

**Thesis title:**

A Framework for Critical Infrastructure Management with a Focus for Disasters; Case Study Approach

**Abstract :**

Each year natural hazards are triggering over the world, as a result of the adverse impacts occurring from climate changes, population growth and urbanization. The damage to human lives and the critical infrastructure triggering as a result of natural hazards accelerating each year over the world. With the global concern upon this, the initiatives were implemented with the aim of reducing the impacts from natural hazards through Disaster Risk Reduction concept. The significance of Critical Infrastructures and therefore the imperative need to enhance their resilience to disaster risk is recognized by the Sendai Framework for Disaster Risk Reduction 2015-2030, that has among its seven targets. Furthermore, enhancing the resilience of Critical Infrastructure is an emerging paradigm, which directs towards achieving the Sustainable Development Goal 9 which calls for building resilient infrastructure and promoting inclusive and sustainable industrialization and fostering innovation. Accordingly, strengthening of the resilience capacity and the preparedness level of Critical Infrastructure over natural hazards needs an integrated long-term commitment to enhancing the level of Sustainability. This can be delivered by means of Multi-Hazard Early Warning, which emerged as a vital component of Disaster Risk Reduction mechanism which highlighted in the Sendai Framework for Disaster Risk Reduction as one of its targets. Science and Technology can be interlinked more broadly implementing innovative strategies and techniques on Early Warning mechanism. The application of advanced more sophisticated communication platforms lie where the technology can change the world to a more advanced overlook. The main objective under this research study is to develop a framework integrating the Multi-Hazard Early Warning mechanism in Critical Infrastructures management over natural hazards with the applicability of the modern technological advancements. The framework development is concerned in the Sri Lankan context focusing on the selected Critical Infrastructures. Further, this framework is mainly developed under the outlines of multi-sectoral, multi-stakeholder and multi-hazard concepts which are more towards linked with the Sendai Framework for Disaster Risk Reduction targets.