Tsunamis cause large scale destruction to the property and life. These destructions are visible and reasonably quantifiable, environmental impacts and risks due to tsunamis cannot be accurately assessed. One of the invisible but major environmental impact will be on the groundwater resources and more so if it is used for drinking and agricultural purposes. The objective of this paper is to highlight the environmental issue of tsunamis related to groundwater quality and suggest possible remedial measures. Seawater that inundate can salinise the groundwater by a number of ways. Infiltration of seawater and direct recharge of seawater through the existing wells in the inundated area will immediately salinise the aquifers. The saline water trapped in the unsaturated zones lead to deposition of salts due to normal evaporation processes. These deposited salts are later washed into the groundwater zone during rainfall recharge and cause in the increase of salinity. A study carried out during the 2004 Indian Ocean tsunami indicated that the tsunami immediately salinized the unsaturated zone and groundwater in eastern coastal parts of southern India. A thorough investigation was made to study the changes in the groundwater quality after the tsunami. Groundwater samples were collected in borewells, hand pumps, dug well and dug cum bore wells. The hydrogeochemical characteristics of water and its portability were obtained from physiochemical analysis of the water samples. EC (Ω S/cm), hydrogen-ion activity (pH) and redox potential (Eh) in mV of water samples were measured in the field using portable meters. Wells in the affected areas have become brackish. It appears that seawater has intruded into the groundwater system, and a coastal freshwater ‘wedge’ has been displaced. The remedial measures suggested are to move the drinking water supply wells to the un inundated region, artificial recharge of rainwater and pumping out the saline groundwater. In this region the natural rainfall recharge itself flushed the saline groundwater into the sea after about four years. Hence, greater importance needs to be given to assess the groundwater quality in the Sendai region of Japan, especially with concern of increased radiation levels.