

AWARENESS FOR BETTER ADAPTATION STRATEGY DEVELOPMENT FOR CLIMATE CHANGE IMPACTS IN PAKISTAN

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ABSTRACT: Climate change awareness has become very important to develop adaptation strategies for climate change impacts. Climate change impacts varied in type and intensity for different countries, but the lack of awareness is making developing countries more vulnerable to the alarming impacts of climate change. The purpose of this study was to explore the level of awareness to make adaptation strategy for climate change impacts in Lahore, Pakistan. Relevant literature on climate change awareness revealed that climate change awareness in Pakistan was very low. The findings of this paper were based on a detailed survey conducted with the general public of Lahore. This research paper was attempted to find out the existing level of climate change awareness for making better adaptation strategy in Lahore.

Keywords: Climate Change, Awareness, Adaptation, Impacts, Strategy Development

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INTRODUCTION

Climate change is one of the most serious environmental problems being faced by the world. It may be defined as a significant change in measures of climate (such as temperature, humidity, precipitation and wind). Climate change occurs due to natural as well as manmade causes. But research shows that anthropogenic activities contribute more to exacerbate climate change as compared to natural causes (Pittock, 2009; Hardy, 2003).

The question arises why to go for awareness raising as compared to other adaptation measures. The answer is very simple yet with complex implications *i.e.* if some policies are being implemented on some specific target population, it can be implemented in true spirit. Moreover, it is important to note that strong institutional setup and policies are required to raise awareness of climate change. Decision makers should consider that there is public volition and motivation to bring change (Mertz *et al.*, 2009).

It is also anticipated that most of the people are aware of climate change phenomenon, but the awareness about the impacts of the same and urgency of the matter is low. Lack of awareness ultimately leads toward no or little effort to drive the change. There is also a lack of access/knowledge of effective platform where their voices can be heard or actions can be generated (UNEP, 2006).

Awareness raising campaigns and tools: Awareness campaigns are very useful for addressing mass population in response to climate change and adaptation. These can be effectively used for the target population and stakeholders vulnerable to any particular threat from climate change. The main objective of awareness raising

is the behavioral change. The other objectives of awareness raising are information sharing, increased concern, stimulate self-mobilization and mobilization of local knowledge and resources (O'Connor *et al.*, 1999).

The outcomes of awareness raising involves increased awareness of climate change impacts, enthusiasm, support, impact assessment, adaptive policy establishment, enhance adaptive capacity, indigenous solution and reduced vulnerability. There are various forms of media through which the message can be communicated *i.e.* through newspapers, the internet, and television (Sampei and Usui, 2009; Arlt *et al.*, 2011).

Generally, climate change is given secondary importance as compared to the other personal or social issues in people's daily life (Lorenzoni and Pidgeon, 2006). Climate change has devastating impact on Pakistan's acute and distinct lack of natural resources and fragile environment (Khan, 2011). Pakistan has always fewer resources and this country has been suffering from water shortages, high temperatures, and degradation of agricultural land. Climate change is exacerbating the existing problems of this country. The temperature has increased from 0.6 to 1 degree centigrade in coastal areas of Pakistan since the early 1900s (Dawn, 2009). Climate change has also a devastating impact on the biodiversity and ecosystem of major parts of the country. According to Global Climate Risk Index 2014, Pakistan ranked 3rd on the list of countries most affected by climate change (Dawn, 2015). Although Pakistan's contribution was very low to global warming as it contributes only 135th of the world's average of carbon dioxide emissions (Dawn, 2009).

MATERIALS AND METHODS

This research was carried out in a systematic manner. Primary as well as secondary data was collected in this research. Secondary data consisted of few reports related to climate change awareness and adaptation. Primary data included questionnaire surveys from the general public in Lahore. Random sampling was done to select the 150 respondents' throughout Lahore. A reconnaissance survey was also done to test the questionnaire with 20 randomly selected persons. Functionality as well as usability of this questionnaire was tested. The questionnaire was revised and finalized keeping in view of the responses of this reconnaissance survey. The final questionnaire was floated among the randomly selected respondents to know their level of awareness about climate change issues.

RESULTS AND DISCUSSION

A questionnaire-based survey was conducted to find out the climate change awareness among people of Lahore. The results of this survey showed that majority of people were aware of the phenomena of climate change. Further analysis revealed that majority of respondents did not know much about the concept of climate change and lacked its full understanding. Low level of understanding about climate change among people leads the country towards many social, economic and physical problems (UNEP, 1998). Climate change awareness has now become very important to attain sustainable development in Pakistan (Shahid and Piracha, 2010).

The analysis was done to demonstrate how people feel about the possible solutions of the climate change impact (see table 1).

Table 1. Can Climate Change Problems be solved at all?

Sr. No.	Response	Frequency of Response	Percentage
1	Yes	41.00	27.33
2	No	91.00	60.66
3	Indifferent	18.00	12
	Total	150.00	100.00

Source: Field Survey by Author (2013)

The above table has indicated that most of the people felt that this problem could not be solved through particular activities to reduce the climate change impacts. There was really a gap between understandings of climate change, its impacts, and possible solutions among people of Pakistan. This analysis highlighted the importance of awareness raising about climate change impacts, its solutions and adaptation measures among people. Literature review similarly revealed that awareness

raising campaigns were imperative to deal with the devastating impact of climate change in Pakistan. Increased climate change and awareness have always reduced vulnerability to climate change impact (CICERO, 2000). Public-private partnership has also helped in arranging workshops and training programs among people of Pakistan to increase public awareness about climate change issues (GOP, 2003; GOP, 2010).

The type and level of awareness of people about different climatic issues in the country were analyzed through this survey. The survey revealed that majority of respondents were indifferent about the issues of climate change. More than 50 % respondents said that they had no effect due to sea level rise, change in weather pattern, increased storm, rapid ice melting, extreme precipitation, droughts and lower level of water bodies. This analysis highlighted lack of understanding / knowledge among people of Pakistan about climate change issues. Literature also showed that lack of climate change awareness among people always encumbered the country in leading towards sustainable development (Iizuka, 2000; Lerner and Lerner, 2008; Tilbury, 1995).

Further, in the survey people were asked about their role in adapting to climate change impacts. It was revealed that 29 % respondents were of the view that they could play an important role to adapt to climate changes impact to stop or reduce air pollution. According to 21 % respondents, afforestation could also play an important role to reduce climate change impact. Although people of Pakistan did not have full understanding about climate change and its impact, majority of them were willing to play their role in adapting to climate change impacts (O'Connor *et al.*, 1999).

Last part of this survey attempted to find out the interest of individuals to know more about adaptation to climate change impact. Table 2 showed that majority of respondents fully agreed to know more about adaptation to climate change impact. This analysis showed that most of the people were willing to reduce climate change impact by adopting proper adaptation measures. Better adaptation measures could be adopted by people by increasing their level of awareness about climate change issues (Ziadat, 2010).

Table 2. Interest to know about Adaptation to Climate Change Impacts

Sr. No.	Response	Frequency of Response	Percentage
1	Strongly agreed	48.00	38.40
2	Agreed	47.00	37.60
3	Undecided	42.00	13.60
4	Disagreed	10.00	8.00
5	Strongly Disagreed	3.00	2.40
	Total	150.00	100.00

Source: Field Survey by Author (2013)

Conclusions: Climate change has always been a social, economic and environmental problem facing the world today. This study revealed that understanding the climate change impact and its consequences were very low in Lahore. In this aspect of the research, it was found that climate change issues led Pakistan to be a peculiar country that was unable to organize many things including action on climate change. Lack of climate change awareness in Pakistan was exacerbating the vulnerability to climate change impact. Increased climate change awareness in Pakistan could help in preparing and implementing climate change adaptation strategy.

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