



Building Communities' Resilience to Natural Hazards

A Case Study of NAC's Disaster Risk Reduction Interventions in
in Yawan District of Badakhshan

February, 2024

The Norwegian Afghanistan Committee

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The purpose of the organization is to work together with the Afghan people to contribute to the development of an independent, peaceful, and democratic Afghanistan; promote knowledge about Afghanistan in Norway; and promote friendship between the Norwegian and Afghan people.

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NAC shall contribute to a peaceful Afghanistan, free from poverty, where rural communities are empowered and resilient, valuing equality and diversity.

Our Mission

NAC shall support the Afghan people in the development of a peaceful, just, and egalitarian society where universal human rights are respected. NAC shall be a nexus for knowledge of, interest in, and engagement with Afghanistan in Norway, promoting Afghan voices and perspectives in Norwegian public debate and advocating for informed and responsible policies towards Afghanistan.

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Abbreviations

ANDMA	Afghanistan National Disaster Management Authority
CBDRM	Community-Based Disaster Risk Management
CDMC	Community Disaster Management Committee
DDMC	District Disaster Management Committee
DRR	Disaster Risk Reduction
ERA	Empowering Rural Afghanistan
FGD	Focus Group Discussion
IRD	Integrated Rural Development
M&E	Monitoring and Evaluation
NAC	Norwegian Afghanistan Committee
NRM	Natural Resource Management
SERT	School Emergency Response Team
UN	United Nation
VDMP	Village Disaster Management Plan

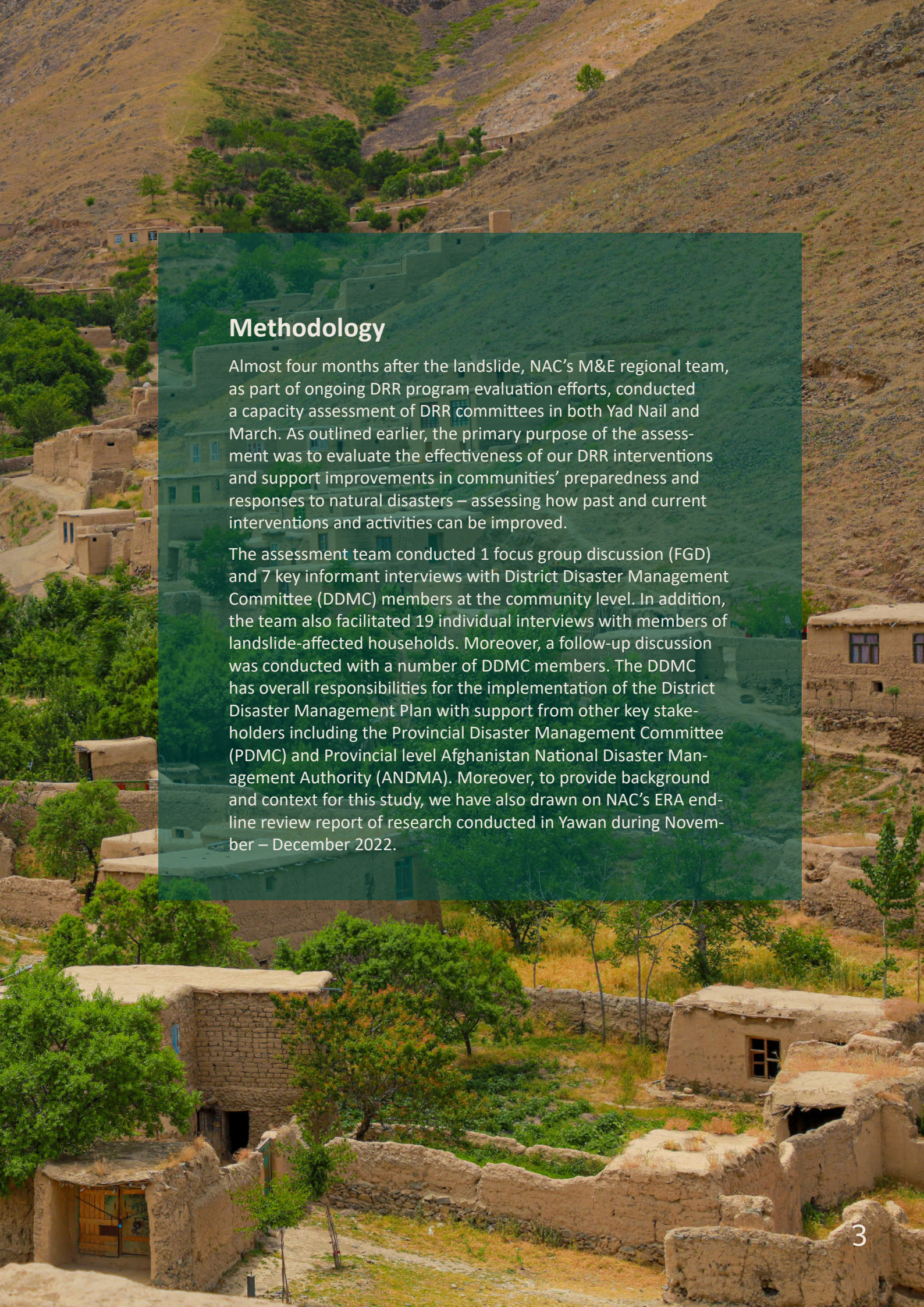
Introduction

Yawan is located in the far Northwest of Badakhshan province, between coordinates N: 37°31'41 and E: 70°22'43. The district has some of the most dramatic landscapes in the province, but life can be harsh for the residents living in the remote communities which regularly experience multiple types of natural hazards. These communities are highly prone to geomorphological hazards such as landslides, flooding, and avalanches. Landslides occur frequently and cause extensive damage to agriculture lands, homes, and livestock. Landslides have been a source of severe devastation, affecting both the natural environment and human settlements for several decades and resulting in considerable loss of life¹.

To reduce the adverse impacts of such disasters and build communities' resilience, the Norwegian Afghanistan Committee (NAC) has, since 2013, been supporting DRR governance structures at community and district levels in Yawan and other districts of Badakhshan through the implementation of a wide range of community-based disaster risk reduction programs and activities. These interventions have been key components of NAC's Integrated Rural Development (IRD) and Empowering Rural Afghanistan (ERA) programs.

This case study addresses the effectiveness of NAC's interventions and DRR committees' work with communities in preparation and response to disasters. We specifically assess communities' capacities and the performance of Disaster Risk Reduction (DRR) committees in relation to the key indicators for resilience to natural disasters – landslides in particular – in two communities, Yad Nail and March.





Methodology

Almost four months after the landslide, NAC's M&E regional team, as part of ongoing DRR program evaluation efforts, conducted a capacity assessment of DRR committees in both Yad Nail and March. As outlined earlier, the primary purpose of the assessment was to evaluate the effectiveness of our DRR interventions and support improvements in communities' preparedness and responses to natural disasters – assessing how past and current interventions and activities can be improved.

The assessment team conducted 1 focus group discussion (FGD) and 7 key informant interviews with District Disaster Management Committee (DDMC) members at the community level. In addition, the team also facilitated 19 individual interviews with members of landslide-affected households. Moreover, a follow-up discussion was conducted with a number of DDMC members. The DDMC has overall responsibilities for the implementation of the District Disaster Management Plan with support from other key stakeholders including the Provincial Disaster Management Committee (PDMC) and Provincial level Afghanistan National Disaster Management Authority (ANDMA). Moreover, to provide background and context for this study, we have also drawn on NAC's ERA end-line review report of research conducted in Yawan during November – December 2022.



Profile: Landslides in Yad Nail and March

On 6 September 2023, a large-scale landslide occurred in the area between Yad Nail and March valleys in Yawan district. Different from previous landslide events in the district and province, this time, fortunately, no casualties were reported, even though the landslide fully covered the road used by children to get to school and for the passage of livestock. Although there was some damage to homes and agricultural lands, all community members were safely evacuated to a predetermined safe zone nearby.

It is noteworthy that an event of this magnitude did not result in any loss of life, a rarity for Badakhshan! We remember the tragic landslide of 2014 in Abe Barik, Argo district, where over 300 people lost their lives. In Yawan district, instances of landslides without loss of life have been relatively rare. For example, in early 2023, a similar incident in Tingan village resulted in numerous fatalities and injuries and there was a landslide in Khairabad village where many laborers lost their lives.

It was Wednesday morning [6 September 2023] when a teacher, also a member of the Community Disaster Management Committee (CDMC), informed us about the initial, early signs of a coming landslide [cracks appearing on the hill] when he was on his way to school between Yad Nail and March. When he noticed the cracks, he immediately sent a message to us [CDMC members] alerting us about the danger. Without delay, we began to take action; mobilizing our resources and sharing warnings with our community members, using the basic early warning tools, such as loudspeakers, and asking all community members to gather in the safe zone. The primary safe zone was a Mosque in Yad Nail village that we had identified beforehand during a process of hazard mapping. Then, we communicated with the district authority [District Disaster Management Committee (DDMC)], promptly informing them of the escalating situation.

We put on the Disaster Risk Reduction (DRR) uniforms provided by Committee Norway [NAC] and joined with other community members to support in relocating people, particularly women and children, to the safe zone. At first, some were reluctant to leave their houses, but with the help of community elders, we convinced them to move to the safe zone. Fortunately, before the occurrence of the actual landslide at 2:00 pm, all the families had been relocated. Despite some damage to lands and homes, the evacuation was carried out successfully, with no human casualties!

NAC provided us with training and resources on preparation and effective response to natural disasters. We put this knowledge into action in response to this landslide.

Noor Mohammad, Head of CDMC



When comparing this most recent landslide to previous occurrences in Yawan, the community members in Yad Nail and March demonstrated their effectiveness in addressing and managing disaster risks before, during, and after the event. In particular, NAC's regional team in Badakhshan observed a highly effective application of Community-Based Disaster Risk Management (CBDRM) by the Community Disaster Management Committees (CDMCs) in both communities in confronting an actual disaster.

To learn more about how these DRR committees responded to an actual disaster and supported their communities in the process, NAC's Monitoring & Evaluation (M&E) team conducted an assessment, interviewing committee and community members about how they utilized their knowledge and skills in the face of a landslide. Yet, this study does not delve into the landslide's

geomorphological factors, instead, we focus on evaluating the human dimension, that is how the affected communities responded to this disaster. Our aim is to learn from and reflect on this experience in support of the communities involved, for other partner organizations and stakeholders and as part of NAC's ongoing DRR efforts.

It is important to note that not all communities in Badakhshan experience the same level of risk from landslides—the complex topography and geological conditions in the area where Yad Nail and March communities are located makes these communities particularly susceptible to various geomorphological hazards, including landslides, exacerbated by the fact that houses have been constructed in areas with extremely steep slopes.



Jaran Wasrud in a workshop with NAC regional team in Badakhshan, shows how to use a compass to measure slope steepness.

NAC DRR initiatives

In 2013, as part of a Norad funded project on community-based disaster risk management (CBDRM), NAC in collaboration with a number of Norway-based organizations, including Ingeniører Uten Grenser (IUG), initiated a landslide risk assessment in over 147 villages across Badakhshan, including Yawan district.

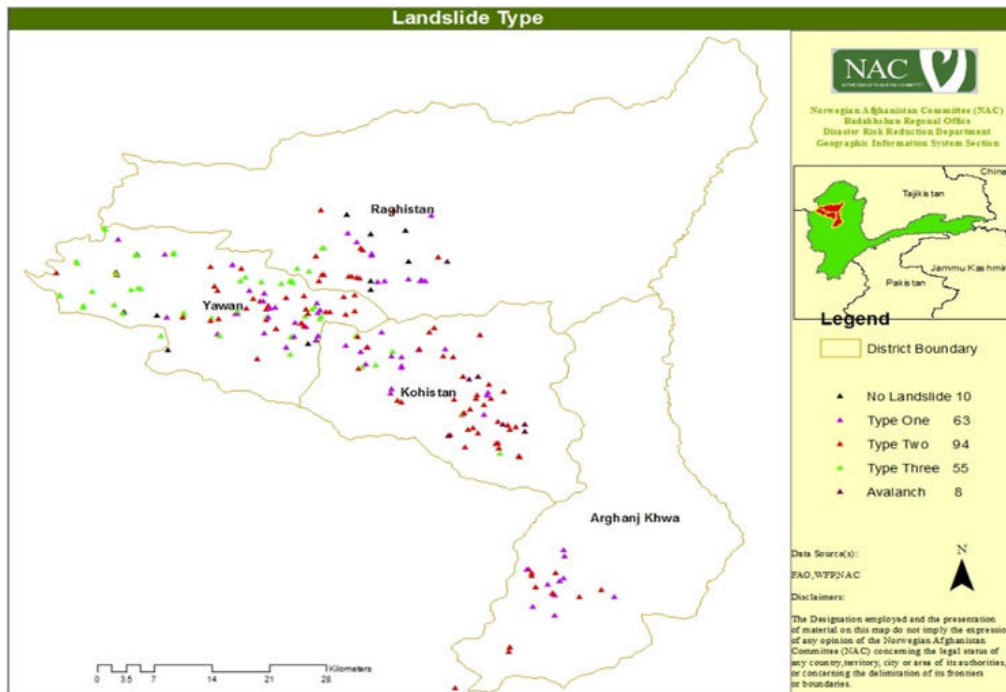
During May 2013, geologists Andrea Taurisano and Jaran Wasrud, from the Norwegian Water Resources and Energy Directorate (NVE), conducted a field mission to Badakhshan with the primary objective of "...raising the level of expertise of selected technical personnel [within NAC's regional team] so that they could continue the project's activities including hazard mapping with limited external help"².

Through the assessment, the selected villages were classified as either high, medium, or low risk so that actions could be taken to prevent or reduce potential damage from disaster, most importantly the loss of human life accordingly. The risk assessment process was carried out by the NAC regional team and DRR trainers, geologists, and engineers. In the case of Yawan district, the team identified over 20 villages with high landslide risk, including the communities discussed in this report, Yad Nail and March.

The assessment report recommended continuous support, emphasizing the need for enhancement of human capacities, to strengthen the capacity of vulnerable communities on CBDRM. The report also underscored the importance of communities' active engagement in a holistic approach, urging not only for immediate humanitarian assistance in high-risk communities but also for enduring long-term development interventions (including poverty reduction) with the aim of establishing sustainable resilience at the community level.

Building on the recommendations derived from the survey and the identified needs outlined in subsequent NAC technical assessments, NAC considered the Disaster Risk Reduction (DRR) interventions as key components within its IRD program.

Since that time and with the advent of NAC's ERA program, the initiatives have been implemented in most of the districts in Badakhshan that are identified as being particularly susceptible to natural disasters. The primary objective of NAC's DRR program is to improve the resilience of partner communities, including committees and individuals, as well as institutions, to natural hazards; by providing ongoing



NAC (2013). Landslide Risk Assessment Survey Report

support and equipping them with essential tools, knowledge and skills. With a focus on the development of long-term, sustainable resilience, NAC also supported the construction and enhancement of DRR infrastructure, and these interventions have served to safeguard communities, enhance access to livelihood opportunities, and promote climate smart agriculture and natural resource management.

In order to enhance human capacity and institutionalize best practices, NAC has been supporting the DRR committees and related structures at various levels, such as CDMCs (community level), DDMCs (district level), ANDMA (provincial and national levels), and School Emergency Response Teams (SERTs) at school level. This support includes training and provision of essential DRR tools and equipment, such as hazard mapping tools, basic early warning systems, and search and rescue tools. Moreover, NAC has established a network of support and coordination among relevant structures and institutions at the community, district, and provincial levels to ensure timely and effective responses to disasters. For instance, currently ANDMA, as the lead committee for DRR activities, actively engages with NAC-established structures at the grassroots level to promptly address and manage natural disasters.

Specific to the two communities of focus in this report, Yad Nail and March, since the establishment of CDMCs, these communities have received DRR training on various aspects of natural disaster preparedness, management, and response. The committee members gained the required skills and knowledge and learned how to

develop community hazard maps and village disaster management plans (VDMPs) and roll out community based early warning systems. Furthermore, they were provided with needed materials and equipment including first aid kits, and search and rescue tools, to enable them to effectively respond to disasters with limited external support. Nevertheless, Yad Nail and March's CDMCs do get some external support and are linked to district departments including the DDMC in Yawan and ANDMA at provincial level.

Part of NAC's interventions in DRR involves building protective infrastructure, where necessary, including mitigation walls, gabion walls, and boundary walls, using a community contracting approach. NAC also promotes (re) forestation, upper catchment protection and soil protection, through encouraging people to protect vegetation cover, and encouraging groups and individuals at the community level to protect pastureland. In addition, the construction of DRR stockpiles and response coordination centers in communities has increased their preparedness for natural disasters.

Moreover, and as a post-event response to the recent landslide, NAC actively participated in a landslide post-event assessment, on the ground, together with other development partners including UN agencies, identifying post-disaster needs and priorities. In response to the assessment, NAC supported 50 (the most affected) households, with USD 100 each to address their urgent needs immediately after the landslide.



Results

Building resilience to natural disasters at community level requires increased participation of community members. It has been consistently argued that disaster preparedness and response is not practically effective without the meaningful engagement of communities³. Such engagement can be realized, for instance, through the existence of active DRR structures such as CDMCs where participating community members collectively work together on DRR and support their wider community in disaster mitigation and response.

In this study, the evaluation team has focused on these structures and assessed the role of the CDMCs in the face of the recent landslide. The results show that despite the challenges the communities have been facing over the past few years, particularly the displacement of families due to severe drought and lack of job opportunities, the community members have managed to keep the committees active and running. The study has confirmed the existence of 4 active CDMCs – in Yad Nail and March villages, comprising a total of 42 members, (both male and female). While the composition of the CDMCs has undergone slight changes over time, with some members being displaced to other districts,

the committees have promptly recruited new members to address these gaps. As a positive reflection on the competencies of the established committee members and the potential sustainability of these CDMCs, the study found that new CDMC members received training from the more experienced members to assume their responsibilities. Jalal, a recent addition to the Community Disaster Management Committee (CDMC) in Yad Nail, shared his experiences upon starting his role within the committee: *“I did not participate in the trainings conducted by NAC because I was not a member of the CDMC at that time. However, when I joined the committee, other members generously shared their knowledge with me and actively engaged me in practical exercises...these simulation exercises organized by the members were both fun and helpful”*.

Our study revealed that both new and older members of committees were well-equipped with the necessary knowledge about landslides. For instance, in the focus group discussion (FGD) with CDMC members in March village, it was noted that they not only possessed an in-depth understanding of land movement but also demonstrated awareness of the more technical aspects of landslides and natural disasters.

Interestingly, during the FGD with the CDMC members, many displayed knowledge of various geomorphological aspects of landslides, including soil type, movement figures, and details of displaced materials including soil and (in)stability measures.

We also found that the CDMC members had clear understandings of their responsibilities including their role in raising awareness among other community members. Confirming this, the families in both Yad Nail and March reported having received multiple training sessions including simulation exercises and mentorship activities by the CDMCs over the past two years. *“We learned and practiced when someone is trapped in debris, how we can save their lives”*, reported a community member from Yad Nail village.

All CDMC members were observed to be actively engaged in supporting communities throughout every phase (pre-event, during and post-event) of the recent disaster. Community members reported that CDMC members were not only leading in helping their communities on the day of the landslide, but were also active before the landslide happened, assisting with preparedness, and constructing awareness and resilience sessions. Assuming that disasters will happen regularly, it was observed that the CDMCs in both communities made preparations for various disaster scenarios in advance. These include establishment of contact and communication channels with the DDMC at the district level, and ANDMA and other DRR stakeholders at the provincial level.

Such lines of communication were actually used in the immediate aftermath of the disaster, the CDMCs promptly contacted the DDMC, ANDMA, and other organizations seeking assistance. As a result, and through such networking capacity, humanitarian organizations promptly arrived in the area, initiating investigations to assess affected areas, and conducting surveys to determine recovery needs.

During the pre-event phase, study participants also highlighted the central role of the CDMCs in identifying vulnerable areas prone to landslides within their communities. As delineated in the hazard map, the CDMC not only identified regions with varying degrees of risk - ranging from high to low - but also proposed

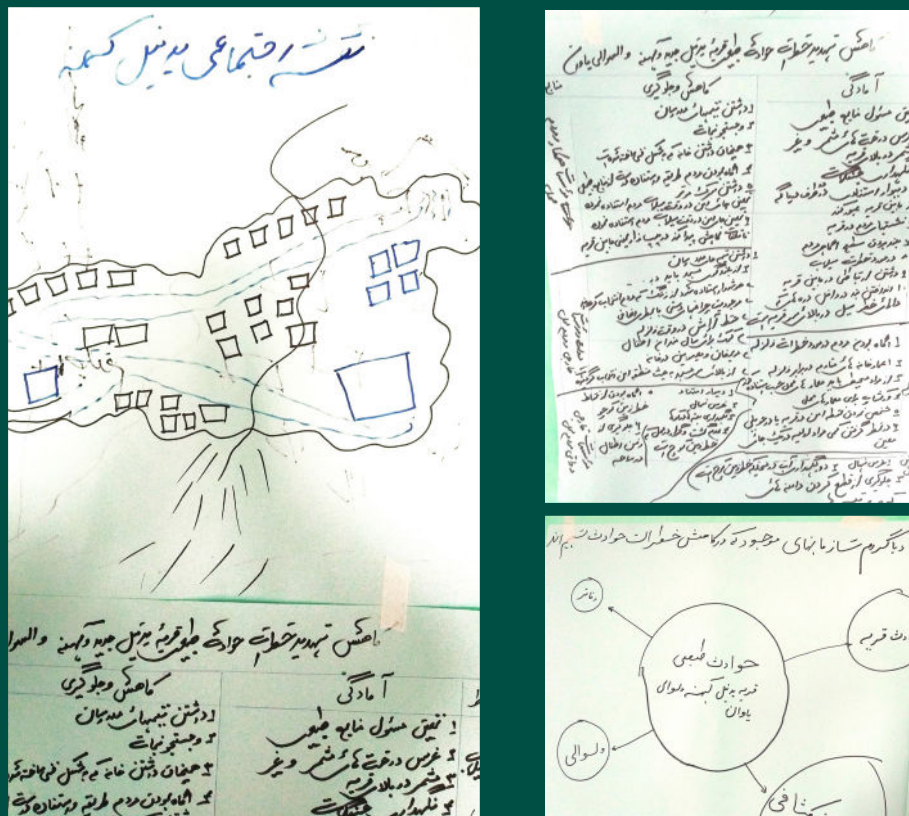
longer-term mitigation measures, such as implementing safe housing construction practices, undertaking reforestation efforts, and increasing forestation to enhance communities' resilience to a range of different natural disasters, including landslides. For instance, the hazard map for Yad Nail specifically recommended the establishment of a Natural Resource Management (NRM) committee alongside the CDMC to synchronize agricultural practices with the Village Disaster Management Plan (VDMP). This included managing irrigation water effectively, refraining from converting sensitive watershed areas into agricultural land, and altering the course of water flow to prevent further erosion in parched areas identified as contributors to past landslides.

Similarly, the VDMPs in both communities placed significant emphasis on conducting regular community meetings and designating contact persons within the communities to promptly alert the CDMCs and other community members of any indications or warnings regarding potential hazards, for instance, using their local early warning system (e.g., effective use of loudspeaker) to inform people beforehand. As one CDMC member explained:

“We use the Mosque as a venue to convene and discuss any emerging issues. In the event of an emergency, we inform the residents in the affected area about the imminent threat and danger. This is exactly what we did when we became aware of the possibility of land movement and collapse in that area, as it had shown signs of landslide in advance”.

Yad Nail's VDMP warned against the risk of excavating the hillside (to take soil for construction purposes), urging the community to prepare check dam to protect their community's surroundings. Moreover, assuming that disasters will happen, the CDMC has identified safe zones near to the community which people, including children and women, can readily access without crossing risky areas.

The VDMP for Yad Nail has been installed on the Mosque's wall at the village center, where the community members regularly visit. According to one community member, *“...this could help residents become aware of high-risk areas prone to landslides and share information that is valuable in the event of a landslide”.*



Yad Nail's community hazard map, prepared by CDCM, identifies the hazards including landslides threatening the village.

The engagement of CDMC members was not only limited to pre-event preparation; the community members reported that on the day of the landslide, the CDMC members played a vital role in effective management, ranging from early warning activities to the evacuation of people to pre-identified safe zones to minimize damage and other negative impacts. Although the actual landslide occurred at 2:00 pm, CDMC members had been actively preparing since the morning, when they became aware that a landslide could be imminent.

As noted previously, CDMCs do not consist solely of male members; rather, they include an almost equal number of women. These female CDMC members played an important role in assisting other women and girls on the day of the landslide. For instance, one male CDMC member expressed, *“Without the female members of the CDMC, we would have been unable to evacuate all community members, particularly the women and children”*. A similar observation was made by another participant, stating, *“My wife, who is a teacher at the community school and member of female CDMC, helped women with their children to move to a safe area we identified. She, along with other women, visited houses, gathered women and children, and brought them to the safe zone”*.

The responsibilities and work of the CDMC members did not conclude with the evacuation of people from landslide affected areas; indeed, they provided support to their communities after the landslide, initiating post-event phase activities, which included establishing contact and communication with Disaster Risk Reduction (DRR) stakeholders at district and provincial levels, as well as mobilizing resources to help affected populations. For example, documented evidence illustrates that, through the CDMCs' resource mobilization efforts, numerous humanitarian organizations, including ANDMA, NAC, Concern Worldwide, Mission East, DACAAR, and UN agencies, worked jointly in the area to provide communities with emergency assistance.



Affected households were evacuated and provided with temporary shelter by INGOs

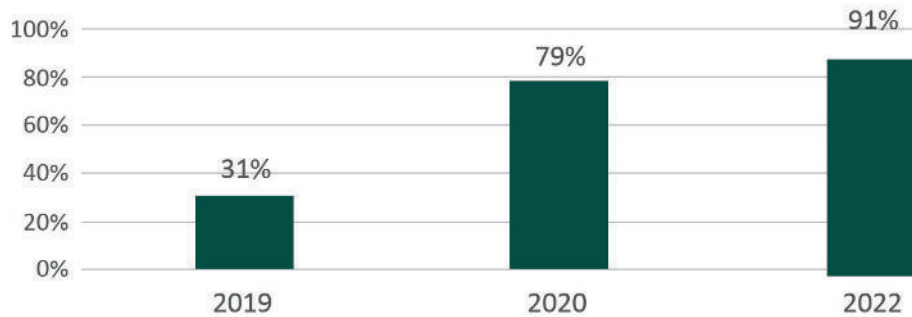
In the post-event phase, the NAC-supported DDMC also closely supported families in Yad Nail and March, responding to the call from the CDMCs. In discussions with community members, it was revealed that on the day of the landslide, the DDMC was the first external entity who arrived in the area, offering support to the CDMCs and their communities in effectively managing the relocation of families and coordinating response efforts. For clarity, the DDMC functions as a DRR committee at the district level, serving as a crucial link for communication and support between provincial and community levels. It is noteworthy that this committee in Yawan, alongside the community-level structures, has received support from NAC since the process of hazard mapping was conducted in 2013.

Generally, it is evident that the existence of proactive DRR committees at both the community and district levels played an important role and perhaps could be considered as one of the key factors that minimized the impact and mitigated vulnerabilities for communities affected by the recent landslide in Yawan.

Despite longstanding challenges and capacity and governance gaps, which have historically hindered effective management of natural disasters in Afghanistan⁴, the confirmed contribution of DRR local structures in this instance is noteworthy. These structures played a significant role in reducing the impact by anticipating, preparing for, and effectively responding to the disaster.

It is evident that the active use of knowledge and skills acquired through training facilitated by the NAC in recent years has proven instrumental in Yawan. Fortunately, Yad Nail and March are not the only examples in Yawan where community members have effectively utilized DRR capacities they acquired. As noted in NAC's ERA report (2023), we found that 91% of all NAC-supported DRR committees in this district have been implementing their learning to enhance their communities' resilience to natural disasters. This underscores the broader success and positive impact of the knowledge transfer and capacity-building initiatives facilitated by NAC in this district.

Utilization of Skill and Knowledge



Active use of skill reported by DRR committee members to improve community resilience to natural disaster

Despite the capacities displayed by the committees in response to the recent landslide, it is also evident that due to the multi-dimensional nature of disasters, such capacities alone cannot ensure communities' long-term, sustainable resilience against natural. 308 families from Yad Nail and March have been displaced due to the recent landslide and are currently residing in temporary shelters, or with relatives in neighboring communities and districts. Although various forms of post-event assistance have been provided to the affected families by NAC and other organizations, it is clear that the affected communities need further longer-term support for full recovery and rehabilitation, and in order to ensure their safety in the face of further potential disaster upon returning to their home communities.

Although disasters, such as landslides, can be a result of normal geomorphological processes, human actions, such as the misutilization of natural resources like water and forests, as noted also by Dr. Andrea Taurisano in his previous research in the district, still emerge as key contributing and exacerbating factors to such disasters. Further, it is important to emphasize that human behaviors which contribute to specific, localized, environmen-

tal damage and related disasters in Afghan communities, as well as climate change more widely, often have roots in income poverty, and other inequalities (e.g., lack of access to quality education) experienced by community members. For example, many rural communities in Badakhshan experience harsh winters and have limited access to electricity and limited money for heating and so community members resort to cutting down bushes and trees to fulfill their heating needs. This, in turn, leads to weakening of the soil and erosion which can cause or contribute to landslides.

Yawan is among the districts in Afghanistan which experiences the most extreme food insecurity. Our recent study (November 2023) in this district reveals that 89% of surveyed households exhibit a poor consumption score, with 11% on the borderline and none with an acceptable food consumption score. Thus, improving community resilience requires more than just a focus on DRR ad hoc emergency interventions; it necessitates longer-term and multi-dimensional and holistic support that enables communities to access sustainable livelihood opportunities and ensure food security.



Conclusion and recommendations

This case study has focused on rural community resilience and proactive engagement in the face of natural disaster. In assessing the response to the recent landslide in Yad Nail and March, it becomes evident that the institutional capacity at the community level and active and effective participation of CDMCs played a crucial role in reducing vulnerabilities and mitigating the impacts of natural disasters.

The study highlights the significance of NAC's DRR initiatives in building local capacities, emphasizing the importance of community-based disaster management and long-term resilience development programs. The active use of skills acquired through training has proven impactful, not only in Yad Nail and March but also across other NAC-supported DRR committees in the district. In Yad Nail and March, it was clearly documented that the CDMCs' proactive approaches and practices, including early warning systems, hazard mapping, development of VDMPs, and community mobilization, significantly reduced casualties, and damage from the recent landslide.

Our study of the two communities in Yawan not only highlight the significance of community engagement for an effective response to natural disasters but also provide insights on how these proactive measures within the community can be enhanced further to ensure preparedness and an effective response to such disasters. The study has yielded specific learnings and recommendations for the way forward:

- Considering the intricate interplay between the overall livelihood situation of the community and susceptibility to natural hazards, as highlighted in this study, adopting a holistic approach that focuses on improving the livelihood situation of households can simultaneously enhance community resilience to natural disasters. Therefore, continuing to provide livelihood opportunities, such as creating job opportunities and improving agricultural productivity, is vital.
- Although disasters, such as landslides, can result from several geomorphological processes, human actions are still emerging as key contributing and exacerbating factors. Thus, long term and continued support to build the capacity of community members (including women and children), increase knowledge and awareness and promote environmentally sustainable practices for livelihoods is crucial for improving community resilience to natural disasters. Specifically, community members have requested the NAC to continue providing training for CDMC on DRR and climate change adaptation measures and support with conducting systematic hazard mappings.
- Disaster protective and agriculture productive infrastructure projects are emphasized as important assets for improving resilience to natural disasters. This is particularly significant in a situation where, due to economic hardships and low incomes, rural communities are unable to mobilize resources for DRR infrastructure needed in the communities. On the other hand, there has been a significant reduction in external support for long-term development to these communities since the regime change in 2021.

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