

## **CHAPTER 8. Conclusions and Future scope**

Wireless sensor networks are one of the promising technologies for not only real time monitoring of disaster prone areas but also proves to be the suitable technology for managing post disaster. This research study presented the design, development and deploying of such networks in disaster prone areas. The deployed network deployed has a capability of tracking trapped people post disaster. The location fingerprinting and unilateral techniques are the main backbone of the network. The location fingerprinting capture the RF signatures of travelers and tracks the people in real time pre disaster situation and the network is capable to switch the unilateral technique to track the trapped people, in case of disaster. Detailed experiments were conducted to check the reliability of location fingerprinting technique and mock drills were conducted to check the reliability of unilateral technique. In future we will study how to deploy network in lost cost and large area so that it can cover each and every disaster prone region even the region which is not accessible easily. In future we will also consider energy consumption during the routing of data in WSN.

However, it is to be noted that the developed system has not been designed for disaster such as flood in plain areas. This is kept in view of the broad spectrum of

the current study thereby making it a bigger task. However considering floods as focal point of the node design, especially its encasing will greatly change. In that case, it will be a complete different research study where one has to think of floating node concept.

The proposed system improves the sustainability quotient, and also has negligible impact on environment. At the same time its working is least dependent on changes in environmental conditions in the proposed areas. No harmful products are emitted into the environment. The system is not dependent on any infrastructure which might otherwise get destroyed in case of calamity. The lesser occupied area also helps in maintaining ecological conservation of the geographical region. Even the maintenance and upgradation of the nodes as well as change in node locations is not a big task. The feature of reliable communication strongly favors sustainable development.