Chapter 2

ICT Approaches in Disaster Management: Public Awareness, Education and Training, Community Resilience in India

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ABSTRACT

We live in a world where there are potential sources of disasters with a potential to cause a loss all around us. We could be living close to a coastline that is prone to cyclones or mountainous region vulnerable to earthquakes. On the other hand, we might be living in a place where there may be frequent communal tension. Whatever is the area we live in, we need to be aware of our vulnerability to hazardous events. Better awareness about various hazards, proper education, training and preparedness will enhance the community resilience. Information and communication technologies in the form of audio and video (through community radio, village information centres, video awareness programmes through DVDs, etc) play a vital role in creating public awareness, giving education and training to vulnerable communities. This chapter aims to discuss the various ICT initiatives taken in the coastal districts of Tamilnadu, one of the seven coastal states of India.

INTRODUCTION

We live in a world where there are potential sources of disasters with a potential to cause a loss all around us. We could be living close to a coastline that is prone to cyclones or mountainous region vulnerable to earthquakes. On the other hand we may be living close to an industry which could be dangerous or there may be communal tension prevailing in the area we live in (Arnold J.P, 2006). Whatever is the area we live in; we need to be aware of our vulnerability to hazardous events. Better awareness about various hazards, proper education, training and preparedness will enhance the community resilience. Information and communication technologies in the form of audio and video (community radio, village information centres, video awareness programmes through DVDs) play a vital role in creating public awareness, giving education and training to vul-
nurable communities. Before discussing the ICT initiatives taken in the coastal districts of India, it is important to have a clear understanding on the natural disaster profile of India.

An event or hazard is called a disaster when it threatens property and lives and is unforeseen and often sudden. The World Health Organization (WHO) defines a disaster as ‘A severe disruption, ecological and psychological, which greatly exceeds the coping capacity of the affected community’ (World Health Organization, 1992). It causes great damage, destruction and human suffering. A disaster is a very complex multi dimensional phenomenon and along many dimensions like social, economic, material, psychological or social, but unlikely to be one along all of these in a specific direction. Often the number of human lives lost is an important criterion for defining a disaster (Arnold J.P, 2006). Disaster is a sudden, calamitous event bringing great damage, loss, and destruction and devastation to life and property. The damage caused by disasters is immeasurable and varies with the geographical location, climate and the type of the earth surface/degree of vulnerability. This influences the mental, socio-economic, political and cultural state of the affected area. It may also be termed as “a serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope using its own resources.” (UNDHA, 1992).

India’s increase in the vulnerability to disasters, in recent years has been serious threat to the overall development of the country. Around 57% of the land vulnerable is to earthquakes, 28% is vulnerable to droughts, 12% is vulnerable to floods and 8% of the land is vulnerable to cyclones. Subsequently, the development process itself has been a contributing factor to this susceptibility. Coupled with lack of information and communication channels, this had been a serious impediment in the path of progress. Figuratively speaking, around one million houses are damaged annually, compounded by human, economic, social and other losses (Anil K. Sinha, 2003).

**Natural Disaster Profile:**

**India Basic Facts**

India is with an area of 3,287,590 km² having 7,000 km coast line with a population of 1,065,070,607. The GDP (PPP) is $ 3.033 trillion, GDP Per Capita is $ 2,900 and 25% of the population is below the poverty line. Around 1,642,855 of the total population live within 1km of coast, 3,398,071 people live within 2km of coast and the Infant mortality rate is 57.92. The geographical setting of India makes the country vulnerable to natural disasters.

**Climatic condition:** Covering an area of more than 3,000,000 sq. km, India shares its borders with Pakistan, Nepal, China, Bangladesh, Burma and Bhutan. It has a long coast line with the Bay of Bengal in the east, the Arabian Sea in the west and the Indian Ocean in the south. Geographically and climatically too the country is very diverse, including snow-capped Himalayas in the north, tropical maritime climate in the south, desert in the west, alluvial plains in the east and a plateau in the central region. The River Ganges rising is the life source of the people in the north. The country on the whole has four seasons: winter, summer, spring and monsoon rains.

The land of unique climatic regime, India, has two monsoon seasons (southwest & northeast monsoons), two cyclone seasons (pre & post monsoon cyclone seasons), hot weather season characterized by violent convective precipitation and cold weather season characterized by violent snow storms in the mountainous regions. It is one of the most vulnerable nations in the world, susceptible to multiple natural disasters owing to its unique topographic and climatic conditions. Its coastal states, particularly the eastern coast and Gujarat are exposed to cyclones, 40 million