Urban disaster risk reduction strategy in fragile contexts: a case from Kabul, Afghanistan

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Abstract

A long-lasting conflict and recurrent disasters in the cities have kept the county underdeveloped in Afghanistan. Rapid urbanisation and climate change would put more challenges to urban communities. In order to achieve Sustainable Development Goals in Afghanistan, it is imperative to enhance the resilience of communities in the country. Drawing from a two-year project in Afghanistan that aims to strengthen the resilience of urban communities in the capital city of Kabul through participatory resilience planning and its implementation, this paper explores the effective urban disaster risk reduction strategy in cities in fragile context. The paper suggests that an integrated resilience-building approach, an inclusive and participatory community-led process, the woman participation and a small block grant for structural and no-structural activities are important elements of the strategy.

1. Introduction

The enhancing city resilience has been increasingly discussed in the literature (Leck, et al, 2018, Fraser, et al, 2017). However, there is few studies and projects on urban resilience in the conflict-affected context. This paper examines the effective urban disaster risk reduction strategy that strengthens the urban resilience in a fragile state like Afghanistan. United Nations Human Settlements Programme (UN-Habitat) has been conducting "Project for City Resilience" in Afghanistan since 2017 targeting two cities including the capital city of Kabul. The project aims to support Afghanistan to achieve Sustainable Development Goals (SDGs) especially SDG11 "Make cities and human settlements inclusive, safe, resilient and sustainable" by following strategies and guiding principles articulated in Sendai Framework for Disaster Risk Reduction, New Urban Agenda, and Paris Agreement for Climate Change. The project presents a successful case of implementing effective urban disaster risk reduction strategy in the absence of a functioning governance system in a conflict setting.

Referring to the "Sustainable Livelihood Framework" of Department for International Development of the United Kingdom (DFID) and Institute of Development Studies of the University of Sussex (IDS), the project defied the five dimensions of capitals that urban communities own as a source of the community resilience.

The project first assessed the resilience status of communities in Kabul. The assessment result illustrates the deteriorated situation of urban communities. It found that the primary deficiency in their capitals are coming from the shortfall in public services such as water and sanitation related services and access to education and health facilities.

The project then facilitated the community-centred resilience action planning and its implementation in order to address the gaps in the communities. Lead by the community-level governance body, communities have identified activities to address their shortcomings. This has resulted in the enhancement of capitals of communities.

2. Background

2.1 Trapped by prolonged conflicts and recurrent disasters

Afghanistan is one of the least developed countries in the world. The ranking of Human Development Index is 169th among 188 countries as 35.8% of Afghans are living under poverty and 38.2% of them are illiterate (UNDP 2016). In addition to the long history of invasion, civil war, conflicts and political instability over 40 years,

Afghanistan has been experiencing recurrent disasters every year. With its diverse topography, the entire country is prone to hydro-meteorological and climatic hazards such as flood, landslides, avalanche and drought whereas its North and North-East is a highly seismic zone at the fringe of Pamir and Himalayan ranges. In the last nine years, there are over 28,000 civilian deaths and over 52,000 injured by armed conflicts, whereas disasters caused more than 2,300 deaths, over 2 million affected and USD 168 million economic losses. It is evident that not only the prolonged conflict but also recurrent disasters have put the fragile county in a vicious circle of underdevelopment.

Number of Causalities in Afghanistan 2009-2017 (EM-DAT and UNAMA, 2018)

	Death	Affected/Injured
Conflict-related	28,000 (civilians)	52,000 (civilians)
Natural Hazards-related	2,398	2,239,153
Drought	0	1,750,000
Earthquake	239	101,279
Flood	1,108	341,718
Avalanche	720	3,000
Others	331	43,156

2.2 Weak governance

Like other fragile states in the world, the weakness of its governance system is one of a key feature of Afghanistan. The World Bank Country Policy and Institutional Assessment illustrates that the governance system of Afghanistan including a legislative and legal system is fragile (The World Bank, 2017). The corruption in Afghanistan is widespread, as it is ranked 177 out of 180 countries in Transparency International's Corruption Perceptions Index in 2017 (Transparency International, 2018). With regards to the city level governance, the assessment taken by Afghanistan government shows that municipality governments lack the capacity in terms of finance, human resources and technical (IDLG, 2014). Consequently, the municipal basic public services are substantially limited in all the cities including Kabul.

Concerning the governance system for disaster risk reduction, the Afghanistan government recently drafted Afghanistan Strategy for Disaster Risk Reduction (GIRoA, 2018) as an overarching strategy for disaster risk reduction in the country. This document was developed based on existing laws, plans and frameworks such as

National Disaster Management Plan in 2010, 2011 Strategic National Action Plan for Disaster Risk Reduction, National Disaster Management Law in 2012, 2014 Afghanistan Disaster Management Strategy, 2014 Disaster Management Strategy by Ministry of Rural Rehabilitation and Development. Despite those legislative and legal frameworks, their enforcement and implementation have been limited because of the government's implementation capacity. A World Bank funded project analysed the capacity of the national responsible body, Afghanistan Disaster Management Authority (ANDMA) in 2017. It pointed out ANDMA lacks the technical expertise as well as necessary resources (Altai Consulting, 2017).

2.3 Urbanization, a further challenge

Another characteristic of Kabul city is the on-going rapid urbanisation which is also a global phenomenon. In Afghanistan, the urban population which is currently about 25% of all population is expected to grow to 40% by 2050 (UN DESA 2018). The rapid urbanisation, triggered by various factors such as the influx of Internal Displaced Persons (IDPs) from rural areas induced by disasters and returnees from neighbouring countries, is putting more pressure in the urban areas of Afghanistan. In 2017, 610,000 Afghans returned from Iran and Pakistan, and over 500,000 are internally displaced (UNHCR and IOM, 2018). Many of them are expected to come to urban areas. The urban settlements in Afghanistan are characterised by a density of population with an extremely low level of public services especially in informal settlements which consist about 70% of Kabul city (The World Bank 2005). These situations make cities more vulnerable to possible hazards.

2.4 Project for City Resilience

Against this backdrop, UN-Habitat has initiated the project for City Resilience with support from the Government of Japan in 2017. The project aims to strengthen the resilience of selected Afghan cities for disaster risk reduction through a people-centred preventive approach and demonstrate innovations in localising the Sendai Framework and other post-2015 frameworks and agendas. The project first assessed the resilience status of target cities and then supported community-based resilience actions planning and its implementation.

3. Resilience Status of Urban Communities

The current resilience level of Kabul city is very low from all the aspect. Kabul city scores about only 17/141 for the Disaster Resilience Scorecard for Cities of the United Nations Office for Disaster Risk Reduction (UNISDR). The project undertook a further analysis of community resilience in Kabul city based on the theoretical framework of "Sustainable Livelihood Framework" model of DFID and IDS of the University of Sussex.

3.1 Methodology

Sustainable Livelihood Framework identified five core asset categories of capital upon which communities are built. They are human (e.g. education and skills), social (e.g. social relationship and networks), physical (e.g. infrastructure), natural (e.g. natural resource base) and financial (e.g. income source and access to finance) (DFID, 1999, Zurich Flood Resilience Alliance, 2015). The project took this framework to assess the resilience status of urban communities.

The resilience assessment was conducted in all 22 Districts in Kabul city by adopting the mixed assessment methodology combining structured interviews and focus group discussions. The question items for both an interview and a focus group discussion are developed to capture the status of five dimension of capitals in urban communities. The question items referred mainly to the Zurich Flood Resilience Measurement Framework which is also based on the Sustainable Livelihood Framework (Zurich Flood Resilience Alliance, 2015). Question items are modified reflecting the hazard profile of Kabul city and its socioeconomic condition. The Disaster Resilience Scorecard for Cities by UNISDR, City Resilience Profiling Programme of UN-Habitat and City Resilience Action Plan Tool of UN-Habitat are also taken as references to develop questions.

The structured interview was conducted to the Kabul citizens by visiting houses and interviewing those in the streets in a random manner. It interviewed about 100 people from 17 Districts of the city and about 50 people for newly established five Districts. The project interviewed a total of 1,962 male and female citizens in the city. Although the project deployed female surveyors which consist a half of all surveyors, the project was able to reach 345 female citizens which consists only 20% of total respondents. The focus group discussions were conducted in every 22 Districts of Kabul city. The participants of focus group discussions are male and female stakeholders in each District such as a head of District office of Municipality, community leaders and representatives, religious leaders, representatives from business sectors, etc. The focus group discussions aimed to supplement and validate the findings in the structured interviews.

3.2 Kabul city hazard profile

The recurrent flash floods, earthquakes and rock slides are identified as major natural hazards in Kabul city. The project analysed the available natural hazard data of Afghanistan Spatial Data Center (ASDC) for visual information of Kabul City natural hazards based on digital modelling. This was validated by a field survey and interviews with residents.

Through interview with citizens, it was found that many houses and assets are lost or damaged because of small-scale flash floods and earthquakes in Kabul every year. 23% of interview respondents have suffered from those disasters in the last three years. 13% of respondents have lost their asset and 17% experienced poor health because of disaster in the last three years.

3.3 Result: resilience status of communities

The major finding in each dimension of the capitals of communities by the structured interviews and the focus group discussions are summarised as below.

Human capital: The level of human capital is extremely limited in the urban communities of Kabul city because of the limited level of public services. As the interview result showed that 18% of male and 35% of female respondents had not graduated from primary school, urban population face limited access to education. It is also worth highlighting that this is worse for the female citizen. 13% of respondent said there is no primary education system in their neighbourhood. They also have difficulties in accessing health facilities. According to the interview, 24% of respondents do not have access to health facilities. This is not only a matter of physical presence of health facilities in their neighbourhood, but many vulnerable populations cannot afford to go to health clinics or buy medicines. People's knowledge level of disaster risk was also found to be low. Most of respondents are not aware of the cause of disasters and protective behaviour against disasters. The awareness level of water and sanitation issues related to natural hazard was also largely limited.

Social capital: The mutual help had been a large part of the Afghan culture, but it has been deteriorated in the city after the long-lasting conflict in the country. The influx of IDPs and migrants from rural areas and other cities rarefy the ties between community members. In the focus group discussion, the participants pointed out the solidarity among community members has been weakened in their neighbourhood over the last 20 years and the

mutual help in a community are now very limited. The same found in the interview as only 2.5% respondents answered that she/he had experience of receiving support from communities when a disaster happened. In many districts in Kabul, they hold a periodical community meeting but not in an inclusive to all the community members, as 42% of respondents consider that the voices of the vulnerable population are not heard in those meetings. In those community gatherings, disaster risk reduction is are merely discussed, and no disaster risk reduction related information has been shared. Hence there is no organised preparation, response and recovery mechanism in communities. As the government system is weak, there are few governments support related to disaster risk reduction such as the provision of an early warning, disaster risk reduction related investment and response supports. Most of the Kabul citizen interviewed have no access to public support after disasters. 77% of respondents answered there's no support from the government when disaster happens.

Physical capital: There is a limited level of public service such as water supply, waste management, education and health services in Kabul city. This is mainly due to protracted conflicts and unstable political situation, and the capacity of central and sub-national government is inadequate. For instance, 31% of respondents answered they have limited access to drinking water. The situation is more severe in informal settlements. Some drainage systems have been constructed in recent years in the city centre but a majority of areas in Kabul lacks proper drainage systems and unpaved. This causes recurrent inner water floods in many areas. Some part of the city has been experiencing recurrent flash floods, but there are no adequate infrastructures such as small-scale flood canals. In addition, almost all houses in the city are not built as earthquake resistance as there are no functioning building codes for house construction. According to the interview, only 22% of respondents' houses are constructed by Engineers. Based on the visual assessment by the project, many public buildings such as schools and clinics are found to be vulnerable to earthquakes.

Natural capital: In Kabul city, there is little natural environment asset in their neighbourhood of communities. This results in less protection and absorption capacity of communities against natural hazards such as a flood. Also, urban communities in Kabul city is characterised by the worsened environmental and sanitation situation. This is largely because of improper management of black and grey waters and solid wastes in the household and communities. According to the interview, only 36% of Kabul residents have access to the waste

collection, 58% of household do not treat black water properly, and 87% residents have no proper drainage system in the neighbourhood.

Financial capital: According to the interview, only 21% of respondents have savings, and about 40% of the respondents who currently in the labour force was jobless. This is almost same as the national unemployment rate which is 40% (UNDP, 2016). Although 56% of respondents answered they have access to some form of credit, for instance, borrowing from relatives, there is little communal social safety net and public safety net mechanism. There is no private and public insurance related to disasters in the country.

4. Community-based DRR strategy and its implementation

Following of the resilience assessment, the project facilitates the community resilience action planning and its implementation that address the deficiency of capitals.

4.1 Community mobilisation

The project followed the modality of community mobilisation of Afghanistan's national community-based development programme, the Citizens' Charter National Priority Programme which is supported by the Afghanistan Reconstruction Trust Fund. First, the project facilitated community gatherings at mosques for raising awareness on disaster risk reduction and proposed communities to lead the resilience action planning in their communities. In addition, especially targeting females who do not attend community gatherings, the project female social organisers visited the house by house in communities to explain the objective and process of the project. Once the community members reached a consensus to implement a project in their community, a community formulated a community governance body through a democratic and transparent election. This community governance body is called the Community Development Council (CDC) consists of about 250 households, and around five to six CDCs formulate a *Gozar* Assembly (meaning sub-district Assembly) as a higher community governance body composed of about 1,000 to 1,250 households.

4.2 Community Resilience Action plan and implementation

Based on the result of the resilience assessment, *Gozar* Assemblies conducted a community problems and hazard visualisation, a community resource mapping, and a community DRR needs prioritisation. Then, through a series of inclusive and participatory discussion and consultation within communities, communities formulated a community resilience action plans. Throughout the process, UN-Habitat provided technical support. The community resilience action plan covers major challenges identifies in resilience assessment in communities. The participation of female community members is encouraged through a mechanism such as either a community representative or a deputy community representative will be a female and holding a periodical female only gathering.

In the project, *Gozar* Assemblies identified a priority of community resilience building are mainly on the aspect of human, social and physical capitals. For human and social capital aspect, several activities are being implemented by communities such as; formulation of Community Disaster Management Team and the team leads all the disaster risk reduction activities in communities; disaster risk reduction awareness-raising activities and disaster risk reduction training including first aid training and drills in communities; preparation of the disaster preposition stock at schools and mosques; awareness raising for sanitation and waste management and improvement of waste management in communities; literacy courses for female community members those who could not go elementary school in their childhood. In terms of physical capital, the communities identified and implemented several structural activities combined with non-structural activities such as; construction of small-scale disaster risk reduction infrastructures such as flood canals; implementation of safe school sub-project by fomulating the school disaster management plan, retrofitting vulnerable school buildings, improving water and sanitation facilities of schools, preparing preposition stocks, conducting disaster risk reduction classes, implementing school disaster drills; retrofitting vulnerable non-engineered masonry houses in communities and the identification of vulnerable houses is done by community members based on the agreed social and technical selection criteria.

Those activities are implemented with a donor-supported small-scale block grant as well as a contribution from communities. Each activity including construction works is managed by *Gozar* Assemblies and reviewed through the social audit by community members. The amount of community contribution was 20 to 25% of the total budget required for the activities. As all the process of starting from establishing *Gozar* Assemblies,

identification of priority to the implementation of each activity, communities are not considered as a beneficially but the owner of the Project.

5. Analysis and Discussion

Based on the project experience, the following strategies are found to be effective to facilitate the resilience building in urban communities considering the weak governance system in the country and the limited level of community capitals.

5.1 Integrated resilience-building approach

It is important to develop the capitals of communities as a source of their resilience and it should integrate disaster risk reduction. As the resilience assessment revealed, communities lack all the aspect of capitals that are the basis of resilience. It was evident that the low level of access to public services in terms of water, sanitation, education, transport severely undermines every aspect of capitals. The Afghanistan National Peace and Development Framework 2017-2021, which was endorsed by international community in Brussels Conference on Afghanistan in 2016, stressed the importance of improving infrastructure, human capital, quality service delivery (GoIRA 2016). Those investments need to be risk-informed and made to enhance the resilience of the vulnerable population. The assessment confirmed that those vulnerable population who have a lower level of education and limited level of access to basic public services suffer more from the recurrent small-scale disasters. They will be stagnant in underdevelopment because of the low level of capitals they own. Unless the deficiency of those capitals were addressed, the resilience of the urban communities and the resilience of the whole city would not be strengthened.

5.2 Inclusive and participatory community-led process: enhancing social capital, ownership, sustainability

Through participatory and inclusive resilience action planning and its implementation by communities, the social capital of communities and solidarity among a community would be gradually built back. As observed in many other countries, the social cohesion is the important part of community resilience (Patel et al. 2018). A newly drafted National Disaster Risk Reduction Strategy of Afghanistan government, as well as Sendai Framework for

Disaster Risk Reduction, also highlights the importance of community-led DRR actions (GoIRA 2018). The community-led process fostered an endogenous resilience building.

Considering the weak governance system in the country, the project positioned urban communities as the change agent and the owner of the project, not beneficiaries or targets. By doing so, the community resilience action plan effectively addressed the fundamental needs of communities and the sense of ownership was strengthened. It encourages the ownership of communities that will secure the sustainability of resilience building activities in communities.

There is always an indigenous knowledge of natural hazards in the neighbourhood as in other countries. However, it is not always shared among communities in an organised manner (UNISDR 2008). In the project, the participatory resilience action planning process effectively raised the awareness of people and shared information among community member, hence strengthening human and social capitals. The community-based approach is in line with Afghanistan Government's approach to improve the governance structure from community level in Afghanistan National Peace and Development Framework (GoIRA 2016).

5.3 Woman participation: enhancement of human and social capital of vulnerable population

It is imperative to include vulnerable population into the community-led DRR process. The document prepared by Afghanistan government, Gender Standard for Disaster Risk Management, Badakhshan, stresses the necessity of introducing various measures as minimum standards to ensure gender equality in disaster risk management in the context of Afghanistan (DoWA and ANDMA 2013). As the document illustrates, it is often difficult to reach out to female community members in Afghanistan. Our assessment shows that their human capital is relatively weak compared with male community members. In the Project, the participation of women in the decision making and the information sharing in a community governance body were secured following the standard set by the Afghanistan government's Citizens' Charter National Priority Programme so that the community resilience building activities will be gender sensitive and inclusive. For instance, in one community at the earlier stage of project implementation, one young lady spoke up in front of community male leaders stressing the needs of the literacy education to women as the basis of community resilience. After a series of discussion within the community, the community started literacy courses for illiterate female community members as a part of community resilience action plan. This has resulted in the development of human capital of those vulnerable population. The project also supported communities to develop some disaster risk reduction infrastructures with

a design incorporating gender-specific needs through the consultation process. It is always challenging to involve women in community-based activities considering the socio-cultural environment in Afghanistan. By mobilising well experienced female social organiser to reach each community member, in addition to continuous communication with community leaders, elders and religious leaders, the project managed to involve women in resilience planning and its implementation.

5.4 Small block grant for structural and no-structural measures: enhancement of physical, human and social capitals

The provision of small-scale block grants to implement the community resilience action plan composed of structural and non-structural activities has been effective to enhance the community resilience. The small-scale block grant funded activities have enhanced not only physical capital (e.g. disaster risk reduction infrastructures) and human capital (e.g. awareness in disaster risk reduction and education level) of communities, but also more significantly it enhanced the social capital of communities (e.g. community solidarity and mutual trust). By making the plan into actions and led by communities with contribution from community members, community members experience and witness the improvement. The community governance body is responsible for managing the funds and accountable for spending, and community members have received training on project management, finance, procurement, and social audit. In this way, social capital is built in addition to physical capitals.

6. Conclusion

In a fragile and disaster-prone country of Afghanistan, both conflicts and disasters have been undermining the development effort of the country. Rapid urbanization is posting further pressures to the city. The resilience assessment revealed that the lack of a fundamental level of capitals in urban communities in Kabul city. This especially applies to those residents in the informal settlements which consist about 70% of the city and without addressing this deficiency, the resilience of Kabul city cannot be enhanced.

The UN-Habitat project is witnessing that urban community resilience building through the community-led resilience action planning process worked effectively to enhance the capitals of communities by integrating disaster risk reduction. In the absence of functioning governance system, community-level governance system can

coordinate residents to identify the needs for resilience building and implement its activities which address the gaps in the capitals of communities.

As the project continues until March 2019, an additional study can further prove the advantage of this strategy by capturing the impacts of community-led structural and non-structural disaster risk reduction activities in urban communities in Kabul. The Project had a limitation in addressing the deficiency on the aspects of financial capital and natural capital especially ecosystem aspect, and further research to address those aspects needs to be explored in the future. In addition, as the structured interview implemented in the project could only cover a limited number of female citizens in the city. A further study which focuses more on gender perspective will benefit a gender-sensitive disaster risk reduction in the country.

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