



## **Landscape response to the development of new tourist attraction, Vinicunca (Rainbow Mountain), Cordillera Vilcanota, Peru.**

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Vinicunca (Rainbow Mountain) is one of the most recent tourist attractions in Peruvian province Quzphaca. First regular trips started during 2015/2016 season. Despite location on relatively high altitude (top of the mountain is higher than 5000 m a.s.l.) and harsh environment tours became very popular among national and international visitors. This study presents an assessment of the development of informal and formal infrastructure, as an example of landscape changes and local communities response to the accommodation of growing number of visitors.

At the beginning, there were no infrastructure prepared for the visitors, which resulted in the development of braided, informal trail. As the vegetation in this environmental condition is rather sparse, during the adverse weather condition, long segments of the trail were muddy, which caused trail widening and braiding. Moreover, fragment of dirt road, which was used as a parking place for cars and buses was seriously widened and overridden. Therefore, over the first year of exploitation, rather serious damages to the environment has been done, as a consequence of largely uncontrolled development of tourism. During late 2016 and early 2017, local communities started trail maintenance activities such as hardening of the trail surface and installing of stone steps and bridges. Later in 2017, new road and new, large parking place had been developed. Field-based mapping combined with investigation of high-resolution satellite imagery has been used to quantify changes in local environments (including overall trail condition, development of trampled vegetation areas, muddy sections, hardened surfaces). Potential geohazards affecting road and trail (landslides and debris flows) were also investigated.

Vinicunca area is a model example of landscape and community changes due to the development of new tourist attractions. Further research will enable us to answer questions such as: Are current managerial and maintenance activities sufficient to accommodate rapidly growing number of visitors, as the site gains popularity? Will the local community see the change in lifestyle, e.g. switch from traditional life-style to visitor-oriented activities (e.g. development of accommodation, guiding)? Is the environment sufficiently protected to survive increasing number of visitors?

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