

Measuring Tourism in Public Natural Parks in Japan

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Introduction

Managing public lands for recreational use requires accurate measurement of visitation. Counting visitors is relatively easy if the land is entirely owned by the government authority and access can be controlled, as is often the case for national parks in the United States. National parks in Japan however are relatively recently designated public park zones that often overlap areas where people already live. In such places, it is difficult to separate usage of parks by tourists from the coming and going of residents living inside the zone.

This study introduces methods of measuring visitors in Japanese public natural parks, and discusses associated problems and areas for future efforts in park management. We also discuss the use of data to estimate economic impacts from recreational use by visitors.

Measuring visitors at Natural Parks in Japan

The Japanese natural park system differs considerably from that in the United States. Because of difficulties in finding vast areas of uninhabited land suitable for government to own for the purpose of preservation, Japan designates park zones over a mixture of public and private land. Areas of public parks by ownership are summarized in Fig. 1.

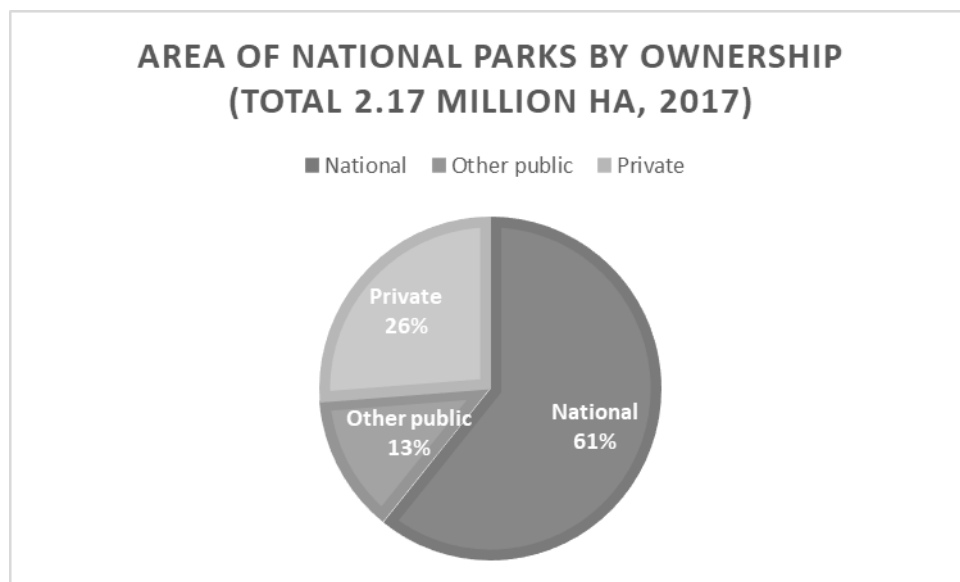


Fig. 1. Area of national parks by ownership (Source: Ministry of the Environment)

There are three kinds of natural parks in Japan: national parks, quasi-national parks, and prefectural parks. National parks are the most highly regarded among these. Since the first designation in 1934, there is now a total of 34 national parks in Japan, managed by the Ministry of the Environment (MOE). (MOE, 2018).

National park visitors are counted by local governments, and counts are gathered at MOE for the preparation of annual reports. The choice of method for counting visitors is largely left to the discretion of local governments. Among the types of park, national parks are the most well monitored. Measurement policies may differ from one national park to another, though the following measurements are commonly used:

- Counting visitors at the visitor center
- Self-reporting, such as a climber's lists at the entrance of mountain climbing trails
- Periodic monitoring by the local government

We consider these three methods, and discuss related issues and areas for future advances.

Counting visitors at the visitor center

Most national parks have a few visitor centers within each park zone. Methods for counting visitors may differ from one center to another. The most common way of counting visitors is a self-reporting visitor sheet at the visitor center. These sheets allow visitors to voluntarily provide information about their visit, such as the date, name, place of departure, number of people in the party, etc. This method can collect rich visitor information, however accuracy and consistency are potential issues: not all visitors voluntarily disclose the same information. An increasing number of visitor centers also have installed electronic counters, which can help verify counts of visitors. However, the use of counters can overstate visitation if re-entry by the same visitor is significant; , a visitor could also be counted at more than one visitor center.

Self-reporting at the entrance of trails

There are self-reporting forms set at the entrance of many mountain trails in public parks. Reporting is voluntary and it appears that a significant number of people choose not to use the system. In addition, not all trails have self-reporting installed. There is also the issue of consistency in information that is reported.

Periodic monitoring

Local governments periodically monitor visitors at natural parks. As people often reside within the park's boundaries, parks typically do not have operating hours or closed seasons. For this reason, the timing of monitoring varies greatly among parks. Some remote parks with many access roads used by both tourists and local people have no good way to distinguish between park users and residents. One example is Sanriku Fukko NP, nearly 150 mi in length along the Pacific in Northeastern Japan.

This study also investigates how visitors are monitored by authorities for quasi-national parks and prefectural parks, and finds that these authorities have not developed any better monitoring systems than are in use at national parks.

Issues on economic evaluation and discussion

The importance of developing visitor statistics and evaluating economic values or impacts of parks is widely acknowledged. Nevertheless, these activities are not widely undertaken by MOE. On the management side, understanding visitor activities, including visitor spending patterns, is important for considering how much effort should be devoted to managing parks, and expressing parks' contributions to local economies.

Traditionally, economic values of non-tradable goods such as parks are estimated from actual user activities (so-called revealed-preference studies), or by asking potential users about their preferences across a range of scenarios (stated-preference studies). Results from this type of analysis provide the public with an estimate of public benefits generated in return for tax

dollar expenditures on the park management. However, the high-cost of surveys is often an issue.

We consider that information made available on the internet (such as social networks and travel sites) is an inexpensive way to gather data, and may be useful in estimating visitor spending, and the resulting economic contributions from visitors. Internet services where people post public reviews of what they purchased or experienced provide information on actual consumption (revealed preferences) as well as people's preferences. Information contained in postings may also reflect underlying utility functions. For non-marketed goods like public goods and common resources, uncovering the factors affecting people's quality of experiences is crucial for the efficient management of resources.

Reference

Japan Ministry of the Environment. (2018). *Natural Park Systems in Japan*. [online] Available at: <https://www.env.go.jp/en/nature/nps/park/doc/files/parkssystem.pdf> [Accessed 28 Mar. 2018].