The study helped to prepare groundwater isograph map and the distribution of EC, TDS and pH maps using the GIS package MAPINFO. Groundwater isograph map help to identify groundwater distribution of the coastal area of Weligama. There exist a closed relationship between topographical map & groundwater contour map.

The results of the study revealed that the Electrical conductivity of well water in all wells situated in the Tsunami affected Zone are turned to be saline (EC in average increases from 1500 μ Siemens per cm to around 4000 μ siemens /cm.). According to the hydrographs prepared during the study period, unconfined quaternary aquifer ground water level intimately related to atmospheric precipitation. The characteristic of the hydrograph provides a conclusion, that the recharge of unconfined ground water in quaternary aquifer takes place during the period of monsoon rain and quality of ground water due to tsunami has not changed specially.

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Organizational response to disaster -the case of tsunami, December 2004

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The Tsunami struck Sri Lanka on 26th December 2004, causing an enormous devastation of human lives and property. State and non-state sectors being unprepared and poor coordination of international and local assistance left people internally displaced even after one year of the disaster. Using primary and secondary data, the study assessed the responsiveness of the organizations to the Tsunami disaster in the Galle district and developed a model of action for effective disaster management.

The study identified the response levels of the organizations at relief, recovery, reconstruction, rehabilitation and development stages. There was no pre-preparation for a major disaster in Galle district. The disaster relief was provided by unplanned emergent structures. The prevailing administrative structures, political institutions, Center for National Operations, Non-governmental organizations, volunteers and community-based groups provided relief for two months. The government established the emergency operation structures for national level coordination.

At the recovery stage community and the private sector organizations have been marginalized in the response system. Governmental and NGOs have focused on providing transitional shelters and dry rations. The reconstruction and rehabilitation stages have focused on housing, livelihoods, social rehabilitation and infrastructure, which were in progress through September 2006. The Galle district emergency operation center completed the Disaster management plan for the district in July 2005. The parliament of Sri Lanka approved the Sri Lanka Disaster Management Act, No 13 of 2005, under which the National Disaster Management center has been established.

The model identifies organizational structure to coordinate donor assistance and link to community needs, through national and local level coordinating institutions with the contribution of different sectors and with proper monitoring. Getting the vulnerable community to actively participate in disaster management activities leading towards development will minimize the damage. Suggestions are made for specific capacity building measures for the different levels of the institutional model.