



**Curriculum Report**

# **BIOCULTURAL DIVERSITY**

**LEARNING FROM RURAL COMMUNITIES OF  
ISHIKAWA, JAPAN**

This curriculum was prepared and developed by:

Mammadova Aida (editor), Kanazawa University International Student Center and Iida Yoshihiko, United Nations University Institute for the Advanced Study of Sustainability, Operating Unit Ishikawa/Kanazawa (2016-2017)

This curriculum was organized for the international academic students of Kanazawa University, Japan

For the further details of the course, please contact the Course Head, Mammadova Aida  
(mammadova@staff.kanazawa-u.ac.jp)

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# Background and Outline

## 1. Importance to learn biocultural diversity in rural communities

Biocultural diversity is a linkage between all forms of biological and cultural diversity on the planet, with strong socio-ecological bounds. Over the millennia, humans adapted to the natural environmental habitat and learned how to use the particular environmental resources to create their own living, and hence creating the diverse forms of culture. Acquired traditional knowledge helped to survive and sustain the livelihoods in diverse environment conditions, and this kind of biological and cultural knowledge were transmitted from generations to generations in the forms of languages or practices. For the continuing life on earth biocultural diversity must be protected and preserved, especially in the rural regions with local communities, as they play the key role in maintaining close link between the local environment and culture, which comprise their entire social identity. However, rural areas are facing the major challenges in the biocultural loss, due to the population decline, aging and economical instabilities, which leads to the loss of traditional knowledge and its practical utilization. Unsustainable relationship with the environment can be observed with the increased number of abandoned houses and farming lands.

To achieve biocultural sustainability, community based learning will play a critical role, and it should be applied at all levels of educational system. One of the effective learning strategies used in the Community Schools, is the learning through the community-based problem solving. These strategies includes environmental education, service learning, place-based learning and academically based community services. Community-based learning, increase the senses of oneness and belongings to the society, and also increase the awareness about the environment and its challenges. At the same time, students develop the skills, knowledge and attitudes that can help to identify the issues and act towards the concerns in their own community and everyday life. These kind of community-based learnings must be integrated within the regular academic-based curriculum.

We decided to create the curriculum model for the regional biocultural diversity learning course at Kanazawa University, for the international academic students and conduct it at the rural areas of Ishikawa Prefecture in Japan. Due to the lack of specific subject on regional community based learnings, most of the students have a little concept about the rich and abundant biological and cultural diversity of the regions, and only focus on the culture at the urban areas. However, as the culture is mainly derived from the biodiversity of the rural communities, it will be very important to develop the rural community-based learning curriculum for the academic students, to educate the senses of values, skills and knowledges to act towards the environmental issues back in their own communities.

Most of the time academic students have no idea about the regional ecosystem, species and living habitat of the rural areas, and we found that it will be very important to divide our course on three main parts, where at the beginning we should educate the students the natural environments with regional biodiversity, on the second part we introduce them with rural communities and on the third part we made the group discussions for the community-based problems solving. We have suggested that to make the best outcomes for the students' studies of the culture and nature, it would be very important to provide them with many service activities together with the academic research.

## 2. Curriculum design

**Nature Education for understanding local biological diversity** was conducted on the first place, to make the students to feel the diverse natural environmental and habitat, diverse flora and fauna of the region, before joining the community.

**Place-based Learning for understanding local cultural diversity** with the key elements. Key elements were used as the linkage between the natural and cultural diversity and that element was specific only for that particular region and community.

**Community-Service Learning for understanding community's problems** and Volunteering Practice, which provided the students to experience the daily lifestyle and feel the unity with the local communities.

**Student's Group Working for Problem Solving** where students increased their problems-solving skills through the group discussions. These also helped the students to develop critical way of thinking and made the comparative analysis between the similarities and difference of the diverse culture and nature in different regions.



# Case Studies of Field Curriculum

## 1. Nature Education for understanding local biological diversity

As culture is derived from the natural utilization of the surrounding environment, it was very important to give the students the opportunity to experience and learn about the surrounding environment, before teaching them about the culture. Natural environmental education increases the curiosity of the students to know the ways of its utilization, and make them feel more connected with the communities, who use that nature for their livings. We decided not to conduct our studies on existing literature, but educate the students relying on their own feelings.

Rural communities of the Ishikawa Prefecture are habituated at the coastal, forest and mountain areas, and accordingly our fieldtrips were divided to the same regional environments, as it was very important to learn about the nature before joining the community. On each region students performed following activities to become acquainted with the local ecosystem and living organisms.

### Nature Education in three different ecosystems

**Forest:** *Plant Searching with Color, Shapes and Tasting*  
*Searching for the animal trails*  
*Walking in the slippery rainy forest, touching and smelling different plants*

**Mountain:** *Nature listening and drawing the shapes of the sounds*  
*Searching for the same shapes in the nature*  
*Imagine and Drawing the Nature of the home country*  
*Finding the edible Plants, Fire and food making with herbal tea from the forest*  
*Creating the Poems on Nature*

**Coastal:** *Experience the sea breeze and playing with the sand*  
*Searching for the coastal small animals and plants*  
*Listen to the Coastal Nature sounds*  
*Blindly walk in the region with closed eyes and feel the softness of the ground*  
*Make an interview to the trees*





## Forest Activities

*Plant Searching with Color, Shapes and Tasting*



## Mountain Activities

*Nature Listening, drawing the shapes of the sounds and searching for the same shapes in the nature*



*Fire,  
plants*



*food and herbal tea making,  
found in the forest*



*from*

*the edible*





## Creating the Poems on Nature



Where is the beautiful place?  
It is the place to feel peacefully  
Nature,  
Don't be scared with that  
Somewhere like home.

Flowers and plants that you can eat;  
Out in the open  
Ready to heat;  
A feeling of peace  
Going out in the woods;  
Inside the forest  
Night or day is good;  
Gathering edible plants for food.

Rachel Sheil

## Coastal Activities

Experience the sea breeze and searching for the coastal small animals and plants





# Communicating with the environment

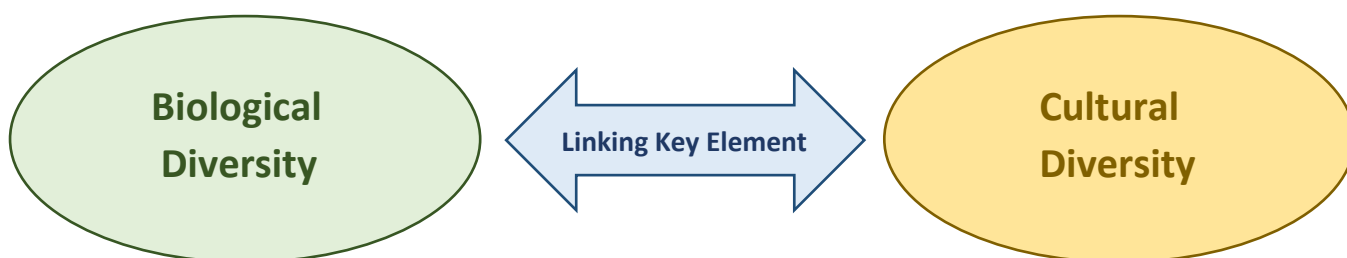




After becoming familiar with the surrounded nature, we took our way to the communities and it was very important to introduce the diversity of the communities living in different landscapes. For the Coastal region we selected the coastal area of Noto Peninsula and Noto-jima Island. For the flat lands and forestry we chose the Komatsu city of Kaga region, and finally for the mountain area we went to the Shiramine village of Mt. Hakusan foothill. Students performed two types of learning: place-based learning and community-service learning.

## 2. Place-based Learning for understanding local cultural diversity

In place-based learning, it was very important to provide the students with the *linking key element* which was specific only to that region, and would link the culture of the village with its nature. Students needed to find the connection of that element with all communities livelihood. That key element could be anything specific to the region.



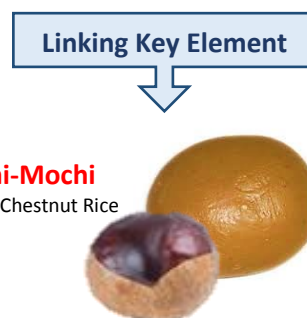
### ❖ Shiramine village and Watatsu village of Mt. Hakusan foothill region

#### Forestry and traditional lifestyle

The unique environment and culture of Hakusan region, provided the students to directly learn about the modern livelihoods and traditional culture. We found that the perfect key element in Hakusan that would combine culture with the nature was the Horse Chestnut Rice Cakes or so called *Tochi-mochi*. *Tochi-mochi* is made from the Horse Chestnut Seeds, and it has for many years served as the food supply for the villages. Due to the steep hilly landscapes Shiramine village has no flat lands to produce the rice, and only the forest was the main resources for the food. However, Tochi seeds have very bitter taste and are almost not edible, and to remove the harshness (*akunuki*), local people used the cold water flowing from the Mt. Hakusan and also the ash made by burning the charcoals produced from the trees of the nearby forest. Forestry, charcoal and mushroom production, was the main industry in Shiramine village for many years.

Community members served as the teachers and instructors for the students to perform the following activities:

- Visiting the *Tochi-mochi* making shop “*Shinsa*” and learn about its production
- Wood chopping and Charcoal production
- Mushroom planting on the logs
- Making the fire from the charcoals and *tochi-mochi* tasting
- Learn about the Mushroom cultivation in Watatsu village
- Communicate with local people by making own rice cakes



Visiting the Tochi-mochi making shop "Shinsa" and learn about its production



Wood chopping and Charcoal production



Mushroom planting on the logs and tochi-mochi tasting





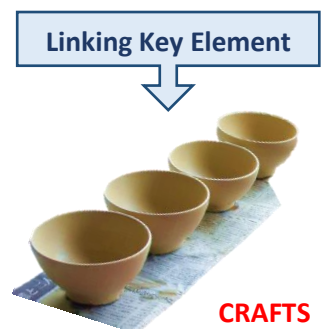
## ❖ Takigahara and other villages in Komatsu region

### Stone Mining and Pottery Culture (Kutaniyaki)

In this fieldtrip our key elements were crafts. Ishikawa Prefecture is very famous for the traditional crafts, and almost all visitors get fascinated and amazed by their beauty. However, almost no-one knows, where those crafts are coming from, and for the students it was unique opportunity to see the birthplaces of those natural resources that allows to create that beautiful culture, and communicate with local people and craftsman. Komatsu City is very famous with stone made bridges, store rooms to preserve the sake, in construction of the temples, guarding walls, housings and sculptures. Due to the volcanic eruption of Mt. Hakusan around 2 million years ago, cooper, opal, green gem, rock crystals were formatted in this region. Also, type of rock like tuff and gem stones was originated here. Takigahara is very reach in green gem stones and is famous for the stone mining. Region became very popular due to the specific stone making techniques, and now it has lots of stone mining caves. Another main destination was the *Hanasaka Hill*, for the pottery stone. That pottery stone is very soft and is main source of clay for *Kutaniyaki* pottery.

Students visited the following destinations, guided and explained by the local people:

- Pottery stone Hill, *Hanasaka-toseki*
- The factory for clay production "*Taniguchi*"
- The atelier for the Kutaniyaki pottery making
- The oldest Kilim for Burning the Kutaniyaki pottery
- Stone mining caves in Takigahara region
- Visiting the atelier of the Stone-sculpture making artist



Pottery stone Hill, *Hanasaka-toseki* and visiting the factory of clay production "*Taniguchi*"



The atelier for the Kutaniyaki pottery making and visiting the oldest Kilim



Stone mining caves in Takigahara region and meeting with the stone sculpture making artist



### **3. Community-Service Learning for understanding community's problems**

To enrich students learning, it was very important for them to experience the feeling that they were the part of the community and experience community daily lifestyle by performing the service activities. From the hilly mountain regions we came down to the coastal region of Noto Peninsula, which is very famous for the fishery and agriculture. The rich natural environment of this region has been properly used by the local villages to support their lives for generation and has created the specific landscapes named *Satoyama and Satoumi*, (arable/flat and coastal lands). *Satoyama* and *Satoumi* provides the unique traditions, local food culture, believes and festivals that shows the strong linkage between the cultural and biological diversity. Noto was designated as Globally Important Agricultural Heritage Sites (GIAHS) in 2011 by Food and Agriculture Organization (FAO) of the United Nations.

#### **❖ *Satoumi Experience in Notojima island area in Noto peninsula region***

##### Helping the fishing net cleaning

In Notojima Island which is famous for the fishing industry, students met with local fishermen, who catch the fish using the set-net fishing practice. Set-net fishing is the technique which has been practiced for many years, and is set accordingly to the fish behavior without damaging the marine ecosystem. The distance of the fishing net can reach several hundred meters. As the net is mended by hand, it takes a huge human work, to finish net mending. Students performed the work, with the family of the local fishermen to mend the net, and during their work, they shared the lifestyles of their own countries with the local people and each other's.





## ❖ *Satoyama Experience in Suzu area in Noto peninsula region*

### Living with the community

Suzu area, is one of the remote areas of Noto Peninsula with very rich natural resources. *Satoyama*, its landscapes and traditional culture have been preserved with the sustainable utilization of the natural resources, by local people from generations to generations. However, due to the depopulation, many local fields and houses became abandoned, and there is a big risk of the cultural and natural loss. Students performed the activities to help the local people by cleaning and helping in the community. It was is perfect place to experience the connection of cultural and biological diversity through the direct experience, by performing the services activities and feeling the sense of being useful for the society. Below is list of the performed services and activities:

- Cleaning around the abandoned houses
- Helping to clean the honey making webs
- Pulling the weeds from the rice fields
- Helping to clean the garden and cultivate vegetables
- Wood chopping
- Make their own plates from bamboo trees
- Make a small food festival with the local villagers and communities
- Students group discussions and experience sharing with each other
- Overnight in the village

### *Cleaning around the abandoned houses and helping in the garden*

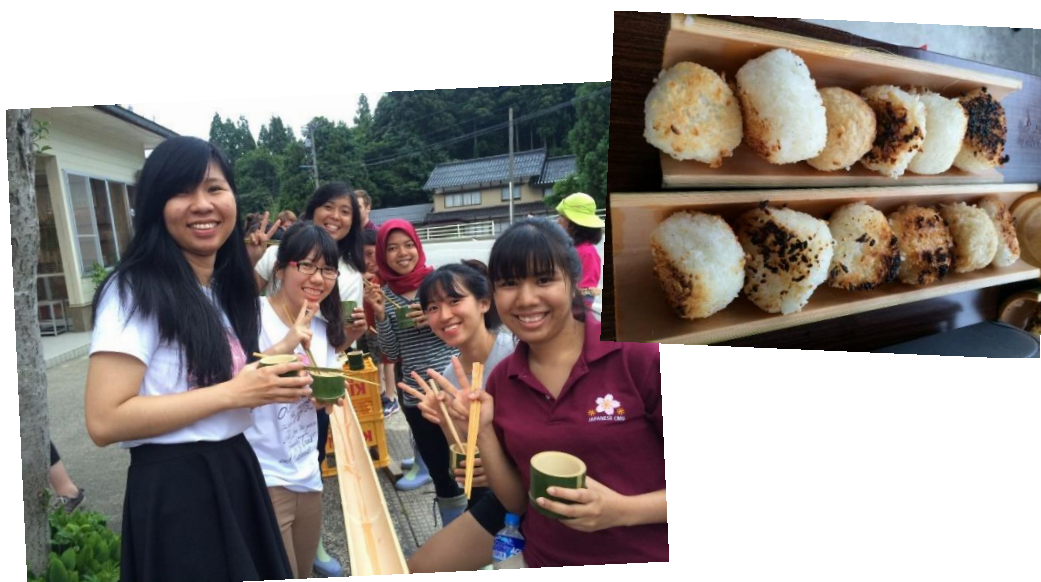




*Helping to clean the honey making webs and pulling the weeds from the rice fields*



*Make a small food festival with the local villagers and communities*



*Students group discussions and experience sharing with each other*





# Group Working for Problem Solving

After experiencing the Biological and Cultural Diversities through the Environmental Education, Place-based learning and Community-service learning, students performed the final group working and made the discussion related to the problem solving of the rural issues. Students were divided on three groups for Noto, Hakusan and Komatsu region and they were asked to perform the discussion related to the community-based problem solving ways, in the following order and submit group reports:

***I. Describe the region by making own research***

***II. Describe the "TREASURES" of the region that must be preserved or under the danger***

***III. What are the main PROBLEMS of the region?***

***IV. What international students can do to CONTRIBUTE for the regional preservation?***

## 1. Students' Group Report on Mt. Hakusan foothill region

### I. About the Hakusan Region

Mount Hakusan (literally meaning 'white mountain') is a potentially active volcano. Its last eruption happened during April to August of 1659. The mountain's tallest peak belongs to Gozengamine which is 2,702 meters high.

The Hakusan Biosphere Reserve extends across Ishikawa, Gifu, Toyama and Fukui prefecture and is centered on the mountain. With Mount Tate and Mount Fuji, it is one of Japan's "Three Holy Mountains". It is surrounded by many rivers that flow into the Sea of Japan.

It has rich biodiversity with a cool-temperate zone that hosts many different forms of life. Hakusan is known for the large number of plants native to its region such as Hakusan *Kozakura* and Hakusan *Chidori*.

It was added into UNESCO'S World Cultural Heritage list in 1995. There are currently 109,321 people living in Hakusan. For hundreds of years, people have come to Hakusan for prayers. Shirayama Hime Shrine (Shinto religion) is located on the mountain. It is the main shrine of approximately 2,000 Hakusan shrines in Japan.

### **First Settlers in Hakusan**

According to the Ishikawa prefecture history of Hakusan, the first settlers came around the Joumon period of around 10,000 BC. Although the mountainous region was more secluded and less convenient – before the development of the water system the region often suffered from floor or drought due to dry weather – people lived by gathering edible wild plants and chestnuts, and hunting and fishing to ensure food to live. The people of the Joumon period acquired skills to process, preserve and store the food from the nature around them for their survival.

While food gathering and hunting helped people survive in the mountains, agriculture contributed greatly to the settlement of its people. The slash-and-burn agriculture that the people developed where they could grow crops and grains without using manure meant that the people could harvest their own food. This traditional way still largely influences the modern day practices such as chestnut making in Hakusan today – along with other processes such as silk raising charcoal making. [source: <http://shofu.pref.ishikawa.jp/shofu/shirayama/english/life/roots/> ]

## II. Hakusan Livelihood

### **1. Tochimochi**

As mochi is such a traditional type of sweets dating back a long time, implementing the taste of chestnuts into them felt kind of a natural things to do. After taking the bitterness from the chestnuts they are ready to be used to make tochimochi and other tochi related foods. Even though the shop we visited was a small shop in a small city we saw quite a few customers come during our visit which might not tell much considering how all the local producers are facing crisis because of the globalization and the area specific food are slowly dying out. Various kinds of the mochi were produced, with or without the red bean paste, having the red bean paste on the outside or in the inside.

## 2. Mushrooms and Spores

Another of the things we were introduced to was the inoculation of logs with spores which is a method that originated from Japan. As Japanese people were originally hunters and gatherers and rice was something that was not original to the islands of Japan and only later introduced to the country, a lot of the food ingredients like the before mentioned tochi and mushrooms are here because of that. Various types of mushrooms can be grown in logs for example the famous shiitake mushrooms which are not only known in Japan but in other parts of the world too. The process itself is quite a long one and consists of drilling small holes around the wooden log after which the mushrooms spores are hammered in and ready to grow. The warmth and humidity are important when growing mushrooms so during the process those are maintained.



## 3. Charcoal

- *Charcoal is made from the wood burned until carbonization in a kiln. It can be made as well from organic waste.*
- *Charcoal has been used in Japan since Jomon period, and until XX century was the main source of energy. Now it is in a comeback because the new uses found.*
- *Water purification, deodorizer, humidity regulator, fertilizer... So, it has many applications in common life (agricultural uses, food preservation, building caring...).*
- *Because the changing of dynamics in society, the charcoal traditional production is disappearing:*
- *Cannot supply all the energy we need. Cannot run engines.*
- *Nobody has the time, the sources and the knowledge to produce it.*
- *Even if we keep charcoal for industrial uses and daily products, the traditional production is not assured.*
- *To preserve the charcoal traditional making, traditional life is necessary.*

From the Jomon era until Meiji period was the major source of energy in Japan. Better techniques were imported from China in the 13th century. Recently experiencing a comeback due all the new materials and applications found in charcoal, apart from source of energy.

### Pros of production

Apart from wood, it can be made from common waste in daily life, slowing the deforestation. Also, the leftovers or the charcoal itself can be turned as a compost to fertilize and grow new vegetation and trees to replace the other ones. The pollution of the production can be covered by photosynthesis of trees grown with the own charcoal compost. It can be produced locally or industrially.

### Cons of production

While it can cover the domestic use, it fails totally in industry uses because the heat power it can provide is much lower. It affects the environment (deforestation, emissions). It takes time, knowledge, especial equipment to produce it, making really difficult an individual production.

### Charcoal traditional production, use as a cultural item and conflict

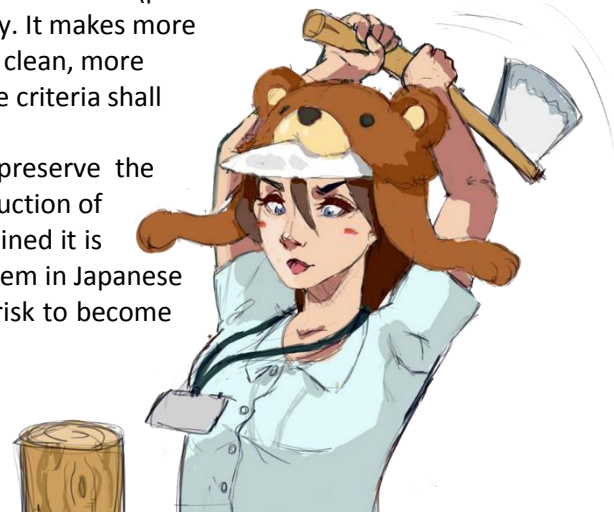
Japan has been producing and using charcoal even before there was a constructed idea about Japan. Not only the culture of making charcoal, in Japan is important as well in other cultural activities as tea ceremony, where a specific kind of charcoal is used to fit the aesthetics. Through all this time, techniques of producing charcoal changed in order to raise the productivity, so it means finally the traditional forms of charcoal making were being replaced for new more efficient ones to supply the demand.

The conflict appears because the changing dynamics of society. Since many years ago, the turn into an urban society and the boom of fossil combustibles in many countries changed the necessity of charcoal to a more efficient source, also suppressing the requirements to make it as a daily life activity: no one have time, skills, sources or equipment to do it, you just buy it if you need. The charcoal traditional production is dying with the traditional way of life. The problem is, we do really need to do a comeback?



We know our energetic model is not sustainable, but a complete regression to charcoal maintaining the current development level is impossible. With charcoal you cannot run modern industry, planes, cars... also, even if the impact is lesser, traditional charcoal production is still harmful for the environment (pollution and deforestation), especially if it has to cover the demand of the society. It makes more sense to advance in the discovering or using other natural source that is clean, more efficient and unlimited. To keep charcoal for goods production, the same criteria shall prevail.

To preserve the traditional production of charcoal is necessary to preserve the traditional way of living, because they come together. The cultural production of charcoal has no sense in modern society, because the culture that sustained it is gone. Other solution is to turn it into a specialized and unique cultural item in Japanese culture, as traditional pottery or other Japanese arts; in that case, the risk to become a mere display of folklore is coming.



### **III. Problems Facing the Region**

#### **1. Population Dwindling**

While the problem with birth rate and declining population in Japan is not a unique problem to Hakusan, many of the smaller rural areas in Japan are hit with this problem the hardest. At its highest peak, the population in Hakusan increased up to 14.5% from 1985 to the 1990s. Since then, its population has continued to decline by roughly 2% every five years. In 2010, there was a population of 110,459 in Hakusan, but this dropped in 2015 where the last statistic showed a significant drop in population with 109,321 people living in Hakusan.

[sources:<http://www.citypopulation.de/php/japan-ishikawa.php?cityid=17210>,  
[http://www.city.hakusan.ishikawa.jp/otherdata/language/en/about\\_hakusan\\_city.html](http://www.city.hakusan.ishikawa.jp/otherdata/language/en/about_hakusan_city.html) ]

#### **2. Local Culture Out-of-Date**

Since the traditional processes of the Joumon people usually take a lot of effort and time before people can reap the rewards of their labour, many of the younger generation from the mountainous region today tend not to be drawn into the traditional lifestyle that they grow up with. Instead, many of them seek “better opportunities” elsewhere, usually in the bigger cities of Japan. This correlates largely with the population decline in the area. This is also the main cause of the problems for these unique trades as there are less and less young people to continue on the traditional processes their ancestors have passed on for so long.

#### **3. Traditional Ways Threatened**

In one of our trips, we were taken to a man who was able to make his own charcoal while he provided his service to the local community around him. We were then told that he was 84 years old, and that he was the last and only person who knew the process of making charcoal in a specific way without any successor in the future.

In another case, we were taken to a family that made *tochi mochi* for a living. We were told that the process they used took about a year for the spores to fully grow and become edible for human consumption.

With the new world evolving and adapting at a high rate geared towards a world of efficiency and with the use sophisticated technology, small rural towns such as Hakusan simply cannot keep up. I believe that only less and less people will be interested in taking up and continuing the traditions of their ancestors that are barely holding on in today’s world. In about 30 years’ time there might not be any more charcoal making in Hakusan.

#### **4. The Aging Population**

As we saw in Hakusan, the population is rather old and as a few young people choose to go make their life up there, the people that make the Hakusan population are becoming seniors. And unfortunately it also reflects the aging population phenomenon of Japan. Most of the people living in those small villages in the mountain like this kind of life and actually that’s what they have always known and cannot imagine living in a big city. Because they don’t need the city life, they manage their life inside small communities and they manage to grow their own food supplies.

They sustain a good and healthy life, but the question is, will this keep going?

#### **IV. What values have to be preserved?**

- *Living with nature without damaging it.*
- *Sense of community and cooperation.*
- *Being in contact with the environment.*
- *Life-style based on sufficiency.*

#### **How can we help?**

- *Volunteering programs such as WWOOF*
- *Sending more people to the Hakusan area to do volunteer work, possibly even to be trained in the traditional arts by the local experts*
- *With these new volunteers in the community, there would be more of a chance for the local people to maintain their independence, rather than asking for aid from the government*

We found an article which was talking about a non-profit organization for the Yuki-daruma event in Hakusan, but the information about the local government and the lack of solid support when it comes to volunteer work is very much connected with other aspects of the Hakusan community, especially when it concerns young people. The article mentions three reasons why the “public-private partnerships” are attracting so much attention with regional communities.

- *“Firstly, regional policies implemented by local government officials with no experience of working at private corporations have been proved to be unsuccessful. Local government employment in Japan operates on the principles of lifetime employment and seniority by length of service. Under the Japanese system, capable young workers cannot be promoted over older colleagues, and the system is skewed in favor of generalists rather than specialists. Despite the fact that the modern global economy demands a high level of economic sense, under this system, the local government cannot make the most of those kinds of human resources.”*
- *“Secondly, local government officials tend not to come up with innovative ideas. One national bureaucrat has noted that local officials are mainly concerned with the intentions of their superiors or the national government, and tend to wait for guidance from them. It is also said that they focus on how things have been done in the past, are reluctant to try new things, and don’t want to adopt a policy that’s different to other region. This behavioral pattern arises from the fact that they are scared of failure and want to avoid taking responsibility. It is difficult for innovative regional policies to be created with this mentality.”*
- *“Finally, because regional financing in Japan is overly reliant on central government, residents do not understand local government sufficiently. According to one company executive, the reason local authorities do not have distinct, specialized regional policies is because central government hands out large subsidies to regions. This person also insisted that a ‘menu’ of regional policies provided by central government makes it difficult for private sector ideas to be developed.”*

([http://www.ps.ritsumei.ac.jp/assoc/policy\\_science/193/193\\_04\\_kawamura.pdf](http://www.ps.ritsumei.ac.jp/assoc/policy_science/193/193_04_kawamura.pdf))

I think these three points explain very well why local communities such as those in Hakusan are so reluctant to accept volunteers and volunteer programs and why the local government is so hesitant to offer funding to these communities, therefore putting important traditions and peoples’ life work at a serious risk of disappearing completely. The real question here is: how can we change this? How can we work to change the opinions of the local government as well as convince the local people to accept help from outsiders, especially young people who can carry on the work in the future. As many of these traditional arts and community works are run by Hakusan citizens with minimal help from the government, residents are very much hesitant, whether through pride or fear of losing their independence, to ask for financial aid or outside help. I think if international programs such as WWOOF were to send more people to the Hakusan area to do volunteer work and possibly even be trained in the traditional arts by the experts of these crafts, they would be more willing than pre-existing local young people to stay in the community, especially if this kind of work is what they were looking for in their own countries (for example, people like Ms Caroline from Suzu). Especially since, as we were told, there are more and more empty houses becoming



available in Hakusan, which would be perfect places for these volunteers to reside in, should they decide to do volunteer work in Hakusan.

While the local people would have to work with the government in order to make these programs happen, with these new volunteers, there would be even less of a reason to contact the government themselves and therefore maintain independence.

### **Main Issues:**

1. *Small town*
2. *In the countryside*
  - *Tourists and people not interested in visiting or living there*

## **Promoting Hakusan**

How to resolve:

- Insisting on what makes Hakusan special and rich (culturally and environmentally) i.e. traditional food and nature by creating events catering to these things*
- By the means of very touristic activities (for example skiing in winter and climbing the mountain in summer), promoting the less known parts – such as nature, species you can find there*
- Get the younger Japanese people involved and help them develop an interest in the culture and the place*

The main "problem" of Hakusan is that this is quite a small town located in the countryside, which doesn't make people want to come there. Indeed, tourists don't want to visit, and other people just don't want to live there. In order to promote the city, in our opinion, you have three main points that can be worked on: First, insisting on what makes Hakusan special and rich (culturally and environmentally). They could insist, for example, on traditional food, nature, etc. and maybe create events (such as various small matsuri) based on this stuff.

Secondly, by the means of very touristic stuff (for Hakusan, ski in winter and climbing/walking in summer), they can promote the less known parts (like make people discover the biodiversity of the place while they're walking famous paths or skiing in famous places).

To finish, make more Japanese young people come to those kind of places (school trips maybe) would make them realise that there is something else than the world they live in every day. It's when they're young that you can easily develop people's interests to something.

## **2. Students' Group Report on Komatsu region**

### **I. About Komatsu**

Komatsu is a city located in the southwest of Ishikawa Prefecture in the Hokuriku region of Japan. With the sacred mountain Hakusan to the east, and the Sea of Japan to the west, is blessed with beautiful scenery and abundance natural beauty. The modern city was founded on December 1, 1940, during World War II, although its history extends to feudal times. It is the third-largest city in the population in Ishikawa. As of 2008, the city has an estimated population of 109.285 with a population density of 294 persons per km<sup>2</sup>. The total area is 371.13 km<sup>2</sup>. Komatsu is nicknamed the city of stone/ clay, because of Komatsu's tradition to mine stone and produce clay. Komatsu is famous for its "Komatsu Rinzu"(satin), "Komatsu Omote"(tatami made from Komatsu igusa ) and "Kutaniyaki ceramics".

### **II. (A) Kutaniyaki (ceramics)**

*Kutaniyaki* is a type of pottery that is made from special clay found in Komatsu.

In the Meiji period, *Kutaniyaki* was reestablished and became an important export product.

Nowadays *Kutaniyaki* faces the problem of no successors to continue the craft.

To grasp an understanding of how the *Kutaniyaki* products are made, what steps are needed in the process from raw stone to the finished product and what problems the people involved with the production are faced with, we visited the important places, which are essential in the procedure:

1. *Hanasaka Kutani Stone Mountain (the mine, where the stone is taken from)*
2. *Taniguchi Clay Factory (where the stone is processed into clay)*
3. *Kutaniyaki artisan (finished products, suitable for selling)*

- **Hanasaka Kutani Stone Mountain**

The first place to visit was the Hanasaka Kutani Stone mountain, where the stone is taken from the mountain. It has been the origin of the Kutaniyaki ceramics for centuries. The stone is very brittle, so it is easy to take from the mountain. We were even able to break it apart with our own hands.

- **Taniguchi Clay Factory**

At the second place, Mr. Taniguchi's clay factory, we saw the exact procedure of how the stone is processed into clay. First it is grinded with a special pounder and becomes fine grained sand. Then it is mixed with water. The oversized pieces are transported back to the previous stage and can be reused again. So it is a very sustainable process, no stone is lost. The almost finished clay is formed and dried to gain its shape. The clay is then pressed into a tight shape, so that no air is left inside. The air would cause the clay to break when the product is later burned in a kiln. In its making process the clay is also dyed with different compositions of chemicals, to gain a different colour. In China cow bones are used for dyeing the clay white, but since in Japan is not enough land for stock farming, chemicals are used for this part. Also we saw a prevention against impurity in the factory, which comes in the form of a raven statue, to scare off the others birds, which could impurify the clay.

- **Kutaniyaki artisan**

After understanding the basic procedure of clay producing, we visited the *Kutaniyaki* pottery workshop. It was very close to Mr. Taniguchi's factory and the clay is famous for its very soft characteristic and popular among artisans. At the workshop we could see how the clay is transformed into pottery. The workshop has been owned by a family for several generations and they even developed their own methods of how to produce and paint the pottery. The clay was always painted after burning in the kiln, but nowadays they paint it before the burning. The paint has a different colors before burning, so they have to mark the colors. In ancient times the clay was burnt in a kiln operated by wood, but nowadays they use electric kilns as well. The different ways of burning it also creates different effects on the finished product.

**Problems**

- Because the workshop is a family business, it is threatened to stop because of no successors.
  - Because the *Kutaniyaki* ware is rather expensive, there is no big consumer pool.
- There was not a single student among our group who purchased one of the pottery goods, even though they were truly beautiful.

**(B) Stone Mines**

After visiting the pottery workshop, we moved on to the Stone Mines of Komatsu. The mines have been used for hundreds of years and have just been awarded as national heritage in spring, 2016. The mined stone always had many uses in the local area. It is for example used by local artisans, who make sculptures out of the stone.

- **Traditional Bridges**

Also, a unique type of bridge is constructed using the stone from the mines. These bridge are unusual as due to their design they are held up by gravity and built without any cement. We learned that they are an important piece of Komatsu's heritage that should be preserved.

**Problems**

- In recent years the industry has suffered from a lack of manpower as younger people move to urban areas. Due to this many of the mines have become derelict and are no longer safe to enter.
- In the mine we visited were only two persons left working. An elderly man and his grandson, who moved back from the city to Komatsu. That young people come back from urban areas is so rare that it was even on the front page of a local newspaper.



### **(C) Sculptor**

Sculptors have been working in Komatsu for many years and it has become a very skilled and respected craft in the region. The local artisan's work was very appreciated and famous, as we could see in the photos that were portrayed, because many notable people had visited the artisan's workshop.

#### **Problems**

- When visiting the stone sculptor, we could see the problem of the aging population. There was no younger apprentice in sight to continue the business.
- Even the way of building the traditional bridges could be lost in a few generations.

### **III. Future issues and problems**

As we experienced in all of the different places we visited, the decrease in young population is one of the main issues. In 2015 the decline in population of rural areas in Japan was about 650,000. The younger people move out to bigger cities like Tokyo and Osaka to find jobs. Not only Komatsu, but every rural area experiences this kind of decrease. It is a huge problem for the continuation of many businesses and traditions. The man in charge of the mines and his grandson are one of the examples where they are the only ones left working inside the mines. Moreover the art of making *Kutaniyaki* is also in danger, because of the young generation not showing interest. If the young people leave, then the future of traditions like the stone mining and the *Kutaniyaki* pottery will be gone and future generations will not have a chance to experience it. They will not have the chance to decide to follow a similar career, because the traditional knowledge will be lost forever.

### **IV. Possible preventions of decline**

#### **Young people**

- In order to make young people stay, creating good work conditions and opportunities should be a priority. For instance good salaries and an easy access to the workplace.
- Encouraging young people to open their own business in smaller rural areas after they finished their studies, rather than looking for a job in an already existing company could also help. This will help the rural area attract more individuals as it creates more jobs.
- Cheap training should be available, so that the young people do not have to pay a lot.

#### **Competition**

- Komatsu is working on improving the levels of planned sales and production worldwide, so the factories can be better known.
- In order to keep up with other companies and to keep up high standards, the Komatsu clay factory for instance should always conduct the clay manufacturing in good factory conditions, without changing the clay quality.
- Also having a good customer service will secure the customer's trust.

### **IV. Possible events to raise interest**

We thought of an event we could organize to raise interest in *Kutaniyaki* pottery.

International and Japanese students should try to make their own pottery products.

Through this the students will not only see the process, but can be actively involved.

After the students finish their products, they could hold an exhibition in collaboration with the local community of Komatsu.

This event aims to:

- Introduce the process of the making of *Kutaniyaki* pottery
- Spread the knowledge about handicraft from Komatsu, not only in Japan, but international.
- help to sell affordable handicrafts from Komatsu in the exhibition.

### **Contribution of the students**

- **Voluntary work**

The students of Kanazawa University, as well as other schools, should be involved in a program to assess the potential of the regions, experience the workplace and help improve the conditions. We thought that an

insight of the students into the workplaces and communication with the local people could help to figure out problems from a different perspective. Also the experiences and knowledge of students can contribute to this. Maybe some of the students can share their knowledge about technology in their home countries and local people could revise their working techniques, while combining it with their traditional ways to preserve sustainability. Therefore the university should initiate internships for the students, to evaluate the conditions, find out the problems and figure out solutions which should contribute to an improvement.

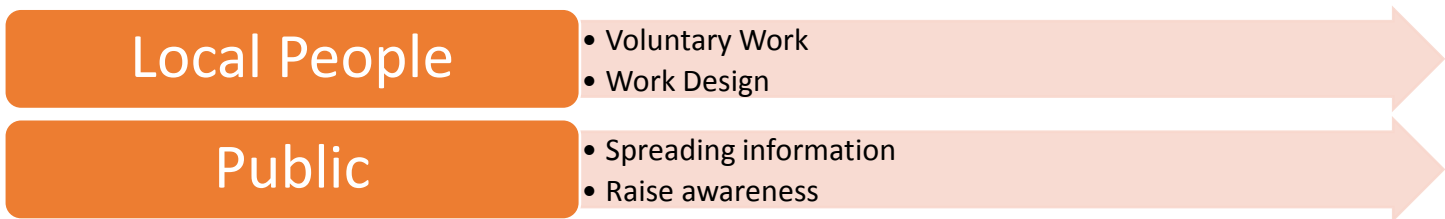
❑ **Community service (university program) :**

- Make an international student organisation
- Internships for the students & young people

**Assess the potential of the regions → Create theme → Create programs →  
Train local people → Implementation → Evaluation → Find out the  
problems → make solution → problems decrease → improve**

• **Public awareness**

It is also very important to spread information and raise awareness of the problems in Komatsu and other rural areas. If the students spread their experiences and knowledge to their Japanese friends and friends in their home countries, the problem of depopulation will gain more interest.



• **Work Design (concept and idea)**

**Technology : safety → eco-friendly → easy to use → efficient**  
**Society : assess the characteristics of local people → find out their potential →  
community empowerment**

We all had the feeling that further insight into the working places and communication with the local people could help a lot to solve problems. It is therefore really important to all of us to continue organizing related courses and stabilize relationships between the students and local people.

**3. Students' Group Report on Noto peninsula region**

Ishikawa Prefecture has abundant of nature and traditional culture and it is also internationally recognized as Globally Important Agricultural Heritage Sites (GIAHS) in Noto, Hakusan UNESCO Eco-parks, RAMSAR Convention in Kaga-region and others. However, most of the international students, do not have a chance to learn and experience those regions. Therefore, the aim of this course is to introduce the students the diverse nature of Ishikawa Prefecture and its culture.

Because of its diversity, Ishikawa Prefecture and Kanazawa City has garnered international attention for its traditional craft, agriculture, eco-parks and many more. Through this course, students also learnt about the various challenges and issues regarding sustainable development and conservation of the diversity in Ishikawa Prefecture. At



the end of the course, the students presents their findings and learning outcomes at a workshop together with the region's experts to discuss about the needs of the local people as well as to find out how the students are able to contribute for the regional development. Through the discussion outcomes, we hope to further improve the community learning classes for the students.

## 1 GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SITES (GIAHS)

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GIAHS is a project that was started in 2002 by Food and Agriculture Organization (FAO, based in Rome, Italy), the United Nations agency that aims to ensure food security for all. GIAHS was founded against a background of an overemphasis on productivity by modern agriculture that resulted in various environmental problems such as deforestation

and water pollution throughout the globe, causing destruction of unique local cultures, landscapes and biodiversity. The overall goal of the project is to identify and safeguard Globally Important Agricultural Heritage Systems and their associated landscapes, the traditional agriculture, agricultural systems and agricultural diversity, and knowledge systems and land use through dynamic conservation from the negative effects of modernization in order to pass them on to future generations. Thus, the main purpose of GIAHS is to seek maintenance and conservation of agricultural systems to pass them to future generations, through the granting of special designation. As of now, 5 sites have been designated in Japan and "Noto's Satoyama and Satoumi" which expands across Noto peninsula which is located in Ishikawa prefecture, along with "Sado's satoyama in Harmony with the Crested Ibis" of Sado City in Niigata was granted special designation in June 2011 as GIAHS (Globally Important Agricultural Heritage Systems) by the Food and Agriculture Organization of the United Nations (FAO), the first from Japan.

## 2 DESIGNATION OF NOTO'S SATOYAMA AND SATOUMI AS GIAHS

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Noto's Satoyama and Satoumi was selected as GIAHS site of its high merits on the following points:

- Traditional agricultural, forestry and fishing methods and land use which protect biodiversity
- Diverse biological resources in Satoyama and Satoumi
- Spectacular Satoyama Scenery
- Traditional Technologies to pass on
- Cultural and Religious Festivals Related to Farming that have been conserved through history
- Satoyama and Satoumi Use and Conservation Activities



## 3 NOTOJIMA

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Notojima is a town located in Kashima District in Ishikawa Prefecture, Japan. As of 2003, the town had an estimated population of 3187 and a density of 68.13 persons per km<sup>2</sup>. The total area was 46.78 km<sup>2</sup>. On October 1, 2004, Notojima along with the towns of Nakajima and Tatsuruhama (all from Kashima District), was merged into the expanded city of Nanao and no longer exists as an independent municipality.

## 4 WAJIMA MORNING MARKET

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The Wajima Morning Market is one of the most famous and oldest morning markets in Japan. We didn't cover this in our Noto study tour but one of our groupmate did. According to one of our groupmate's experience, it was not as grand as fame would suggest. Still, in his opinion, the market is quite lively and he notices the customers range from both local people as well as foreigners and tourists alike. The two main reason for the market's fame would be the fresh fishes caught locally and the lacquer ware craftsmanship also known as Wajima "Nuri" which is also a leading traditional Japanese craft. However, from what he notices, the fishes are often purchased by the local people themselves and thus, it is an important part of the local economy. Meanwhile, the lacquer ware seems to have been made to attract the tourists.

As the market is still part of Wajima (one of the bigger towns in Noto area), it seems to be still thriving and both tourist as well as locals give it enough commerce for it to continue existing. The market offers a stable medium to

sell one's produce, but at the same time, it can still be relatively difficult if one lives in the more distant areas of Noto, such as Suzu. On top of that, the market is only open until 12pm, it might be a little challenging for some residents in the area to make their way there with their fresh produce. But for those that live near the market (it is situated near the sea), it is an inseparable part of their livelihood.

## 5 EXPERIENCE WITH HELPING LOCAL FISHERMEN TO FIX FISHING NET

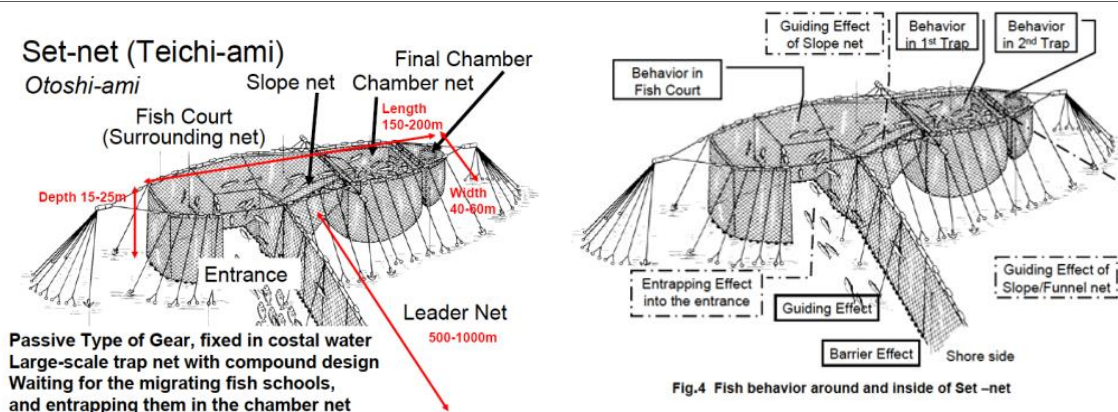


From our experience of helping some local fishermen to fix their fishing net, we really think traditional fishing was hard work. There are 2 difficult parts regarding this method. First, after they put the cage into the fishing area, they have to wait about 3 days or more for the fish to catch bait and enter the traditional net used known as *teichi-ami* or set net. From time to time, they have to check the net for fishes and also, to clean it before putting it back into the fishing area in the sea again. The major difference of this and modern fishing is that the amount of the gathered fish is uncertain and unstable as it is very dependent on many different factors such as the weather, the stream of the ocean and so on.

However, by using this traditional method, we learnt that the local fishermen are really considerate about excessive productivity as well as sustainable fishing and intents on preserving the fish population by using specific net that allows smaller fishes to pass through. Comparing to modern methods used today, the fishermen differ in terms of overemphasis in production and they aim to catch as much fish as they can. Preservation of the sea creatures are not their priority.

Secondly, fixing their net takes a lot of time and efforts. The workload usually requires the whole family to help out as they have to fix their each time they gathered enough fishes. Usually, the whole process of fixing can take about 1 month time, according to them. If one compares this with the modern method used these days with more resources and man power, it is easier to keep fishing every day.

## 6 PROBLEMS AND ISSUES FACED IN NOTOJIMA AND SOLUTIONS TO OVERCOME IT



One of the many issue or problem faced by the fishing community is that they clearly have to spend a lot of time to catch fishes since traditional method are used. This is not much of a motivation for the younger generation and it may be one of the factors that led them to move out to seek for a good job and community to live in the city. In our opinion, we think that we need to cultivate motivation to work from these rural areas. We can teach them to see and understand the value of traditional fishing – by providing a good training school for fisherman to inherit the knowledge of traditional fishing using *teichi-ami* as well as to make them understand the cause that the locals are fighting for and hopefully, make them love their region.

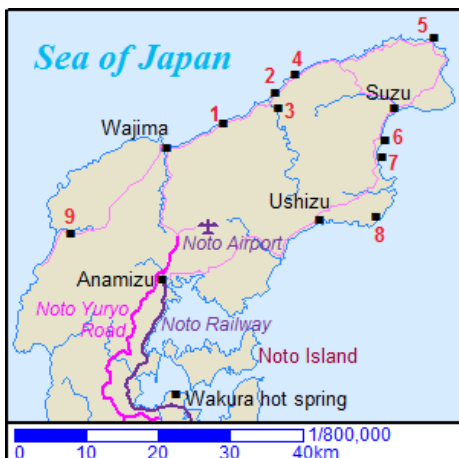
In regards to smaller, difficult to access area in Notojima, it is important to ensure that better opportunities, accessibility to resources and platforms to sell fresh produce are provided for those living in the smaller community. In addition to that, we should also provide a better and efficient transportation service to encourage tourism and for people to visit Notojima. People in Notojima are living in contentment but these days, the advancement of technology as well as job opportunities has led more people to leave these rural communities. While it's possible to



purchase and integrate new technology in these communities, we are reminded that these simple, traditional and basic lifestyle is better for us and for our nature.

## 7 SUZU CITY

Suzu City is located at the top of the Noto Peninsula, surrounded by the ocean in three directions. The total area of Suzu is 247.20 km<sup>2</sup> -- two times smaller than the total area of Kanazawa. However, the population in Kanazawa is 17 times higher than Suzu. In 2016, the population of Suzu is 15362. Unfortunately, more than half of the Suzu population are over 65 years and the percentage increases as years pass. In contrast, the number of children are reducing and is predicted to continue to decrease in the future.



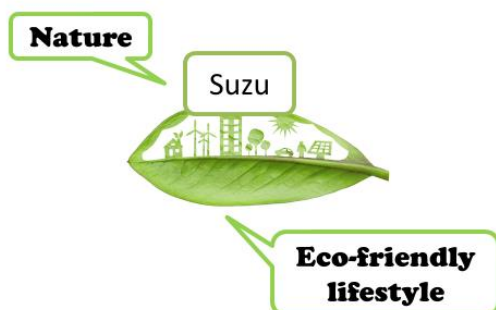
珠洲市(石川県)の人口と世帯 《人口推移》



【出所】 総務省 国勢調査及び国立社会保障・人口問題研究所 将来推計人口、総務省 住民基本台帳に基づく人口、人口動態及び世帯数

## 8 GOOD VALUES OF SUZU

There are two impressive values or 'treasures' that should be preserved in Suzu which is the nature of Suzu and the eco-friendly lifestyle practiced by the local people. Due to its geographical location, Suzu is one of the many national parks of Japan rich with biodiversity and many beautiful landscapes. In this place, we can discover the beauty of nature while enjoying scuba-diving or going to the onsen.



Another point worth mentioning is the eco-friendly lifestyle of the local people. We had the chance to visit Ms. Caroline during our camping trip in Suzu. Her goal is to try her best not to emit any toxic waste through her sustainable lifestyle. As we all know, plastic cannot disintegrate and for that reason alone, it is strictly harmful to the environment.



We learnt from Caroline that through her sustainable lifestyle, she is reducing the carbon footprint and negative effects to the environment around her by not using plastics or any chemicals in her organic farm. Hence, all the things in her farm are connected to one another. For example, she raise chickens and use their waste secretion as fertilizer for her rice field and in return, use certain parts of those rice to feed the chicken. All in all, there are no wastage and it isn't harmful to our planet.

## **9 MAIN PROBLEMS OF SUZU CITY**

The trip has also opened our eyes to understanding the issues faced the local community and one of it how few are the young generation remaining in Suzu. In the community we've visited, there are only a few household in that area and most of them are old people and young children. In fact, there are only around 100 people living in that area. The decline in the residential population especially relating to farming and forestry, is probably one of the key issues faced by people in the Suzu region.

Secondly, the younger generation are increasingly moving into urban cities to pursue higher education opportunities. They usually remain in the cities as they adapt with urban lifestyle and seek to get better job opportunities. In the long run, they may find it a struggle to reimagine a life in the rural community where everything is nothing but traditional.

Lastly, living within a community far away from the convenience of modern life such as lack of electricity, supermarket, and entertainment places and so on may prove to be unattractive to the younger generation. Accessibility is not really convenient as Suzu is far deep within mountain and forest, and all surrounded by nothing but nature. Personally, we think that these are minor factors that led them away and into the urban lifestyle instead. The key reason is that there aren't as much job options in their hometown in Suzu except, perhaps agriculture. Perhaps, job opportunities might entice them to return to the community once again.

## **10 SOLUTIONS TO OVERCOME THE ISSUES IN SUZU CITY**

In order to share Suzu's richness in nature with more people and to achieve living in harmony with nature by having a sustainable lifestyle, some of these recommendations can be considered and implemented. Due to the lack of man power and human resources, fostering volunteering programs to work with the local community may be a good suggestion. Another would be to involved different stakeholders such as the authorities and the local community to cooperate to provide more information about Suzu, to conduct nature guides and promote ecotourism for the visitors. By doing so, we can increase effort to conserve the rich nature in Suzu area and raise awareness for the community in Ishikawa or Hokuriku region to know more and visit Suzu. It is also vital for core areas to designated and set up to protect the biodiversity and the ecosystem within this region.

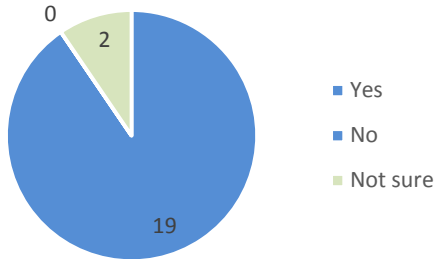
Not only that, educational institutions can also get involve by organize programs or trips to give the students an opportunity to integrate with nature and the local community with various activities such as camping and working together with the local residents of the area. But before those trips, it is important to equip the students with basic knowledge of the local area for us to better the cause the local are championing such as sustainable lifestyle in hopes to help improve the region and overcome their issues.



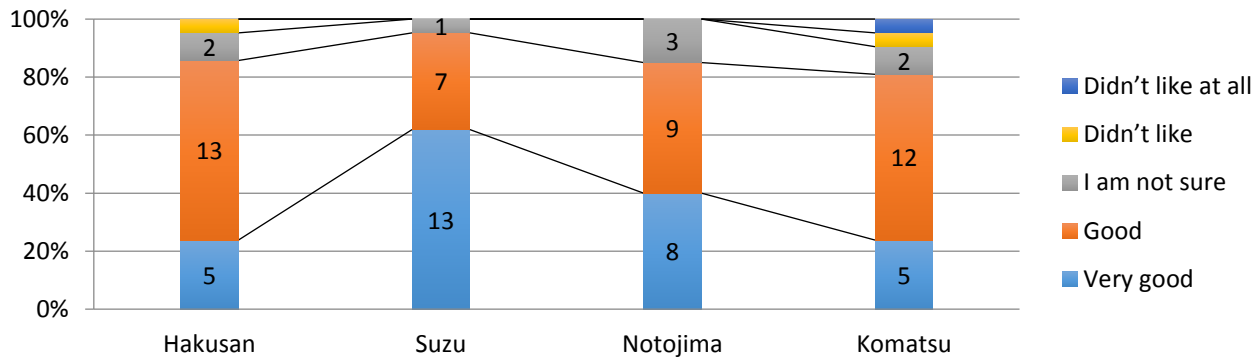
# ANNEX I Questionnaire on the Curriculum

After the fieldtrips, the questionnaire surveys were conducted for the students.

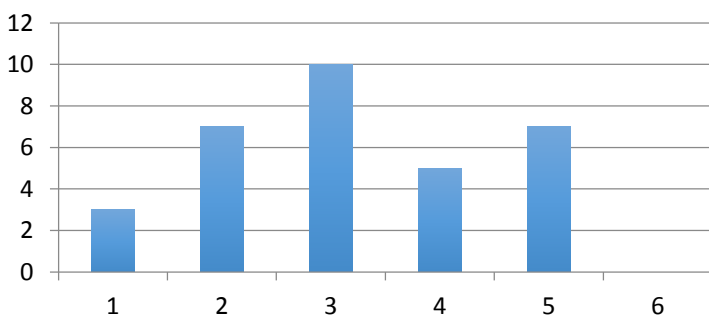
## 1. Did Biocultural diversity course helped you to understand more about community lifestyle?



## 2. How did you liked the community field trips

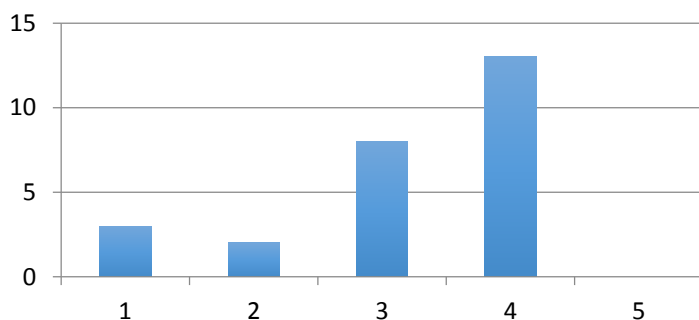


## 3. What did you liked the most in Hakusan trip (can choose more than one)



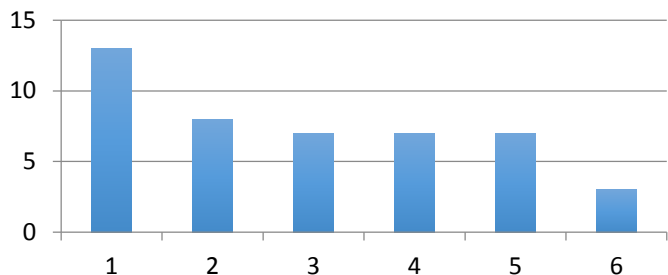
1. Wood chopping
2. Learning about charcoal making
3. Traditional food making with Tochi chestnut
4. Shiitake cultivation
5. Communicating with local people
6. Others

## 4. What did you liked the most in Komatsu trip (can choose more than one)



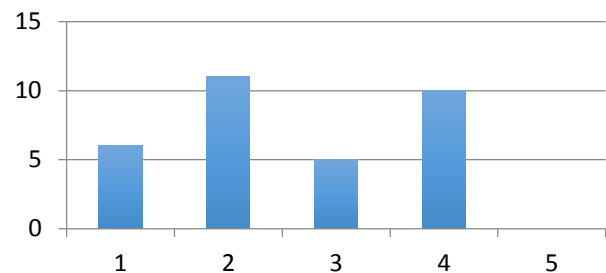
1. Visiting the Mountain for clay production
2. Listen about the Clay making in the factory
3. Visiting Kutani-yaki pottery atelier
4. Visiting the stone cutting caves and stone sculptures
5. Others:

**5. What did you liked the most in Suzu trip (can choose more than one)**



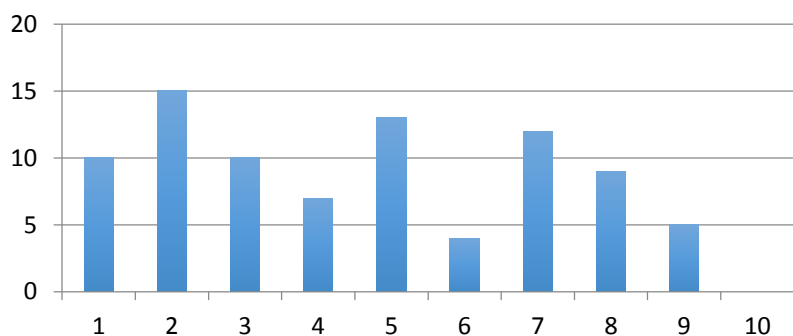
1. Helping in the community
2. Communicating with local people
3. Learning about making traditional food
4. Overnighting in the village
5. Enjoying beautiful scenery
6. Others:

**6. What did you liked the most in Notojima trip**



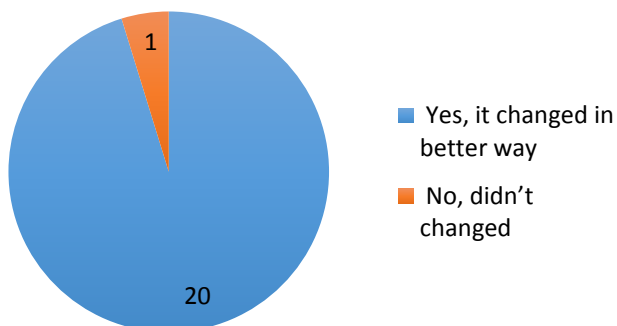
1. Communicating with local fisherman
2. Helping with fishing net
3. Learning about fishing
4. Enjoying beautiful scenery
5. Others:

**7. Please choose the activity that you would like to do more in the region (can choose more than one)**

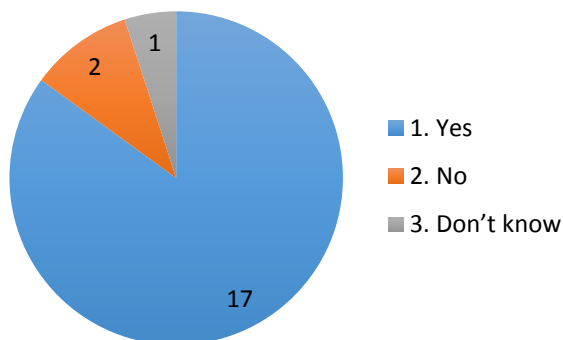


1. Communicate with local people
2. Volunteering and helping the community
3. Homestay at local people's houses
4. Visit the local craft factories and ateliers
5. Participate in local events and Festivals
6. Discuss the local problems with the regional people
7. Have a cultural activities by making some souvenirs
8. Learn about local lifestyle
9. Lean about local cuisine
10. Others

**Was your attitude changed to the regional lifestyle after you attended the classes?**



**Did you became more concerned about regional future?**



# Annex II Students' Comments on Each Trip

The students' comments below were collected after the each trip.

## 1. Nature Education (students' comments)

- Nature Classes is alternative way of learning – through feelings, emotions. You don't take a lot of information, but it can interest people to learn more individually. During these classes we see community lifestyle from inside – see how they live and nature around them, so it is much easy then read it in books. Actually, you probably can't find such book and this is problem of traditional learning. As for me, it is not the first time when I see countryside lifestyle, so before Nature Classes I know a lot about it. But it still help me to find some Japanese specific lifestyle and I appreciated for that.
- After field trips, I learn that Nature is a huge treasure we should protect. Living with nature provide many knowledge for example, how to plant vegetable, how to make things by ourselves. People who live with nature seem to be happy then people in big city because they eat well and have a slow life. However, there is some problem, many young people are moving out to the city and local community is going to be an elderly community.
- The nature classes helped us to understand community lifestyle by allowing us to connect with nature. We learned how to utilize edible wild plants for food purposes, and we learned how to experience the outdoors in a way that we wouldn't have thought about before (such as feeling nature without sight, listening to nature sounds, identifying animal faces, etc). I think we learned in a way that was easy and also interesting so it was easy to remember most of what we were taught.
- From the nature, we will know how we should adapt to the nature, because our life depends on where we live. From those condition, people will adapt to the kind of nature condition and find the best way to live and survive. So, from nature classes, we would feel about the condition of the nature, then when we saw how do people live, it helped us to easily understand why they chose that way to live their life or which way is the best for their living.
- In Nature class, we learn to interact with nature, feel of nature, and imagination with nature. Interaction with nature makes us more familiar with nature. Nature teaches us how to adaptation. Knowing the nature, made us more easily recognize lifestyle community in an area.
- The nature classes helped me understand community lifestyle by having us volunteer and help with the locals in different regions. Although we were only introduced briefly to all the different types of livings, it gave us a big insight to just how much effort is put into their lifestyle. Most of the communities we visited were self-sufficient and dependent on their local trades to make money, and even then the money was just enough to keep them going and live a peaceful life in the countryside. It also gave me more of an understanding as to why many younger people want to find jobs in the cities, where their long hours gave them a fixed amount of salary rather than waiting for crops for years and not being financially secure in the process. I personally admire how hard the people in these communities work to keep up their traditions, but am not so sure if I could live the same lifestyle they do.
- The Nature Classes has allowed to be in the field and experience these things for myself – even if it's just a tiny glimpse of the community lifestyle. By personally experiencing it hands on and seeing it for myself, I get a different perspective to what they're doing and it helped me to understand their lifestyle a little better. By being in the field, I also get to interact with them to better get an understanding of what they do and what are their daily struggles and challenges. Although I would prefer to go back on a constant time period as it will help me to understand their problem better, what I've got to experience is more than good enough. I feel more field trip classes like these would help students to further understand the interconnected of nature and its local community as well as how our actions causes so many consequences, be it good or bad because of this interconnectedness. It help me to be more grounded and understand the local problems that ultimately affects the bigger community itself: the world. It also opened my eyes to see the reality of how fragile these valuable intangible heritage and culture are and how they are at risk of being gone forever if we don't do something about it. I also got to see and understand how sustainable lifestyle plays a part in helping to keep the balance of the eco-system and put wise management of natural resources to good use. But at the same time, I am seeing the danger of how lack of interest and awareness can pose a threat to the intangible heritage within the Ishikawa region. Overall, I am grateful I got to enjoy the beauty of the community lifestyle that goes hand-in-hand with the nature here in Ishikawa.
- The nature classes were very helpful because even though I went in the nature many times, this time was a little bit different as I learned to appreciate nature a lot better. For instance, dedicating time to listen to it and doing various activities made me realize again how important it is to be appreciative of nature. It also helped me understand why many people choose to live in the countryside. For instance finding food in nature and cooking with it without even having to go to a supermarket, and live a healthy and chemical free lifestyle eating this way. Moreover, I understand



how difficult and how long it is for someone to not just go in a supermarket and grab the product, but wait for it until it grows and is then ready to eat. Also weather is a very important factor that helps. While we did the nature activities it was mostly rainy, however that is something good for nature and for the plants to grow.

## 2. Place-based Learning in Hakusan foothill region (students' comments)

- In Hakusan, the community is very small and continuously getting smaller, but those who do live in the community continue to use traditional methods, with food (such as the chestnut mochi and the grass dango), mushroom cultivation using logs and mushroom spawn plugs, and the creation of charcoal from local wood. Sadly, as the community is diminishing, so are these traditional efforts, and the results of the effort that is put into this work is usually not equal to the energy spent during production. It appears to be a very calm and fulfilling lifestyle, but not necessarily for young people who tend to want to move into a large city/overseas or go to university/work in order to make their own impact on the world. It is a bit concerning, but I think that if something major is not done to improve the quality and quantity of life in this region, it may not last for much longer.
- The area of Hakusan suffers from the same thing the other areas do. The biggest issue to them is the difficulty of transportation and lack of higher education, though this is more of an issue in places such as Suzu. However the Hakusan lifestyle and its peculiar traditions are interesting and worth preserving.
- Merits: respecting nature, knowing how to use what nature offers (here living with what the forest has to give and make food from it for example). Environment-friendly life. Demerits: maybe being too rural. It's really good to manage to respect environment this far, but maybe the means are sometimes too archaic. It makes people flee and don't want to live in the village anymore because the living conditions are too harsh. And nobody is there to learn those traditional ways anymore.
- Hakusan has special characteristics of region, so that make Hakusan people have specific lifestyle. The future prediction: Hakusan has natural resources that can be used as biofuel. Thus, it can become a model as "energy-efficient" region.
- Utilization of natural resources can be used as income for local people in Hakusan. 1. One of potential natural resources in Hakusan is charcoal. Wood charcoal has a high carbon content, so the calories produced are also has a maximum value. This potential resources can be used as income for local communities in Hakusan. 2. Utilization of natural resources as a source of foods. Most of areas in Hakusan is forest. Local communities use the forest for mushroom planting. 3. Living in the village will be more environmentally friendly (eco-friendly).  
Demerits: Hakusan is a mountain area. The problems occur when the winter comes. The thickness of snow in Hakusan area are approximately 3 meters. Therefore local communities should be able to adapt to natural condition, or move to another place. Hakusan is a region that is rich in natural resources. In the future, Hakusan region will still maintain its sustainability, both in terms of nature or lifestyle of local communities.
- In Hakusan I really enjoyed learning about the different edible wild plants that were in the forests and how to make traditional food using only these local ingredients. I was able to see a wasabi plant for the first time and taste it. Although I really admire the traditional ways that the people make certain foods and products of the region, some of these are simply unsustainable. The growing of mushrooms and spores to become edible takes at least a year or more to cultivate. It's a slow process with even slower rewards. If you put a lot of effort into something and don't get the reward you are looking for, especially for people who are concerned with money then this lifestyle is definitely not for you. This is part of the big reason why I think not many people want to stay in the countryside to work locally
- I was very impressed at how much thought and concerns these people have when it comes to preserving and conserving nature. Even when it comes to maintaining a certain lifestyle or livelihood such as fishing, the community were not going to do it at the expense of corroding nature and the ecosystem. It's not about taking everything to the maximum but only taking and using what you need. They understand very well about the importance of maintaining a balanced ecosystem. However, once again, lack of man-power is also a highlighted issue as there are little to almost none young generation that is inheriting these set skills or traditions. Another seemingly negative side of sustainable lifestyle is that it's not very convenient and most of society have sadly become used to living a life that's not necessarily very eco-friendly. While changing lifestyle is not impossible, complacency within humans have definitely made it slightly more difficult. As for their future, like Hakusan, I am also quite concerned because of the lack of various job opportunities available in this region has clearly force the young generation out into the cities. Lack of awareness and interest in preserving the region's tradition and lifestyle may be putting these local communities of losing these intangible heritage forever. It was very eye-opening and interesting to see all the tedious processes involved in producing and obtaining raw materials such as clay and the stone. These raw materials then go through more processes before they are turned into work of art. Because it's time-consuming and done by hand, not many artwork can be produced at a fast pace. While the good points are obviously how they wisely managed and used local resources and turn them into beautiful artwork, the time-consuming aspect and tedious process may be their weak point. Once again, lack of manpower and

with the younger generation seemingly being not interested to inherit these intangible cultures and heritage. This can soon be a huge problem for the whole of Ishikawa prefecture, including Komatsu with so little people in the community who are still involve in doing this. In time, if not much is done to preserve these heritage, these art forms will slowly die away with their current culture gatekeepers. While I understand that these young people seeks out better opportunities, I truly believe that more needs to be done to preserve these important works. Clearly, the lack of awareness and interest in preserving the region's tradition and art form put them in danger of ultimately losing this beautiful heritage for good.

- While we visited Hakusan I could see that the village lifestyle was very simple and quiet and everything was very traditional. However there were only few people who live there and majority was not very young. Since there are people who are getting involved in attracting the young generation to come and encourage them to be involved, hopefully those traditions will continue to prosper in the future.
- Hakusan was a very interesting region to visit however it seemed as if many of the local values and skills could soon be lost due to a younger generation uninterested and moving to larger urban areas where they feel their futures lie. It seems concerning as many of the skills used by the older generation could soon be lost which would be rather sad as they are an important piece of cultural heritage, something distinct to the region which defines it and its people from other parts of the world, it is an identity. While this would be sad I can at the same time to an extent understand many of the younger generation wishing to move to more urban areas in a changing world and would not look at this in a completely negative light when you look at their individual situations and desires in life with what they would like to achieve. The merits of the village lifestyle seem to be apparent in a few ways. One is that socially the society is a tight knit group, where everyone knows each other and there is a community feeling to the region of working together and helping each other out. I honestly am not sure about the future of the region but believe we could see it slowly going into decline as older generations pass away and perhaps people will stop living there in large numbers altogether if there is not some type of regional revival.
- Hakusan is the place where surrounded by nature and also nature resources. That's the reason why local people can use all of those resources wisely to produce goods and food for their life. I think the problem of this place and also others place we have been is about depopulation because of lacking of school and job. For me, this thing was my first time to do this kind of thing, so I was so excited and feel active to learn everything from them.
- People who live in Hakusan know exactly how to live in harmony with the natural environment surrounding them. Although it is not easy to find food during the winter, they manage by their own ways to live with it. However, the problem is lacking of young labor. Also because of these difficulties, the young people tend to leave their small hometowns to find jobs and other opportunities in the city. It leads to the result that some traditional jobs have nobody to continue and develop in the future.
- There are a variety of optional jobs are the most interesting things in the Hakusan such as wood chopping, charcoal making, traditional food making with Tochi chestnut, Shiitake cultivation. It turns into the unique lifestyles in Hakusan in the present and in the future as well. However, for those who are professional at their job are the old people. An old man who are an expert at charcoal making are around 80 years old. Moreover, for traditional food making with Tochi chestnut are almost the middle-aged person. It has rarely to see the young people working here. In the future, there are the potential works as well as the lack of the young people working in these potential jobs as well.

### 3. Place-based Learning in Komatsu region (students' comments)

- I think that Komatsu had the most valuable type of traditional art of all the regions. Komatsu pottery can be very valuable when it is made properly, and it is very useful for everyday life. Not only this but the Komatsu stone is also very valuable and able to be sold throughout the region for sculpture-making, building and so on. The only problem is that many people don't know about these two traditional aspects of Komatsu, and therefore, the people doing this kind of work don't receive enough recognition of funding to the level that they deserve. Not only this, but as there aren't enough people in the area to help with moving the stone and the clay, as well as work in the factories, the work is slow and requires a lot of effort. This could be improved with volunteer work and outside assistance.
- The areas in Komatsu we visited were different. The clay making art will stop in the future, unless someone willing takes up the tradition. The caves and mining however employ more people and the stone is used in various ways, so I think that will survive in the future even without outside assistance.
- Komatsu has many natural resources which when used as a products it will be very valuable. Merit: Nature condition as resources are still available for long time. Demerit: Social condition as human resources is decreasing. In this case, not many local people (special for young people) making products, such as kutaniyaki and stone products. The future

prediction: Komatsu is available with natural resources, so if there are many ideas for the most appropriate technology and optimum community empowerment, it will be prosperous.

- 1. One of potential natural resources in Komatsu are materials (mining prospect), such as claystone, mineral rocks, etc. Local community uses these resources as livelihood. 2. Preservation of culture. Business of local communities passed down from generation to generation. The example: Kutaniyaki. 3. Mining activity in Komatsu relatively simple, so that environmentally friendly (eco-friendly). Demerits: Fewer young people. My opinion about the future of Komatsu region: Komatsu is a region which rich of natural resources. Komatsu have sustainable culture, because passed down from generation to generation (Kutaniyaki). Environment in Komatsu area is well maintained, so that environmental friendly (eco-friendly).
- The trip to Komatsu was interesting, especially seeing the stone sculptures and the caves. I think we learned about ceramic making but I think this trip had the least amount of connection with nature but more about the area and lifestyle of its people. We learned about the caves and how there were only three people working on these caves, but two of those people are over eighty years old. It seems similar to the case of Hakusan where the trade is in danger of dying out. Although kutan-yaki is a very beautiful way of making ceramics out of clay, not many people know about it. I think if there were more education and promotion on the local productions of these regions, more people will be interested to learn about the trades and even start spreading the word about it.
- Komatsu has many positive things, like it provides people with some of the best quality clay, for art or other purposes. However even though people are interested in pottery, in Komatsu there were not many people left who were in charge of this so it is hard to tell how this is going to be in the future. And like the other prefectures, there are not many shops around or various things to do to attract people. However, because there are people who still try to raise awareness and remind younger people of these prefectures and of the particular things they have to offer, than maybe things will change into better someday.
- Going to Komatsu, I learn about one tradition craft that called Kutaniyaki porcelain. Kutaniyaki is very well-known in this region. There use clay from mountain to make it. It seems that there's a problem that the number of Kutaniyaki artist is decreasing. Not only Kutaniyaki, there is a special technique of stone mine in Komatsu that was recorded as Japan's national treasure. Sadly, after this generation of artist, it seems like there is no one will continue this traditional technique.
- Komatsu is the place we went to see art craft that was made from famous person in Komatsu. There was a studio and also café that we can learn the way how to make Kutaniyaki. I think that was good idea to make it like that I mean doing studio to make the art craft and also opening café for person who is interested about Japanese art craft to come and try because they can preserve their region and at the same time they can promote their region to others person. For me, this class makes me aware about being lost of region in my country. It also makes me want to find the way to preserve region in my country because I might be the new generation who knows about region and I can teach or tell to next generation about it.
- Komatsu for me was famous only for having the airport but they have cool nature that I never known about it before. One famous nature in Komatsu is a stone that not similar with another region, because it is softer and they are use that stone to make a beautiful ceramic. How to make a ceramic from a stone? They use the stone grinder to crush a soft stone and move to the next step until it is be clay and then we can use the clay to make a ceramic. Moreover, they have a famous artist who created a beautiful tea blow and ceramic. They are using a nature in their region and develop to be a good product which useful and beautiful. The product has good shape and identity. Even though, it is not higher value products but it has good value when you touch and use it. However, I learned about how we use our nature and how the people continue to work in their hometown with their family.
- The merit here is that the local people can develop their business by the local natural resources. Unfortunately, this is also the demerit when those natural resource cannot be recovered. The rock cave and even the soil material for pottery being used are renewable resources and in the future, this will turn to be a problem. Only going there and see what the local people do and feel how difficult their lives are can make students truly understand the community lifestyle. These things cannot be learn through theory classes or pictures in an effective way like the Nature Class can do with its field trips. It also helps to improve my knowledge about natural environment and somehow affected to my lifestyle.
- Visiting the mountain for clay production, listen about the clay making in the factory, visiting Kutani-yaki pottery atelier, visiting the stone cutting caves and stone sculptures are the main parts that I have experienced. The merits of this Komatsu are their own mountainous geography advantages. However, the main trends of the village lifestyle are that there are not many young people are interested in the available jobs in their hometown.



#### 4. Community-Service Learning in Noto peninsula region (students' comments)

- In Suzu especially, while the Satoyama lifestyle has many benefits on the environment and the world itself, it takes a lot of work and every day maintenance in order to keep it flourishing successfully. Not all farmers have as much initiative and independence, so it may be harder for them to improve the situation much more without outside help. However, I think it is a very calm and fulfilling type of lifestyle and it must be worth it to be able to sit down to food you grew yourself rather than something bought from mass production.
- The Noto regions Wajima city is an example of a still active and surviving city since it has better transportations and is an attractive city also for people outside the Ishikawa prefecture. The lifestyle in the more rural areas of Noto are harder and much more demanding than most people are willing to adopt. The lifestyles themselves are rewarding and peaceful, but there are an increasing amount of people who have lived amongst modern technology and cannot survive without it and more importantly, doesn't want to survive without it. To make areas such as Suzu more appealing either the people's mindset or the accessibility of these areas need to be changed. It might be easier in the long run to change the area, even though it will take many years, because people are stubborn. However if the areas are changed they might lose what is unique to them. A slight change in people and the land will make the situation in areas like this much better.
- Noto has a really potential natural resources of both land and sea. Suzu has character of local people were very nice and warm. Caroline's daily activity is really inspiring for young people. However social activities are decreasing. In this case, not many local people (special for young people) do activities to help the fisherman. The technology of catching fish becoming conventional. The future prediction: Noto is really potential as the tourism destination. Noto has high sale value about the Noto's nature and Noto's social condition. If many stakeholders take care about that potential, it will work.
- 1. The potential of natural resources in Noto are the abundance of fish, because Noto is surrounded by the sea. Local community uses these resources as livelihood. 2. The local community worked together for fishing or preparing fishing net, so the local community in Noto will be more familiar with each other. 3. Local community in Suzu, utilizing nature to survive. Demerits: 1. Minimal public facilities, such as convenience stores and gas stations. 2. Takes a long time to produce rice, honey, eggs, etc. (in Suzu, Noto)
- Local community in Noto is easier to socialize because of frequent social interaction, thus allowing the establishment of good social communication. The addition of public facilities may occur in Noto. The future of Noto on my opinion is there will be small possibility of environmental damage. There will be many healthier society, and its environment will maintain its sustainability.
- In Noto I really enjoyed helping the farmer clean his net. Although it was a task that would have taken him three weeks to do on his own, having us around helped him finish cleaning the net in less than three hours. If only more of his community could gather to help him out with his net I think less people would be intimidated by the prospect of being a fisherman in Noto. But seeing him in his trade and the hard work he has to go through to make a living, I could see why younger people would rather be a salaryman than work manual labor for probably more than the salary the fisherman gets monthly. I am not so sure if his trade would have a future since more and more fishermen are being replaced by automatic fishing boats that catch huge amounts of fish each time for less cost because men are not required to do labor. At the same time, I think this is bad for nature because it is the primary cause of overfishing in the seas and changes the natural food chain.
- Noto is a beautiful island and there you can find the best fresh fish caught by the local people. However, there are no supermarkets around and it is very difficult to get to one since it is very far away. At first I would have said that young people are not interested in fishing and when we went there was the one family, which we helped. However, one of the people who came to listen to our presentations that there are also young people who are at the moment interested in fishing, therefore in the future there is also hope for the net fishing business.
- For Noto I have the same feelings as described in the Hakusan section in regards to the future of the region although that the effects of depopulation may be slightly slower if many of the younger people, such as those at Suzu choose to stay on at their homes rather than move to urban areas. I feel that the same as Hakusan the skills used here may soon be lost. The merits of many people here are that they are trying to coincide with nature. The fisherman net is designed so that he does not over fish and that some can escape, meaning that the sea will not be suffering from overfishing. Some of the people in Suzu who began trying to be self-sufficient are also to be praised I think as its not only becoming important for the planet but is not an easy thing to do increasingly. I feel that many of the problems of young people leaving the rural areas of all three locations are modern ones which have been manufactured with a need for new convenience and technology, created recently, relatively speaking. I feel that all three of the listed regions are the same in the problems mentioned in the above two region reports. That is the depopulation and loss of special skills and traditions once the older generations pass away. I believe that for all three these could soon be lost and that it would

be an important part of their identity, even with Japan, as well as cultural heritage, which is lost. They would lose something that distinguishes them. I thought it seemed a positive that despite the changing world and increased competition there is still the traditional method of producing clay and that for the time being it is being kept and used to produce clay and more than that has a famous reputation. The question I feel is how long this will last into the future and whether this will take a turn in the decline in the way that other things are declining. Something that I felt strongly represented the strong problem of depopulation was that there was a massive deal, and it made the local paper when the son returned home in order to continue his father's business in the clay production. It seemed here too as if there was a close-knit community. Especially between those who worked together in the crafting of clay products. This could be seen between people such as the man who produced the clay, and the one who used it to create his products. This has given me a small insight into understanding the village and community lifestyle of Japan, mainly in distinct areas of Ishikawa prefecture. Something that is interesting is the fact that in many ways the people and communities are very different from those of my own country, however at the same time can in others be very similar, in terms of challenges to overcome, social grouping, and adapting to a constantly changing world and environment. It gives insight to the fact that while many people are different in many ways around the world, there are also many ways in which they are similar, and that the problems they face in the future could be one and the same. Socially it was interesting that while there are different social practices and ways of communicating and conversing, there is a tight-knit community in much the same way as my own country's rural areas and that many people have the same types of relationships, just in a different form. It was interesting also to see that while my country doesn't have depopulation, rural areas are the same as ones in Japan in the way that young people are leaving these communities and not returning, preferring urban environments. While I'd say it's a larger problem in Japan it does ring the same in my own country, such as in the farther north rural communities. The most interesting thing I have noticed is the fact that while there are clear differences, the people in these rural areas are much like many of the people in my own countries. Also that they must both face the same types of challenges in the modern world.

- Noto has a lot of beautiful nature and temple. When I helped the fisherman family I can touch a freedom of work and also they are look happy with their work. They use the basic thing until the ideal how they catch more fish or how they are live and work with nature. I was wondering how they live the area without convenience thing. Nowadays, they have a lot of high technology that make a lot of people to interesting in and made them want to move to the city because it is so convenience. So if they change the inspiration of people, I think some of them will come back to their hometown and work with their nature. However, I was learned about how I live with nature without chemical products that was so amazing. We never know how chemical products destroy our health and nature because we are using it everyday. So if we begin to use natural product we will help nature and our health from chemical and we can live with nature easily.
- The way people living in Noto connected to nature is really impressive. They are using the natural resources without harming it. The problem again is lacking of young people to continue those traditional jobs. However, the wonderful thing is all the people there still trying to do what they can do best, even with only a small group of people. Although just being there few hours, I can see the difficulties for local people. But somehow, the problems for city people are not their problems. They enjoy their lives in the beautiful scenery and clean environment and are trying to maintain and develop that lifestyle.

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## For More Information Contact

### Dr. Aida Mammadova

Kanazawa University International Student Center  
Kakuma machi, Kanazawa City, Ishikawa Prefecture, JAPAN  
Email: [mammadova@staff.kanazawa-u.ac.jp](mailto:mammadova@staff.kanazawa-u.ac.jp)  
Phone: +81 76 264 5197

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