

## 科学研究費助成事業 研究成果報告書

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研究課題名(和文) Comparative analysis between Japanese and Russian Biosphere Reserves to understand the Community Capacity in ecosystem management for the sustainable regional development.

研究課題名(英文) Comparative analysis between Japanese and Russian Biosphere Reserves to understand the Community Capacity in ecosystem management for the sustainable regional development.

研究代表者

マムドゥーア アイダ (Mammadova, Aida)

金沢大学・国際機構・准教授

研究者番号：90758666

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研究成果の概要(和文)：本研究から、ユネスコ生物圏保護区内にある日本とロシアの地域社会は、それぞれ異なる組織・運営形態を持っていることが明らかになった。日本の場合、生物圏保護区は主に地方自治体によって管理されており、地域住民の関与は少ない傾向にあった。一方ロシアでは、生物圏保護区は主に地域社会によって管理・運営されているという傾向があった。これらの違いは、1. 政府と地域社会との歴史的関係、2. 生物圏保護区概念と経済的展望に対する態度、3. 自然保護に対する認識の差によって生じていると考えられる。

研究成果の学術的意義や社会的意義

This research provides the important information on the differences between structural organization of Japanese and Russian local communities and their relationship with local government. The results of this project can contribute to create new strategies and policies for regional development.

研究成果の概要(英文)：The purpose of this study was to make a comparative analysis between Japanese and Russian Biosphere Reserves (BRs) to understand the Community Capacity in ecosystem management. From our research, it was clear that Japanese and Russian local communities have different organizational structures inside BRs. In Japanese cases BRs, were mainly managed by the local authorities and local people were not involved in the management process. In case of Russia, BRs, were mainly managed and regulated by the local communities, who played the significant role in the decision-making process. It was suggested that these kinds of differences can be related to the 1. Historical Relationships between the Government and the Local Communities. 2. Attitudes towards the Concept of BRs and Economic Prospects and 3. Perception of Nature Protection.

研究分野：Sustainability studies

キーワード：Biosphere Reserves Community development Sustainability

## 1. 研究開始当初の背景

Biosphere Reserves (BRs) are protected areas of terrestrial, coastal and marine ecosystems, established by the national government and recognized under the UNESCO's Man and the Biosphere (MAB) Programme, with conservation, development and educational functions. BRs also considered as the reservoirs for the biological and cultural diversity, and keepers of the genetic materials of the living organism in the specific region. This allows BRs to function as the hubs for the preservation of the local cultural identity, which is very important for the development of national identity. Japan neighbors with Russia's Far East and Siberian regions, and has common biodiversity and bioresources.

The biodiversity conservation, nature management, as well as the local's livelihoods between Russian and Japanese BRs has many differences. Japanese BRs are facing problems with aging and depopulation, whereas Russia has big problems with illegal poaching, biodiversity loss and management of big territories. Russian BRs are mainly managed by the local people, whereas Japanese are governed by the local authorities and administration offices. Local communities have a little access to the management, and most of the time they lack the access to the information related to the BRs. In terms of Russian BRs, they provide the job opportunities for the locals and resources for the daily living. Until now, researches in BRs were focused mainly in biodiversity monitoring to prevent the biodiversity loss, and the demand to the scientific and data-based knowledge played the main role for the ecosystem management.

## 2. 研究の目的

The purpose of this study was to make the comparative analysis between Japanese and Russian Biosphere Reserves (BRs) to understand the Community Capacity in ecosystem management. Japan and Russian was selected as neighbor countries with similar terrestrial and marine biological resources, which has similarities in ecosystem management. Four BRs from each country was selected to make the comparative analysis in structural formation of the communities. Structural formation was divided into four groups: Native residents - those who have been born in village; Adaptive residents - those who came from outside of the village; Returned residents - those who left and later returned back; and Left residents - those who completely moved away from the village, but sometimes come back to visit their families. Besides, the involvement of local communities inside the administrative and governmental management was also evaluated.

## 3. 研究の方法

In 2019, preliminary investigations were conducted about the Biosphere Reserves in Russia and Japan. In May-June, PI visited Shiramine village of UNESCO Mount Hakusan BR (MHBR), and met with the representatives of the MHBR council. Discussed the issues of depopulation and aging, structural management of BR and collected the data about job opportunities, and ecosystem management. In June, visited the Moscow State University, faculty of Geology and made the information collection about the current situation of Biosphere Reserves in Russia. In August 4-10 traveled to Russian Altai BR, met with local villagers and managers. Made data collection about the local's lifestyle.

In 2020-2021, the second trip to Russia and Japan, was cancelled due to the pandemic of Corona virus. The research was conducted inside Kanazawa University through the data analysis of the previously collected data's and online interviews. Also, some data was collected from the Ishikawa Prefecture, and analyzed. 2020.09.29 Joint Russian-Japanese Symposium was organized by the Kanazawa University on "UNESCO Biosphere

Reserves, Geoparks and World Heritage Sites, as platforms to conduct the regional education towards SDGs". 2020.12.11 Online Seminar was organized by the Gorno-Altaysk State University (Russia), on "Open World of Altai" and made presentation about the "Japanese system of Geoparks and Biosphere Reserves management".

In 2022, PI canceled the trip to Russia, due to the war conflict between Russia and Ukraine, and conducted all remained investigations online and inside Japanese BRs, by

sending young people into the Japanese villages and creating online courses.

#### 4 . 研究成果

From 2019-2022 PI published four papers at international journals.

Two papers were related to the comparative analysis between Japanese and Russian Biosphere Reserves as well as Geoparks.

First was “Comparative Analysis between the Role of Local Communities in Regional Development inside Japanese and Russian UNESCO ’ s Biosphere Reserves: Case Studies of Mount Hakusan and Katunskiy Biosphere Reserves ” and second was “Community Engagement in UNESCO Biosphere Reserves and Geoparks: Case Studies from Mount Hakusan in Japan and Altai in Russia.” From these papers it was elucidated that Japanese and Russian local communities have different organizational structure inside BRs and GPs. In Japanese cases BRs, was mainly managed by the local authorities and local people were not involvement in the management process. In case of Russia, BRs, were mainly managed and regulate by the local communities, who played the significant role in the decision making process. The hypothesis was suggested that these kind of differences can be related to the 1. Historical relationships between the government and the local communities. 2. Attitudes towards the concept of BRs and economic prospects and 3. Perception of nature protection.

According to the results, the additional investigations were conducted about the perception of BRs between Japanese and Russian students, and were published in the following journals: “Perceptual differences on the concept of Sustainability between Japanese and Foreign students” and “Can Online Learning about UNESCO Biosphere Reserves Change the Perception on SDGs and Different Aspects of Sustainability between Japanese and International Students?”. We found the significant differences between Japanese and Russian students on the perception of economic development, sustainable communities and livelihoods inside the BRs. It was suggested that the perception on sustainable regional development inside BRs may strongly depend on the students’ historical background, cultural differences and living environmental conditions.

## 5. 主な発表論文等

〔雑誌論文〕 計4件（うち査読付論文 4件/うち国際共著 4件/うちオープンアクセス 4件）

1. 著者名 Mammadova, A.; Redkin, A.; Beketova, T.; Smith, C.D.	4. 巻 11
2. 論文標題 Community Engagement in UNESCO Biosphere Reserves and Geoparks: Case Studies from Mount Hakusan in Japan and Altai in Russia.	5. 発行年 2022年
3. 雑誌名 Land	6. 最初と最後の頁 227
掲載論文のDOI（デジタルオブジェクト識別子） 10.3390/land11020227	査読の有無 有
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1. 著者名 Mammadova A, Smith CD, Yashina T.	4. 巻 13(18)
2. 論文標題 Comparative Analysis between the Role of Local Communities in Regional Development inside Japanese and Russian UNESCO 's Biosphere Reserves: Case Studies of Mount Hakusan and Katunskiy Biosphere Reserves.	5. 発行年 2021年
3. 雑誌名 Sustainability	6. 最初と最後の頁 10422
掲載論文のDOI（デジタルオブジェクト識別子） 10.3390/su131810422	査読の有無 有
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1. 著者名 Mammadova, A	4. 巻 Vol 11, Issue 4
2. 論文標題 Perceptonal differences on the concept of Sustainability between Japanese and Foreign students	5. 発行年 2022年
3. 雑誌名 European Journal of Sustainable Development, Vol 11, Issue 4, 25-31,	6. 最初と最後の頁 25-31
掲載論文のDOI（デジタルオブジェクト識別子） 10.14207/ejsd.2022.v11n4p25	査読の有無 有
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1. 著者名 Mammadova, A.; Ali, N.;Chaiyasarn, K.	4. 巻 14
2. 論文標題 Can Online Learning about UNESCO Biosphere Reserves Change the Perception on SDGs and Different Aspects of Sustainability between Japanese and International Students?	5. 発行年 2022年
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〔学会発表〕 計2件（うち招待講演 0件 / うち国際学会 2件）

1. 発表者名 Aida Mammadova
2. 発表標題 The role of communities in sustainable ecosystem management inside Japanese Biosphere Reserves
3. 学会等名 9th Edition of International Conference on Environmental Science & Technology (国際学会)
4. 発表年 2019年

1. 発表者名 Aida Mammadova
2. 発表標題 “Perceptual differences on the concept of Sustainability between Japanese and Foreign students”
3. 学会等名 10th International Conference on Sustainable Development Rome (国際学会)
4. 発表年 2022年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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