Geophysical Research Abstracts
Vol. 20, EGU2018-11397, 2018
EGU General Assembly 2018

Suitability evaluation for building skiing grounds in China based on natural and socioeconomic conditions

Jie Deng (1,3) and Tao Che (1,2)

(1) Key Laboratory of Remote Sensing of Gansu Province, Heihe Remote Sensing Experimental Research Station, Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou 730000, China; (dengj2014@lzu.edu.cn), (2) Center for Excellence in Tibetan Plateau Earth Sciences, Chinese Academy of Sciences, Beijing 100101, China;, (3) University of Chinese Academy of Sciences, Beijing 100049, China;

The successful bidding of 2022 Beijing and Zhangjiakou winter Olympic Games has deeply aroused the enthusiasm of people to participate in the ice and snow sports. Driven by the huge market demand and economic benefits, ski tourist industry in China is entering in a period of prosperity. However, there are still many challenges in the booming industry: repetitive construction at a lower level, disordered competition, and afterward resource waste, which would lead ultimately to serious ecological and environmental problems. The operation of ski resort mainly relies on suitable natural and local socioeconomic conditions. In this study, we try to evaluate the suitability of building skiing grounds based on those two separate components. We created the natural index by integrating seven parameters: snow resources, air temperature, topographic condition, groundwater resources, vegetation coverage, land-use type and elevation. on the other hand, the socioeconomic index contains four parameters: economy, transportation, tourist sites and city distribution. Those various natural and socioeconomic factors affecting the construction of skiing grounds were analyzed by the GIS spatial analysis function. Our analysis identifies areas with favorable natural conditions where some high-quality ski resorts should be built, areas with well local socioeconomic status but relatively modest natural conditions where proper small ski grounds are recommended to be built, and ‘enhanced areas’ where both favorable natural and local socioeconomic conditions are equipped. By 2022, the number of skiing grounds should reach 800, with ski trail’s area of 100 million square meters, according to the construction plan formulated by China National Tourism Administration. The purpose of our study is to provide reference data for the planning of ski grounds and promote the sustainable and healthy development of chinses ski tourist industry.