



23/346 Green Pepper Road, Perumkulam, Varkala - 695102
seacliffresorts@gmail.com
Phone: 94961-73299

SEA CLIFF TOURISM PROJECT

KCZMA Reference: 1682/A3/15/S&TD

DISASTER MANAGEMENT PLAN

SeaCliff is a relatively small (5,030 sq. m) tourism complex proposed to be set up in Varkala, Thiruvananthapuram, Kerala. The specific site location and classification is shown in the Report of February 2013 prepared by the Centre for Earth Science Studies. The Report adheres to the guidelines stipulated in the Coastal Zone Management Plan of Thiruvananthapuram District, which is based on CRZ Notification 2011 from the Ministry of Environment. CRZ Form-I provides details of the project, including several measures to mitigate environmental effects. KCZMA has recommended approval of the project on April 28, 2016 after review of the building plans and site visits. The Reports above clearly show that the project is located in a safe area not prone to natural calamities, contagious diseases, epidemics, communal violence, riots etc. However, the disaster management plan seeks to address these disasters to ensure the absolute safety of the property and its occupants as detailed below to counter disasters related to sea storms, earthquake, fire, and health.

Seaborne Disasters:

The site of the project is in Varkala Municipality in Thiruvananthapuram District, and falls under CRZ Zone - II. Though it lies within 500 meters of the Arabian Sea, this area is naturally protected from calamities such as sea storms, tsunami, tidal waves and cyclones as the Cliff on which the project is located is elevated 45 meters to 55 meters over the beach level. Tsunamis have not affected this part of the world since 1947 (when records are available). In the rare chance of such a calamity occurring in Varkala beach, the public are able to seek safety by taking the existing steps to climb up the cliff, offering a safe haven to people in need. In order to protect the occupants from heavy winds, no tall trees would be planted in the area; this substantially reduces the potential damages to the property and mitigates casualties to the occupants.

Earthquakes:

As per the seismic zone map of India, the area where the project is proposed comes under Zone III, where only moderate tremors, if any, are likely to occur. Not a single tremor of measurable magnitude has occurred in Varkala area since 1947. The recent survey of Varkala by the Geological Society of India (Ganguli and Gupta) also confirm this. Special care has been given in the building design and architecture to withstand minor tremors.

Fire Hazards:

Several measures would be adopted to prevent fire hazards. These include use of high quality electric wires, regulators and other electrical equipment. Also fire alarms and fire-fighting equipment shall be installed all through the building as per the prescribed norms of Kerala State. Mock fire-fighting drill shall be conducted for the staff members of the project, under the supervision of licensed Fire and Safety Engineers. The Varkala Fire Station is only 2kms (10 minutes) away from the facility; and there are three more fires stations within a 20 km radius.

Health Hazards:

Varkala where the project is located is not a disease-prone area. Contagious diseases and epidemics are not common in the area. However, incidents of food poisoning and food allergy may occur, especially due to the potential intake of seafood. Signs would be posted in the building to educate the occupants of such issues, and make them aware of the healthcare providers in the area. Another health issue that we foresee is minor health hazards induced by mosquitos and pests. Effective mosquito and pest control measures would be adopted to minimize such hazards. Paramount importance would be given for hygiene in general with special focus on cooking, storage of edible commodities and ingredients, cleaning of kitchen utensils and cutleries etc. to decimate such health hazards. Effective solid waste disposal system would be adopted; also partnership with NGOs in the area to strengthen the measures. Extra lighting would be provided all through the premises to enhance visibility and prevent stepping on reptiles.

Hospital Accessibility:

There are multiple hospitals and medical facilities in and around Varkala. In fact, the Government Hospital is under less than 2 kms from the project site. Then there are four private medical clinics within 5 kms. The Kerala Institute of Medical Sciences and Thiruvananthapuram Medical College Hospital - two of the best in the State - are only 45 kms away. Taxis and drivers are readily available in this part of Varkala. Adequate first-aid facilities will be created by the project.

Dated: August 25, 2015

Prepared for SeaCliff Resorts by: *TM Cyriac, B. Arch.*

Reviewed for SeaCliff Resorts by: *MP Michael, B. Tech.*