



**National University**  
of Computer & Emerging Sciences



**"A Social Marketing Framework for the  
Development of Public Awareness Programs"**

***- Pakistan's Perspective***

**Submitted by:**

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## Abstract

Marketing has become the key factor in deciding the success and failure of not only the enterprises but also social causes. The impact of such marketing tactic is eventually determined in the behavior of the target group.

This paper is designed to discuss the development of public awareness programs to mitigate risks regarding floods and other natural hazards. Such mitigation can be done by two ways i.e. Structural and Non-structural.

Undertaking a good plan covers the steps one should take before, during or after a hazard that will not only minimize risks but also lessen the injuries and Protect people's health and lives. Social marketing campaigns are therefore deliberately planned to change the target audience behavior towards particular matter. Public awareness programs and their implementation on local level are the core techniques for disaster risk mitigation strategies.

Literature proposes that people do not take on ways to change their behaviors and keep continue their stereotypes rather than changing. A model of behavior change by Prochaskau and DiClemente(1986) suggests that people move through five stages starting from ignorance to getting committed to the behavior change. It enlightens the stages that at which identifying will be vital for individuals to move to the next stage for the behavior change.

- **Pre-contemplation:** People do not consider changing or quitting their addicted behavior.
- **Contemplation:** People start thinking about the desired behaviors.
- **Preparation:** People adapting the desired behavior and carrying out changes.
- **Action:** People start moving forward and bring out the real change in their addicted behaviors.
- **Maintenance:** People make challenge and are thus loyal to their behaviors.

The paper is proposing an objective to build disaster preparedness, services through immature and volunteer groups in the target communities to reduce their vulnerabilities to disasters and natural calamities beyond their limits to combat them. This model shall introduce train and equip volunteer groups (comprised of local activists) in all targeted areas for raising awareness of their

respective communities in the basic disaster risk management techniques, so that it may lessen the possibilities of injuries and casualties.

The author is running a successful Event Management & Public Relations company in Pakistan and has successfully designed and executed social marketing campaigns during earthquake in 2005 and massive flood in the year 2010. Those catastrophes are considered bigger than the combined damage of Tsunami and Haiti. The paper will also reveal the action plan used to help the team of volunteers to rebuild Pakistan.

## **Introduction**

*“Disasters affect on average 200 million people every year... Earthquakes and droughts remain the main killers, but floods, hurricanes, cyclones and storms are the hazards that affect most people worldwide. Crowded cities, unsafe constructions, lack of urban planning, destruction of natural buffers, climate change, etc. these all combine to expose more people to disasters... We are all at risk” (UNISDR, 2011).*

Natural Calamities are a hard reality of this world. It could affect any region, any country regardless of race, religion or economic status. While the exact prediction of natural hazards remains difficult, if not impossible, even in the presence of highly sophisticated scientific equipment, research has shown that nations that are better prepared are usually in for lesser overall damages (Balaisyte & Van Wassenhove, 2011).

Thanks to advancements in science and technology, areas that are disaster prone can now be marked and identified in advance and thus it has become much easier for countries to be better prepared for natural hazards such as floods, famines, and earthquakes etc. at organizational and individual level. Developing and underdeveloped countries are at much risk because of many factors such as lack of infrastructure, financial constraints, lack of awareness etc. (Balaisyte & Van Wassenhove, 2011).

As mentioned above nations that foresee and prepare for upcoming hazards are better off. Individuals can play a key role in combating national disasters and minimizing the damages, however they need to preconceive the after effects of such catastrophes and know what to do in such a situation. If individuals are well prepared in advance, the damages can be minimized as they will not only take care of themselves and their family but also will be helpful to the entire community.

For developing countries, lack of resources becomes a great challenge in such situations that is why a Hurricane Tsunami killed 1833 people (Wikipedia) however a flood in Pakistan affected 20 million people (Wikipedia). That is because U.S being a developed nation has resources not only to prepare in advance but also to rescue and relocate the affected population. Keeping in view the lack of resources, the need of the hour is to educate the masses so that they sustain such level of natural disasters. And this can only be done through social marketing programs.

This paper is written specifically in context of Pakistan; however it is applicable to every such country that is prone to natural disasters. This paper promotes the need for behavior change through public awareness programs, in a structural way so that the risks from natural hazards can be mitigated and reduced to minimum and it further emphasizes the use of social marketing programs to do so. If Social marketing programs are implemented on grass root level, public awareness will be generated, that will definitely lead to behavioral changes.

The use of Social marketing is not new to a country such as Pakistan. In the past, such programs have been implemented successfully with effective results. Efforts have generated positive results for fighting against polio and educating the people about Green Star birth control program. It is evident from their results that local groups and individuals can prove to be an effective resource if trained and educated properly.

In times of natural calamities such as earthquakes, floods and famines, volunteers play an invaluable role. Whether it is rescue or relief, volunteers function aside the government and the non-governmental organizations as a key player. In 2005 earthquake and floods of 2010 & 2011 many international and local volunteer groups worked parallel to rescue teams for the relief and rehabilitation of the victims. These volunteers were neither trained nor equipped to serve in such conditions and were not prepared to combat these circumstances, even then their services made a difference. Keeping in mind this fact, it becomes all the more evident that preparing volunteers is the key to minimizing risks of casualties and serious damages.

## Literature review

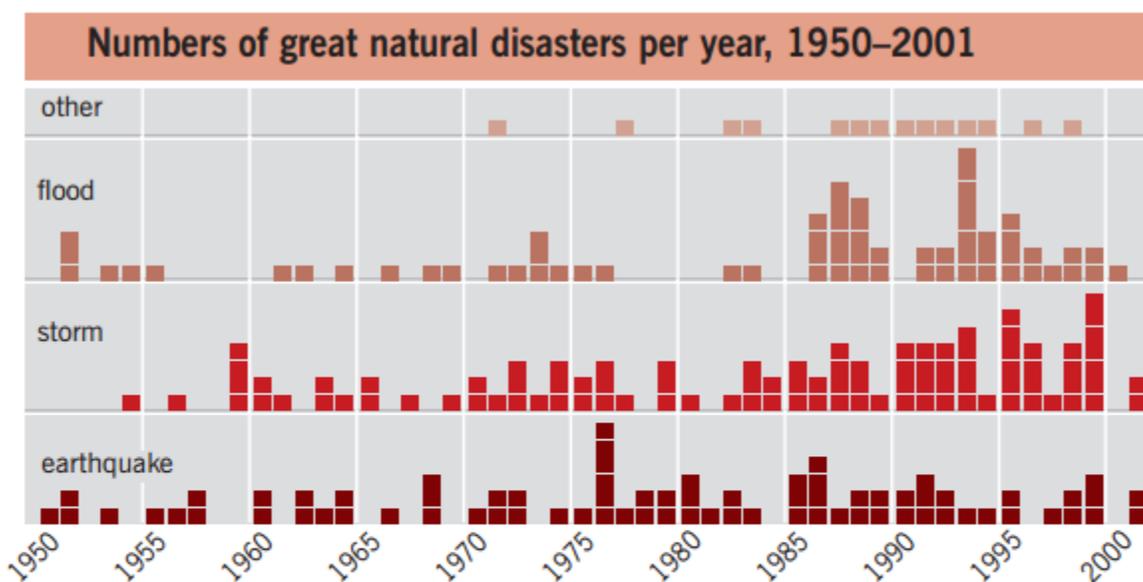
*Social marketing* is an approach well informed by behavior science for promotion of social change. It is not a theory in itself but a framework drawn through various bodies of knowledge like communications, sociology, anthropology, and psychology, for understanding that in what ways the behavior of public can be influenced (Kotler & Zaltman, 1971). Andreasen (1995) defined it as “*the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of society*” (p. 7).

From this following features are illustrated. First feature focuses behavior change which is voluntary: enforcement or coercion is not social marketing. Second feature is that the social marketers apply the principle of exchange for inducing change– it recognizes that for a change to occur there should be clearly defined advantages for the customer (Houston & Gassenheimer, 1987). The third feature is that the marketing mix should be used along with segmentation, targeting and market research that must be consumer oriented. Last feature is that social marketing aims to enhance welfare of society and individual, instead of benefitting the business entity carrying out social marketing; and this is exactly the point of distinction between social marketing and other various types of marketing (MacFadyen et al., 2002). The focus over individual and society is an illustration of the key point of social marketing that it emphasizes over the behavior of individuals, as well as policymakers, organizations and professionals. It is a distinctive attribute of social marketing that it learns from commercialized sector and applies it for resolving problems related to health and society.

In a broader perspective, social marketing is implementing principles of exchange and marketing to issues of the society. It is used for campaigns related to the environment and public health. Triumphed approaches dealing with water purity, waste management, safe sex, garbage recycling, family planning, tobacco consumption, and obesity are the most common applications (Andreasen, 2002; Hastings, 2003; Kotler et al., 2002). It is a common belief that most issues of the society have rudimentary behavioral origins. Influencing the outcomes of behavioral exchange is the core aim of social marketing and dramatic growth has been observed in its usage (Gordon et al., 2006). Non-profit and commercial organizations, both are simultaneously using

social marketing to those domains in which educational and legal interventions were always unsuccessful (Diamond & Oppenheim, 2004).

A **natural disaster** is a physical event that occurs naturally, resulting in undesired outcomes over a society (Alexander, 1993). These encompass geological events (for example volcanic eruptions & earthquakes) and climatic ones (for example hurricanes & floods). Loss of property or life can be the consequence of a natural disaster, leaving huge economic damages in its wake, but its severity relies over the resilience of the people being affected (Bankoff, Frerks, & Hilhorst 2003). People’s economic, social and demographic attributes determine their vulnerability to these disasters.



Graph shows increasing trend in frequency of 'great' natural disasters. Catastrophes are classed as great if the ability of the region to help itself is overtaxed, making inter-regional or international assistance necessary, as is usually the case when thousands of people are killed, hundreds of thousands made homeless or when a country suffers substantial economic losses

Source: Munich Re 2001

A hazard can be avoided to turn into a disaster if it occurs in an area without vulnerable population (Alexander, 2002; Wisner et al., 2004). However, in a vulnerable area like Jacobabad, a flood can have calamitous consequences leaving behind lasting damages that will take too many years to rehabilitate. Risk is the consequence of cooperation between the ecosystem and human choices. Comprehension of risk involves dissecting historic techniques of natural change

and human advancement (Holzmann, 2000). It involves seeing how relocation joined with absence of planning, overload the framework and ability to react of quickly developing urban communities and make belts of poverty as slums helpless against a mounting number of individual and covariant risks.

Here is a list of floods from recent years in Pakistan according to Pakistan weather portal ltd..

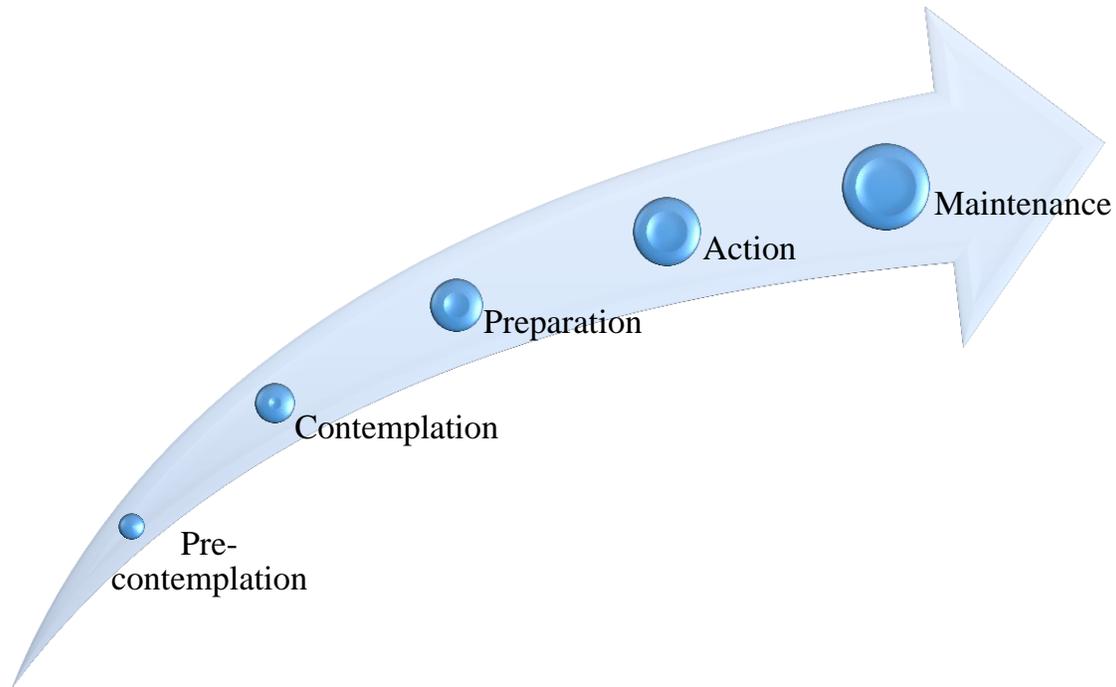
- “In 2003, Sindh province was badly affected when above normal monsoon rainfall caused flooding in the province; urban flooding also hit Karachi where two days of rainfall of 284.5 mm (11.20 in) created havoc in the city, while Thatta district was the worst hit where 404 mm (15.9 in) rainfall caused flash floods in the district. At least 484 people died and some 4,476 villages in the province were affected.”
- “In 2007, Khyber-Pakhtunkhwa, Sindh and coastal Baluchistan were badly affected due to monsoon rainfall. Sindh and coastal Baluchistan were affected by Cyclone Yemyin in June and then torrential rains in July and August, while Khyber-Pakhtunkhwa was affected by melting glaciers and heavy rainfall in July and August. At least 130 people died and 2,000 were displaced in Khyber-Pakhtunkhwa in July and 22 people died in August, while 815 people died in Baluchistan and Sindh due to flash floods.”
- “In 2010, almost all of Pakistan was affected when massive flooding caused by record breaking rains hit Khyber-Pakhtunkhwa and Punjab. The number of individuals affected by the flooding exceeds the combined total of individuals affected by the 2004 Indian Ocean tsunami, the 2005 Kashmir earthquake and the 2010 Haiti earthquake. At least 2,000 people died in this flood and almost 20 million people were affected by it.”
- “In September 2011, at least 361 people were killed, some 5.3 million people and 1.2 million homes affected as well 1.7 million acres of arable land inundated when massive floods swept across the province of Sindh as a result of monsoon rains.”
- “In September 2012, more than 100 people died, and thousands of homes destroyed, with thousands of acres of arable land affected when intense rainfall battered Khyber Pukhtunkhwa, Southern Punjab and Upper Sindh. As a result of monsoon rains.”
- “In August 2013, more than 80 people died.”

The UN defines *Disaster Preparedness* as “forecasting and taking precautionary measures prior to an imminent threat when advance warnings are possible”. It is setting the supporting infrastructure, plans, and policies that are implemented in advance to a man-made or natural disaster while aiming to mitigate the unpleasant outcomes to an acceptable level. These risk levels are attained through the decision makers’ agreeableness to different trade-offs (Haimes et al. 2008). It is actually about emergency management which can be done through education, resourcing, planning, estimating, research, practicing and rehearsing.

Undertaking a good plan covers the steps one should take before, during or after a flood that will not only minimize risks but also lessen the injuries and protect people’s health and lives. Social marketing programs are therefore deliberately planned to change the target audience behavior towards particular matter. Public awareness programs and their implementation on local level are the core techniques for disaster risk mitigation strategies.

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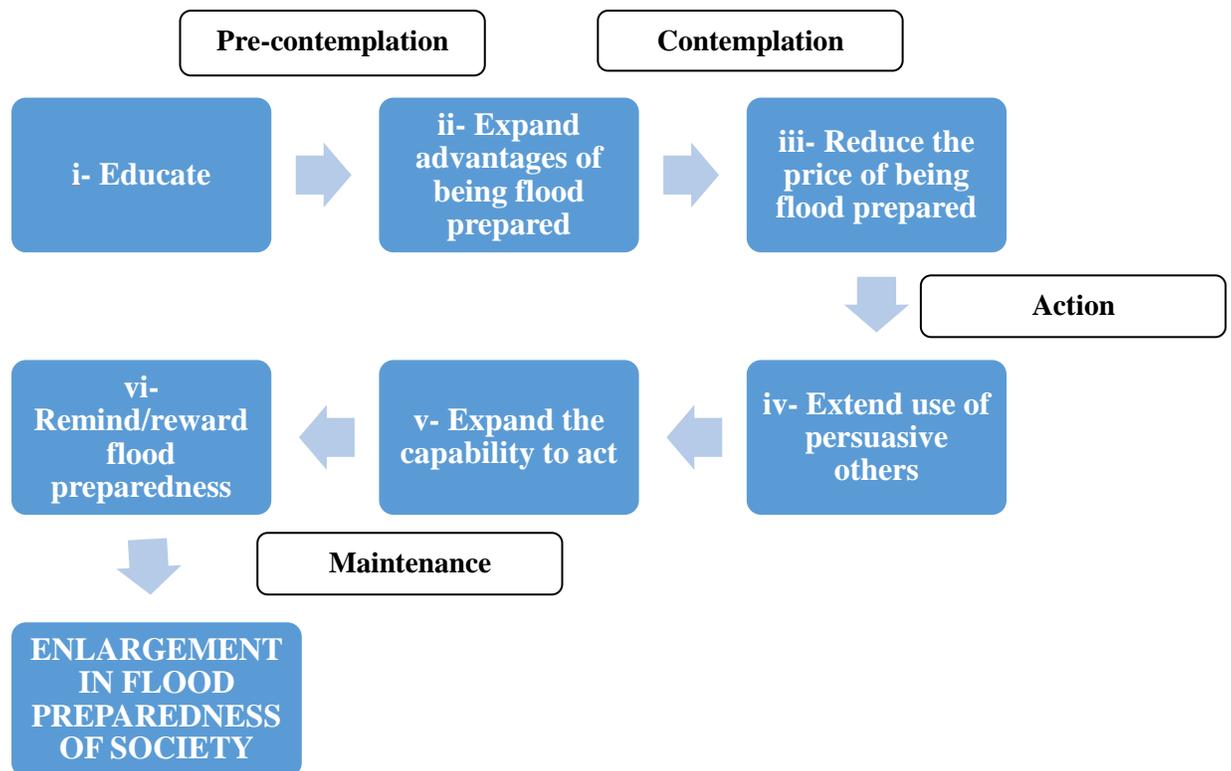
**Figure 1: Prochaska & DiClemente (1986)**

These behavior levels can be in line with following program tasks:

- **Develop realization and attraction:** the prospective audience must be educated about a desired new conduct to be considered which might be suitable to present circumstances.
- **Reform the value system:** for behaviors requiring substantial reforms in values, the prospective audience must realize that the proposed conduct is worthy to the society they live in.
- **Convincing:** when the prospective audience is discerned that carrying out the behavior is absolutely fine, they must be persuaded that carrying it out is generally attractive.
- **Develop action:** distinction exists between persuading the public about a conduct to be a great thing and receiving activity. It could be more of making the conduct easy to embrace.
- **Maintain change:** now this campaign must not stop when the audience makes the first important step in the case when our objective is sustainable behavior transition.

The task of these models is to encourage people to be proactive for flood. It will include influencing the behavior, attitudes and knowledge of the public living in a floodplain for them to be ready for, and survive, any level of flood while mitigating the injuries and losses.

Andreasen (1995) has suggested the following model that brings alignment between the stages of behavior and task of communication.



**Figure 2: Andreasen (1995)**

## **Aims/objectives of the study**

The focal point of this study is to emphasize the role of volunteers and individuals in reducing a community's vulnerability to natural disasters and how a clear behavioral change could be brought in disaster prone areas by emphasizing public awareness program based on social marketing framework.

The purpose of this study is to judge the level of awareness in the masses related to natural disasters and its aftermaths. This study will also examine the role social marketing can play in public awareness regarding natural calamities.

## **Methodology**

The research for this report was divided into two parts. First of all, the sample population was assessed for the need of a public awareness program for disaster mitigation using direct interview method. In the second phase, the public awareness program was implemented.

## **Research Design**

In order to understand the perspective of the flood affected people, it was important to examine and understand the magnitude of damage done by the floods and also what was done by government and the community itself to mitigate the risks of the flood. A retrospective technique was used for the sake of data collection. Discussions and interviews were conducted in different flood affected areas from the victims of the flood, the IDPs (Internally Displaced People), the volunteer workers from different NGOs (domestic, e.g. Deventions, and international, e.g. US-AID) working in the flood relief campaign, the officials from the armed forces managing the rehabilitation and relief activities in the flood affected areas.

Structured and semi-structured interviews and survey was used to explore the on ground realities faced by the flood victims which consequently fulfills the requirements of qualitative research. The questionnaire was designed while keeping in mind the work done by other renowned social scientists that had lots of contributions in the field of disaster impact analysis. (E. Burke Rochford, Jr., & T. Jean Blocker, 1991; Graham A. Tobin., & Jane C. Ollenburger, 1996; Gerald

L. Hutchins & Fran H. Norris, 1989, Robert O. Hansson et al, 1982, Jasmin K. Riad & Fran H. Norris, 1996, Shirley B. Laska, 1990; S. Martin Taylor et al , 1991).

### **Research Participants and Sampling procedure:**

According to estimates around 20% of Pakistan (Wikipedia) came under flood in the year 2010. We could not reach all these areas. However, visiting most of the Khyber Pakhtunkhwa and Punjab province, it became clear that the plight of the affected people was almost the same everywhere. Thus, it was practically impossible to expand the research to all this vast area. Thus, a sample population was taken to assess the topic under study.

A sample size of 200 households was taken into consideration for the survey. These households were randomly selected from the flood hit districts of Punjab and KPK province including Nowshera, Charsada, Mianwali etc. There were mostly adults and others were elderly people both males and females so as to get true reflection from the population of Pakistan without any biasness. Children or minors (aging 18 and below) were not included in the interviews. There was general discussion with a few close ended questions and many open ended questions.

This study was initiated in the first quarter of 2011, when the memory of the devastating floods was still fresh in the minds of the people. The rationale is simple and clear as the accuracy of measurement of responses could only be guaranteed if the interviews were taken as soon as possible after the flood. They were able to recall from memory the way they coped with the floods and its aftermaths. The data collected was purely descriptive in nature since it was based on interviews. The methodology used for this research was descriptive in nature. A survey was conducted in the disaster hit areas from a specific sample population. A comprehensive but descriptive questionnaire along with interviews was used as survey instrument to assess the sample population.

## **Data Collection Instruments**

### **Questionnaire**

A comprehensive questionnaire was developed for the research purpose. This questionnaire was qualitative in nature. The questionnaire contained many closed ended and open ended questions that required participants to describe the situation they had faced during flood. The main objective of the questionnaire was to understand the losses faced by the respondents. The questionnaire also emphasized on how the respondents prepared for the flood with or without the help of the government officials. A copy of the questionnaire is attached as Annex A

### **Interviews**

Interviews were the primary data collection strategy used for generating data. These interviews were based on the above questionnaire. It is important to understand here that a majority of the respondents were either illiterate or semi-literate. They were able to speak and understand only their native language with specific dialects. This was not just the case with respondents but most of the flood hit areas had this language barrier, be it anywhere in Pakistan. That is why the services of a translator was utilized, who translated the interviews into the native language (i.e Punjabi and Pushto) and then recorded the data. This recorded data was later transcribed into English for findings and analysis.

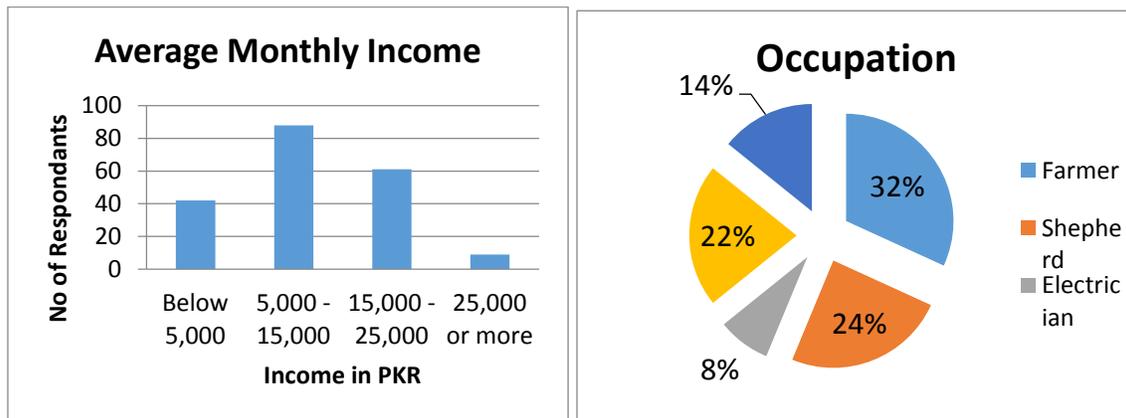
### **Secondary Research**

In order to explore the previous studies conducted on this topic, secondary research was also conducted which comprised of, but was not limited to, Journal papers, local newspapers and various researches by different organizations.

## Findings

The data from structured and unstructured interviews was transcribed and translated, read and re-read to identify the major characteristics of the population such as income, occupation and damages caused by the flood. Apart from that a major emphasis was given on the flood preparedness situation of the respondents.

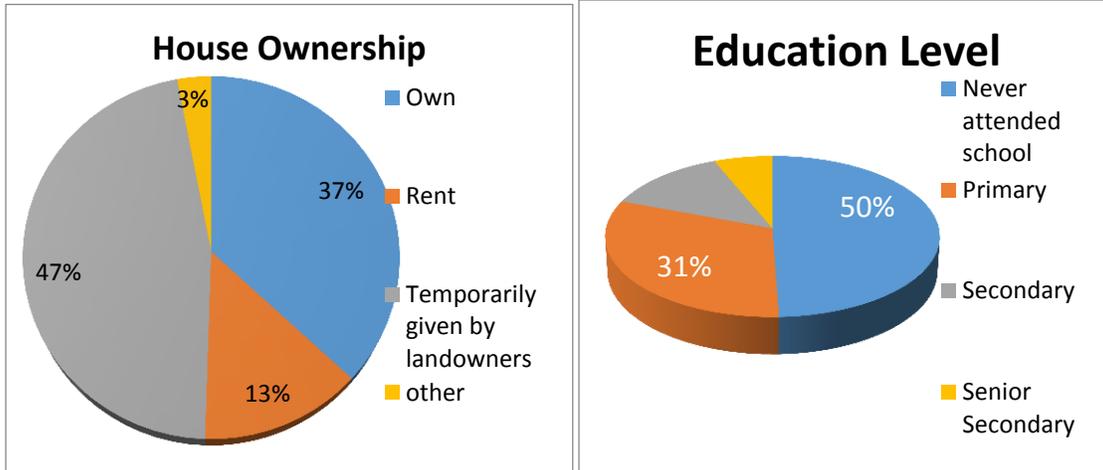
Here are the descriptive statistics from our findings.



As mentioned earlier in the methodology section of the report, the survey was conducted in a number of districts in Punjab and KPK province. 200 households became part of the survey and these respondents were interviewed keeping in view the questionnaire.

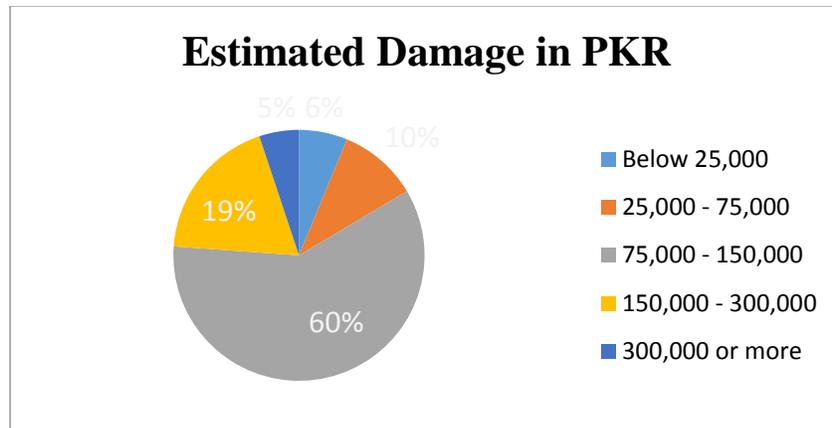
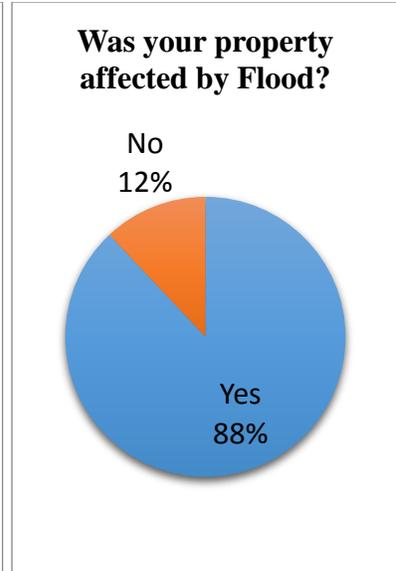
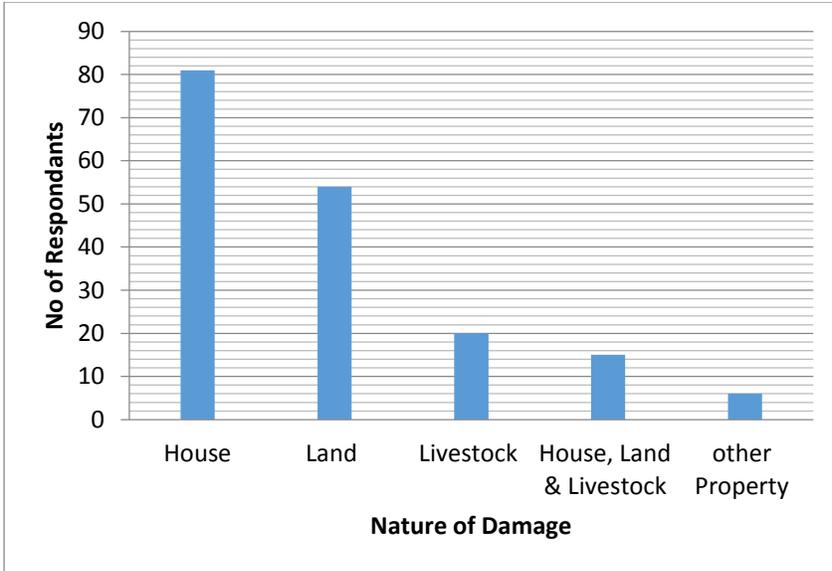
The average monthly income for majority household came out between PKR 5,000 to 15,000. There were a number of households below the average monthly income of PKR 5,000 that were surviving on food and shelter from their landlords. These families were living below the poverty line and without the basic necessities of life.

The occupation of most of the male population was farming or sheepherding. Around 32% of the respondents stated farming as their profession and 24% took care of livestock. The female population was mostly homemakers with a few exception of women working as LHW Lady Health Worker deputed by ministry of health in the province.

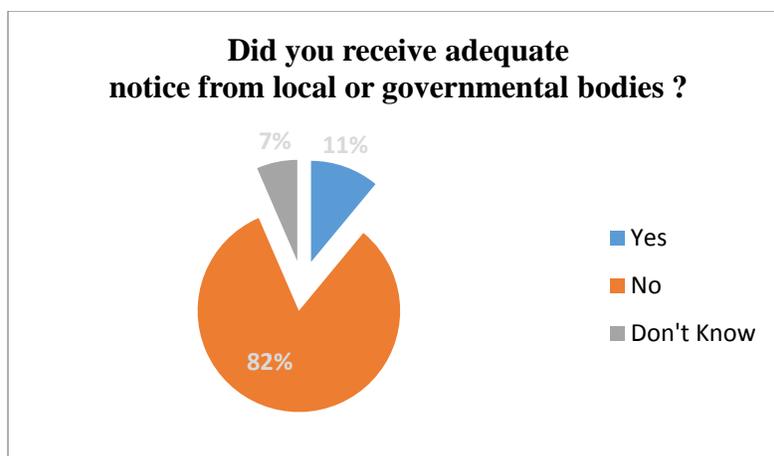


The areas surveyed are a part of remote districts and therefore the population in the village is not very literate. The half of the people surveyed had never gone to school in their entire life. Approximately 30% of the respondents have attended formal education till primary level and only a handful of respondents have completed secondary education.

A majority of the respondents that were surveyed were living in mud houses given to them by their landlords. These households were working as farmers or shepherds for the land and livestock owners respectively. The other majority owned small houses made of stone and mud. A very few of them were living as tenants in that area.



The extent of damage caused by the flood was enormous. The agricultural land of the residents was completely destroyed along with their livestock (mostly cattle). The continuous rain also demolished mud houses and forced the residents to leave their shelter in those unavoidable circumstances. The estimated average damage per household was around PKR 150,000. This included the loss of their cattle and roof/walls of their homes. A greater part of the household reviewed had damages ranging from PKR 75,000 to PKR 150,000.



When asked about any warning or notice received from the government, 82% of the respondents were of the view that they did not receive any adequate warning from local or governmental body.

## **Discussion and Analysis**

The data from the survey and interviews was analyzed in a number of steps. The qualitative data from the interviews was consolidated and reviewed to generate a list of problems faced by the population. Now particular attention was paid to the problems that could have been prevented or solved with the help of an initiative taken by the community dwellers themselves.

### **1. Lack of awareness and information**

Interviews with the locals and the authorities made it clear that they had no awareness whatsoever about the floods and even if they knew that a flood was expected they did not know what to do. This lack of information and knowledge led to an increase in the number of death toll as well as loss of property and valuables.

### **2. Lack of Planning and Precaution**

According to the results of the survey, it becomes clear that there was no particular planning or precaution taken by the participants themselves or by the government or social sector. Even though Pakistan is a country that is at the risk of floods every year due to monsoon rains, there was no comprehensive plan at any level to prepare for flood.

Loss of life and property could have been minimized by taking precautionary measures in advance.

### **3. Lack of Support from local authorities**

The respondents were of the view that they had literally no support from the local authorities at any point in time whether it was before the flood, during the flood or after the flood. Before the flood, there was no warning mechanism or precautionary measures installed by the authorities. Even the evacuation was managed by the respondents themselves. During the flood, the local authorities did not come forward to help them. Initially locals of that area and some volunteer groups provided evacuation and rescue. Later marine groups and army was able to deliver rescue to the flood affected on a massive scale.

### **4. Psychological mindset of the people**

Another very important factor that was visible from this entire research was the mindset of the people and the authorities. It seemed that the majority of the flood affected people and the authorities had their ‘heads buried in the sand.’ As explained in the earlier sections, flood is a kind of natural disaster that has a high expectation of occurrence during the monsoon season. Most of the areas that were hit by the flood, have been historically affected by floods as well. However, even if the locals are informed prior to floods, they take no action. The rising water levels are visible and in knowledge of everyone, even then there is no discussion or preparation in this regard. There have been incidents where people have refused to leave their homes, simply on the pretext that if they were to die, they would rather die in their ancestral home. Same is the case with the local authorities.

### **5. Lack of mechanism for dissemination and assessing information**

In times of natural hazards, it is important that the area has an established system of information assessment and dissemination. Most of the respondents were of the view that they had no proper information about the flood, its extent and the risks associated with it. The local government authorities and leaders showed no initiative in terms of dissemination of factual information and evacuation plans. There was no organization of information and most of the population relied on the information provided by the media or by word of mouth. There should have been a technical plan clearly indicating the level

of risks, the geographical areas at risk and what must be done on priority basis to safeguard the life and property of the community and this entire plan should have been shared with the locals.

#### **6. Scarcity of resources**

A major problem faced by the people living in the flood affected areas was lack of resources. If the locals had been given access to materials and resources required to prepare for the flood, a lot could have been saved. There was no resource distribution by the government since there was no fore planning for minimizing the destruction of flood. For example people could have given sand bags and trained on how to build dikes to safeguard their homes and property.

#### **7. Lack of any warning mechanism**

It is beyond comprehension of a common person that while forecasts were being made of heavy rainfall and risk of floods, why government authorities did not devise any warning mechanism to the communities. According to most of the people, there was no or not enough warning given to people about the threat of flood and that they needed to evacuate. The information given to local communities was either insufficient or inconsistent or inaccurate or too late. Most people could not take appropriate action because it was too late. Most people died because they had insufficient or no warning about the extreme risk they were facing. There was no mechanism for delivering flood alerts to the communities. Local mosques were utilized for warning alerts, however, in most cases it was too late.

#### **8. Lack of Direction**

Most flood victims were at loss about what they were going to do after evacuation. As the survey indicated most of the flood victims were from the lower class so they neither had money nor they had any other resources to sustain themselves during the flood time. So they were totally dependent on state help which was either too small or too late. Even after they came back to their homes, they were unable to start again as they did not have any resources left such as crops, livestock or small businesses.

#### **9. Medical and sanitation hazards**

In such times of natural devastations, there is a risk of a lot of medical hazards. First of all, people did not have access to clean and safe drinking water. Since people did not

have any knowledge about the hazards that could be caused by drinking unclean water, a couple of diseases sprung up such as typhoid, Hepatitis A, Diarrhea etc. Same is the case with sanitation. People were not prepared for such a catastrophe so they did not have access to a basic thing such as soap. Thus, because of lack of preparedness, people especially the elderly and the children had to suffer from various medical problems.

#### **10. No utilization of past experience**

It was witnessed during the floods that the government and the people both had not learnt any lessons from the past floods. Pakistan is a country that is prone to devastations of floods. But each year nothing is being done to prepare for the floods that are inevitable if there is excess rainfall during monsoons. Almost all the sample population were of the view that the government has always overlooked their interests especially in times of such catastrophes. Same is the case with individuals. Most of the individuals interviewed admitted that this wasn't the first flood of their lifetime. They had themselves seen many floods and same is the case with their forefathers. However, even then they had never thought or initiated a system amongst their community that could help them in minimizing the losses that are caused every few years due to flood.

#### **11. Where were all the government bodies made specifically for disasters?**

There are a couple of government bodies particularly set for disaster management such as National Disaster Management Authority (NDMA), provincial disaster management authority (PDMA), district disaster management authority (DDMA), Federal Flood Commission (FFC), Flood Forecasting Division (FFD), Disease Early Warning System (DEWS) etc. Despite claims by these organizations that people were warned and evacuated, it is evident that the flood warnings issued by FFD were never disseminated appropriately to the concerned people. Apart from that the NDMS and its subsidiaries never devised any solid plan for counter action before and during the flood.

### **Testing of Social Marketing Framework**

Keeping in focus the objective of this study which was to highlight the role of volunteers and individuals in reducing a community's vulnerability to floods and initiating a behavioral change in the disaster prone areas, a social marketing framework based on the model suggested by Andreasen (1995) was applied to a sample population.

It is evident from the survey described above that a majority of the population living in the flood prone areas in general is illiterate and living in poverty. It was thus important to apply the social marketing framework systematically and carefully.

Our testing of the social marketing framework was limited to Mohallah Qazian, situated on the banks of river Kabul. This area faces a great threat of flood all the time especially in the monsoon season, it becomes all the more important that the residents are fully prepared for every kind of emergency. The prime objective as suggested by the Social Framework was to increase the knowledge and awareness level of the community which would essentially trigger behavior change and mitigate the risks from floods.

Behavior change is the most important task of any such program however it is also the most complex one. The model suggested by **Andreasen** (1995) served as a guideline here as it emphasizes on gradual behavioral change instead of instantaneous behavior change. For our research, the sample population was moved through the six stages suggested by the above authors from ignorance to commitment.

These six stages were the systematic way to move forward. Each participant was gradually led through a series of information in order to incorporate a behavior change that will ensure that people know that they can play a useful role to combat natural disasters.

## **1. Educate**

This is part of the pre-contemplation stage. The sample population was not even aware of the fact that they need to be flood prepared. The first task was to convince them that being flood prepared is a desirable action. This required changes in their beliefs and attitudes. So they were educated and made aware such that their preset beliefs are modified. In order to bring the people on the next level of contemplation, they were targeted in two steps:

- a. Raising awareness
- b. Communicating the positive things about being prepared so that people brings about a change of behavior in this regard.

The preset notions of the people that were there for centuries needed alteration. People of this area have been facing flood almost every few years because of the geographic proximity of

this area to the River. Even then these people have a firm belief that they need not to be flood prepared as it does not make a difference. They have always believed that the government is responsible for their safety and it has a 'plan' so they don't need to worry about it.

Through consistent workshops and debates the following message were brought about in the community:

- a. It is important to be prepared for flood.
- b. Saving valuable assets and prevention of death and injury is possible if you are prepared yourself.
- c. There might not be much time before you are warned about the flood so you must know your action plan.
- d. Your preparedness means greater chances of survival for you and your family.

## **2. Expand advantages of being flood prepared**

Reason suggests that the most effective strategy for behavior change is to emphasize the benefits of the new behavior. Thus, keeping this in view, people were educated about the long term and the short term benefits of the behavior.

- a. The primary benefit stressed on was the prevention of death and injury.
- b. Another important factor stressed upon was control. People were made aware that the impact of a serious flood, just like the one in 2010, can be controlled if they become flood prepared.
- c. Flood preparedness will bring about a sense of relief and peace of mind because then you will know what to do and who to take help from for evacuation.

## **3. Decreasing costs**

The change in behavior has some cost as suggested by Andreasen (1995). A major task was to make the participants understand and identify the costs of flood preparedness. It was clear during the survey that people thought that being flood prepared entails a lot of cost like buying a disaster supply kit, stockpiling emergency building materials, evacuation kit etc. This perceived cost also played a major hurdle for participants to be flood prepared. A major task was to convince the participants that the costs are minimal

and the benefits overshadow the costs. They can use materials from their own scrap and land. Sandbags for instance, are the easiest of all the precautions which can be made at home.

#### **4. Extend use of persuasive others**

A key thing to keep in mind here is that people have moved from pre-contemplation to action stage. Now they are aware of the benefits of being flood prepared and are also ready to act on it. They just need a major push. In this stage we incorporated the key influential people from around the community. These people involved the local political leaders, religious leaders and also some figures from the media. Another key person was a representative of the local government Mr. Shah Usman, who gave the people factual picture of the floods and how to prepare for them. Other public figures included Ms. Nosheen Bokhari, LHV (Lady Health Worker), Mr. Afzal Shah (Ziarat Kaka Saheb) and Mr. Arif Khan Khatak (Union Council Member). The agenda of all these key influential persons was the same.

They talked about why flood preparedness is important for the participants and the overall community. They also highlighted the benefits of being flood prepared and provided guidance and support. They ensured that people knew about the risks associated with floods and also knew how to be prepared for it.

#### **5. Expand the capability to act**

In this stage the participants were formally trained with the skills and resources required to be flood prepared. This is the first action towards a formal behavior change and comes under 'Maintenance' stage from the framework proposed by Prochaskau and DiClemente (1986). The participants were told how through inexpensive means they can be better prepared for future floods. Participants were trained to foresee the flood signs like keeping constant check on the status of rains and what is the danger level of rain. They were also trained about how they could extract the desirable news about flood and rain status from national media sources. Flood plans were discussed in which a safe place and a safe route was marked that is close by and evacuation to that site will keep them all

safe. They were also trained in keeping and maintaining a disaster kit that has all the important things to get them going in times of disaster.

## **6. Reward/Remind**

The most important thing in all this activity was to make people maintain this behavior. Flood is a very common phenomenon in this area. Minor floods occur once every year or once every two years and major floods are witnessed every 4-5 years. However, people need to be constantly reminded of the fact that they need to keep prepared. For this purpose, the participants were followed up with the information imparted after a few months. A few chosen literate individuals were made trainers to generate awareness in their neighborhood. They were given a time frame for a month after which they were tested for what they remembered and a small ceremony was held where they were provided with entertainment and were also tested for information. The process continued repeatedly until a majority of that area got prepared to take up the challenge.

## **Conclusion**

Our findings suggest that people need to be prepared through awareness programs and campaigns because they are mostly illiterate and poor to this extent that television, radio and newspaper have no reach to these areas. They can however be reached through local representatives, effective word of mouth communication and a flood preparedness model that can be easily understood and implemented. Therefore by working through the proposed Social Marketing Framework, the flood affected people can be educated about the benefits and costs of being flood primed. Not only will this framework assist them to mitigate their loss of property and lives but it will also make them self sustaining and a source of motivation for the community at large.

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