

Daisetsuzan Grade: its characteristics and contribution to the nature conservation
(大雪山グレード：その特徴と自然保全への貢献)

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Trail degradation and vegetation loss have happened in Daisetsuzan National Park mainly because of the increasing trail users. Trail conditions have greatly changed in recent years. It is noted that many accidents have happened to those undertrained and elderly hikers. In 2005, the first version of the classification of the trails was published by the Ministry of the Environment (MoE), but it did not enjoy much popularity. The MoE, therefore, developed the 2nd (revised) version of the 'trail classification' in 2015. This 2nd version is called 'Daisetsuzan Grade (DG)'

This research firstly aims to understand trail users' and related organizations' recognition and knowledge on DG, secondly aims to identify the existence of the gap between DG and trail users. The third aim is to explore the difference between DG and other countries' trail classification.

For the first aim, this study used the method of face-to-face questionnaire survey. There are total 16 questions in the questionnaire survey, 6 questions were users for the first aim. A total of 2013 trail users were surveyed by face-to-face questionnaire and the data were analyzed by R language. The questionnaire survey was conducted from July to September 2016, including weekends and weekdays. The questionnaire survey was conducted at two survey sites: (1) the summit of Mount Kurodake, and (2) Asahidake Ropeway Lower Station. These two sites are the two of the most popular sites in Daisetsuzan National Park. Further, face-to-face interview survey was conducted on the 4 related organizations in Japan: Kamikawa Nature Conservation Office of the MoE, Furano City Government, Kamikawa Town Government and Shihoro Town Government. For the second aim, 7 questions from the face-to-face questionnaire survey for the first aim were used. For the third aim, literature review, topographic map analysis and email interview survey were employed. Literature review investigations were conducted on six countries and regions: Switzerland, Australia, South Africa, Norway, Scotland and Taiwan. The detailed information about the trails in Mount Aspiring National Park of Australia can be found on the internet, as an experience reference. This study conducted the topographic map analysis: trails' horizontal distance, ascending distance and descending distance were measured. Email interview surveys were conducted on Switzerland, Australia and Taiwan.

After the questionnaire survey, the answer to the question of 'Do you know DG?' showed low percentage of 'Yes'. This suggests the need of advertisement of DG to the public. Four related organizations' interviews in Japan also indicated that the most important problem of DG is the lack of advertisement. There is a gap between DG and the trail users: only 1/3 trail users corresponded to the actual DG. Trail users' gender, visit times and nationality have no obvious relationship with the trail users' recognition on DG. Trail classifications in other countries are essentially based on the degree of walking difficulty, which is different from DG. DG was decided by the matrix of the combined factors of difficulty of trails and of degree of vulnerability of soil and alpine vegetation. By dividing the trails into different grades, national-park managers can supervise the trail degradation more conveniently and efficiently. This will read to the nature conservation of the national-park area by the use of DG.