

# 80 Volunteer activities for semi-natural grassland conservation in Japan and the impact of COVID-19 on these activities

Reiko MACHIDA<sup>1</sup>, Tetsuya Aikoh<sup>2</sup>, Masanori Take<sup>3</sup>, Hajime Matsushima<sup>4</sup>, Shoji Yasushi<sup>4</sup>, Naoyuki Mikami<sup>4</sup>, Yoza Mitarai<sup>1</sup>, <sup>1</sup>TOKYO UNIVERSITY OF AGRICULTURE, Japan. <sup>2</sup>Hokkaido University G. <sup>3</sup>University of Tsukuba, Japan. <sup>4</sup>Hokkaido University, Japan

## Introduction

The changes in the landscape are caused by the economic and social forces of the early 19th century and particularly of the 20th century (Matej M., Frantisek P., 2013). The community of Nezasa (*Pleioblastus yoshidake*) and Susuki (*Miscanthus sinensis*) plants forming the typical semi-natural grasslands of Japan used to cover approximately 10% of the land of Japan until the 1930s. The semi-natural grasslands have been managed by local agricultural activities such as controlled burning, mowing and pasturage for over 1000 years, but recently, due to the decline in the livestock industry and the gradually aging population, the landscape management of semi-natural grasslands has become increasingly difficult. The loss of semi-natural grasslands, which have decreased to less than 3% of the national land has become a key issue. In the Second National Biodiversity Strategy of Japan, the Japanese government designated such landscape crisis as Crisis 2, which is “the degradation of Satochi-satoyama (rural landscapes formed by sustainable use of natural resources) due to insufficient level of management”. (Ministry of the Environment, 2012). But recently, due to the decline in the livestock industry and the gradually aging population, the landscape management of semi-natural grasslands has become increasingly difficult. The loss of semi-natural grasslands, which have decreased to less than 3% of the national land has become a key issue.

The Aso-Kuju National park in Kumamoto Prefecture has been managed by local agricultural activities such as controlled burning, mowing and pasturage for centuries. Aso is characterized by the world’s largest caldera and semi-natural grasslands landscapes. The region of Aso includes more than 50% of the grass plants Nezasa and Susuki in Japan, making it one of the most important biodiversity hotspots nationally. The decline of the livestock industry and the increasingly aging population, the landscape management of grasslands has become

increasingly difficult. To address the shortage of manpower, the volunteer activity in Aso attracted a lot of motivated people outside of Aso since 1990’s. A volunteer group was founded to support the controlled burning work under the name Aso Green Stock in 1995. Also, approximately 960 volunteers carry out maintenance tasks such as the controlled burning together with the local inhabitants presently. Therefore, the conservation activities in Aso’s grasslands came to attract nationwide attention as pioneer examples of tackling such landscape crises.



However, the impact of COVID-19 on protected areas has affected biodiversity, economy, tourism, communities (John Waithaka, at all.2021) Volunteer activities have made it difficult for traditional face-to-face volunteers. Also, the grassland conservation activities have become difficult to perform due to the COVID-19 pandemic. It is necessary the guidelines on managing semi-natural grasslands during a pandemic.

## Method

This study was conducted a questionnaire survey with 486 grassland conservation volunteers in Aso in September 2020. The questions were related to the

COVID-19 safety measures and the volunteers' intentions to continue the grassland conservation activities. The question topics were as follows: Intention to participate in grassland conservation activities after COVID-19, Safety of outdoor grassland conservation activities, and Intention of grassland conservation activities involving movement.

### **Results**

According to the survey results, 81% of the volunteers wanted to continue the grassland conservation activities in line with infection control measures. In addition, 73% of volunteers answered that they felt the risk of contracting the infection is low, since the grassland conservation activities are performed outdoors. On the other hand, elderly volunteers and volunteers living in metropolitan areas such as Tokyo, tended to shy away from volunteer activities. According to the

survey results, there was no tendency to refrain from moving across the prefectural borders of the Kyushu area, where the Aso-Kuju National Park is located, or across nearby cities, towns and villages. Volunteers had a strong motivation to participate.

Concerning future measures against the COVID-19 pandemic, the following points should be considered. It is important for participants to take appropriate measures according to their living area and age, to follow safety measures for working in groups, and to properly disseminate information related to volunteer activities.

### **Acknowledgement**

This work was supported by JSPS KAKENHI Grant Number 19H02981

### **References**

Matej M., Frantisek P. 2013 LAND USE CHANGES OF HISTORICAL STRUCTURES IN THE AGRICULTURAL LANDSCAPE AT THE LOCAL LEVEL – HRINOVA CASE STUDY. *Ekologia*. 32(1). Pp1-12. Ministry of the Environment of Japan.2012 The National Biodiversity Strategy of Japan. John Waithaka, Nigel Dudley. all.2021 IMPACTS OF COVID-19 ON PROTECTED AND CONSERVED AREAS: A GLOBAL OVERVIEW AND REGIONAL PERSPECTIVES. *PARKS VOL 27 (Special Issue) MARCH 2021*.Pp.41-56. Gretchen Walters, Neema Pathak Broome all.2021 COVID-19, INDIGENOUS PEOPLES, LOCAL COMMUNITIES AND NATURAL RESOURCE GOVERNANCE. *VOL 27 (Special Issue) MARCH 2021*.Pp.57-72. Teresa Cristina, Carolina Bartoletti.2018 Participatory management to engage society with the planning of protected areas: a mountain bike trail planning. *The 9th International Conference on Monitoring and Management of Visitors in Recreational and Protected Areas (MMV9) ABSTRACT BOOK*.Pp30-32.