

EFFECTIVENESS OF NGOS' INITIATIVES IN FACILITATING DRM EFFORTS FOR THE VULNERABLE COMMUNITIES IN EGYPT

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Abstract: Risks have been defined as the combination of vulnerability, exposure, and natural hazards. Poverty, illiteracy, socio-economic challenges, and disease are the primary factors that contribute to the vulnerability of communities. The community in Alexandria, Egypt is one such vulnerable community. Alexandria, Egypt has faced numerous natural disasters and is one of the coastal cities which are among the most exposed to natural weather-related disasters. This study applied the case study and qualitative approach methods to examine a Non-Government Organisation's role in disaster risk management (DRM). The objective of the research was to evaluate the effectiveness of the NGOs' initiatives in carrying out DRM efforts for vulnerable communities in Alexandria City, Egypt. This research paper used three approaches, Firstly, the researchers investigated the role of different NGOs in the implementation of DRM initiatives and community development programmes in one of the vulnerable towns in Alexandria. Secondly, this paper conducted a few structured and semi-structured online and one-to-one interviews with the NGOs' personnel and the vulnerable families under review. Finally, this research paper carried out an on-site observational study at Al-Amiriyah village, in Alexandria. The findings proved that the disasters 'risk drivers', which threatened the city's resilience, were inadequate living conditions, poverty, socioeconomic challenges, illiteracy, and disease that were most often seen in the poorest sectors of the city. On the other hand, Disaster-focused NGO programmes have positively impacted and transformed, the living conditions of vulnerable villages gradually. Their approaches have been designed to build community-based disaster risk reduction (CBDRR), using effective DRM programmes and community development activities. The results demonstrated that the NGOs understood the impact of bottom-up resilience capacity building approaches on the effectiveness and success of their DRM initiatives. The NGOs even aimed to integrate their mitigation measures into the development framework to build a sustainable DRM aware community. The researchers believe that this study will be a good starting point for further studies aimed at identifying successful approaches of building resilient communities and adaptive capacities. The main conclusion of the study that NGOs play a crucial role in disaster management, community development, and humanitarian assistance.

Keywords: Natural Disaster, Disaster Risk Management (DRM), NGOs (Non-Governmental Organizations), Disaster Risk Reduction (DRR), Community Based Disaster Risk Resilience (CBDRR).

Introduction

Over the last few decades, natural disasters like earthquakes, floods, storms, and droughts have led to major losses of human lives and livelihoods, and had a similarly major impact on the social, physical, economic aspects of life in many places around the world and Egypt has not been spared. The Global Facility for Disaster

Reduction and Recovery pointed that "Egypt is exposed to several natural disasters, including coastal and river floods, earthquakes, landslides, and water scarcity".

The concept of disaster management in the country faces several problems, on the national level, the Egyptian population accounts for only 5% of the country's total surface

area. The impact of the damage from natural hazards differs from one community to another, depending on the communities' exposure and resilience levels. In fact, "Over the last 20 years, natural hazards have killed nearly 1,500 people, and caused economic damage estimated at US\$346.7 million" (Sheehan, 2019).

To reduce the severity of the natural disasters, Disaster Risk Management (DRM) strategies have to be put in place. DRM initiatives involve implementing disaster risk reduction activities, including building-up the capacity of a community, organisation, or society, to expect, deal with, battle and recuperate from disasters" (UNISDR, n.d.). The extent of an agencies' involvement and integration with vulnerable communities can influence the impact in the aftermath of the disaster, as DRM activities aim to reduce the harmful effects of such natural disasters by conducting Disaster Risk Reduction (DRR) strategies such as bottom-up mitigation procedures that engage vulnerable communities in the risk awareness and decision-making process for health and environment protection, which is considered a vital approach to mitigating these natural disasters.

The Non-Governmental Organizations' (NGOs) positive involvement in DRM and Humanitarian Emergency efforts have been addressed by several studies around the globe. Many researchers have highlighted their vital

role in diminishing risk drivers, such as poverty, inequality and poorly managed urban and rural areas. Researchers have also highlighted the NGOs role in building resilience capacity, conducting risk preparedness programmes and other supportive humanitarian initiatives in such emergencies.

The United Nations Office of Disaster Risk Reduction (UNISDR, n.d.) pointed that "NGOs can work toward reducing vulnerability through training, education and helping to establish a clear coordination of disaster response responsibilities".

In Egypt, the risk responsibility of the local and national institutions is a large barrier towards the building of a resilient community. According to the Crisis Management Sector, which is affiliated with the Egyptian Ministers Board, there are no published manuals or instruction to inform the public on how to behave in disaster situations (Hany Abulnour, 2014).

The Sustainable Development Goals Input to the 2016 High-Level Political Forum (HLPF) on Sustainable Development 2016, identified urban poor, cities vulnerability and lack of resilience to withstand natural and weather-related disasters as major risk drivers, and a challenge to the country's ability to progress towards sustainable development.

Figure 1 indicates that around 22.5 million Egyptians are unable to meet their basic food and

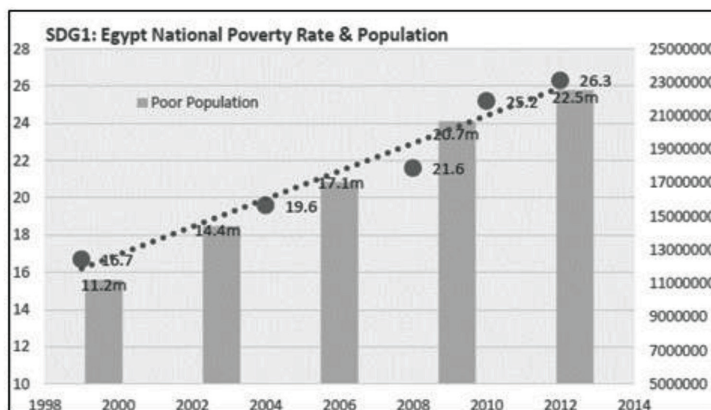


Figure 1: SDG1, Egypt National Poverty Rate and Population. Source: (UNDP, 2018)

non-food needs due to environmental hazards. While the international poverty indicators pointed at improvements, the national poverty line trended in the opposite direction with sharp increases in the poverty rate (National Strategy for Disaster Risk Reduction 2030, 2017) (Table 1).

Natural disasters in Egypt are an important subject in Alexandria City. The city which suffers from environmental, social, and development challenges, is vulnerable to sudden high temperature changes, floods, a decrease in the amount of precipitation received in winter, droughts, a rise in sea levels storm surges and wind with other storms (USAID, 2015). The dominant risk driver in Alexandria City is the rapid population growth and population density of 4,800 people per square mile over an area that covers approximately 2,679 square kilometres.

Urban inequality, a lack of capacity building, the inability to have a decent life, the lack of basic resources all conspires to increase the human and economic losses suffered as a result of disasters suffered by the city.

Based on the issues highlighted earlier, this study, aims to examine the role of NGOs in Egypt with regard to Disaster Risk Management (DRM). The objective of the study is to investigate the effectiveness of the NGOs' interventions and initiatives in facilitating DRM efforts to assist the vulnerable communities in Egypt.

This paper investigates the initiatives carried out by NGOs in Al-Amiriyah, situated in Alexandria, in facilitating DRM efforts for vulnerable communities.

Literature Review

Natural disasters are considered as external shocks, but disaster risk mitigation results are usually a result of complex interactions between development processes that generate conditions of exposure and vulnerability to the disasters and hazards (United Nations International Strategy for Disaster Reduction, 2019). Therefore, natural hazards require a well-coordinated, prompt response to minimise its adverse effects (injuries, death rates, and other losses), and provide a forum for a faster recovery (AA Shah, 2020a; Sun, Gong, Gao & AA Shah *et al.*, 2020; A. Mohanty, 2019).

Urban Poor and Economic Inequality

Economic inequality increases a societies vulnerability, as inequality increases the number of the very poor and this group is particularly vulnerable (Chou *et al.*, 2004) theoretically, the impacts of a disaster are not randomly distributed across health and socioeconomic classes, empirical evidence of this claim is scarce. In a population-based cohort study, the authors identified risk factors for mortality from the September 21, 1999, Taiwan earthquake, which occurred in the middle of the night. Among 297,047 earthquake victims in central Taiwan who experienced partial or complete dwelling damage, 295,437 (noncases. Kellenberg and Mobarak (2008) showed that, socioeconomic development initially increases the occurrence and level of loss of life resulting from landslides, floods, and windstorms. Poverty has strongly increased Egypt's vulnerability to natural disasters, as it is unable to avail itself of the effective investment in the country's DRM and climate adaptation procedures, this

Table 1: Inequality situation in Egypt

	IHDI value	Overall loss (%)	Human Inequality Coefficient (%)	Inequality in Life Expectancy at Birth (%)	Inequality in Education (%)	Inequality in Income (%)
Egypt	0.493	29.2	28.3	11.6	36.9	36.3
Arab States	0.523	25.1	24.8	15.7	32.6	26.1
Medium HDI	0.483	25.1	24.9	20.3	33.1	21.2

Source: (UNDP, 2018)

is compounded by the fact that the poor still have to experience the same conditions that led to them being poor. Therefore, the assessments of vulnerability must consider all the disaster drivers in order to form effective mitigation solutions (AA Shah *et al.*, 2020b).

Disaster Risk Management (DRM)

Disaster Risk Management (DRM) can be thought of as the implementation of DRR and includes building the capacity of a community, organisation or society to anticipate, cope with, resist and recover from disasters (National Strategy for Disaster Risk Reduction 2030, 2017). Activities for reducing risk can be classed as structural, for instance dealing with land use or planning, and non-structural, as awareness raising, policymaking and legislation (United Nations International Strategy for Disaster Reduction (Disaster Risk, 2020).

Meanwhile, resilience refers to the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform, and recover from the effects of a hazard (United Nations International Strategy for Disaster Reduction). And capacity is a combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk or the effects of a disaster. According to AA Shah *et al.* (2018), community's involvement is vital since it will reduce vulnerability.

The Non-profit Organization, Community-based Institutions in Egypt

The government has a significant role in reducing vulnerabilities to natural disasters (AA Shah, Ye, Abid & Ullah, 2017). However the government cannot function in a vacuum, the community also plays a vital role as one of the key drivers or stakeholders in the implementation of successful DRR measures, especially at the local level (UN. Office for Disaster Risk Reduction, 2019).

NGOs are defined as civil societies capacities recognised as any non-profit, voluntary citizens group, organised on a local, national or international level.

The Community-Based Disaster Risk Reduction (CBDRR) approach has been taken by several NGOs as a common approach to building resilient communities in trying to achieve DRR objectives. In Egypt the NGOs' role was highlighted as the basic means of implementing national DRM strategies.

The Egypt National Strategy for Disaster Risk Reduction policy (Disaster Risk, 2020) pointed out that support must be given to these local communities in order to boost their ability to stand resilient in the face of natural disasters and to follow the right course of action to achieve this goal. And because of this, the approach to disaster management should not only include the government but also the NGOs and community (AA Shah *et al.*, 2019).

Based on the study, the NGOs role can be categorised into two main sectors, which is discussed in this paper; their role towards community development, and in DRM (through responding, preparing, and mitigating natural and weather-related disasters). Their role in supporting and decreasing communities' poverty levels is also highlighted later in this paper.

Research Methodology

Study Area

Alexandria is located on the Mediterranean coast, with a total population of 5,182,450 (Egypt Disaster & Risk Profile, n.d.). Its coldest months, January and February, are characterised by severe storms and heavy rainfalls that damage the city's infrastructure and disrupt its people's livelihoods. Alexandria experiences violent storms, heavy rainfalls, sleet and hail during its cooler months.

These events, combined with poor drainage systems, densely packed urban infrastructure, and faulty early warning systems have been responsible for the occasional floods in the city. In order to further investigate the role of NGOs in the DRM recovery schemes, the town of Al Āmiriyah, (as shown in Figure 2), in the western part of Alexandria was selected as the case study. Al Āmiriyah consists of 17 rural villages,



Figure 2: Al Āmiriyah town, Alexandria, Egypt
Source: (Al Āmiriyah Map, n.d.)

and has a total population of 845,845 people (Alexandria Governorate Mobilization and Statistics, 2009). The town has been at the centre for different disaster management initiatives by NGOs for many years.

“The town suffers from a severe shortage of facilities leading to poor water, electricity and sewage systems which made it the most affected by the sinking of Alexandria with rainwater in 2015” (National Strategy for Disaster Risk Reduction 2030, 2017).

The main sources of income for the bulk of the population in Al Āmiriyah town are limited to daily wage jobs. The town suffers from an extreme shortage of economic opportunities during the winter season. The community depends on agriculture or logistics in the form of the transfer of goods from the city’s factories to the city centre. The poorly planned rural areas have been highlighted by the Egyptian National Disaster Risk Reduction Strategy (UNDP, 2011) as the most exposed and vulnerable zones to

withstand the city’s disasters that require rapid response times.

Therefore, the interventions and activities by NGOs needs to be analysed in order to assess their impact, response time, and social presence.

Sampling Procedure and Data Collection

This study employed a qualitative approach to the analysis of the study of Al Āmiriyah town. Primary data was collected through structured interviews with the NGOs, semi-structured interviews with vulnerable families, and through on-site observation of one of the NGOs’ at work in the rural villages. A combination of 12 structured interviews, which were in-depth investigations were carried out with three NGOs that were involved in the study.

The interviews comprised of a mixture of open-ended questions, designed to be exercised within 15 minutes. The questions were split into several themes, which included questions

reflecting the NGOs’ profiles, their DRM and CBDRR activities, their humanitarian work during disasters and the rooted risk drivers affecting the vulnerable communities. These themes were categorised based on the early investigation from a pilot survey conducted before the actual study got underway. The questions were designed based on recommendations following qualitative research (Attride-Stirling, 2001).

Due to research limitations, only four interviews were conducted via one-on-one open discussions with four persons of the 12 experts listed as engaged in the NGOs activities implementation. The four interviews took place

at the organizations’ headquarters in Alexandria. While the seven remaining interviews were conducted online via email (Table 2). Meetings and interviews were not only with the NGOs as originally planned, as during the initial meetings, it was necessary to interview several affected families in order to get a better understanding of the issues and solutions being researched. Therefore, four semi-structured meetings were done with four families that have been supported by the NGO Life Makers Foundation.

The on-site observational study was carried out at the Halab village, one of the Al Āmiriyah town’s rural villages that was deemed suitable for observation on the 15th of August from

Table 2: Summary of interviews conducted for the study

	Life Makers Foundation for Community Development	Resala for Disaster Risk Management and Human Emergencies Relief	Misr El-Khier for Community and Human Development
Number of interviewed volunteers	4	6	2
Direct meeting	3	0	2
Online meeting	1	6	0
Gender	4 Males 0 Females	6 Males 0 Females	1 Male 1 Female
Age group	20-35	20-40	20-40
Years of volunteering	From (4-6) years	From (2-4) years	From (2-4) years
The key personnel	Operational Marketing Manager	Emergency Relief Coordinator and the Head of the Operational Unit	Head of the Operational Unit in Misr El Khier Foundation
	The Executive Team Leader in the Al-Āmiriyah Town	Head of Human Resources Committee	Head of Marketing and Public Relations Unit
	Health Care Unit Member and Campaigns Team Member	The Executive Manager of the Local Emergency Relief Convoys	
	Head of the Observation and Surveying Team	Team Leader of Humanitarian Relief Unit	
		Team Volunteer	

Source: Author

12.00 pm to 3.00 pm in order to understand the rooted risk drivers in the vulnerable villages and to identify the NGOs' DRM and community development activities. The data was analysed using a qualitative thematic technique to categorise the responses according to several subjects. The Thematic technique was chosen since, "It emphasizes identifying, analysing and interpreting patterns of meaning (or 'themes') within qualitative data" (Braun & Clarke, 2006).

Data Analysis

Firstly, the 12 structured interviews with the NGOs' targeted personnel were divided into four direct interviews conducted from the 10th to 18th of August at the NGOs' headquarters, followed by eight online structured interviews which were distributed via email from the 11th of October to the 1st of November. Meanwhile, the semi-structured vulnerable families' interviews were conducted during the site observation and were recorded due to the limitations of the involved families. The site observation was conducted at the Halab village on the 18th of August from 12.00 pm to 3.00 pm the event was organised by the Life Makers Foundation.

The main aim of the interview questions for the NGOs was to understand their areas of specialisation, their DRM initiatives and community development activities, the main risk drivers of the area under review, and the major challenges faced by the NGOs. The interviewees' key profile reflected their volunteering details as they have been involved in their foundation's work for average period of between four and six years. The interviewees' areas of expertise were all related to humanitarian emergencies, community development, and disaster management activities, which they conduct in Alexandria in general, and in Al Āmiriyah town, specifically, as part of their work fields. Their positions' responsibilities reflected the limitations, targets, and tasks they required to obtain.

Secondly, the direct interviews with the four deprived families were chosen by the Life Makers Foundation's Executive Team Leader

based on their abilities, suitability, and agreement to be involved in the study and disclose their personal information. The personnel interviews covered four women, and the discussions were recorded with semi-structured questions given to them to answer prior to the interview in order to better understand the rooted risk drivers in the village, their living conditions, sources of income, experiences during and after the disasters, and how the NGOs practices impacted their lives.

The gathered data were coded and categorised to identify the trends among the women's answers as shown in Table 3.

The on-site observation conducted at the village of Halab, which came under observation on the 15th of August from 12.00 pm to 3.00 pm. It was located in Al Amiryah within three hours of the city centre some 75 km from the Alexandria Gate. The observational study was organised by the Life Makers Foundation Executive Team Leader. Notes were taken during the on-site observation with regard to the physical, environmental, and economic challenges faced by the residents in the wake of a disaster.

Based on the implemented data collection tools, the findings were categorised into three dominant groups, from the findings during the NGO interviews, data from the vulnerable families' interviews, and from the Halab village on-site observation. Firstly, based on the NGOs' gathered data, the three humanitarian foundations have been practicing DRM and community development all over the country for more than 15 years. They each look after several villages and informal settlements in different parts of Alexandria. The duration of their activities extends throughout the year, which is reflected in the consistency and sustainability of these DRM activities.

The three NGOs depend on a network of more than 3,000 volunteers in each foundation with an employed staff count ranging between 50 and 150 employees to conduct their programmes.

Table 3: The deprived families' profile

	Family No. 1	Family No. 2	Family No. 3	Family No. 4
Number of family members	6	7	5	50
Average age of the household heads	45-50	40-50	40-50	35-45
Average age of the children	3-10	8-18	2- 15	3-12
The household Bread winner gender	Male	Female	Female	Male
The household Bread winner age	55	42	52	50
Source of income before the involvement	Not answered	Not answered	Not answered	Not answered
The NGOs programs	Monthly medical treatment and medications	Monthly medical treatment and medications	Monthly medical treatment and medications	Monthly medical treatment and medications
	Winter preparedness clothes, schools' materials	Winter preparedness clothes, schools' materials	Winter preparedness clothes, schools' materials	Winter preparedness clothes, schools' materials
	DRM preparedness and recovering (constructing concrete roof, rehabilitation of the house)	DRM preparedness and recovering (constructing concrete roof, rehabilitation of the house)	DRM preparedness and recovering (constructing concrete roof, rehabilitation of the house)	DRM preparedness and recovering (constructing concrete roof, rehabilitation of the house)
	SME.	SME.	New pure water system and electricity	New pure water system and electricity
		Fire insulation.		Constructing the house walls.
				SME
	Source of income after the SMEs	Animal husbandry	Agricultural goods sales project	Not suitable for this family
			Basic household appliances	
Family monthly income before the involvement	500 EG ~ 30 USD	700 EG ~ 40 USD	600 EG ~ 35 USD	700 EG ~ 40 USD

Family monthly income after the involvement	1500 EG ~ 90 USD	2000 EG ~ 125 USD		1300 EG ~ 80 USD
The duration of support	1 year/January 2018	6 months/August 2018	6 months/August 2018	1 year/January 2018

Source: Author

The NGOs' programmes in the field of disaster management and community development activities are related to the health, environment, education, and socio-economic development. Most of these programmes are implemented through the year with differences in the duration based on their nature. The rotational preparedness and recovery campaigns and community development activities have been implemented and are assessed yearly.

The teams survey new families and villages each year to be added to their work fields. The data showed that, the three NGOs' practices cover nine of the 12 villages in Al-Āmiriyah.

The findings of the family interviews have been categorised into their risk drivers that increase their vulnerability, their experiences and challenges during and after disasters, and the changes to their lives after the NGO interventions.

The four families were a sample of families vulnerable to disasters supported by society. Their answers reflect the experiences of most if not all of the families living under the same conditions in Al-Āmiriyah.

Their abject poverty, poor living conditions, lack of income has exacerbated the negative physical and psychological impact that they have to face. The NGOs intervention could be considered limited in its ability to generate radical changes, but from the families' perspective, the humanitarian and social support is a radical shift from their norms.

The current situation of the village is characterised by several issues. The on-site observational study showed that the village lacked any kind of early warning systems for

flash floods, storms, earthquakes and severe winds.

The village is isolated from urban services available in the town's more developed areas. Houses are constructed from bricks and concrete with palm trunk roofs strapped together with ropes or wooden roofs, with narrow roads between them. Some of the houses were abandoned or damaged from previous disasters at the site. There were no "Danger" or "Hazard" signs or labels in disaster prone areas, and there was a lack of protection and prevention measures at the site despite it being a disaster prone area.

Results

Results from Site Investigation

The site investigation illustrated that, most of the losses took place in the poorly equipped or poorly protected Egyptian communities. Based on the findings of this study, disasters destroy houses, lands, prevent people from working, bar access to healthcare, education and or other humanitarian assistance. It was apparent that the community at Halab village lived in squalid conditions and had inadequate access to services needed for even the most basic human living conditions.

Houses were constructed from bricks and concrete with palm trunks roofs strapped by ropes or wooden roofs (Figure 3). The study location was found to be prone to sandstorms, flash floods, very volatile fluctuations in temperatures from extreme highs to extreme lows. Families in the village are also isolated and are unable to gain social, economic, or humanitarian support to overcome the challenges that they face making them virtually insurmountable and trapping many of the families in perpetual poverty.



Figure 3: Al Āmiriyah town poor living conditions
Source: Author

Results from Interviews with NGOs

The gathered data showed that, NGOs play different roles in implementing their activities. The interviews showed that, Egypt's NGOs have a direct involvement in leading, managing, and implementing DRM initiatives and other community development activities. The study of Al Āmiriyah proved to be the case for many of the poor towns that the NGOs cover in Alexandria and the rest of Egypt. The results of the study proved that the three NGOs implemented sustainable bottom up approaches to build the knowledge-base, skills, and capacity of the deprived families in order to open the gates for them to live their lives independently without the need for aid (Figure 4).



Figure 4: Examples of Initiatives of NGO's in Al Āmiriyah town
Source: Author

Initially, *Life Makers Foundation* was responsible for DRM and community

development by depending on volunteers to formulate mature generations that are aware of disasters and practicing sustainable development and social integration.

The Foundation adopted a special approach in building economic sustainable development frameworks to reduce poverty. It succeeded in transforming several vulnerable families' living conditions, from being financially dependent to being financially independent families, able to earn their own wages, and obtain an acceptable level of healthcare. The Foundation adapted their DRM activities specifically using four main strategies to reduce the impact of natural disasters. The four pillars of the Foundation's programmes are summarised in Figure 5.

Secondly, the *Misr El Kheir Foundation*, aims to build sustainable communities by conducting different development programmes to enhance their economic, health, social and living conditions aspects. Meanwhile, the *Resala Foundation's* activities consist of 33 sectors that run from human development, health, education and emergency relief to sustainable development. Its main objectives are to supply short-term aid and relief subsidies to villages on the poverty line, raise the basic infrastructure of each village and provide long-term assistance.

To conclude, the three NGOs conduct various activities to build social, economic, and environmentally sustainable approaches

to decrease poverty, disease, illiteracy and socio-economic challenges. Focusing on four main sectors; health, environment, education, and social solidarity to cover their targeted communities' life aspects as presented in Figure 6 below.

Results from Interviews with Deprived Families

The findings identified that, disaster risk drivers included inadequate living conditions, poverty, socioeconomic challenges, illiteracy and disease the impacts of which were most keenly felt and

most strongly observed in the poorest sectors of the country.

The available literature on effective DRR frameworks and community-based climate adaptation measures are very limited. This when coupled with the absence of DRR measures and effective urban planning make disaster recovery a nightmare. NGOs' disaster response and community development initiatives aimed to improve the poor conditions in the area under review to allow the community to withstand disasters and transform the deprived village's conditions to improve its resilience.

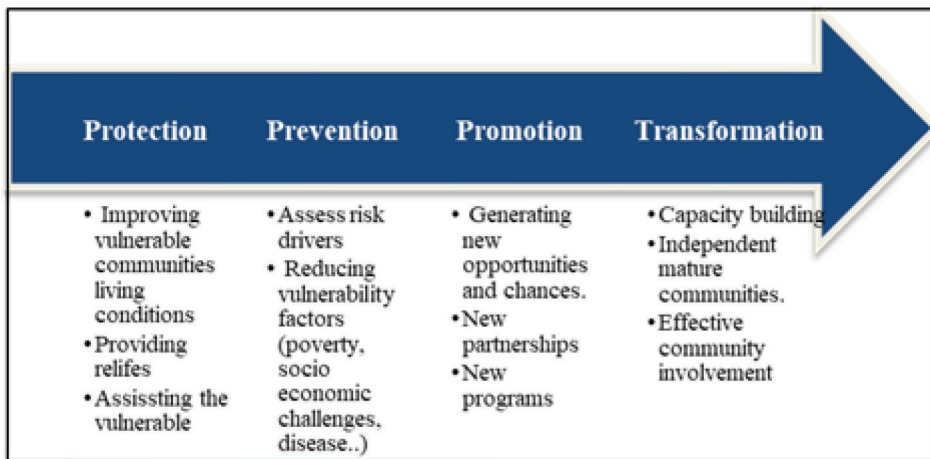


Figure 5: Life Makers Foundation programmes
Source: Author

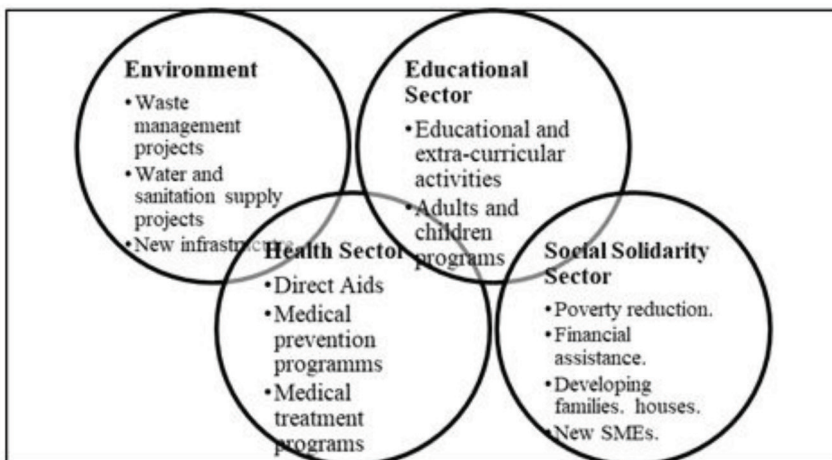


Figure 6: DRM approaches by NGOs in Al Amiriyah Town
Source: Author

The observed living conditions decrease the poor communities' resilience in the face of natural disasters and freak weather conditions.

The abject poverty of the residents meant that there was an absence of clean water, healthy living conditions, poor sanitation, safety, limited access to services and poor physical environment conditions that prevented the villagers from having adequate living conditions. The lack of job opportunities, and the weak access to services and facilities increased the odds that the residents would be poor and remain so.

Discussion

The available literatures on the subject under review has highlighted the impact of natural disasters on the most vulnerable communities in different countries. Egypt, in particular, has been one of those vulnerable disaster-prone countries, subject to freak storms and floods as well as other natural disasters. This paper considered the physical, social and economic impacts of such disasters on the poorest parts of Alexandria, Egypt.

The area under review Alexandria, is a coastal city that has been involved in different studies due to its exposure to floods, storms, cyclones, and earthquakes. Available literatures have proven that several agencies contribute efficiently to the management of disaster relief from the government, private and public sectors. The hypothesis of this study was that NGOs' which represent public sector involvement, play a significant role in reducing the harmful impact of disasters in Alexandria and have contributed to the building of a Community-Based Disaster Risk Reduction (CBDRR) infrastructure that has enhanced the resilience of the most vulnerable in Alexandria by reducing the rooted community risk drivers.

Environmentally, the study results prove that Alexandria has been vulnerable to different types of natural disasters coupled with the accelerating threat of climate change. Several villages on the eastern part drawn over the last

five years due to the growing issues with flash floods and cyclones.

Economically, Alexandria's infrastructure has been shown to suffer physical damage on a yearly basis and the city has no long-term solutions in place to deal with the issue. Massive losses have been recorded with the absence of guidelines, regulations, ground-based action plans or DRR strategies.

The study has also proven that, there is a correlation between the approaches that integrate human poverty reduction measures into the risk management matrix on its ability to be both effective and successful.

Poverty has been shown to be one of the most threatening issues, that increased the loss of human lives both during and after a disaster hits. The findings demonstrated that, Egypt, and Alexandria in particular, had a large section of the community living in abject poverty. On the other hand, it was found that, Disaster-Focused NGOs' have understood the correlation between the negative impact of a disaster on the poorest groups in a society.

Also, the poor communities are the most affected during disasters as poverty is closely tied to illiteracy, disease, and poor living conditions, which consequently, lead to having poor protection both prior and during disasters, the lack of preparedness and recovery facilities or opportunities.

Vulnerability is among the main risk drivers coupled with disasters' exposure in Alexandria, the high levels of vulnerability imply grave outcomes in hazard events, and it is strongly correlated to the human complex needs and limitations.

The study indicated that, Egyptian poor communities are living under the poverty line and experience often insurmountable challenges getting access to healthcare, education, and awareness. Most were living on less than one US Dollar per day in families that consist of between five and seven members.

The income is on a daily wage which meant that an absence from work for even a day would mean there was no funds to be had that day. The poverty was compounded by illiteracy and isolation from economic, market activity and training.

Results also showed that Disasters-focused NGOs were mushrooming and deeply involved with the most isolated, marginalised, and vulnerable communities. Their positive change towards resilience at the grassroots level has become their core role, and they succeeded in gaining support from national and international agencies to conduct their programmes with reasonable funding.

As a result of the NGOs role and responsibilities in DRM initiatives at Al Āmiriyah town it has adopted various approaches and has built a Community-Based DRR, where they depend on the local community to reduce the rooted risk drivers.

The adopted CBDRR approaches such as designing volunteer programmes for the local community members of all different ages to be involved in the decision-making and planning process to tackle the frequent disasters.

The NGOs aim to expand the knowledge-base in the community with disaster management training, community development projects' implementation workshops, enhancing their vulnerability control knowledge and improving their community engagement experience to ensure their continued on-site learning journey.

In this fashion the NGOs have emerged as emergency relief agencies providing humanitarian support both prior to, during and after disasters have struck. Their nature could hence be understood as mission-oriented organisations, that integrate vulnerable communities, with the private sector, and other social welfare organisations.

Conclusion

This study revealed that NGOs in Alexandria, Egypt, play a crucial role in disaster management, community development, and humanitarian

assistance. The study analysed a case study of Al-Āmiriyah Town in Alexandria, using structured and semi-structured interviews, site observational study, and documents review to collect the needed information regarding the city's disaster management practices and vulnerability measures.

The study was limited to the chosen site of the Western rural town in Alexandria, Egypt where the data was collected from the three foundations that were actively engaged in DRM initiatives in the area under review. The research excluded using public questionnaires or studying other different areas.

It was found that, disasters negatively influence human lives in different communities. The global, international, and national call has focused on the urgent need to build mature, resilient communities that can withstand natural and weather-related disasters. The sustainable approaches of DRM have proven success in building long-term investments and knowledge-based programmes on the local level to overcome vulnerabilities to natural disasters.

Disasters-Focused NGOs' have been among the most effective sectors during emergencies, providing humanitarian aid, and lessening poverty with long-term economic monetary and profit generation in Alexandria. Their role affects different scales and arenas. Varying from the well-educated public community to the deprived families, they are able to transform the mind-sets, behaviours and beliefs of those adversely affected or marginalised towards a more mature integrated generation.

The studied Disasters-Focused NGOs in Alexandria have succeeded in promoting effective DRM and CBDRR and providing guidelines for governments and institutions to act effectively prior to, during and in the aftermath of natural disasters. Their presence benefits the impoverished families, volunteers, public, and private groups providing humane living conditions, as well as sharing the risk knowledge and responsibility. Their role needs to be empowered, integrated, and strongly addressed.

The significance of the study is that it offers researchers a chance to identify the rooted vulnerabilities, and risk drivers in the Egyptian community. Moreover, it offers researchers the chance of comparing between the living conditions after the implementation of disaster mitigation measures.

The main conclusion of the study that NGOs play a crucial role in disaster management, community development, and humanitarian assistance. Their practice empowers the public and the community at large to be integrated effectively into the city's disaster mitigation initiatives. Greater assistance, improvement and empowerment should be given to them to enhance scope and improve their level of influence.

Governments, public, and private sectors need to effectively understand their roles in the event of a natural disaster to provide much needed support to ensure a better future for Alexandria. Finally, the outcome of this study can be a reference to the government and other NGOs in managing disasters and suggest the role that the community can play in the effort towards better, more effective and sustainable disaster risk management.

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