
Challenges to the use of open spaces in winter

(Research period: FY 2016–2017)

Nobuaki Kagemoto, Senior Researcher Shuichi Takeya, Head(Dr.Eng.)
Urban Disaster Mitigation Division, Urban Planning Department

Keywords: Snowfall, open space, tourism, disaster management

1. Introduction

While deep-snow areas are expected to actively attract non-Japanese tourists to their regions, open spaces, such as parks, are playing various roles, including for relaxing and as tourism resources. Open spaces also function as evacuation sites and bases of rescue and recovery activities in case of natural disasters. However, deep-snow areas in winter do not have enough plans to use open spaces for disaster management based on an expectation that snow would restrict the use of open spaces. It is necessary to prepare open spaces so that they can smoothly function as disaster management sites in case of a natural disaster while actively using them during regular periods.

Based on the above, the National Institute for Land and Infrastructure Management (NILIM) is examining challenges to maintain the disaster management functions of open spaces in winter while using them during regular periods.

2. The status of the use of open spaces in winter

The authors organized how open spaces were actually being used in snowy areas and found the following uses.

- Using open spaces as snow-dumping sites to improve the efficiency of snow removal work and regional safety
- Having winter events, such as snow festivals, by seeing snow and cold temperatures as regional resources (Photo 1)
- Winter sports, such as cross-country skiing, and uses as observation sites for swans

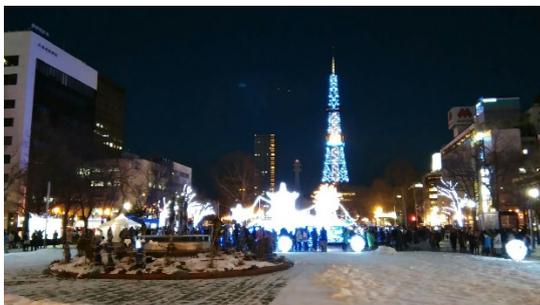


Photo 1: An example of using open spaces in winter

- Snow removal as a part of the activities for local people and using open spaces as sites where local people can meet each other and build relationships
- Using open spaces as movie film locations to promote uses during winter

3. Challenges when a natural disaster occurs in winter

Some challenges are found in terms of the use of open spaces when a natural disaster occurs in winter.

- Shortage of budget and labor: It is difficult to gain the understanding of finance departments to increase the function of open spaces to prepare for years with heavy snow.
- Limited use of open spaces during the period of snowfall: Emergency manhole toilets cannot be used during the period of snowfall. It is difficult to designate outdoor spaces as evacuation sites (photo 2). People cannot reach there in heavy snow.
- Restrictions as event sites: It is difficult to provide spaces as evacuation sites in case of a natural disaster when events are being held in the open spaces.

4. Plans to use findings in the future

The authors are going to additionally investigate challenges and countermeasures in regard to disaster management so that open spaces can be used during regular periods and in case of natural disasters in winter. Information found through these investigations is going to be provided to administrators of open spaces and disaster management organizations through the website of the NILIM.



Photo 2: An example of difficulty in using open spaces due to snow