

実践報告

## Development of educational fieldwork activities for the International Students:

### Case of awareness raising in biocultural diversity of Kanazawa City

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#### Abstract

One of the main issues for the sustainable development is the lack of the awareness about the local issues, especially in the young generations. We conducted the fieldwork based practice, to raise the awareness on biocultural diversities for the international students. Students were 10 participants with different backgrounds. The fieldwork trips were Mountain course - Iozen Mountain, River course - Asano River and Coastal course - Ono town and Kahoku Lagoon. In each course students met with local people and learned about traditional culture and nature. After each course students submitted the reports, where they described the biocultural diversity of the region with their own home city/country, and also reported about the present issues of the region. Most of the students showed the similar feedback and gave the proposals for the issues, however, using only comparative analysis were not enough to raise the awareness in the biocultural diversity. Further methodological approaches must be developed.

[Key words] Education for Sustainable Development, Biocultural Diversity, Community, Creativity, Integral Education

## I. Introduction

One of the main problems for the sustainable development is the lack of the awareness about the local issues, especially in the young generations. Education is considered to be the crucial to raise the awareness among the youth toward the sustainable development, however, the teaching methodology still needs to be improved and suited for the modern society. One of the teaching approaches in the education for the sustainable development is

the education through the fieldworks, which provide the opportunities for the students, to experience local culture and directly learn from the local people.

From 2011, Kanazawa University International Student Center launched the Japanese Language and Culture Programme, where students experience and practiced different Japanese culture such as; Tea ceremony, Pottery making, Japanese education, Art and design, Martial arts and others. However, until now there were no classes that gave the students the opportunity to experience the cultural “interlinkage” with nature and environment. It is well known, that culture is derived from the sustainable utilization of the natural recourses and biodiversity of the region and in this report, we aim to introduce the newly established fieldtrips program by linking cultural experience together with nature, and discuss on the challenges and further improvements of the teaching methodology.

## II. Methods

### *1. Study program for the international student*

Biocultural diversity is the term applied to the network between the nature, living organisms, plants and human culture, that are “inextricably linked” to each other. The first idea about the “inextricable link” between the nature and culture was expressed in 1988 by the Declaration of Belem of the International Society of Ethnobiology (1). Later, this linkage were investigated by different scientific fields, like natural, social, behavioral and other sciences, resulting in creating a new concept as “biocultural diversity” (2). Subsequently, researches were mainly conducted on biocultural measurements methods, biocultural loss and preservations, language and its relation to biodiversity, focusing mainly on rural and traditional culture. Less is known about the biodiversity and cultural diversity of the urban areas that regulates the economy and the society of the city in sustainable manner. It is well known that most of the ecosystems of the cities are obtained from the rural areas, and it will be crucial to consider both areas, for the sustainable development. Kanazawa City will be one of the best cases for our field trips, due to the rich culture of the city which is inextricably linked with the diverse ecosystems, such as coast, lagoon, water canals, rivers, sand dunes, plateaus, forests and hills. The population of the city is 450,000 people, and it is mid-size city with rich biological and cultural diversity. Due to its abundant culture, in 2009, the city was designated as a UNESCO Creative City in the field of crafts and folk.

In 2015 from April to July, Kanazawa University International Student Center, conducted

the new study program named “Biocultural Diversity of Kanazawa City and International Initiatives”. The aim of this course was to find the linkage between the biological and cultural diversity through the fieldworks and raise the awareness about the importance of the sustainable environmental utilization and development. At the end of the course, we conducted the workshop, together with United Nations University Institute for the Advanced Study of Sustainability, Operating Unit Ishikawa/Kanazawa (OUIK) and Kanazawa City representative, and the results of the workshop were expected to contribute on the development of the environmental conservation policy plan of Kanazawa city.

## 2. Program design and course description

Participants were 10 international students from Indonesia, Malaysia, Russia, Germany, Slovakia, Vietnam, USA and Argentina, with different backgrounds and universities (Table. 1).

Table.1 participants list

University	Country	Major	Mountain	River	Coastal
Gadjah Mada University	Indonesia	English Literature	○	○	○
Universitas Pendidikan Indonesia	Indonesia	Japanese Education		○	○
Universiti Malaya	Malaysia	International Relations		○	○
Can Tho University	Vietnam	English studies	○	○	○
Slovak University of Technology	Slovakia	Architecture	○	○	○
University of Regensburg	Germany	Political and Economic Studies	○	○	○
University of Siegen	Germany	Literature	○	○	
Kazan Federal University	Russia	Public International Law		○	○
Nacional de San Martin	Argentina	Business Management		○	○
Tufts University	USA	Japanese studies	○	○	○

According to the rich diversity of ecosystems in Kanazawa City, fieldworks were divided in three main trips; Mountain course to Iozen Mountain, Rivers Course to Asano River, and Coastal Course to Ono- town and Kahoku Lagoon. Course destinations and the objectives are presented in the Table. 2.

Table.2 Course description

Courses	Date	Towns	Visiting Destinations	Objective
<i>Iozen</i> Mountain	18.06 2015	Tanoshima, Futamata, Shimizu	Pottery making atelier, <i>Washi</i> paper making atelier, Farmer's house, <i>Iwana-ya</i> local restaurant, "Kanazawa Kitchen" shop	Bio-Cultural diversity in the Mountains and traditional ways of utilization natural resources in rural area
<i>Asano</i> River	09.06 2015	Kazue-machi, Higashi-chaya, Utatsuyama Park	<i>Kaga-kebari</i> atelier, <i>Tawara-ya</i> candy shop, <i>Tsukudani</i> -shop, <i>Asunaro</i> -shop, <i>Yonezawa</i> tea shop, <i>Kyoden</i> rice shop, <i>Ume no Hashi</i> bridge, <i>Utatsuyama</i> park	Bio-Cultural diversity inside the City, with lots of historical shops, cultural attraction places along the Asano-river
Coastal	30.06 2015	Ono-town, Kahoku Lagoon	Ono <i>Hiyoshi</i> Shrine, <i>Naogen</i> soy souce shop, <i>Moromi-gura</i> shop, <i>Yamato</i> Soysauce and Miso Shop, Kanazawa Port (by ship) Kahoku Lagoon	Bio-Cultural Diversity in the Coastal area, and its relation to the Food culture

### 3. Student report submission

Students were asked to submit the paper according to the followings:

#### Awareness raising using comparison method

One of the methods to detect the awareness and understand the culture and the society of the region is to make comparisons with others regions (3), therefore, students were asked to submit the reports, where they were describing the linkage between the biological and cultural diversity and compared it with their own home city.

#### Acknowledgment of the present issues

By understanding the strong linkage between the biological and cultural diversity and the value of the nature, it is well known that the loss of one of those diversities, can cause the chain reaction and lead to the loss of others (4). Therefore, students were also asked to find out the present issues, of the particular region and give some proposals about the preservation and sustainable utilization of the natural resources for the cultural development.

### III. Biocultural awareness raising and students comparison with own home city/country

#### 1. *Mount Iozen Course*

##### Course description

Mt. Iozen, is a dormant volcano mountain with 939m high, and it is situated between Ishikawa and Toyama prefectures. It is a source for three rivers, Asano-river, Morimoto-river and Oyabe-river. Mountain has three main communities, Futamata, Tanoshima and Shimizu town, and is famous for traditional paper making (*Washi*) and for the *Tomuro* volcanic stones, and also for medical herbs. Nowadays, due to the aging population, there are almost no followers to continue the local activities. We met with local craftsmen who uses the natural resources from the region to create their crafts, such as; *Washi* making artists, who uses the Kozo and Mitsumata plants, planted in their own fields; a craftsman who uses the *Tomuro* stone to create the pottery; visited the house of the local farmer for *Waraji* making (traditional Japanese shoes), who uses the Wara (rice straws) harvested by hand from his own rice fields. Also, we visited the local restaurant *Iwana-ya*, which serves the Iwana fish-white spotted char (*Salvelinus leucomanis*), which they breed by using the nearby water from the river. Besides they produce the charcoals by using the trees from the nearby forest. Finally, we visited the young family who resides in Shimizu-town, and run the local shop named “Kanazawa Kitchen”. They also, promote the educational activities for making the local Satoyama cuisine, and also utilize the *Tomoro* volcanic stones in making different lanterns and small souvenirs.

##### Student’ s comparison with home city/country

*Germany, Siegel City*: Siegel city has a specific form of agriculture and forest management that uses the natural resources. In alternating periods, trees were used to be planted and later the woods were harvested. Woods were used in multiple ways, “one of which was to make coal with which the iron that was also extracted from the land in the area, was melted and processed. The trees’ bark was used to tan leather, the rest of the wood for fire and building. In the other periods, the same area would be used as fields for wheat, rye and other grains. The area also has meadows to feed cattle. Nowadays, agriculture is still abundant (in contrast to the iron extraction which was stopped in the early 1900s). Yet, many young people leave the countryside and the majority of the

population is older. Luckily, the remnants of manufacturing and producing industries are still around and the heritage of the iron processing can still be seen continued in some small world class steel processing companies. And yet, most young people have left the region for the bigger cities, likely never to move back.”

*Germany, Regensburg:* The number of young who values and prefers local products (especially food) is constantly rising and they are more conscious about production technique, globalization and trade roads. While also in Germany the rural life is considered as slow and kind of boring amongst the majority of the youth, this changing consciousness might be used as an angle to promote a lifestyle closer to the nature.

*Slovakia, Bratislava City:* Similar size with Kanazawa City with similar castle towns. Bratislava surrounded by mountains (Small Karpaty), they are not considered a part of the town itself and most certainly are not used in the same way as Mt. Iozen. Japanese culture is much more efficient to trying to use the land they have than Slovak culture. Sheer amount of used rice fields and not utilized mountain areas. They are usually nice hiking spots, skiing spots, but the land is not so much utilized like in Japan.

*Indonesia, Yogyakarta city:* Has an active volcanic mount on its north part called Mount Merapi. Volcanic stones are also used as Tomuro-stones. The different is on its usage. Lots of stone engravers in Yogyakarta and Magelang (a neighboring city of Yogyakarta) use volcanic stones from Merapi to make beautiful sculptures. Because Mount Merapi is a very active volcanic mount, the activity of engraving the volcanic stones have existed even since 8th century, when Hindu and Buddhist were still the major religion. One of the most famous sites in Indonesia that is made from the volcanic stones is Borobudur, the largest Buddhist temple in the world.

*USA, Brockton city, MA:* Cannot make a lot of use out of natural environment. There is not much forest, river is too polluted, and natural resources are limited in general. Mt. Iozen is practically it's opposite. One that allowed self-sustainability, and possibly a sense of self-autonomy. This is important because farming allows Kanazawa to import less food, and gives more chance to export. Kanazawa has history with rice and is known for their kaga yasai.

## 2. Asano River Course

### Course description

Asano River trip was planned by walking along the Asano River and at the end reach the Utatsuyama Hill Park. Asano River starts from the upper mountains and flows inside the city center called Higashi-chaya. Since the old times, by this river, lots of goods and materials were carried from the port to the center of the city, there how, making the Higashi-chaya one of the commercially vivid places and cultural center of the Kanazawa City. Still now, there are lots of shops, teahouses and many old buildings are designated as cultural protected area of the prefecture. Asano-river, ones were famous for fishing the *Ayu* fish (sweet fish, *Plecoglossus altivelis*), but now the fishing is restricted only for summer period. *Ayu* fishing has a long history, and fishermen uses a special fishing-flies made from the feathers. First we visited, the shop famous for fishing-flies making, named *Meboso*, which is also started to produce the broaches made from the feathers. Students experience the broach making and learned the history of the fishing-flies making. Next, we walked along the river and started our journey to the center of the city. First we visited, the old shop of rice-candy making *Tawaraya*. During the process of candy making no sugar is used, and only the natural sweetness of the rice remains, therefore it is still very famous among the local people as a healthy product. Next, we visited the old shrines, with lots of narrow streets and teahouses. We kept our way to several destinations such as; *Yonezawa*, the old Tea Shop; *Asunaro* shop, the only one shop that makes the small souvenirs using National Tree of Japan *Asunaro*; *Tsukudani-ya* shop, famous for food preservation; old rice shop *Keitaya*; soy sauce shops, and other. Finally, walking through the historical streets, we walked up to the hill and reached the Utatsuyama Hills. These hills are famous for the number of temples, and it has abundant nature with diverse flora and fauna. From the hills, we walked down and come to the center of the city.

### Student's comparison with home city/country

*Germany, Siegen city*: Siegen city has not so much shops and so rich culture. “Even the main big city in our area has also never been nearly as wealthy. The region has been mainly shaped by mining for iron and agriculture, the first of which is no longer done and the second is not very popular among young people even though there are some young families who move to the countryside. Food preservation might have a great nice value, seeing as the demand for organically produced food is still on the rise.”

*Russia, Republic of Tatarstan, Kazan City:* “Traditions (goods and resources) are used in order to receive the profit and not to lose it as market goods with acceptable price for citizens and tourists also. But with goods, which are also rare, and needs a lot of expensive materials, are in the same situation as in Kanazawa. For example, with rice that is sold in special shops and those shops mostly survive thanks to the restaurants where this rice is used. In our city this situation is similar with traditional clothes - it is used only in theaters or so on but not for daily life.”

*Indonesia, Bandung City:* “It is the second big city after Jakarta. In Bandung there is a street named Braga Street that consist of ancient European buildings from the colonial period along the street. Some of it still used as shops or banks. The most historical one is Asian-African Conference museum that was used as the place of the actual conference and still used as the memorial hall every year. It has similar parts with the Higashichaya district. Bandung city as one of the Sunda ethnic region also has a place to preserve Sundanese traditional cultures (instruments, dance, wooden puppets theatre, performances, etc.). That place called Saung Angklung Udjo. This place not made by the government, but made by a Sundanese traditional instrument artist named Udjo. Because most of Sundanese traditional instruments made from bamboo, they also preserve the bamboo forest. This is one of a culture-nature preservation example. We cannot just preserve culture without thinking about preserving nature.”

*Germany, Regensburg:* As Kanazawa, Regensburg that was found during the Roman Empire, also has a long history. And as Kanazawa, Regensburg’s historic city is full of buildings that were built hundreds of years ago. “But while (as we have seen) in Kanazawa in some of those buildings people still run the business of their ancestors, almost all shops in Regensburg could be considered as modern. The few that remained are either supported by the government and partly turned into museums or fully changed to satisfy the wishes of tourists, which want to experience German Culture.”

*Indonesia, Yogyakarta city:* “With its official name Nagari Kasultanan Ngayogyakarta Hadiningrat, is a city in Indonesia with well-preserved tradition after Bali, and therefore one can easily see Yogyakarta's cultural aspects in every corner of the city. There is also a castle, and a wide space to assemble in front of the castle, quite similar to Kanazawa. Tourists are

coming to Yogyakarta because tradition and culture in Yogyakarta are still very strong.

In Indonesia itself, a democratic country led by a President and have 34 provinces, Yogyakarta is the only province whose governor is a King and not a chosen-by-election Governor like the other 33 provinces. Therefore, a little bit different from Kanazawa, Yogyakarta's castle is still occupied by the Royal family, the King is still living there until this moment, and the traditions as well as culture the people created long ago are still particularly active. Nevertheless, the landscape of Yogyakarta is very much different with Kanazawa; while Kanazawa is hilly with satoyama and satoumi, the city of Yogyakarta is quite flat. But there is a volcanic mountain in the north and an ocean in the south, which are as important as Satoyama and Satoumi.

As a flat landscaped city by nature, the King who built Yogyakarta in 1700s had thought about linking three important parts of its region; the volcanic mountain "Merapi" in the north, the King's Castle in the middle, and the ocean "Laut Selatan" (which means South Sea) in the south. These three are linked into one straight line, and inside this straight line, the cultural economy was first born, and is still preserved until today.

This nature supports a creative way of thinking to the local people, and from there on, they are creating lots of aspects, like activities they can do in the city, or objects they can make and sell, that later becomes the city's culture that lasts for centuries. And culture, even though supported by the nature itself, might disappear eventually, if they are not preserved and supported by many sides, like the government, and the local people."

*Vietnam, Vinh Long city:* Located in the south of Vietnam. Have lots of traditional products, majority in the countryside such as rice paper making, rice noodle, bamboo handmade product, and so on. Same aging problems like in Japan, with dropping of human resources for these product manufacturing. However, the difference is that Vietnamese population is increasingly quiet high every year and the governments is making more effort to protect these "culture" so it still ensures that these products will be lasting quiet long afterwards.

*Argentina, Buenos Aires:* "Is a country mostly populated by immigrants and descendants of immigrants. Native people was expropriated of their land and taken to live in remote areas in Argentina. Of course, each community of immigrants has their places around the city where they try to preserve their culture, but not everyone is allowed to participate, you

have to be a direct descendent. Argentinean culture is a mix of immigrant's culture plus some of the native culture that is left. It is difficult to find the folklore in Buenos Aires. The culture are the "peñas", festivals (Vendimia, Doma, Cosquin, etc), music and dance (Tango, Malambo, Chacarera, Zamba, etc), food (empanadas, choripan, mate, vino, asado, etc), craft (faja gaucha, craft in metal, aguayo), instruments (bombo legüero, quena, pezuñas, etc) were lost mainly due to economic reason behind. The economic reason is that this generation was so worried about "not being poor" as their parents and grandparents, that they focus their lives on working hard to make money, forgetting about what makes a culture alive, stopping in this way the searching and the transmission of the traditions. Another reason for cultural loss was the fear. On the 70's we were in a dictatorship government and people who looked like "those potential rebels" were those who gathered together and maybe played guitar or did some activity that involved some kind of expression. And culture is the expression of the community. Lots of people disappeared, they were taken from their homes or class or streets.

Fortunately, since some years ago there is a movement going on. A movement started with people of young generation. This generation is willing to know about the traditional music, dances, and traditional dishes. They are fighting to recover them. This generation is not scared to dedicate themselves to work in craft or knit, they reconnecting with the Nature: a lot of young people are moving outside the cities to live in quieter places surrounded by nature. This generation is also supporting native people to recover their land. So, there was a moment when our culture was dying, but now is coming back again. Among other things, now we have a Tango University and a Music Teacher's degree with orientation to traditional instruments."

### 3. *Coastal Course*

#### Course description

Coastal course trip was made from two destinations, one was Ono town and another was Kahoku Lagoon. Ono town is the City Port, which now functions as an active sea transporter of the material and goods inside the country and abroad. Because this town is close to the sea, since the Edo period, it was used as a port for linking the northern parts and south parts of Japan, by *Kitamae*-ship (Trading ship, from Hokkaido to Shikoku islands). *Kitamae*-ship, brought lots of Soybeans from Hokkaido, Salt from Noto Peninsula, and the local people started to use those components to make Soy Sauce and

Miso. Now, the Ono town is one of the famous places in Kanazawa for Soy Sauce production. We started our trip with the old local Shrine *Hiyoshi-jinja*, placed on a slight hill that protects the town from the sea winds. Walked through the old soy sauce making shops. One of the oldest shops that started soy sauce production is *Naogen-shoyu* shop. Then we moved to *Moromi-gura*, where they still produce a soy sauce as it was made hundred years ago, with huge storage wells. Finally, we visited the Yamato-shoyu shop, which is one of the famous shops in Kanazawa, because they create new products. Finally, we had a small trip on a ship “*Wakana*” who took us around the Japanese sea, and students learned about the port's history and international transportations that are run by the port.

Next we came to Kahoku Lagoon. The lagoon was a brackish lake, but after the Second World War, Japan started to increase the rice production and more than 1000ha of the land were filled with the land and used in agricultural purposes. Due to the refilled land and water management, the water of the lake changed to the fresh water, and damaged the ecosystem of all the lake. Now, the total territory of the lake is only 5.96km<sup>2</sup>. After the economic growth in Japan, the demand to rice production decreased, and local government started to rent the land for local people in multi-purpose ways of utilization, and now the land is mainly used for cattle and farming different vegetables and fruits. Because the territory of the land is very big, we travelled it by bus and listened to the lecture of the researcher from the Kahoku Research Center.

#### Student's comparison with home city/country

*Russia, Republic of Tatarstan, Kazan:* Kazan city is situated on the Volga river, which has an access to the important trade ways and to the Baltic, White, Azov and Black sea also other city-milliners are located on the river, that's why access to the river also plays a big role as a trade way. From the city the tourist way named “Golden ring” is started and it also attracts lots of tourists from the world. Many fishing activities are done in the city due to the river, and in the river there is hydroelectric power stations which are also very important for the electric industry in the region.

*Germany:* “This central European country is definitely no home of great salesman with short cost in the north that is hardly connected to the Atlantic, which was always dominated by more sea loving nations like the English, Dutch, Spanish or Portuguese. But as especially the cities in South Germany have no access to the sea and therefore are not

comparable to cities like Kanazawa, the process of trading and thus exchanging culture might have happened in a similar way. Serving as a notable and descriptive example the ancient salt roads that connected major cities all over Europe may had a similar impact on culture transfer as the seaways did in Japan or elsewhere. But as the port as a trading post developed and is still and with greater importance remaining, the salt roads are long gone and replaced by railways that now supersede the bulk of continental trading.”

*Malaysia, George Town:* There are several similarities and differences between George Town in Malaysia and Ono town. In terms of similarities, both towns plays an important role in preserving their own unique culture. For George Town, the city is a historic colonial town that contains multi-cultural heritage from both the east and the west. The local government and the people has played a strong role in preserving this unique history and culture heritage. Like Ono town, the government and the people in Penang has taken initiatives to conserve and revitalise traditional architectures, such as shop houses and townhouses that was built during the colonial era, which dated back to 1900s. As a result, the city along with Malacca was designated as a UNESCO World Heritage Site in 2008. Apart from building conservation, George Town is also famous for its traditional unique food, such as the Peranakan and Mamak cuisine, where both cuisine are introduced in this island town during the colonial era and it has been passed down from generation to generation. This situation is quite similar with the soy sauce and miso in Kanazawa, which is also a food inherited by the current generation from their ancestors.

The differences between George Town and Oono town is that the size of George Town is larger than Oono town and it is the capital of the state of Penang. As the capital of Penang, it has more oversea companies and investors compared to Oono town, where shops and businesses are operate by local people.

*Vietnam, Vinh Long city:* Southern part of Vietnam. “Like Kanazawa Sea, the sea in this region is also used a lot for goods transportation. Another similarity lies on abundance resource of seafood like crabs and oysters. Besides that, we found a contrasting difference which is while we develop a wide range of farming industries such as seafood Aquaculture (mostly shrimp), sale making and so on, Kanazawa makes up their sea for heavy industries(cement, ship making) and tourism. This is an easy-to-understand between a high developed country and fighting developing country-Japan and Vietnam. That is said, sea

always contributes greatly to the people life in many aspects, from economy to cultures and tourism. Understanding throughoutly these will helps each country boost significantly their development in various fields.”

*Indonesia* is a “country of islands, about more than 40 sea-ports. West Java has 1 sea-port, but there was a plan to build a new sea-port in the southwest coast of my city, Sukabumi. The coast named Pelabuhan Ratu (Harbor of Queen). Because of the coast’s geographic structure, it is said to have a great potential to be a big sea-port. This is a good development, but, Sukabumi’s government has not ready yet for that. This plan is actually have been discussed for about years ago, but have not reached the agreement. It is a big deal that need a big responsibility, which the government does not have. Building a sea-port means creating a new environment for the villagers nearby, and the ecosystem there. Indonesia still has some big issues about ecosystem’s preservation.”

*Argentina, Buenos Aires:* “In the city there is Buenos Aires Port (also called Puerto Nuevo). It is the most important port in Argentina and it is considered the 4<sup>th</sup> in the Latin America and Caribbean list of the best ports. Buenos Aires is a city and our port is in Rio de la Plata (river). Compare to Kanazawa, the Capital City has almost none natural places, and definitely none fields to produce. The entire ecosystem is damaged because it can’t handle the pollution of the city. All the goods for importation come from the rest of the country. The cost of transportation to the port could be very high depending on the distance what makes increase the cost of the product and because of that sometimes is hard to compete with the same product with other countries.

In Buenos Aires, Capital City, was also have another port called Puerto Madero that it is out of business since many years ago. This area nowadays is one of the fanciest places in Buenos Aires.

The docks, after years of being abandoned, were taken by private companies and remodeled into offices and lofts. There are also 5 stars hotels and important restaurants with Tango show that are very attractive for tourists. The old Port was integrated to the city as renewed one with history.

Having a port it is really important for the economy of a country, but also that it is important to take care of the places and resources around it. Try to gain the most benefits not only economically.”

#### IV. Recognition of Biocultural diversity of the Kanazawa City; Common students' feedbacks after the field trips

##### Nature in the City

- Kanazawa is modern city, but still have agricultural practice, where Satoyama is appreciated with local tradition
- Diverse ecosystem of Kanazawa city supports the city's tradition
- Kanazawa's nature provides all necessary materials for cultural practices, and craftsmen can sustainably utilize those resources
- Temperature and moisture of Kanazawa is suitable for its culture
- Nature relates and affects cultural diversity
- Nature, as well as bio-diversity, is one of the strong points that could be profitable for human being and bring forward economic growth. Natural resources can be used to support one's life for years and obviously for generations as well

##### Culture and Creativity in the City

- Kanazawa City is rich in Traditional Craft and Modern Art, with unique handmade quality
- Both traditional and contemporarily are alive in Kanazawa
- Creativity of the shop owners who managed to transform an old building into a shop with modern interior design without jeopardising the traditional exterior design of the building
- The high linkage between the crafter, nature and the consumer provides various advantages.
- Adaptation to local environment, people create local culture
- Local traditional shops and crafts preserve the culture for generations while keep on developing their products' quality and variety.
- Young people moves back to the village to take care about family's heritage, gives hope for the community
- Supply needs a demand to remain, and this is how old shops still survived, because there is still the demand for those traditional supplies in the community
- Local government, provide the support to survive for the traditional crafts and shops.

Issues and Actions plans proposed by the students are shown in the Table. 3.

Table. 3 Present issues and actions for the problem solving

Environmental	<p><u>Present Issues</u></p> <ul style="list-style-type: none"> <li>· Climate change, pollution, invasive species and humans negative interaction with nature</li> <li>· Whether it is fine to destroy an ecosystem in order to create a new one with a different kind of benefits the people would like?</li> </ul> <p><u>Actions for Problem Solving</u></p> <ul style="list-style-type: none"> <li>● Forest management</li> <li>● Create other farmable areas in the Kanazawa, even if the area is less populated, it would help to care for the unused land while producing products for the city</li> </ul>
Social	<p><u>Present Issues</u></p> <ul style="list-style-type: none"> <li>· Depopulation and aging problems. No followers to continue traditional culture or art</li> <li>· Young people are more attracted by the big cities and metropolitan areas, and not interested by traditional culture</li> </ul> <p><u>Actions for Problem Solving</u></p> <ul style="list-style-type: none"> <li>● Improve the access to the rural areas, so the volunteers, students and anyone can go to the fields and help in land management along with the farmers</li> <li>● Make the port, like the “Sea Gates of Kanazawa”, like an attractive place for tourists and fishing tours</li> </ul>
Economical and Political	<p><u>Present Issues</u></p> <ul style="list-style-type: none"> <li>· Local goods and crafts are too expensive, especially handmade products</li> <li>· Demands of the people change and therefore the supply has to change too, linking that the culture changed as well</li> <li>· The way the local shops market their product is not as effective as big corporations, where they cannot reach a bigger segment of costumers to earn more profit that can allow them to expand their business.</li> <li>· Less local customers</li> <li>· Why rural area, which are so close to the city centre doesn't get more help for establishing and using more of old factories</li> </ul> <p><u>Actions for Problem Solving</u></p> <ul style="list-style-type: none"> <li>● Attract young people or young families to live in rural areas with plenty of natural resources, by creating small business models. Change the perception of youth</li> <li>● Start the International export of the crafts and local products. For example, <i>Washi</i> paper that is produced in Kanazawa will be exported to Germany, used as canvases because of its unmatched quality. Traditional goods must be the “face of Kanazawa”. Local products should target as certain domestic consumers, as well as international consumers</li> <li>● Promote local products market to be sold at the center of the city and increase the demand for the local goods</li> <li>● Crafts and local products must be for the available price and used in daily life</li> <li>● Control the tourism influx, otherwise it can negatively impact the region</li> <li>● Government has to be involved to economically support the local people, so that their products (and the culture) can survive at least in the economy field</li> </ul>

Cultural	<p><u>Present Issues</u></p> <ul style="list-style-type: none"> <li>· If nature changes, so does the culture. Should the culture adapt to the new environment or cultural extinction?</li> <li>· Culture should not be preserved by overusing and exploitation natural balance. For example, birds should not be killed just to make the broches from their feather</li> </ul> <p><u>Actions for Problem Solving</u></p> <ul style="list-style-type: none"> <li>● Culture should not only be traditional, there should be new innovations for its preservation</li> <li>● Increase Creative Tourism and Eco-Tourism</li> <li>● Ease the access to the creative ateliers of the craftsmen, so that consumers can buy original products, rather than buying standard souvenirs from the shops</li> </ul>
Educational	<p><u>Present Issues</u></p> <ul style="list-style-type: none"> <li>· Lack of the awareness about the importance of the biological and cultural diversity among the locals. Communities are unaware about the existing problems that they are facing, and how it will affects the society inside the city.</li> </ul> <p><u>Actions for Problem Solving</u></p> <ul style="list-style-type: none"> <li>● Educate the young and local people in promoting of consciousness about natural and cultural protections</li> <li>● Promote regional awareness about the importance of the nature and its sustainable utilization</li> <li>● Awareness transfer to the younger generations about their culture, to preserve the demand and increase the supply.</li> <li>● New Educational Approaches should be developed. Young people consume what they are taught in school, at home, society and all the media. They consume what they are motivated to consume. However, because of the rapid modernization, and changes in the society “The Educational System is designed for students that doesn’t exist anymore”.</li> </ul>

## Conclusion

### *Merits of the fieldworks*

According to the reports submitted by the students, it was clear that the conception about the biocultural diversity changed after the trips, and awareness was increased about the present problems and issues of the regions.

Student citation: “Field work provided, the opportunity to experience all the states of consciousness, such as “Looking” at the art, “listening” to the traditional music and sounds, “catching” with the local people, “Being” a customer at local shops, “feeling” the Nature”.

### *Missing points*

Only comparative analysis and fieldworks were not sufficient to deepen the understanding about the linkage of the nature and the culture. Students, didn’t provide any scientific approaches for the present issues of the biocultural diversity globally and their

home town, and ideas for the problem solving were given based on the generalized concept, without providing any research analysis.

#### *Methodological approach for the future*

As biocultural diversity encompass the myriad of fields of sciences, so the methodological approach should be as integrated education, where students explore, identify, organize and incorporate the ideas and practise together, to develop the critical way of thinking and problem solving abilities.

To improve our methodological approach in our next research we are going to develop systematic approach at the individual, community and integral level of education. On the individual level students must reflect the biocultural diversity, on the psychological and behavioural level, such as listening, smelling, touching and feeling the diverse nature and culture. Next, is the community level, where participants start to experience the real practise together with the community, by creating the sense of belonging to each other and learning directly from the environment to create and sustain the culture. Finally, during the integral level of education, students will search for the social, economic, environmental changings, develop the ability to critically analyse the existing problem. Integrated approach will improve the creativity, to find the alternatives to the existing issue and implement them for sustainable development.

We are going to utilize all the approaches mentioned above in our next fieldwork studies.

#### **Notes**

- 1) Kanazawa University, International Student Center
- 2) United Nations University Institute for the Advanced Study of Sustainability, Operating Unit Ishikawa/Kanazawa

#### **References**

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# 留学生対象のフィールドワーク教育プログラムの開発： 金沢の生物文化多様性の認識向上に向けて

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## 要 旨

本報告では、持続可能な地域の発展に貢献するための、留学生向けのフィールドワーク教育プログラムの開発について予備的な検討を行った結果を紹介する。フィールドワークとして金沢市内の山間地、川沿い、沿岸の3つのコースを設定し、計10名の留学生が参加した。留学生は、地域住民と交流し、伝統的な文化や身近な自然との関わりについて実地学習し、出身地との比較や現実の社会的な課題に関するレポートを提出した。その結果、留学生からのフィードバックや課題解決のための提案について共通性が確認された。しかし、出身地との比較だけでは、地域の自然と文化に対する認識力を向上させるには限界があり、さらなる手法の探求が求められる。