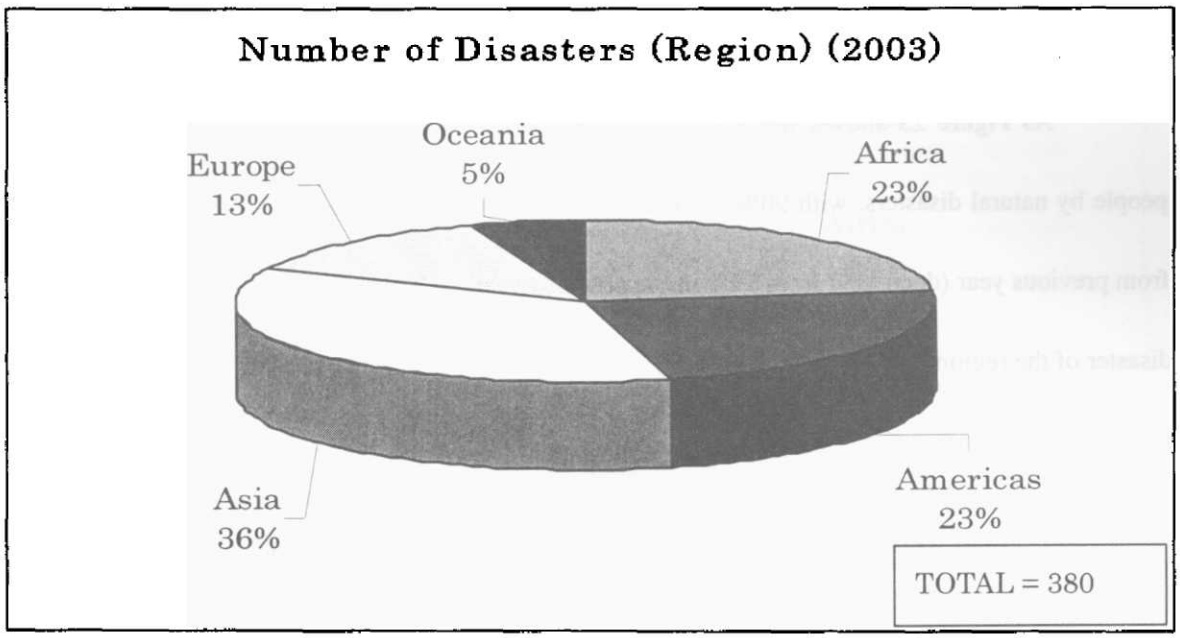
Chapter 3: Regional Characteristics of Natural Disasters

3.1 Proportion of Natural Disasters in the World Compared to Region:

The majority of disasters in the year 2003 occurred in Asia, with 36% (increased from previous year), followed by Africa, America, and Europe with 23%, 23%, and 13% respectively. Oceania had the least with only 5% of the total natural disasters that occurred in the world in the year 2003. Figure 23 summarizes this data visually.

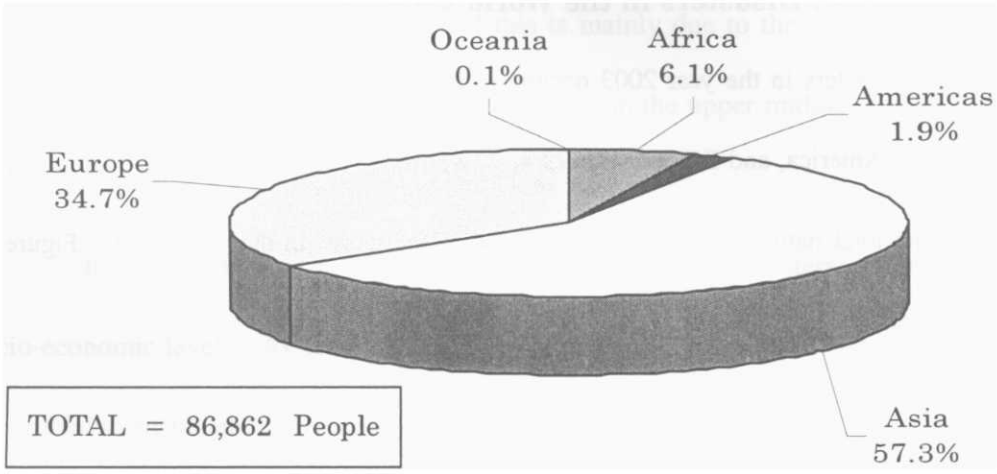
Figure 23:



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

As can be seen in Figure 24, the majority of people killed by natural disasters in the year 2003 lived in Asia, with 57% of the total number of people killed by disasters in the world (decreased from 78% from the previous year). Another significant region is Europe, with 35% (increased from 2% in the prvious year). This is due to the heatwave hit the Europe in 2003. Africa registered decreased percentage from previous year. All other regions register a very low percentage.

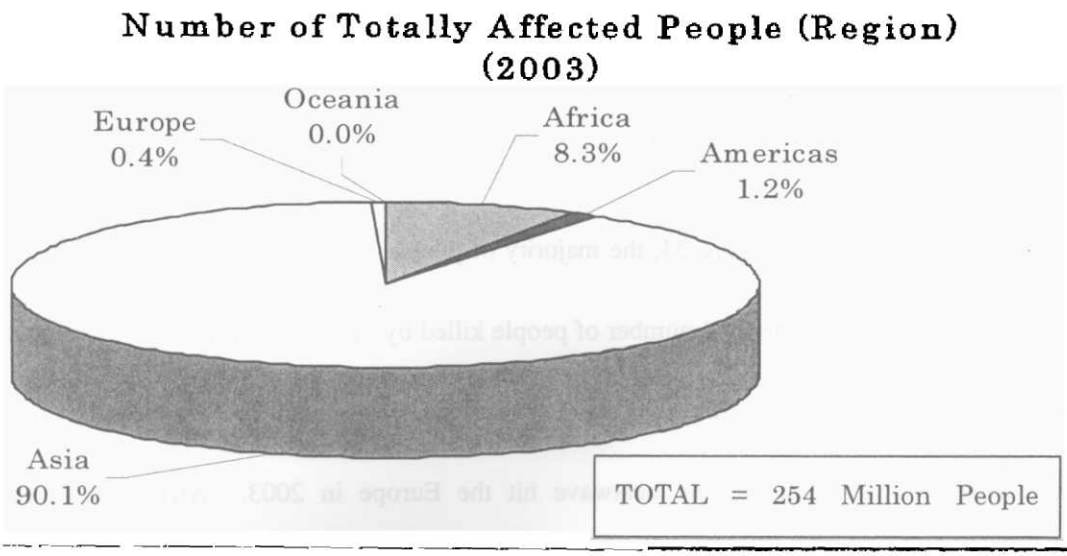
Figure 24:



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

As Figure 25 shows, the Asian region has recorded the highest percentage of *totally* affected people by natural disasters, with 90%. Nevertheless the number of overall affected people has decreased from previous year (decreased from 94% in the previous year) It clearly demonstrates the vulnerability of disaster of the region.

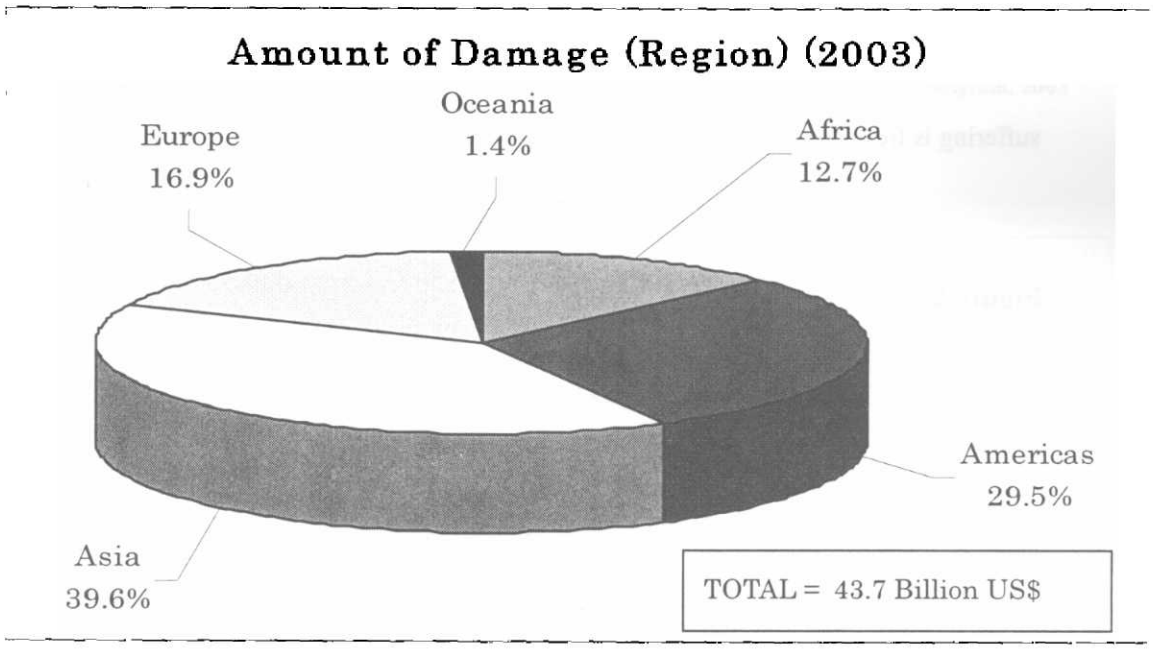
Figure 25:



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium.

According to Figure 26, in accordance to the above figures and in contrast to previous year figures, Asia accounts for more than one third of the economic damage caused by natural disasters in the year 2003. This is mainly due to the 2003 Typhoon Maemi hit Korea and Iran Bam Earthquake. America (30%) and Europe (17%) account the second and third level of economic losses. This is due to the socio-economic structure of the region. All other regions accounted for much less economic damage. Overall damage has increased from the previous year 25 Billion US$ to 43.7 Billion US$ and this is considerably a huge blow to the development efforts.

Figure 26:



Source ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

These figures indisputably demonstrate that the disaster vulnerability of the Asian region cannot be neglected in relation to global sustainable development.

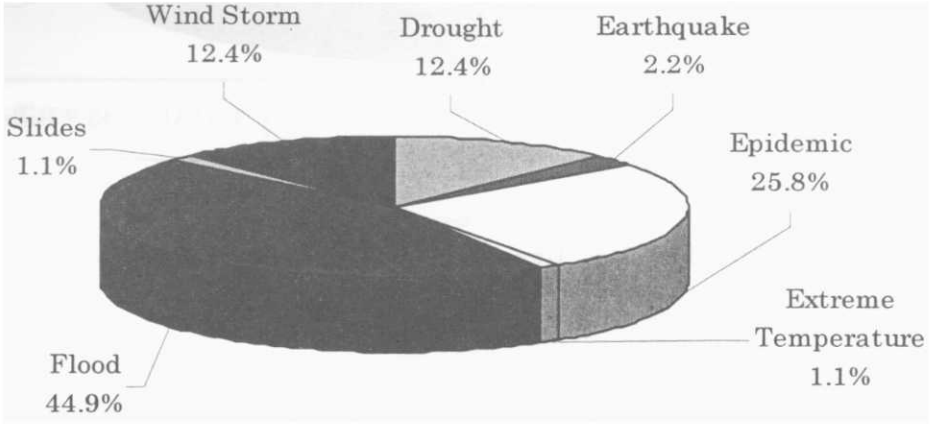
3.2 Regional Characteristics of Natural Disasters in the World:

3.2.1 Characteristics of Disasters in Africa:

It can be seen from the Figure 27, that about 96% of the natural disasters in the year 2003 in Africa were floods, windstorms, epidemics and drought. Further, Figure 28 suggests that the majority of the human loss in Africa is due to epidemics and earthquake, as they account for 88% of the human loss. Meanwhile, the majority of the people affected by disasters in Africa are affected by drought which accounts for nearly 86% of the *totally* affected people in Africa in the year 2003, as shown in Figure 29. Also economic damage caused by the Algeria Earthquake is the biggest in the region (Figure 30). These figures characterize the African region as a serious disaster prone region with more socio-economic vulnerabilities where the majority of human suffering is from droughts, floods, earthquakes and epidemics.

Figure 27:

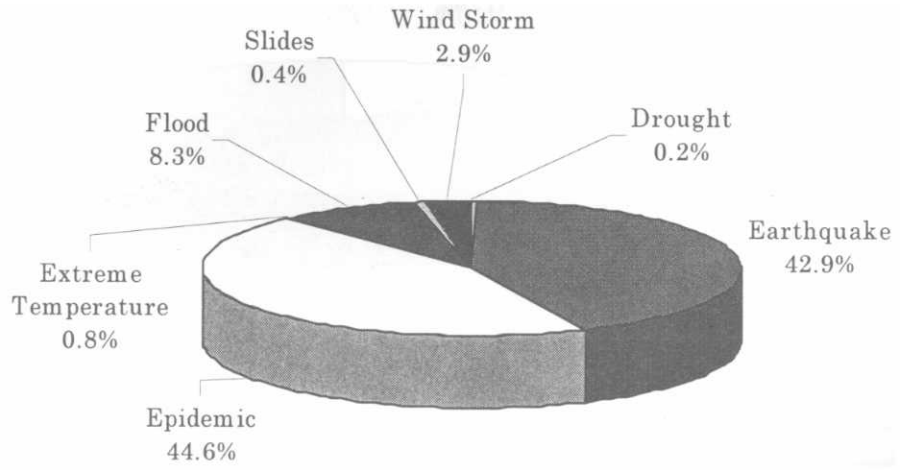
Number of Disasters in Africa (2003)



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

Figure 28:

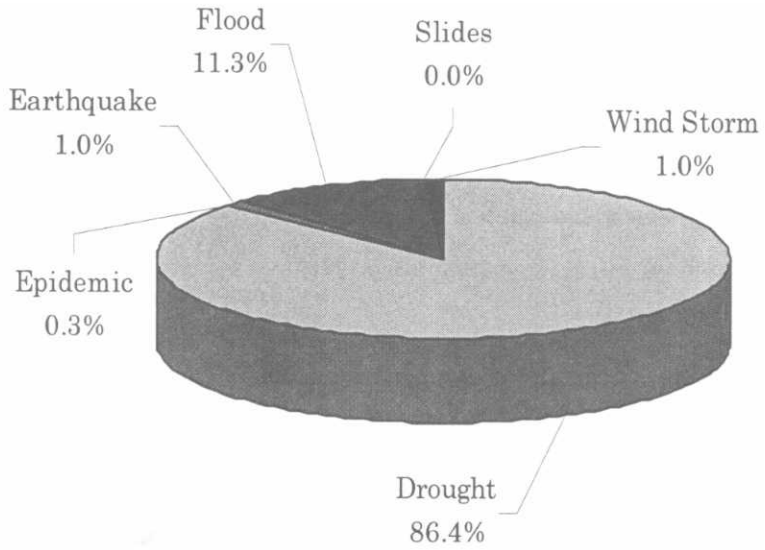
Number of Killed in Africa (2003)



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

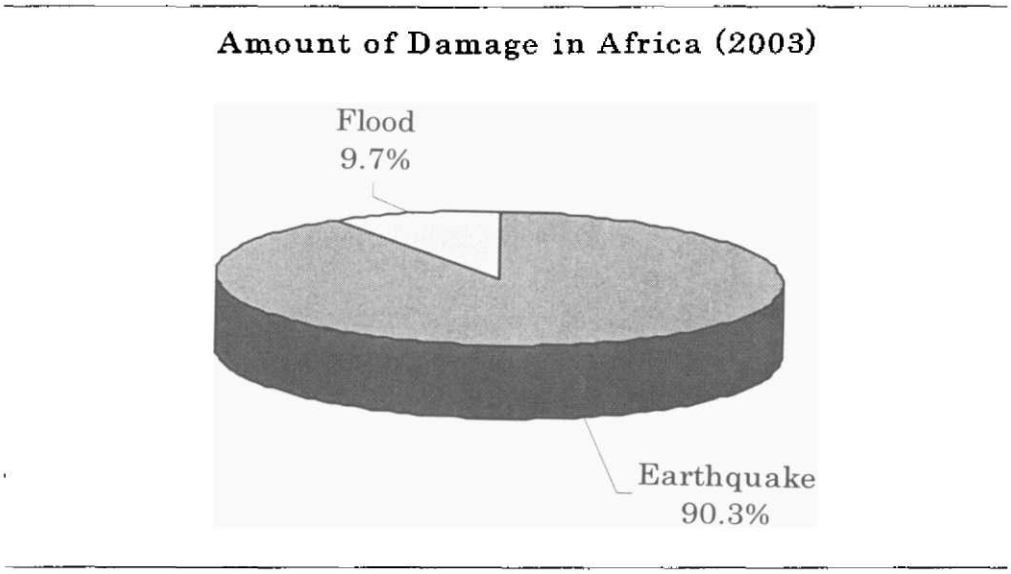
Figure 29:

Number of Totally Affected in Africa (2003)



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

Figure 30:

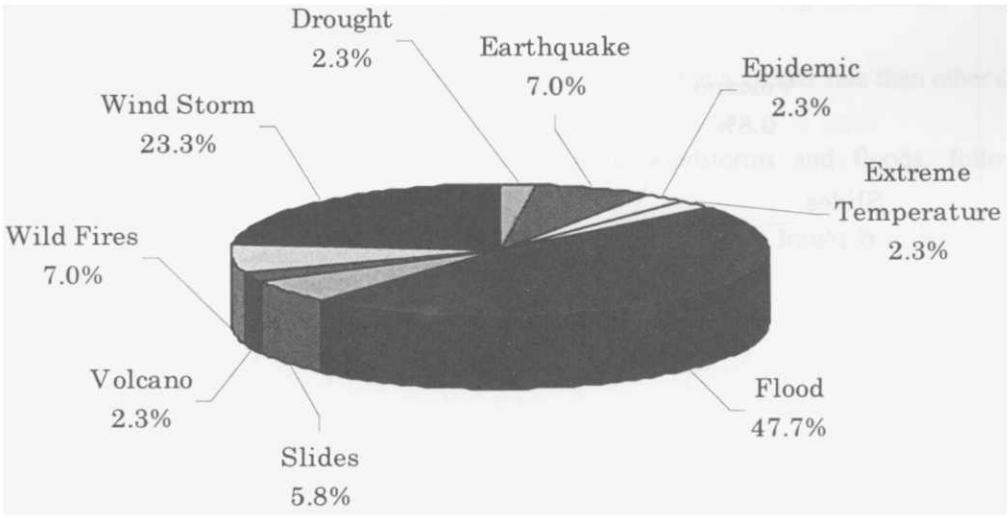


Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

3.2.2 Characteristics of Disasters in Americas:

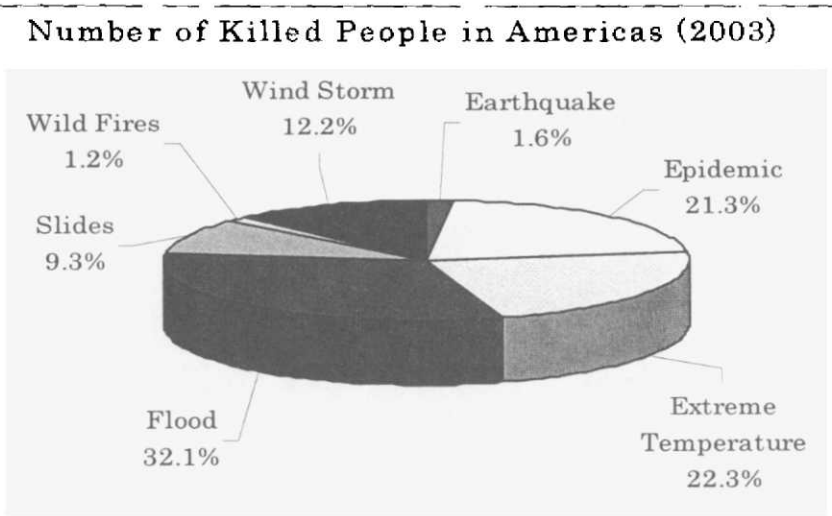
In the American region which includes North and South American countries, floods and windstorms make up the majority of natural disasters occurred in the region in 2003. When human loss and suffering are considered, 97% of people were killed by floods, windstorms, epidemics, extreme temperatures and slides Meanwhile, nearly 88% of the disaster-affected people are brought by floods and extreme temperatures. Majority of the economic damage was caused by hurricane and tornado in 2003. It is evident from Figure 31 to 34 that the American region was greatly affected by hydro meteorological disasters in the year 2003.

Figure 31:



Source ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

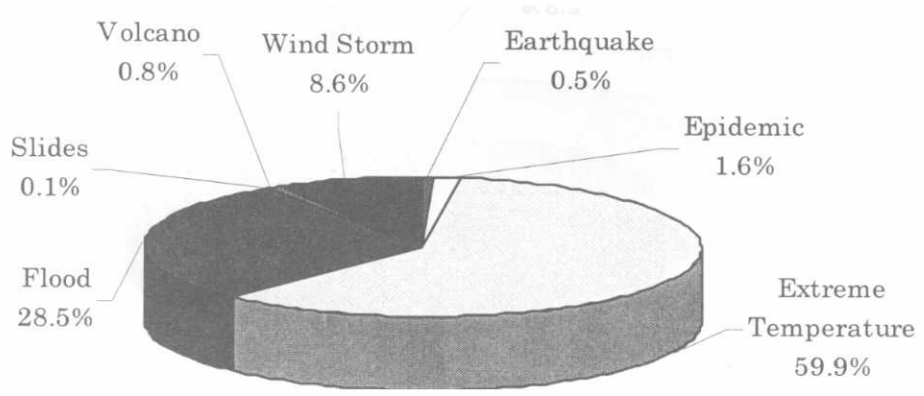
Figure 32:



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

Figure 33:

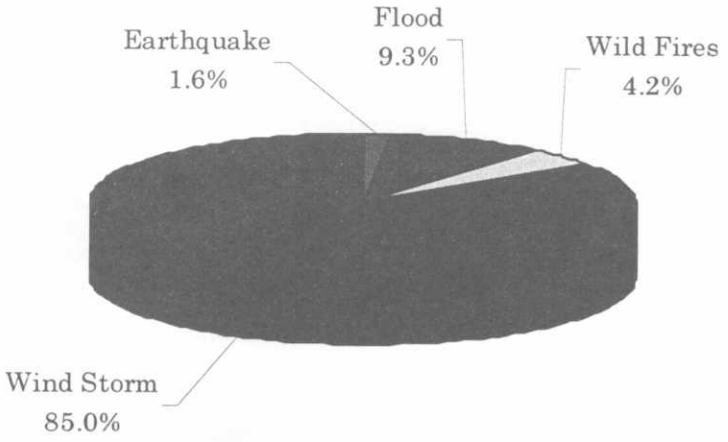
Number of Totally Affected People in Americas (2003)



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

Figure 34:

Amount of Damage in Americas (2003)



Source: ADRC, Japan and CRED-EMDAT, Universite Catholique de Louvain, Brussels, Belgium, 2003

3.2.3 Characteristics of Disasters in Asia:

In the earlier section, it was demonstrated that the Asian region is highly vulnerable to natural disasters. The same trend will also be observed in the following discussion. According to Figure 35, floods, windstorms and earthquake have occurred at a greater rate than other disasters. About 61% of disasters that occurred in Asia were windstorms and floods, followed by earthquakes with 18%. It is noteworthy to observe in relation that Iran's Bam Earthquake has caused the greatest human loss (Figure 36), along with China, India, Sri Lanka and Bangladesh flood. It is evident from Figure 37 that droughts, floods, and windstorms caused severe human suffering in Asia as almost all the people affected by natural disasters in the region in 2003 were affected by these types of disasters. Further, 99% of the economic damage was also due to floods, windstorms and earthquake in the above specified countries in the region (Figure 38). Hence, it can be concluded that the Asian region is severely prone to disasters and vulnerable to both hydro meteorological and geophysical disasters. The following figures from 35 to 38 clearly depict these trends.