Exploring new methods for sustainable forest management through forest rental businesses

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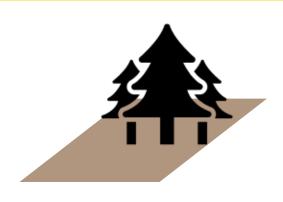
Background

- Attention to safe and healthy recreational activities (COVID-19, change of lifestyle)
- Necessity of new forest use
 (Declining forestry and landscape degradation (Konno 2014), aging volunteers (Sawai and Takemoto 2019))

Invention of forest rental business by a forestry company



nature-symbiotic lifestyle





Users can enjoy their plot at any time

Owners can ensure stable income and less effort to maintain forest



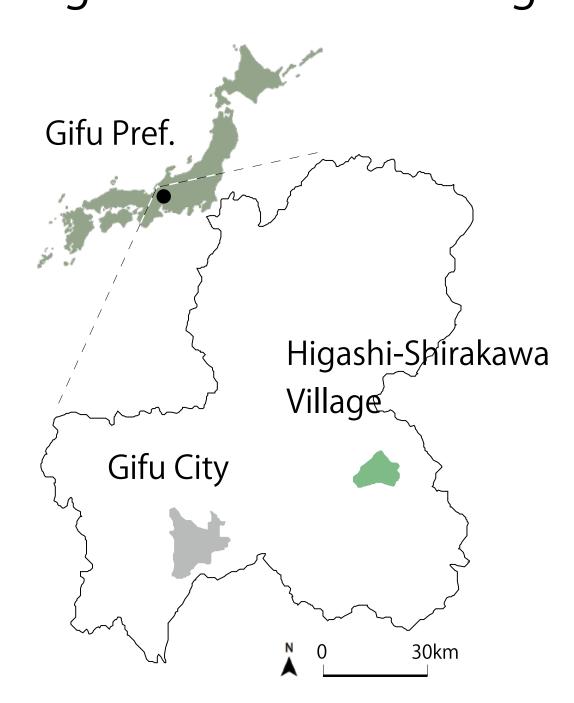
RQ: How much do forest rental business actually contribute to sustainable forest management?

Objective

Elucidate the economic benefits of the forest rental business and its impact on forest management

Method

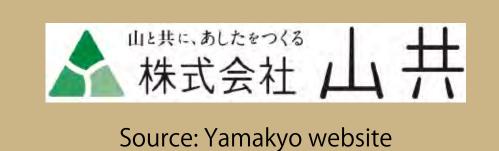
Case study
"forenta" business by
Yamakyo Corp. based in
Higashi-Shirakawa village



- Interviews with the president of Yamakyo Corp.
 March 14th, 2022 and October14th, 2022
 Principal questions
 - History of the business
 - User target, demand
 - Regulation on forest use
 - Benefit for the company and mountain owners Franchise system (e.g. how to approach other owners)
- Information collection from "forenta" website

Yamakyo Corp.

Established in 1955 (Corporation since 1980)



Lumber company specializing in Gifu lumber

Stopped due to objection by neighbors

Findings

Start of the forest rental business



Lumber prices have been declining No way to add value No measures other than cost reduction

Seeking to create forest value beyond timber production



During his training in Germany, the president learned about the culture of freely entering forests, BBQs, and hiking.

Conceived the idea that consumers' familiarity with forests will lead to a culture of buying trees



mountain owners

Camping and outdoor activities are popular. More cases of forest purchases, but maintenance is difficult

Invention of forest rental business in 2021 Start of franchise in 2021 as well to support other

- Initial application rate: 25 times (440 groups applied for 17 lots)
- Users mostly from Aichi Pref. (next to Gifu)
- Promotion through instagram, facebook, twitter, YouTube, TV etc
- Fee: 66,000 JPY/y for 990 m² (case of Higashi-Shirakawa)

Expansion of rental sites

Table: Forest rental sites including franchised sites (as of October 7th, made from forenta website)

	Prefecture	City, town	Preview	Open	Plot size [m ²]	Number	Annual fee	Operator
-						of plots	(personal use) [JPY]	1
	Gifu	Higashi-	Dec. 12, 2020, Mar.	Jan., 2021	990	36	66,000	Yamakyo
		Shirakawa	12-13, 2021					
	Gifu	Higashi-	Jul. 16-17, 2021,	N/A	660-990	20	66,000	Yamakyo
		Shirakawa	Apr. 8-9, 2022					
	Shizuoka	Ito	Dec. 3-4, 2021	N/A	200	35	132,000	Agricultural farm
	Shizuoka	Shimizu	Dec. 5-6, 2021	N/A	330	10	132,000	Forestry company
	Gifu	Takayama	Aug. 7-8, 2022	Sep. 1, 2022	330	6	55,000	Real estate company
	Kyoto	Fukuchiyama	Aug. 10-11, 2022	Sep. 1, 2022	160-276	6	88,000	Forestry company
	Iwate	Iwaizumi	Aug. 28-29, 2022	Sep. 1, 2022	660-990	10	77,700-99,900	NPO
	Shizuoka	Hamamatsu	Oct. 7-8, 2022	Nov. 1, 2022	660	10	132,000	Local owner
_	Hokkaido	Mikasa	Sep. 25-26, 2022	Oct. 1, 2022	300	8	55,000	Forestry company

Franchise system

- Purporse: To utilize forests all over Japan
- Providing know-how to mountain owners
- Royalties collected after receiving business income (no initial fee)
- Owners usually contact through forenta website

Benefit to mountain owners

- Effective use of planted forests (profitable during the growing period)
- No initial investment (logging and land development) required
- Stable income
- Necessity of just one or a few staff members

Rules of use

- Flexible use as possible
- Tree cut allowance with a diameter at breast height (DBH) of 15 cm or less
- Responsibility of users for accidents, theft and other troubles between users
- No commercial use
- Renewal possible upon expiration of contract





Figure: Actual use of forest (photo by authors)

Conclusion and future works

The forest rental business complement to the forestry industry and as a response to the increasing need for contact with nature. Growing number of franchise sites indicate mountain owners' benefits

Future works to evaluate forest business from environmental and economic perspectives

- 1) Investigation on users' lifestyle and motivation (Questionnaire to users)
- 2) Investigation on franchisees' intention and actual benefits (Interviews to franchisees)
- 3) Investigation on spatial changes of forest (Analysis of DEM data)