

Creation of the Lighting Environment Guiding the Quick Evacuation from the Tsunami in Case of Power Failure at Night

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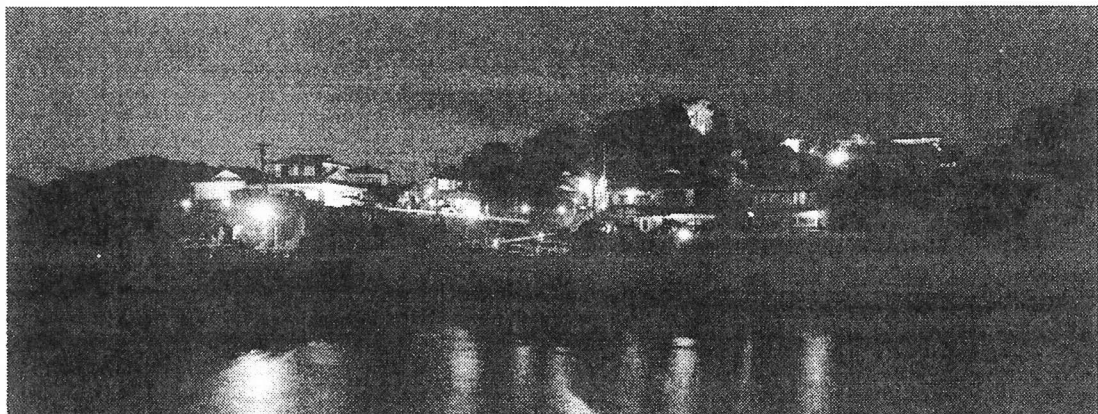
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[SYNOPSIS]

The importance of evacuation to higher ground away from a tsunami safely at night has been recognized right after the Great East Japan Earthquake in 2011. This research examined the evacuation lighting for supporting escape to higher ground, and it aimed at realizing the lighting environment that the people of this area could recognize the directions of heights when the following tsunami comes.

Even if the town consisted of temporary buildings, it had suffered the damage caused by tsunami, and had already become a place of citizens' daily life. The landscape by inexpensive and colorless materials did not look prepossessing, and people tended to feel uneasy at night in order that there was little light arranged. Therefore, it was essential to guarantee safety and sense of security with lighting at night.

This research aimed at the Hisanohama town in Iwaki-shi, Fukushima which suffered serious damage from the earthquake disaster in 2011. The lighting social experiment which visualizes the geographical direction and spatial characteristics with lights was conducted. Based on the existing escape-route recognition investigation, lighting fixtures were attached to the hill, houses at junctions, open spaces, and cultural factors which are the landmarks of evacuation such as shrines. As a result of the experiment, more than 90% of residents answered that they could recognize the geographical direction by the lights also in nighttime. In every district with a possibility of suffering tsunami damage, it is considered that the lighting environment technique carried by this research is applicable.



The view of the lighting social experiment (April, 2015)