

An attempt to manage both rural landscape conservation and tourism development

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1. Introduction

As the number of farmers has been decreasing in the rural areas of Japan, the cultivation of some farmland and forest areas has been abandoned. Therefore, a recent trend involves developing tourism as one method for solving these problems. However, some practices have spoiled the rural landscape because of the promotion of tourism development. Hence, it is necessary to develop planning methods that manage both rural landscape conservation and tourism development sustainably. This study implemented and evaluated a new planning method to assess its future feasibility.

The Yamada area in Miyaki town was selected as a case study. Yamada Sunflower Farm (YSF), which has been managed by local farmers' union, is the main tourist attraction in Miyaki town. These days, over 20,000 tourists visit during the sunflowers' blooming season from October to November. Therefore, traffic jams sometimes happen and the local farmers have planned to develop new parking lots on other farmlands.

2. Methods

The fundamental policy for managing both rural landscape conservation and developing new parking lots as tourism infrastructure involved estimating the demand and the available supply of parking lots in Yamada area, then comparing the two data sets.

The demand for parking lots on YSF was estimated using data provided by a local farmer that indicated the number of visitors. Additionally, oral information about conditions when the maximum number of visitors arrived in the past was used to estimate the maximum demand.

When we tried to calculate the available supply of parking lots, our research team developed a footpath route with the cooperation of residents. The purpose was to invite visitors to look at the beautiful rural landscape. Second, we identified which farms were visible from the footpath route using a field survey. These farms were considered what most visitors would regard as a beautiful rural landscape that should not be developed. These farms were transformed into shapefiles for analysis by QGIS. Third, Warning Zone of Landside Disaster (WZLD) was added to QGIS because the development of parking lots on WZLD should be avoided. Fourth, the farms visible from the footpath and the WZLD were overlaid and we estimated the available supply of parking lots.

Finally, We held a workshop to explain the results to local residents and evaluated the proposed planning method by listening to their responses.

3. Results

At first, 452 cars per day was the estimated maximum figure according to the data on the number of visitors. Furthermore, the estimated maximum figure was 250 cars per hour according to residents' oral information. Therefore, 4508 m² would be needed to park 250 cars.

When both the farms visible from the footpath and WZLD was overlaid, four types of farmland were confirmed. The first type of farm was both visible from the footpath route and located on the WZLD. The second was only located on the WZLD. This type was located east of the YSF. The third was visible from the footpath route only. the fourth was not visible from the footpath route nor located on the WZLD. Both the second and fourth types were suitable for parking lot development in rural landscape conservation terms and were bigger than 4508 m². However, the fourth, the most suited in terms of disaster prevention, was quite far from YSF so we decided that the new parking lots should be developed

on the second type of farm.

Finally, we explained the aforementioned results to local residents who provided the following responses. First, although residents understood that farmlands visible from the footpath route should be protected, they tended to hope that parking lots would be developed on farmlands near the YSF, or lands not suited for cultivation. Second, the ownership of farmlands in the Yamada area is finely differentiated so that there are various conflicting environment. This may make reaching agreement about parking lots among the people concerned difficult.

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