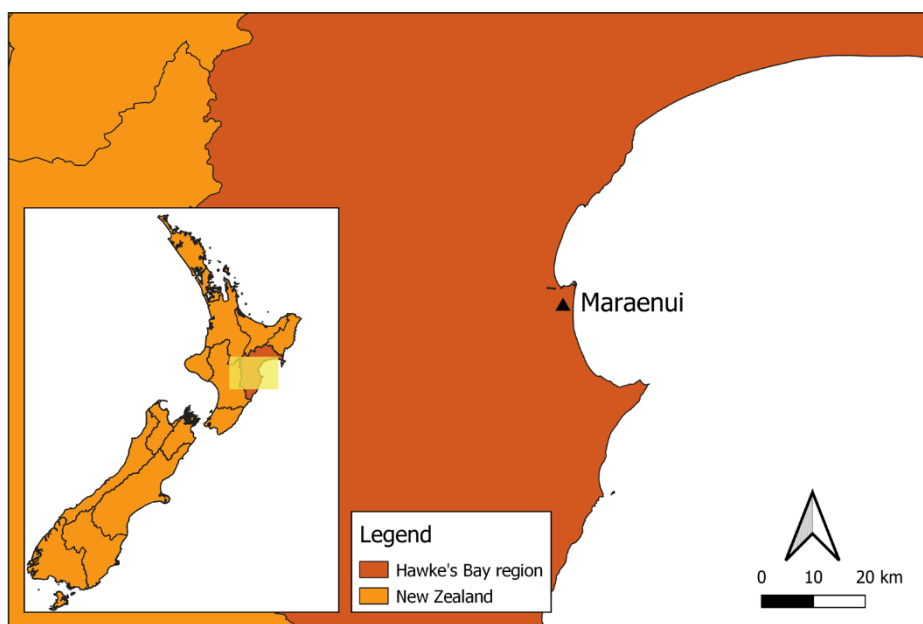


Figure 2. The location map of the study area

II. Results

1. Threats, consequences, actions and barriers:

The assessment explored people's perception of four dimensions: the threats that confront them; the consequences of these threats; the actions to address the threats and consequences; and the barriers that hinder the implementation of actions. The threats explored in this study are not limited to natural phenomena but include other political, social and economic scenarios. According to the respondents from the participating government organisations (GOs) and civil society organisations (CSOs), the top three hazards that people in Napier are facing are earthquakes, tsunamis, and floods (Fig. 3). The other threats raised by the participants are ashfall, pandemic flu, drug addiction, fire, liquefaction, sea-level rise, and firearms/violence.

In Maraenui, the local participants from the community consultation and household surveys reported heavy rains, tsunamis, and floods as their most concerning hazards. The community consultation participants noted that earthquakes are not a top concern as strong magnitude earthquakes are rare in occurrence whereas small earthquakes that pose little impact on livelihoods are common.

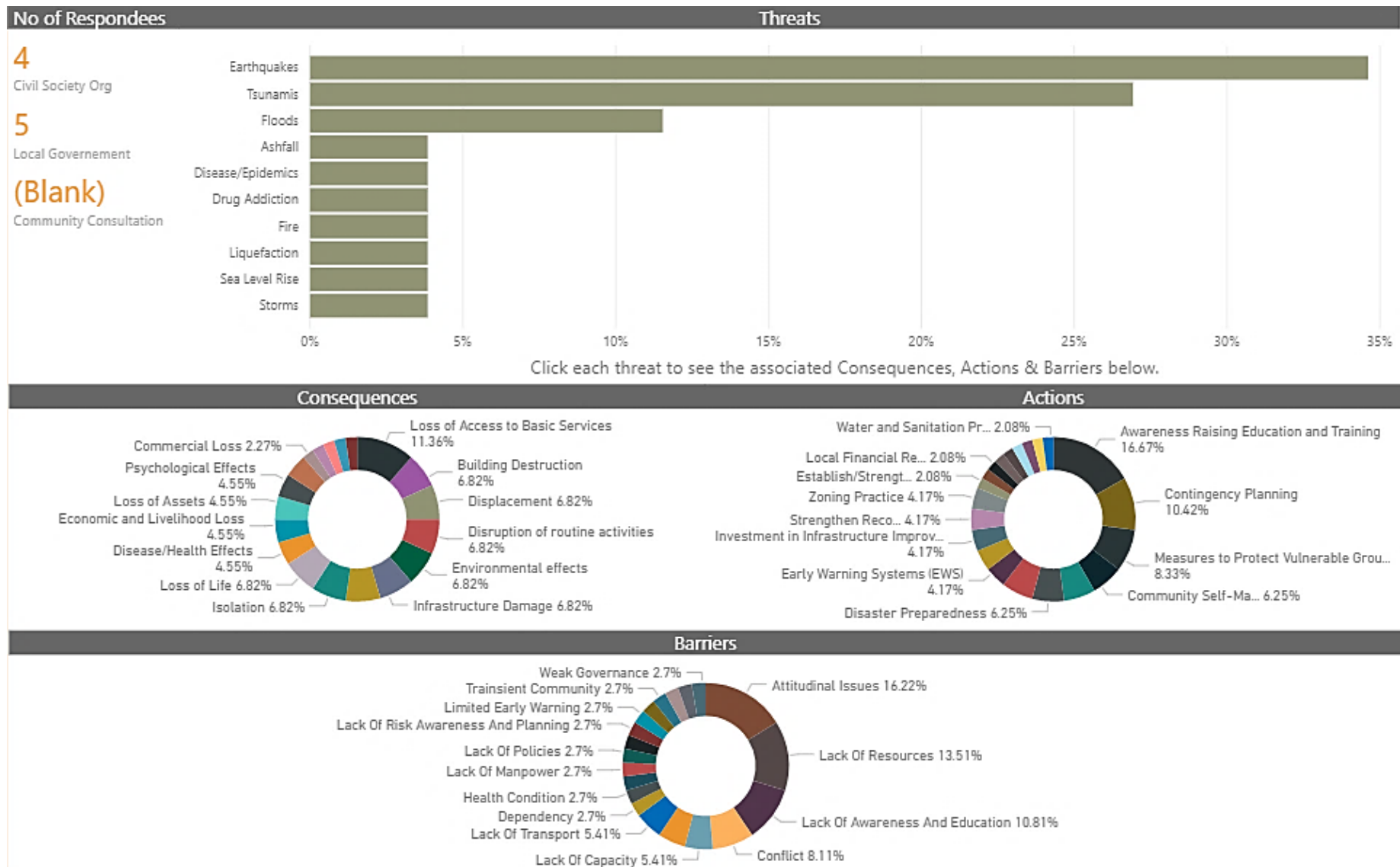


Figure 3. Threats, consequences, actions and barriers in Napier

Earthquakes:

The top impacts of earthquakes reported are loss of access to basic services (11.36% of the respondents from GOs and CSOs), infrastructure damage (12%) and isolation (12%) (Fig. 4). The participants explained that earthquakes destroy the local infrastructure and accordingly lead to disruptions in providing lifeline services (e.g. water, power, transport, and communication) to people as well as in their daily routine activities. In addition, the destruction of the road network would restrict the relief activities from the outside and therefore place people in isolation for weeks or even months depending on the severity of the earthquake. Furthermore, participants raised other expected impacts of earthquakes including, loss of assets, injuries, loss of life, disruption of routine activities, mental effects, disease and health effects, and environmental effects. Some participants also believed strong earthquakes can lead to other hazards such as liquefaction, tsunamis, fires, flooding and looting. FG participants raised their concerns of in-door threats, associated with earthquakes, of which people are not aware. For example, a TV or heavy items hung high may fall, killing or hurting people.

The top priority actions proposed by the GO and CSO participants to reduce the risk of earthquakes mainly focused on raising public awareness of earthquake risks and earthquake preparedness (e.g. having emergency items such as water, food, and fuel in place) (21.74%), introducing measures to protect vulnerable people (13.04%), strengthening community cohesion (e.g. knowing neighbours) (8.7%), and improving the early warning systems (especially in terms of communication) (8.7%) (Fig. 4).

Other important actions suggested are having emergency response plans, distributing survival kits to people, practising evacuation drills, investing in building resilient lifeline infrastructure (e.g. water pipeline, building codes), allocating funds for local government to implement disaster risk reduction (DRR) actions, strengthening the monitoring mechanisms for the implementation of policies, and enhancing the collaboration among the stakeholders in implementing local DRR (e.g. more communication between agencies, NIWA and the media, communication between CDEM groups and local people). A GO participant also commented that the current knowledge on disaster management is not sufficient or outdated, and therefore, he emphasised the need for research to have a better understanding of the earthquake risk that would place a foundation for DRR planning (e.g. zoning practice). Few FGD participants also raised a need to get to know neighbours and help them where needed.

The top three barriers that hinder the implementation of DRR actions are local people's attitude toward disasters (19.05%), lack of resources (mainly funding) (9.52%), and lack of transport (9.52%) (Fig. 4). Many participants believed that community attitude (such as "it'll be alright", not believing disasters would happen in their area or not considering disaster preparedness seriously) and people's reliance on the CDEM group (e.g. thinking that emergency response is the sole responsibility of the CDEM group) greatly prevent people from taking preparedness actions. A GO participant commented that people tend to deny the existence of risks and therefore not to get well prepared for emergencies or disasters. Several FGD participants raised concerns regarding procrastination and reliance of people on others to get prepared.

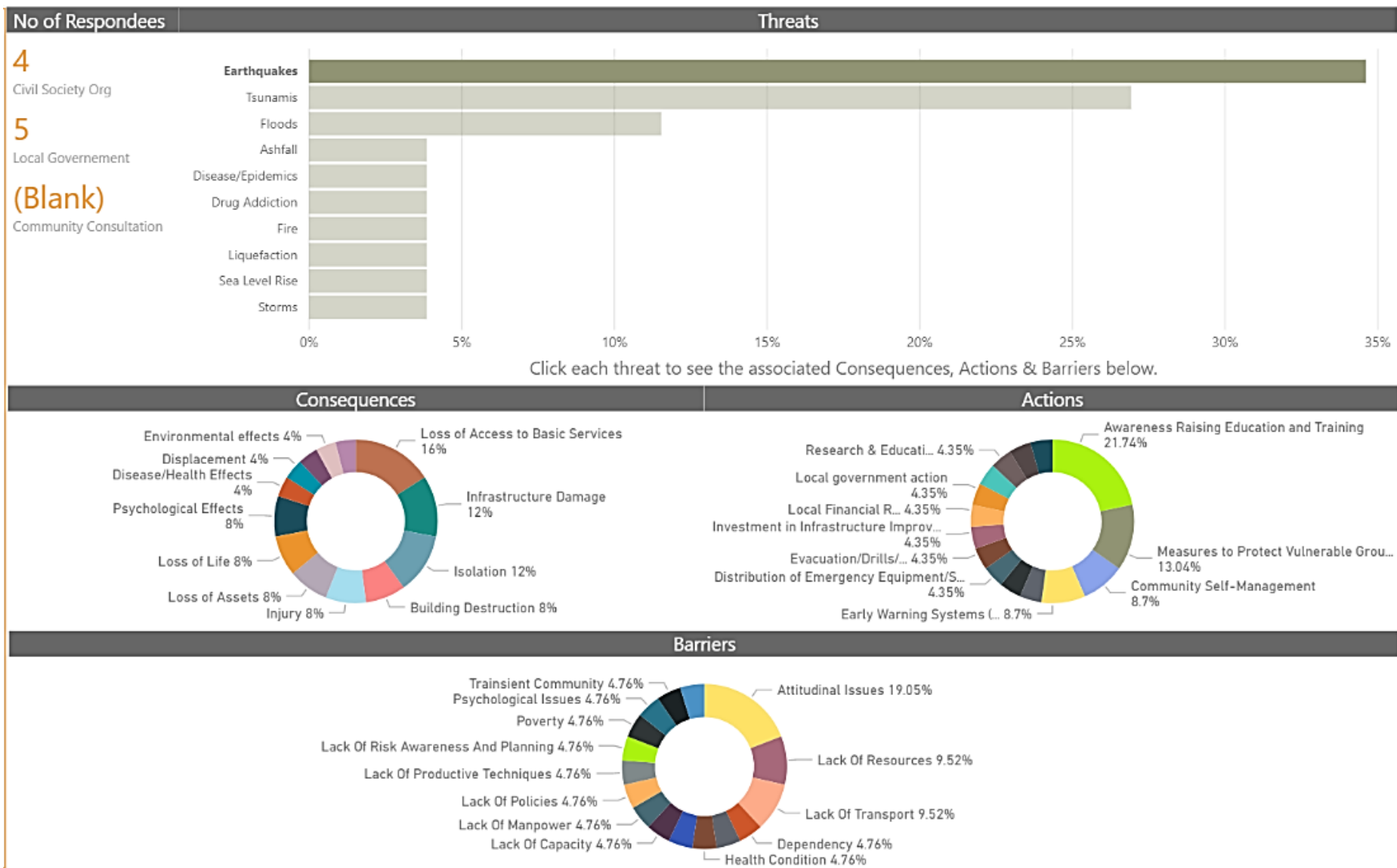


Figure 4. Threats, consequences, actions and barriers for earthquakes in Napier

Another critical barrier reported is the lack of resources. This barrier prevents not only the local government from implementing DRR measures and distributing relief goods to affected people but also prevents local people, especially those who have low socio-economic status or live in poverty, from taking preparedness actions. The 2018 census indicated that, for people aged 15 years and over in Maraenui, the unemployment rate is 7.8% and an annual income of \$20,000 or less is almost 35%. Such people without employment and income may face challenges in preparing items such as food and other essential items before a disaster. In addition, lack of transport was reported to limit the ability of people who have no motor vehicles (around 20% of Maraenui population) and live in remote or isolated areas to travel to town for purchasing items for their disaster preparedness. It was also noted by a FGD participant that in times of earthquakes, road and housing destruction and falling trees would be a big challenge for people to be mobile or evacuate. A CSO participant also raised her concern of isolation as in the aftermath of an earthquake, which would limit people's mobility as well as external support. It is noted that, according to the NZiDep 2018, an index of socioeconomic deprivation for individuals conducted by University of Otago, Maraenui was the most socio-economically deprived in Napier City. People who live in such deprived areas are more susceptible to environmental hazards and may also have less capacity to cope with or protect themselves from environmental hazards³.

Other barriers reported include dependency on lifeline services such as water pipeline, health conditions of vulnerable people such as older individuals and people with disabilities, lack of human resources (e.g. Council is overrun with other work and services which they must provide for their residents), lack of policies (i.e. looking at vulnerability as a whole or society-wide issue is not easy to address), lack of productive or effective techniques to build resilient infrastructure, lack of risk knowledge and planning, mental health issues (e.g. fear or panic), transient groups (i.e. newcomers or short-term residents may not have knowledge of local hazards), and weak community organisation. A FGD participant raised the issue of bureaucracy in bringing food into CDEM emergency shelters. This may prevent tangata whenua, who value collective activities such as cooking and sharing food, from sheltering there in the aftermaths of a disaster.

Tsunamis:

The most reported consequences of tsunamis include disruption of routine activities (15.79%), economic losses (10.53%), infrastructure damage (10.53%), isolation (10.53%), and loss of life (10.53%) (Fig. 5). A GO participant estimated that if a major tsunami happens in Napier, it is likely that more than 60% of the population would not have a place to live and the city would be isolated for 10-15 days. The other impacts reported are building deconstruction, commercial losses (i.e. loss of business opportunities), displacement, flooding, food insecurity, injuries, loss of assets, and loss of social or family links. A FGD participant noted that the tsunami risk is not necessarily from a local source in Napier but major earthquakes in the Pacific like Fiji or Honolulu. They experienced one in 1964 but it did not cause any effects on their lives.

³ Environmental Health Indicators New Zealand <https://www.ehinz.ac.nz/indicators/population-vulnerability/socioeconomic-deprivation-profile/>

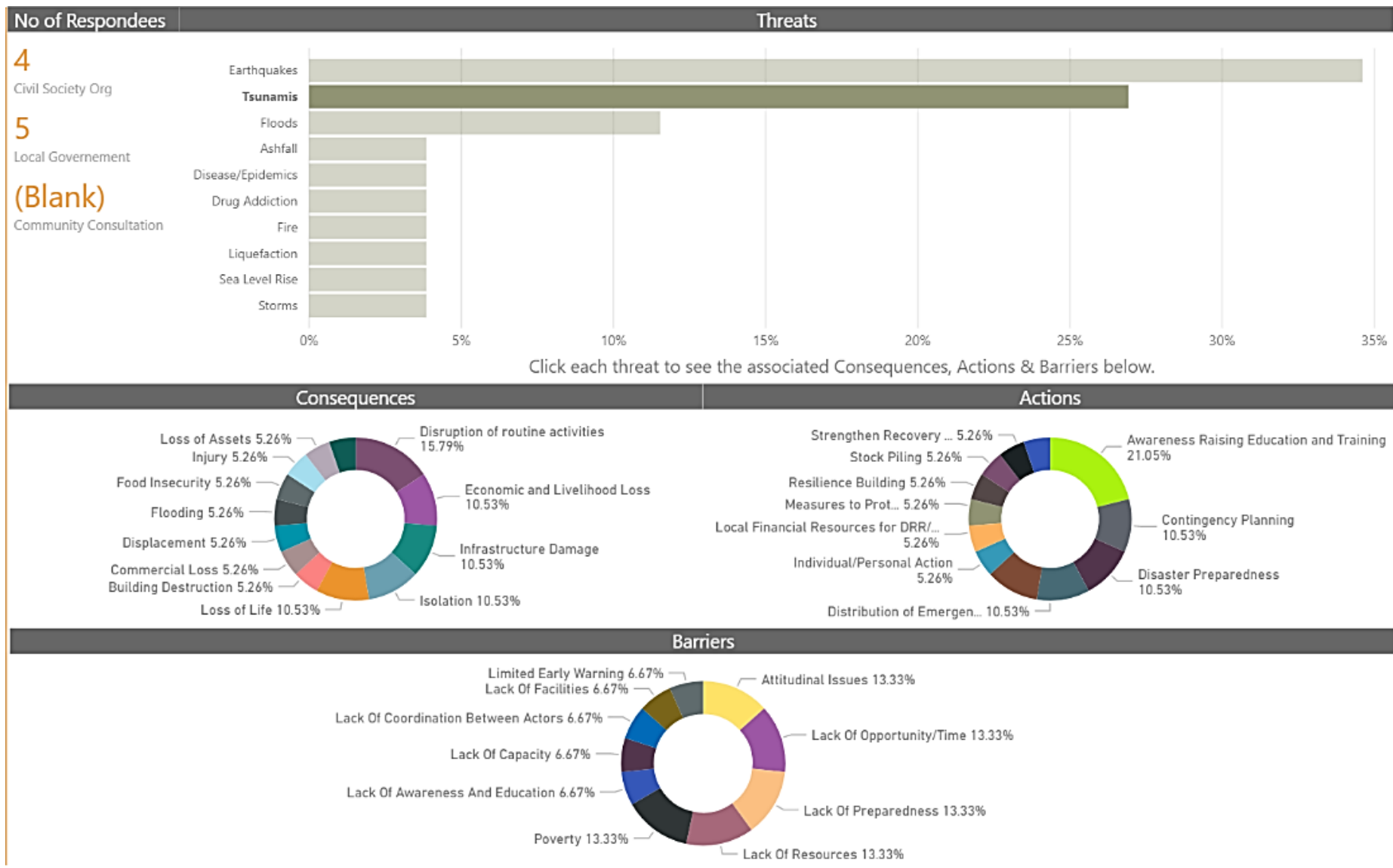


Figure 5. Threats, consequences, actions and barriers for tsunamis in Napier

Given the impacts, the participants proposed actions that mainly focus on awareness-raising campaigns (e.g. telling people what to do and where to go in times of tsunamis) (21.05%), having an emergency plan in place (10.53%), improving household and individual disaster preparedness (10.53%), distributing emergency/survival kits to people (10.53%), and having evacuation drills (10.53%) (Fig. 5). Some participants indeed shared their concerns that many local people do not know where to go in times of tsunami. Even if they know the place, they are not sure if it is safe from tsunamis. Therefore, the vertical evacuation was also proposed as a solution to coastal low-lying areas like Maraenui. The other actions suggested are increasing personal responsibility and actions, allocating funding for local DRR, taking measures to protect vulnerable people, building the resilience of infrastructure, stockpiling, strengthening the recovery team, and having water and sanitation programmes after tsunamis.

The top-rated barriers from the perspectives of GO and CSO participants include local people's attitude (13.33%), and lack of resources (13.33%) for both local people and government staff, lack of preparedness (13.33%), poverty (13.33%), and lack of time (13.33%) (Fig. 5). According to a GO participant, a common belief of local people who live close to the coast is that if a tsunami happens, they will all die. This made them reluctant to be prepared. As many local residents who live in poverty as they have to make their ends meet and thus would not have time to think of being prepared. Also, preparing food for 3 days, as recommended by the CDEM group, is a challenge for those with lower incomes. From the government side, a GO participant noted that the local government would face financial limitations in the response to tsunamis (e.g. providing emergency shelters for tens of thousands of people who probably lose their house after a tsunami). He also noted that local government staff prioritise solving ongoing and present issues such as water contamination and waste, and thus, find it difficult to put significant time into planning for low instance, high risk events.

A few participants commented about the limited capacity of the early warning systems for tsunamis. For Tsunamis generated by nearby of shore fault lines, there is a limitation on the amount of warning that can be given, and therefore, people will not have ample time to evacuate. The other barriers reported are lack of risk awareness and knowledge among local people, lack of capacity to take actions (e.g. for older people, people with disabilities, or people with chronic illness), lack of coordination between stakeholders, and lack of facilities or lifeline services. In addition to these barriers, the FGD participants believed that the efforts and investment of the local government in reducing tsunami risk for local people remained limited.

Floods:

Flooding, one of the significant threats reported in Napier, is often associated with king tide and heavy rains, and mostly affect the areas that are low lying or have poor drainage systems. In Maraenui, there is mostly surface flooding caused by the poor drainage system. Four main impacts, reported by the GO and CSO participants, include loss of access to basic services, displacement, disruption of routine activities, and infrastructure damage (Fig. 6). Other impacts added by the FGD participants are loss of livestock, housing damage, sewage and contamination of water that may cause diseases, isolation, power cut that may affect those who rely on medical machines/device.

Given the impacts, the interview participants proposed the following actions to reduce the flood risk: emergency planning, zoning practice, and investment in infrastructure including the drainage system. The FGD participants also added the improvement of early warning systems (EWS) and measures to protect vulnerable people such as people with disabilities and older people. They suggested each family need to have an emergency plan that clarifies the role of each member in the household, preparedness and response.



Figure 6. Threats, consequences, actions and barriers for floods in Napier

However, to take these flood risk reduction actions, the barriers such as lack of resources and poor implementation of DRR policies were raised. Few interview participants believed that the current DRR strategies are based on the old or outdated understandings of hazards and DRR.

2. Change in disaster loss and future risk:

The perceptions of both the community and stakeholders on changes in disaster losses (e.g. lives, livelihood, and assets) over the last 5 to 10 years and on future risk were also explored. The participants were asked to rate this change using the following scale: 1- Decreased significantly; 2 - Decreased a little; 3 - Remained the same; 4 - Increased a little; 5 – Increased significantly. Almost 50% of the participants from the interviews and household surveys believed that disaster loss remains the same over the last 5-10 years (Fig 7.). The rest of the participants had various opinions, either increased or decreased. More than half of the FGD participants, however, believed that the disaster loss decreased over the past 5-10 years. For them, this decrease resulted from more risk awareness-raising activities implemented in the region, and people being more concerned about disaster preparedness since the earthquakes in Christchurch in 2011.

In terms of future risk, the participants believed that the main hazards or threats that younger generations will face in the next 10-15 years are the same as what they are facing now, including earthquakes, storms and tsunamis (Fig. 7). Many participants considered climate change as a threat as of now and in the future. They believed that climate change may lead to sea-level rise and intensify hydrometeorological hazards such as storms and flooding. Other natural threats raised are droughts, sea-level rise, erosion, and fire. Some participants were also concerned about social threats such as drug addiction, high cost of living, insufficient housing, poverty, lack of sense of belonging or connection, and rumours (giving wrong information and thus confusing people to take actions) that may arise or be exacerbated in the future.

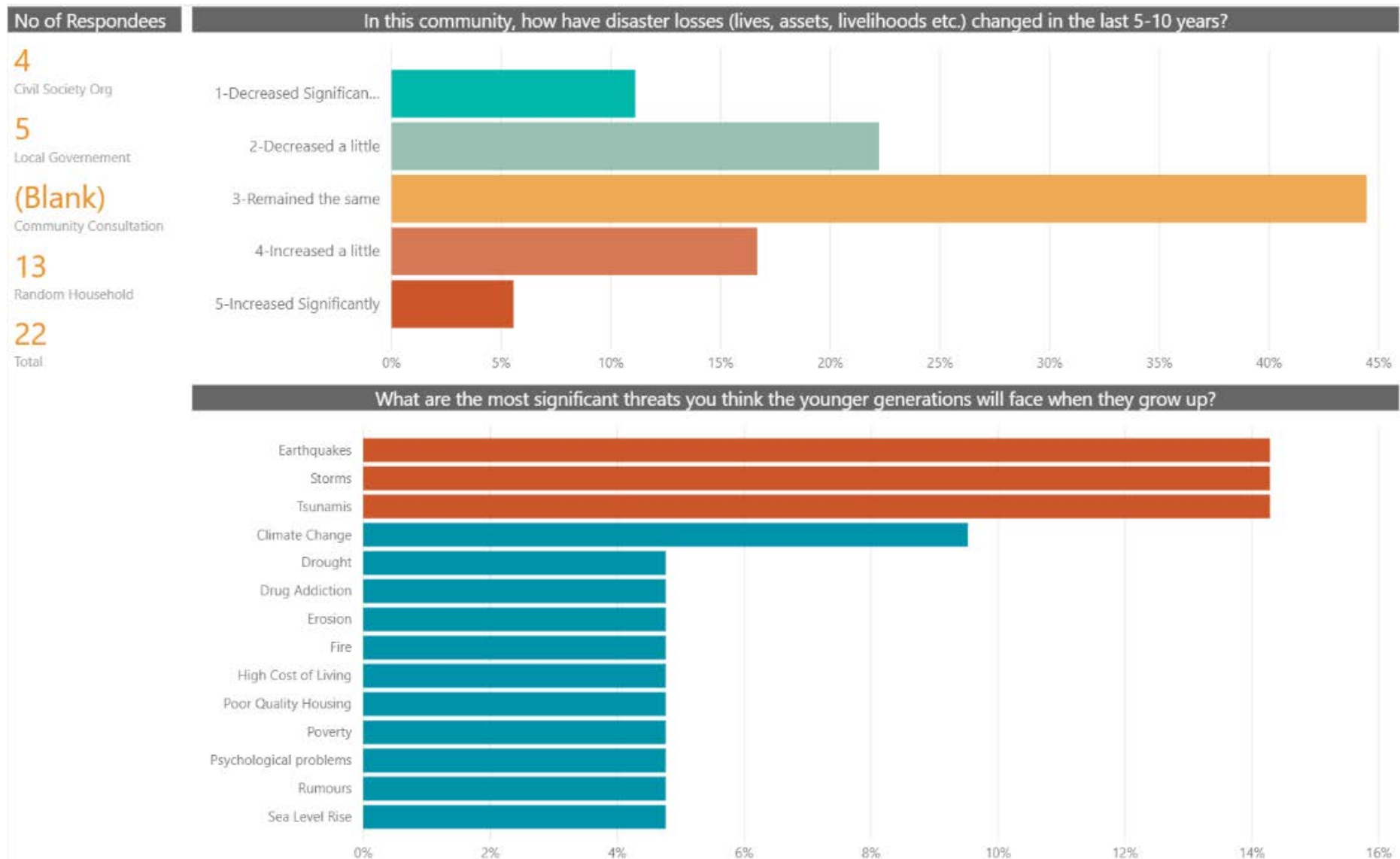


Figure 7. Change in disaster loss and future risk in Napier

3. Risk governance:

This section explores the extent of community inclusion initiated by GOs and CSOs in disaster risk governance processes. Inclusive disaster risk governance is defined as mechanisms put in place to foster full and meaningful participation of relevant stakeholders at all levels of the disaster management and preparedness cycle (GNDR, 2018). In examining the inclusivity of existing mechanisms in disaster risk governance, the research took into consideration the elements and processes below (Fig. 8).



Figure 8. Elements of inclusive risk governance

The below graphs show the status of community inclusion in risk governance from the perspectives of GOs, CSOs and local people.

Community engagement

From the CSO perspective, communities were not engaged or engaged to a very limited extent in disaster risk assessment and DRR planning phases initiated by the government by the time of data collection (Fig. 9). A CSO participant noted that at the region-wide, a range of experts run disaster risk assessments without community involvement. At the local level, it depends on the local government programme. For instance, in Bay of Plenty, communities are involved in disaster risk assessment (e.g. in terms of acceptable levels of risks, vulnerability, capacity). The CSO participants from Maraenui noted that no disaster risk assessment and DRR planning were conducted in this area. Accordingly, they emphasized that the CDEM group needs to take initiative in gathering people and making DRR plans together.

Community members were engaged more in implementing DRR actions. For instance, one participant commented that her organisation involved community members and volunteers in their projects such as community gardens or the Curtain Bank, which helped local people, especially those with low income, have free access to vegetables and fruits, or keep their house warm in the winter. Another participant claimed that they helped their community members in developing safety plans in terms of violence. It was also reported that volunteers for the CDEM group are all from government sector rather non-government sectors. Thus, a participant doubted about the inclusion of communities in planning and implementing disaster-related work by the CDEM group.



Figure 9. Community engagement by civil society organisations

Similarly, in terms of supporting local people in sharing local knowledge and approaches to resilience with other community members, most of the CSO participants claimed that their work was effective. One participant commented that when they organised risk communication activities (e.g. workshops or public events), they acknowledged the local knowledge and encouraged people to pass on the information to other community members.

Building capacity for communities to participate in resilience processes was also reported to be occasionally conducted. One of the capacity building forms reported is increasing the access to the risk information (e.g. how to get prepared in the face of disasters) for the communities through community meetings and materials (which are translated into Te Reo). Few participants also claimed that they considered accessibility issues when selecting venues for community meetings, or provided free transport services for older people and those living in remote areas.

For most of the CSO participants, participation in the national platform for DRR was not possible or not frequent. At the regional or district levels, however, they claimed that they often participated in the regional coordination meetings organised by the local CDEM group or Safer Napier meetings. In such meetings, they did share local concerns such as utilities, housing, and poverty.

The GO participants generally claimed that they have well engaged local communities in the disaster risk assessment, DRR planning, and implementation of actions to reduce the risk (Fig. 10). The engagement of community representatives, however, was believed to remain limited in monitoring progress towards resilience. Though the CDEM group was promoting 'community resilience process' through which community members came together and held their own meetings, identified hazards, resources and capacities, and made the plans of how they reduce the identified risk (e.g. establishing the information board, ways of disseminating warnings, evacuation routes, evacuation locations), this process was initiated in Maraenui yet.

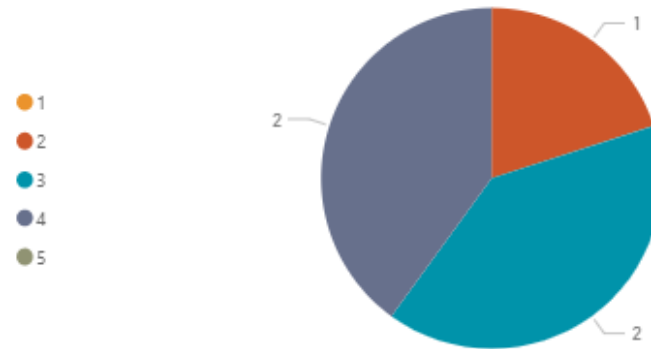
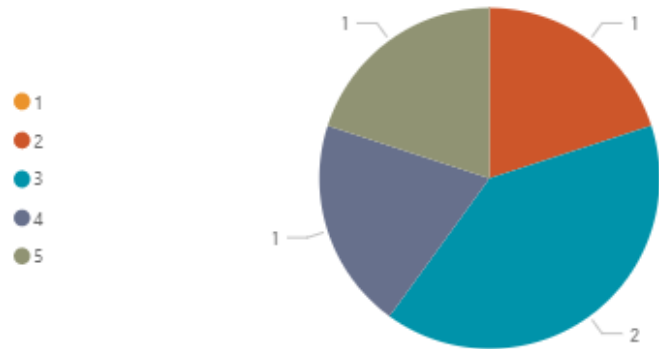
From the local community perspective, community engagement is generally very limited in all community resilience processes, especially the planning one (Fig. 11). The majority of FGD participants reported that the local government did not talk directly with them or they were not aware of community resilience activities conducted by the CDEM group. Few FGD participants shared that the CDEM group held some disaster-related workshops in Maraenui. However, these workshops focused mainly on sharing disaster risk information (e.g. what to do in times of disasters) rather than disaster risk assessment and planning for disaster resilience. A few local people in Maraenui also claimed that the existing bureaucratic process prevented many people from giving submissions to local plans when they are made available for public consultation. Participants claimed the submission process is sometimes poorly announced and not easily accessible especially for the lay person. Therefore, these participants doubted the consideration or inclusion of local needs in the local plans.

Key

1 - Not at all 2 - To a very limited extent 3 - Occasionally 4 - Yes, with some limitations 5 - Yes, very effectively

Assessment: Does local government regularly talk to the community, including the most vulnerable, to assess the most significant threats?

Planning: Does local government talk to communities, including the most vulnerable, when preparing policies, plans and actions to reduce risks/threats?



Implementation: Does local government involve communities, including the most vulnerable, in the implementation of actions to reduce risks/threats?

Monitoring: Does local government include community representatives in teams responsible for monitoring progress towards resilience?

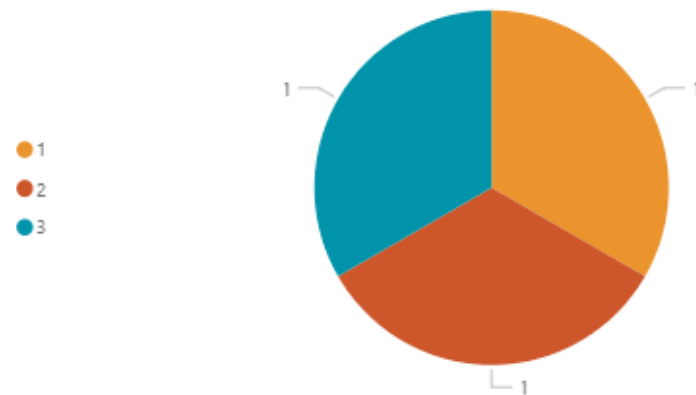
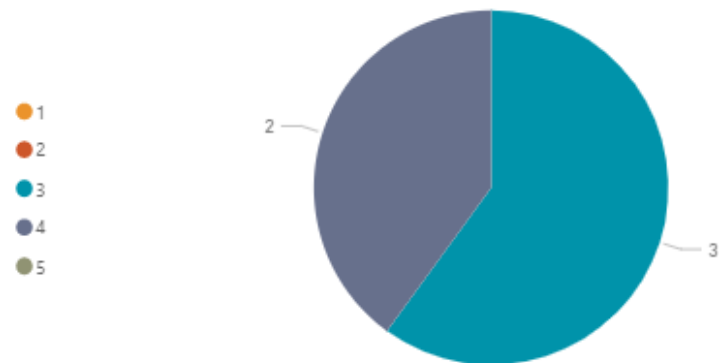
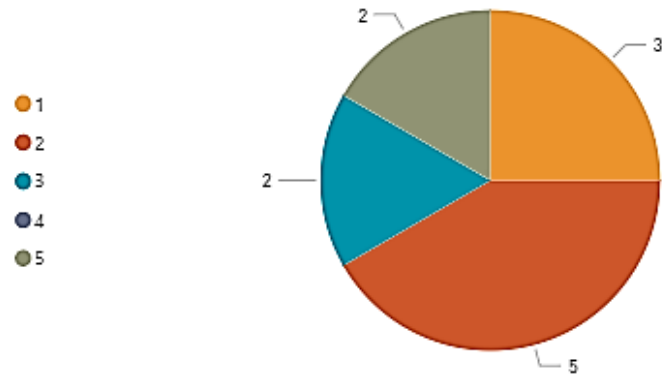


Figure 10. Community engagement by government organisations

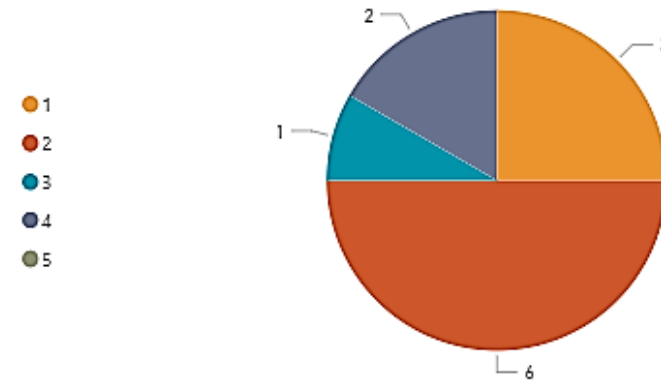
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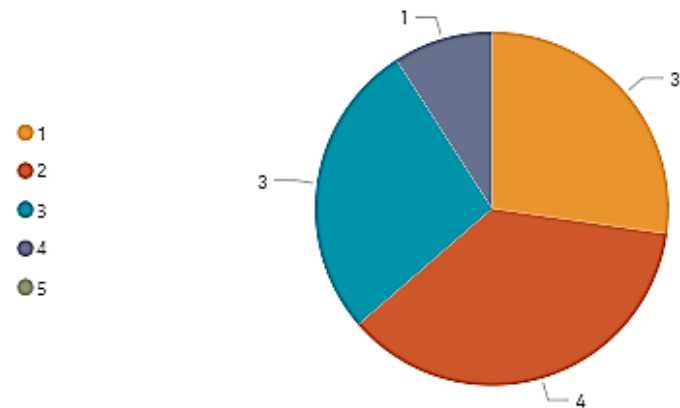
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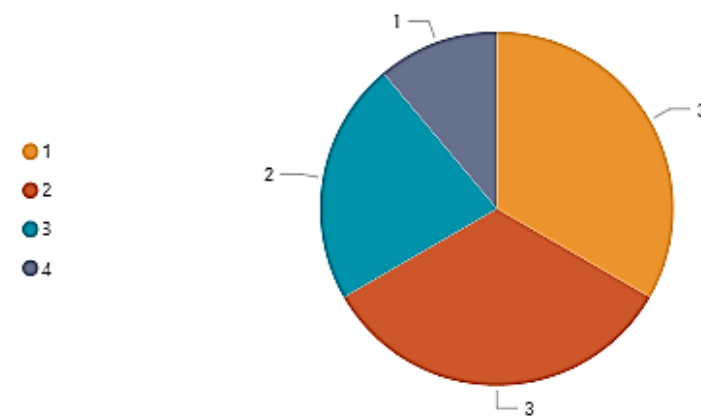


Figure 11. Community engagement from the local community perspective

Enabling environment for inclusion:

Enabling environment refers to factors such as leadership, resources, legal mechanisms and policy that enable and encourage proactive engagement of communities and relevant stakeholders (GNDR 2019). In general, the interviews with the GO participants indicate that the CDEM Group was capable of influencing the disaster risk reduction at the regional and local level. The GO participants also believed that the CDEM plan was effective in addressing the risks in the region (Fig. 12). However, when it comes to mechanisms for community engagement in resilience building, some believed that existing mechanisms were not effective at times. For instance, a GO participant noted that consultation processes existed, but some reports limited the request for feedback. Many of them also raised their concerns about the lack of funding to address the risks in their region. A participant noted that the operation of CDEM group relied on the funding of 5 district councils, which influenced and at times restricted the CDEM group from making change.

Regarding the access to information, most of the GO participants agreed that the government generally well communicated the risk information to local people through a variety of channels such as community meetings, the internet and social media. However, a GO participant raised the concern of reliance on the internet to communicate the information on risks to communities as not everyone had access to the internet (only 67.9% of the households in Maraenui had access to the internet according to the 2018 national census). Another participant recognised that having risk information (e.g. risk zoning websites) may not ensure that people would act upon the information received.

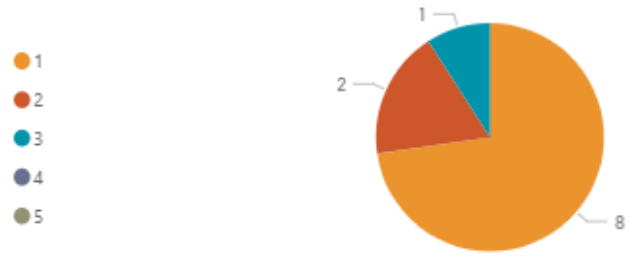
From the community perspective, the majority of the participants believed that community members could access the information with some limitations from the government regarding actions to reduce disaster risks (Fig. 13). Few GO participants noted that there was still room for improvement, especially in terms of accessibility of the information for people with disabilities and migrants.

In terms of the access to resources for communities, there was a general agreement among the household survey respondents that local people had no access to or were not aware of financial resources (money, material, equipment) from the local government to address their risks/threats (Fig. 13).



Figure 12. Enabling environment for inclusion from the government perspective

Access to resources: Can communities access resources from local government to address risks/threats?



Access to information: Can communities access information from local government about the actions to reduce risks/threats?

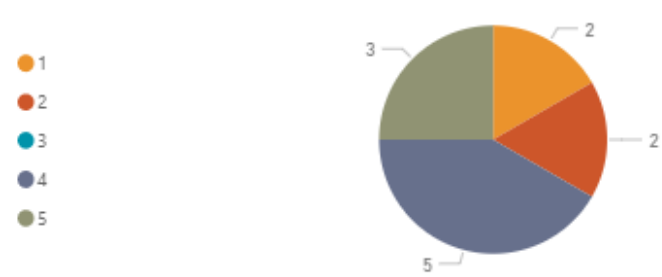


Figure 13. Access to resources and information from the community perspective

Factors that prevent and facilitate the community inclusion in the decision-making processes about risks/threats

The research explored a variety of factors that prevent and facilitate the inclusion of communities in the decision-making processes about risks/threats. These factors were reflected by the GO, CSO and community perspectives and summarised below.

Barriers:

- Attitude of local people: Some interview participants noted that disaster preparedness is not a priority in life, especially for local people who live in poverty. Some local participants (from the FGD and household survey) also raised the issue of apathy or disagreement of people to local government plans or strategies. (This barrier may explain for the limited number of responses received from the household surveys.)
- Lack of knowledge: Few local participants felt unable to contribute to the planning due to their limited knowledge of the plans.
- Poor communication: Some local participants claimed that they were not informed or aware of the activities (e.g. where and when the meetings or activities happened, or who to ask for more information about the activities). This was mostly because of the poor communication as noted by many participants including those from GOs. Some FGD participants felt that the local government was not reaching out as much as they should. A local participant commented that he did not read the local newspapers and therefore did not know of the activities or meetings in his community.
- Time: the timing may not fit with people's schedules, especially for those who have to work and live on a day-to-day basis. A participant from a CSO noted that participation at the local level was possible but it would take more time to scale it up to regional level (e.g. public consultation for a regional plan).
- Lack of resources: Some local people did not have their own means of transport and public transport was also limited in some areas. Some GO participants also reported that a lack of resources limited the risk information from reaching the population at large.
- Inaccessibility: The inaccessibility was raised in terms of distance (e.g. the meetings held in town), venues of the activities, transport to the venues, language barriers, or limitations in communication abilities. A few local community participants also attributed the lack of inclusion to the bureaucratic process (e.g. submission process).
- Cultural barriers: recognising the cultural diversity which is often seen in a transient community, where people from other places come and stay temporarily, a CSO participant raised an issue of lacking cultural considerations when promoting local inclusion. Given the diversity in a community, one participant also noted a challenge in accessing all community groups.
- Top-down leadership: the top-down leadership style remained. A GO participant commented that the CDEM group work was dominantly operated by those who had a military background. This contributed to the top-down leadership in resilience building. Many participants also raised the issue of ignorance of and disconnection of politicians (e.g. low priority) in low socioeconomic areas. The lack of representation of different groups (e.g. Maori) in the local government was also noted by a few participants, which led to a lack of trust by the groups in the government.

Facilitators:

- Change of leadership style: Several structural changes made to Hawke's Bay CDEM group were expected to shift the current approach of resilience-building from top-down toward the

bottom-up. It was also reported that collaboration between the CDEM group and other sectors in local government had been increasingly strengthened.

- Support of CSOs: The support of CSOs (e.g. East Coast Lab, Safer Napier Network, neighbourhood support network) through their projects was believed to promote the information sharing, community connection and inclusion.
- Increased accessibility: Efforts of the local government in reaching out to the communities were recognised in terms of diversifying communication channels (e.g. social media) and flexible timing for the meetings.
- Community plan: The CDEM group was promoting the development of community resilience plans which was led by communities themselves. This platform was believed to promote community inclusion in resilience building.
- Treaty of Waitangi training: Allows participants from local government and CSO groups to understand cultural issues relating to Maori and how the Treaty can be upheld in community development and such activities. Such training can lead to more inclusive practices which uphold the treaty in today's context.

4. Coherence:

Coherence in this study refers to the efforts of different actors and organisations (government and non-government) to effectively respond to a crisis by identifying ways of working together based on their respective expertise, values and mandates (GNDR 2018). Coherence is the logical connection or consistency between household and community-focused resilience-building activities, on the one hand, and development activities, on the other. When required, activities under these two types of interventions should converge together to deliver the common outcome of development that can tackle future risks, decrease vulnerability and build resilience (GNDR 2018).

From the interviews with CSO and GO participants, it shows that disaster risk and climate issues were well considered in local development plans (Fig. 14). However, from the local household perspective, it was no or very limited consideration (Fig. 15).

There was no consensus on the consideration of risks and approaches to reducing the risks in local investment projects among the CSO and GO participants. Many participants believed that these issues were not carefully considered in local investment projects (Fig. 14). This agrees with the majority of local households' opinions (Fig. 15).

In addition, the GO participants claimed that efforts, made by the local government to ensure the coherence between the strategies to reduce risks, adapt to climate change and reduce poverty, remained limited. This was attributed to a lack of coordination among the concerned sectors at the local level. However, this collaboration was being improved. At the national level, the issue in part lied at the contradictions of national guidance (e.g. urban development policies and Resource Management Act) as noted by a GO participant.

The CSO participants also shared that they had very limited ability to influence such coherence at the local level (Fig. 14). It was explained that this went beyond the strategies of their organisations. A CSO participant commented that coherence in addressing disaster risk, climate change and poverty was a system-wide issue that was indeed above the responsibility of the CDEM group.

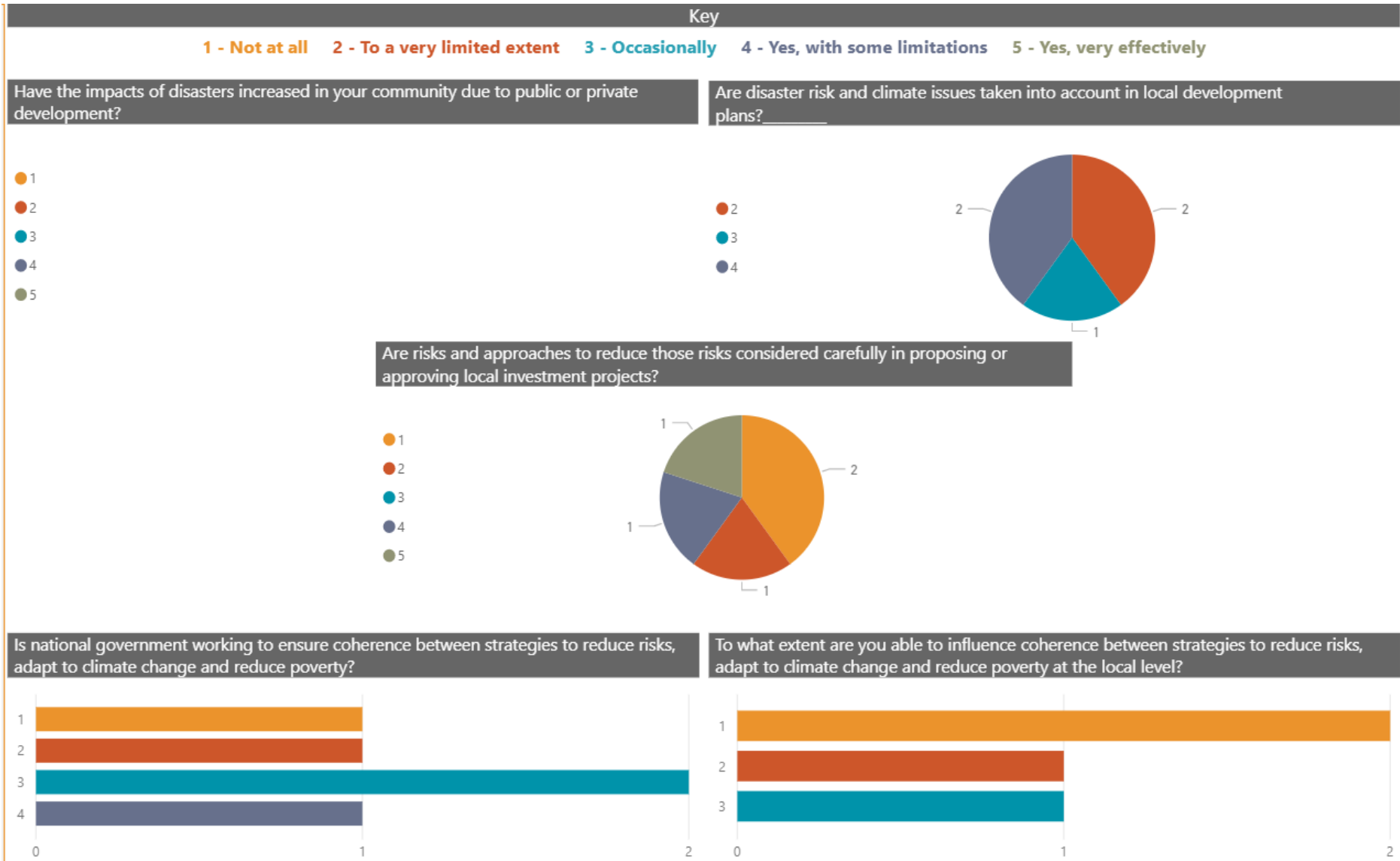


Figure 14. Coherence from the government and non-government perspectives

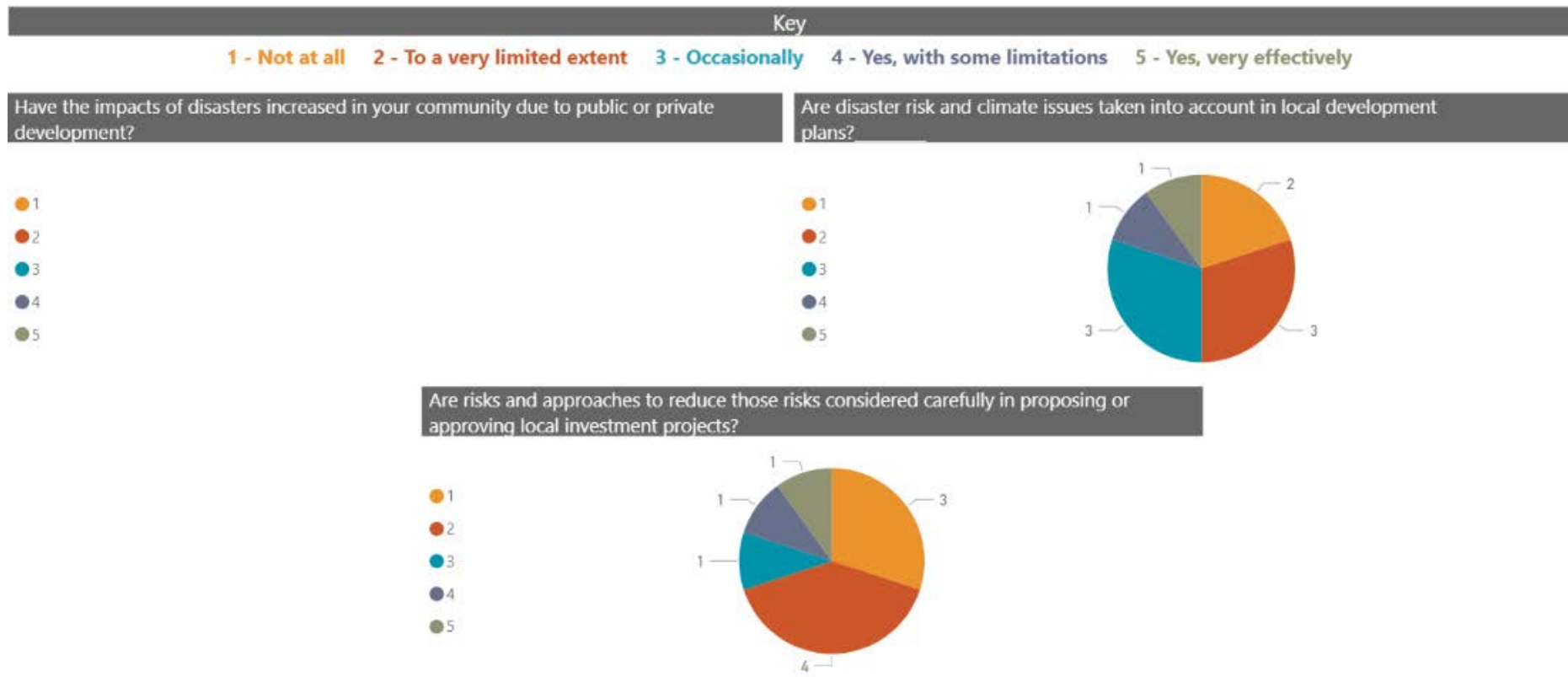
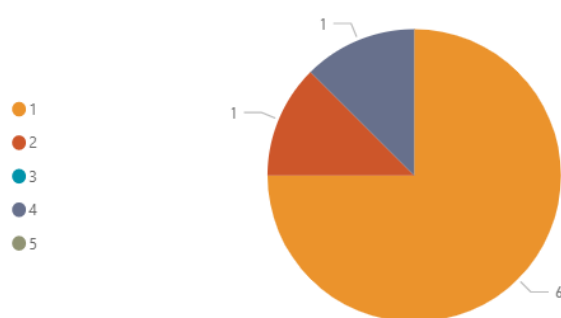


Figure 15. Coherence from the community perspective

5. Ecosystem-based disaster risk reduction

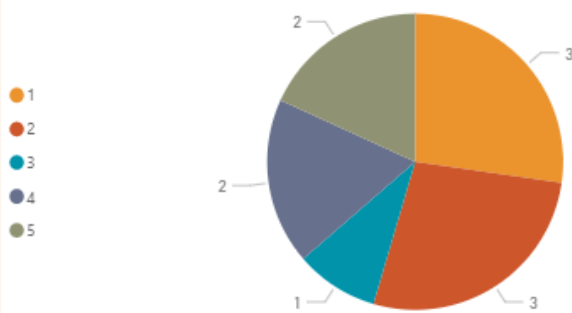
Ecosystem-based disaster risk reduction refers to the sustainable management, conservation and restoration of ecosystems to provide services that reduce disaster risk by mitigating hazards and by increasing livelihood resilience (GNDR 2019). The CSO and GO participants claimed that ecosystem-based approaches were not used or used in a very limited way in building community resilience (Fig. 16). Community members had a similar belief that local government did not consider or considered to a very limited extent environment and ecosystem management issues while implementing development plans. One of the ecosystems related actions often taken by government and communities was tree planting that aims to protect the ecosystem.

Are ecosystem-based approaches used in in community resilience building?



(a) GO and CSO perspective

Are ecosystem-based approaches used in in community resilience building?



(b) Community perspective

Figure 16. Ecosystem-based DRR approach from (a) government and non-government and (b) community perspectives

III. Conclusions

This study contributed to raising the voice of local people in resilience building processes in the study area. The local community had a chance to share their concerns and needs with regards to the disaster risk reduction processes (e.g. their concerned threats/hazards, their priority actions, barriers for taking

the actions and participation in disaster resilience processes, and access to information and resources).

A variety of threats being concerned in the study community were explored. These threats were not only natural ones such as tsunamis and floods but also social ones such as drug addiction and violence. For most of the threats identified, increasing the access to the risk information (including local knowledge of risk and approaches to risk reduction) through awareness-raising campaigns and other communication channels, having a community resilience plan with careful considerations of the needs of at-risk groups, and improving household and individual disaster preparedness were the most important actions in building community resilience to disasters. The assessment also revealed a variety of barriers that prevented people from taking actions in coping with disaster risk, and many of them were rooted in local people's everyday lives, e.g. lack of resources and apathy.

In addition, this study provided a chance for both government and non-government stakeholders to reflect how inclusive their risk governance is and for communities to evaluate their inclusion in this risk governance. In general, the community engagement in the disaster risk assessment, DRR planning, implementation of actions to reduce the risk, and monitoring the resilience progress remained limited in the study location.

A variety of factors that prevented and facilitated community inclusion in decision-making processes regarding disaster resilience were also revealed. These factors did not operate in silos but were often interrelated in causing the effects (preventing or facilitating) on the inclusion. Personal barriers such as attitudes and lack of resources may need a long-term strategy to address and should be integrated into local development plans. In addition to the common external factors such as poor communication and inaccessibility of the decision-making processes, cultural issues were emphasized as an important factor to be taken into account when promoting community inclusion.

Furthermore, though the local development plans, in the study area, considered disaster risk, climate change and poverty issues, there is still room for improvement. Similarly, while ecosystems are believed to provide services that reduce disaster risk by lessening the exposure of communities to hazards and by increasing livelihood opportunities, ecosystem-based approaches were considered in a very limited way in building community resilience at the study area.

When it comes to the collaboration of multi-stakeholders in disaster resilience building, although elsewhere the vital role of CSOs is recognised in building local resilience, their contribution to or influence on the local disaster resilience remained limited in the study location. This raises a need to enhance their engagement, and thereby mobilise their capacity and resources for building the local resilience.

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