Intention to Use the National Park and Geopark for Disaster Risk Reduction: A Case Study of Sanriku Tsunami-hit Area

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Recovery is ongoing and the devastated scenery is gradually being improved in the tsunami-hit areas in the six-year period since the Great East Japan Earthquake and Tsunami of 2011. However, massive seawalls have been constructed along the coast for future tsunami disaster prevention, and it is feared that the beautiful natural scenery will disappear from the coastline of Japan. On the other hand, a new concept called "ecosystem-based disaster risk reduction (Eco-DRR)" is emerging internationally in recent years, and it seeks to reduce disaster risks by harnessing the disaster preventing/mitigating functions of ecosystems. In this, the Sanriku Reconstruction National Park (SRNP) has great potential in pioneering the practice of Eco-DRR in Japan. It is expected that the ecosystem of the area designated as a national park can mitigate the damage caused by natural disasters and also have a positive economic impact on the tsunami-hit areas. However, it might be difficult to understand the roles of ecosystems in disaster mitigation, as the concept might have been shared only within the expert community of researchers and administrative organizations. Hence, this study aims to: 1) share the knowledge and thoughts of local people in a meeting for discussing issues such as the roles of the SRNP and the method to assess the attractiveness of the area and 2) understand the prevailing awareness of Eco-DRR.

In order to understand the awareness of residents in a tsunami-hit area, a workshop on the roles played by the national park and geopark in disaster risk reduction (DRR) was held for the local residents, people involved in the tourism industry, government employees, and university students at Jyodogahama, located in the middle of the Sanriku seashore which is one of the best tourist sites in the national park. In this workshop, 26 participants were divided into three groups for discussion, and the contents of the discussions were recorded by cameras and IC recorders. In addition, one of the authors presided at the meeting and assigned one student to each group as a facilitator to ensure smooth progress of the discussion. Four points about the area were discussed: 1) its attraction and uniqueness; 2) the challenges and problems; 3) the roles played by the national park and geopark in DRR; 4) the way to convey its histories, attraction, and uniqueness. After the workshop, the contents were analyzed from the viewpoint of the speaker's attributes and the utterance order.

Some issues such as passing down of disaster histories, information provision, evacuation preparation, and raising of awareness for disaster prevention were thought to be key topics because they appeared repeatedly. On the other hand, few opinions and proposals regarding DRR mentioning the functions of natural environments such as disaster preventing forests and evacuation sites on hills were recorded. It implies that the local people had a shallow understanding of the roles of the ecosystem. Besides, marine products, natural scenery, and the unique landform were thought to be attractive as community resources for tourism promotion. Disaster issues were also thought of as important information to protect people who do not know the risks of tsunamis, and disaster education using this area for children and in-landers was regarded as necessary. From the viewpoint of the awareness of the local people, the relationship between nature conservation and DRR was not clearly found, but the importance of the natural environment and landform was perceived.

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