

# Livelihood, Dietary Style in Lake Biwa Area

琵琶湖地域の暮らしと食

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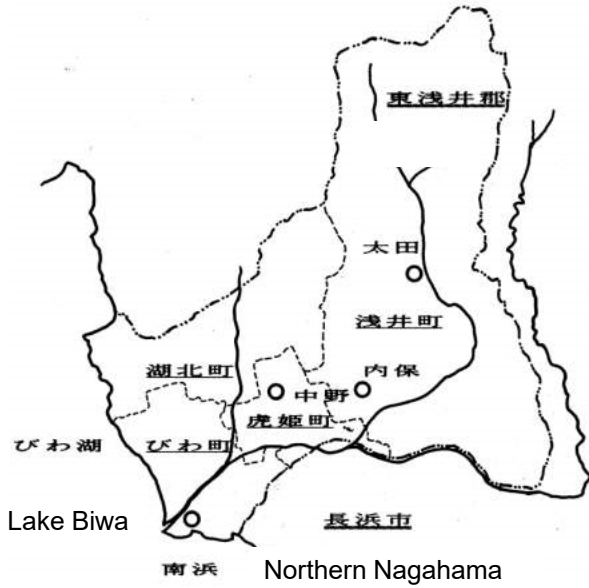


## Proceeding

1. Introduction of today's lunch purveyed by Uoji
2. Fish and shellfish in Lake Biwa are useful food resources. They are processed to traditional dishes, such as fermented fish, cooked fish, and soup of clam (*Corbicula sandai*).
3. The combined farming and fishing life style is characteristic around Lake Biwa. Lake Biwa fishes have been consumed in lakeside villages, also in agricultural area.
4. People have developed the special culinary culture of traditional foods. Lake Biwa area is rich in foods, rice, fish, vegetables, beans, and many kinds of fermented foods.
5. People in Lake Biwa area have been taking well-balanced nutritious diet.
6. The average men's life expectancy in Shiga is longest in Japan.  
(\*that of women in Shiga is the fourth)

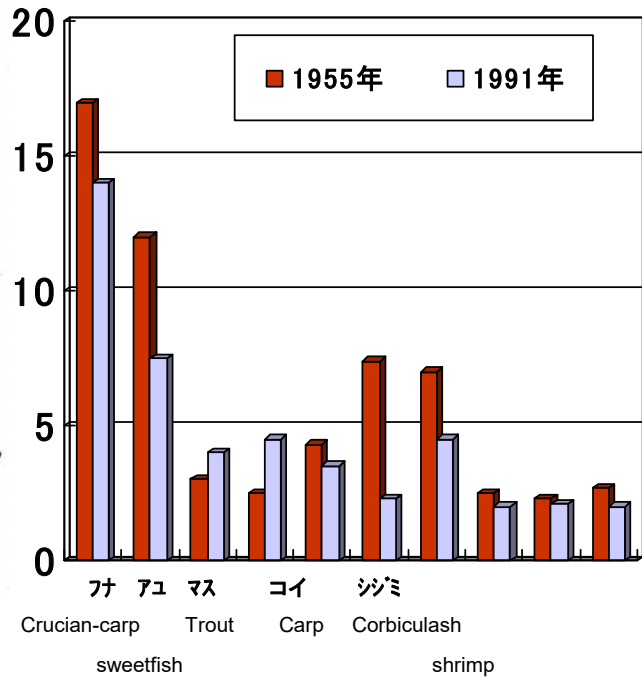
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# Consumption of Lake Fish in northern Nagahama



Fish peddlers used to sell lake fishes from village to village in those days. Farming village people had been taking fishes as those in lake side villages. (当時、湖魚は行商で農村部まで運ばれた)

## 長浜北部の湖魚利用



Consumption of Lake Fish (kg/yr)

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# Distribution of Fermented Fish

なれずしの分布



People were making fermented fishes in many fishing and farming villages.



(Questionnaire in 1991)

Distribution of Fermented Fish

● : present ○ : before

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# Cultural Food Assets of Lake

## Biwa area

琵琶湖地域の食文化財



**seasoned fish**  
湖魚の佃煮



**Biwa-trout rice**  
あめのいおご飯



**Fermented fish**  
湖魚のなれずし



**Hinona-turnip pickles**  
日野菜漬



**Detchiyokan sweet**  
でっちようかん 5

## Today's Lunch purveyed by Uoji (魚治)

<p><b>Dashimaki omelet</b> (だし巻玉子)</p>  <p><b>grilled Biwa trout</b> (びわます幽庵焼)</p> <p><b>Shrimp &amp; soybean</b> (えび豆煮)</p>  <p><b>Seasoned Ohmi-beef</b> (近江牛しぐれ煮)</p>	<p><b>Cabbage</b> (ごま和えきゃべつ) with sesame seed dressing</p> <p>Tartar sauce (タルタルソース)</p>  <p><b>Deep-fried carp</b> (鯉のフライ)</p>
<p><b>Cooked rice</b> (ゆりかご水田米) "yurikago rice" produced in Chinai</p>  <p><b>Pickled vegetables</b> (香の物)</p>	<p><b>Marinated sweetfish</b> (小鮎のマリネ)</p>  <p>paprika/ onion/ parsley (パプリカ・玉ねぎ・パセリ)</p> <p>6</p>



**Eel sukiyaki**  
うなぎのじゅんじゅん



**Carp miso soup**  
鯉のみそ汁



**Shrimp & soybean**  
えび豆



**Grilled Biwa gudgeon**  
焼きほんもろこ

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**Funazushi cutting event in Kusatsu**  
(すし切り神事)



**Offering of fermented loach for shrine God** (\* with fermented catfish)  
(どじょうずしの神饌)

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Preparation of fermented sweetfish (あゆずし漬け)



Preparation of fermented ugui (うぐいずし漬け)

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## Festival Dishes

祭りのご馳走



Festival float  
大津祭りの山車



Rolled sushi 巻きずし



Cooked red bean rice  
赤飯



Grilled miso tofu  
豆腐田楽



Mugwort rice cake  
よもぎ餅

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# Regional culinary Specialities

The map shows various regional specialties across Japan, with blue lines connecting them to their respective locations:

- Horse chestnut rice cake** とちもち (朽木) - Located in Kuchino (朽木).
- Leaf dumpling** やまごぼう団子 (マキノ) - Located in Makino (マキノ).
- Trout rice** ますめし - Located in Maibara (米原市).
- Fermented mackerel** 鯖なれずし (長浜) - Located in Nagahama (長浜市).
- Rice dumpling** 米粉団子 - Located in Maibara (米原市).
- Natto rice cake** 納豆餅 (仰木) - Located in Oki (仰木).
- Corbicula rice** しじみごはん - Located in Oki (仰木).
- Smartwed sushi** たでずし (野洲) - Located in Nozomi (野洲).
- Ukawa kanpyo sushi** (dried gourd shavings) 宇川寿司 (水口) - Located in Mizuuchi (水口).
- Tea porridge** 茶粥 (信楽) - Located in Shikokuchuan (信楽).
- Dupling covered with tofu and vegetable mix** おあえだんご (草津 守山) - Located in Kusatsu (草津) and Mino (守山).

# Japanese Healthy Meal

(健康的な一汁三菜の食膳スタイル)

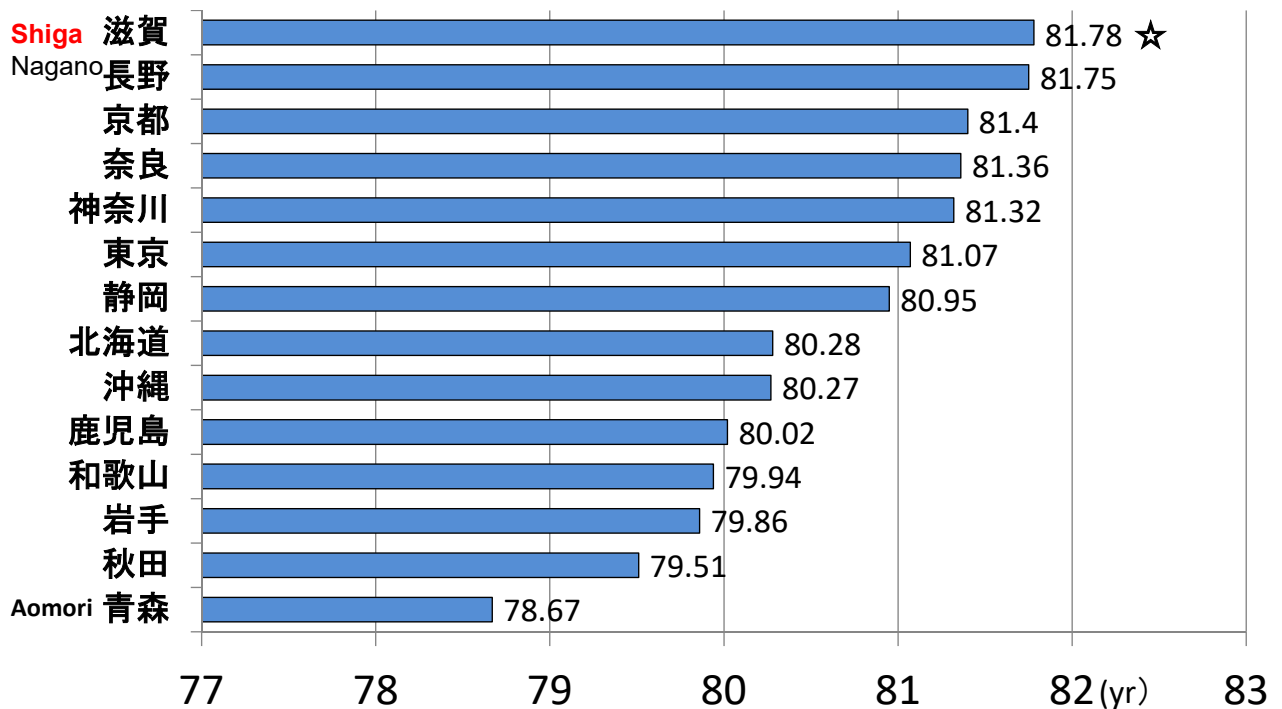
The components of a Japanese healthy meal are shown in a grid:

- Vegetables**: A plate of green beans.
- Fish dish**: A plate of grilled fish.
- Cooked rice**: A bowl of white rice.
- Vegetable in vinegar**: A bowl of vegetables in a light dressing.
- Miso soup**: A bowl of miso soup with vegetables.

Rice, fish, bean, potato, vegetable, and seaweed 12

The average men's life expectancy  
- Shiga prefecture is No.1 (longest) in Japan -

男性の平均寿命



The Ministry of Health , Labor and Welfare (厚労省 2015)

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## ● ● ● | Dietary style in Lake Biwa area

- The combined farming and fishing life style is characteristic around Lake Biwa. Lake Biwa fishes have been consumed in lakeside villages, also in agricultural area.
- People have developed the special culinary culture of traditional foods.
- Lake Biwa area is rich in foods, rice, fish, vegetables, beans, and many kinds of fermented foods. People in Lake Biwa area have been taking well-balanced nutritious diet.
- The average men's life expectancy in Shiga prefecture is longest in Japan. (\*That of women in Shiga is the fourth)

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# せせらぎの郷 須原

(Village of murmuring "SUHARA")

## 魚のゆりかご水田 (Fish Cradle Paddy Field)

～生きものと人が共存できる農業を目指して～

～ Coexistence of human and creatures～



### ゆりかご水田とは

- ①水田にはフランクtonのエサが豊富である
- ②水田の水温が温かい
- ③水田には外来魚がない

滋賀県 せせらぎの郷  
代表：堀 彰男



# 湖の魚が自ら水田にやってきて産卵

Lake fish run upstream to paddies for spawning.



Crucian carp is Lake Biwa's Endemic species.

**魚の生息域拡大  
千年以上の継承**  
Rice farming in paddies means expansion of habitat area of fish. It has been continued more than 1,000 years.

**降雨と水位上昇により  
安全な産卵場所である水田へ**  
Rainfall and rise in water level helps fish to run upstream to safety spawning ground.

**一部を漁獲  
重要なタンパク源に**  
Coming fish has been partially fished. It has been important source of protein.





水路を遡上するフナ類の群れ

Run up the waterway.



魚道をジャンプするフナ

Jumping fish(Crucian carp).



田んぼに入るフナ

Enter the rice field .



水田での産卵行動

Spawning.



水田を泳ぐ稚魚の群れ(高い生存率)

A school of young fish in rice field.

They survive with high survival rate.<sup>3</sup>

自然や農業に触れる機会を提供しています。  
Providing opportunities

to experience nature and agriculture



田植体験の実施 (5月)

Rice planting (May)



生きもの観察会の実施(6月)

Creature observation (June)



収穫体験の実施 (9月)

Rice harvesting (September)



恵に感謝と勉強会 (秋)

Thanksgiving workshop(Autumn)

加工品開発に向けた挑戦を行っています。

We are challenging to add value by processed product development.

魚のゆりかご水田  
米で日本酒造り

Japanese rice wine  
“Cradle of moonlit night”



魚のゆりかご水田米で  
「ゆりかご石鹸」

魚のゆりかご水田米の米ぬか

“Cradle sora” by rice bran



大麦ストロー

プラスチックストローを使わないことが

プラスチックごみ問題を考えるきっかけになる

To reduce Plastic straw



We produce Barley straw.



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「せせらぎの郷」はSDGsを意識し活動します！  
琵琶湖環境に配慮した農業を未来へ！

We will work with SDGs.

“Lake to land focused  
environmentally sound  
agriculture” for the future.



Visitors of overseas



Our precious  
“Biwa Lake-  
to-Land  
Integrated  
System”  
for the future!

ありがとうございました  
Thank you for visiting us

# 魚のゆりかご水田プロジェクト

## The Fish Nursery Paddy Fields Project

### 湖魚が産卵・成育出来る水田環境を取り戻そう！

Our goal is to restore paddy fields for lake fish to spawn and grow in.

農家、地域、琵琶湖、そして何より生きものにとって大切な『魚のゆりかご水田』

Fish nursery paddy fields are important for farmers, communities, Lake Biwa and – especially – the fish!

人や生きものが安心して暮らせる田んぼの環境を取り戻すプロジェクトです。

We are trying to restore a paddy environment that will allow both people and wildlife to live safely and securely



#### 生きものによし

Fish nursery paddy fields are good for wildlife...

水田はプランクトンが豊富で外来魚がないため稚魚の生育に適した環境。

Rice fields are rich in plankton and there are no non-native fish, so they make an ideal environment for young fish to grow.



#### 地域によし

Good for the community...

魚道作りや観察会など、多くの人が田んぼを訪れるようになり、人と人との交流が生まれ、人々のにぎわいが戻る。

People participate in creating the fish paths, and groups come to observe. This brings a lot of people to the rice fields and helps to strengthen human relations.



#### 子どもによし

Good for children...

田んぼに魚がいることで、子どもたちも田んぼに興味をもつようになる。

Children who like fish also become interested in the rice fields.



#### 琵琶湖によし

Good for Lake Biwa..

魚道で排水路の水位を堰上げることにより、琵琶湖に流入する濁水を抑えることができる。

Fish paths raise the drainage water routes, and reduce the flow of turbid water into Lake Biwa.



#### 農家によし

And good for farmers.

「生きものブランド米」として、付加価値をつけて米を販売することが出来る。

More rice can be sold because of its added value as "A live, natural rice brand."

# Fish Cradle Paddy Field Project

Restore a paddy field environment where lake fish can spawn and breed!

"Fish cradle paddy fields" are important for farmers, communities, Lake Biwa and – especially – other living creatures. The Fish Cradle Paddy Field Project aims to restore a paddy environment where human and other living creatures can live safely and securely.

## Relationships between lakeshore paddy fields and fish

### Until the mid-1960s

- Farmers had great difficulty growing rice in paddy fields around Lake Biwa, due to flooding caused by fluctuating water levels in Lake Biwa and work in wet paddies using paddy field boats.
- Paddy fields, warm and rich in the plankton on which fish feed, were ideal spawning and breeding sites for lake fish. Paddy fields, indeed, functioned as a "cradle for fish."

### From the mid-1960s

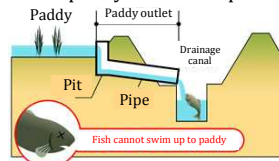
- Land consolidation projects were promoted, resulting in increased productivity and improved agricultural management.
- To convert wet paddy fields into dry paddy fields, drainage canals were dug deeper, making it difficult for fish to enter paddy fields.

### Present and future

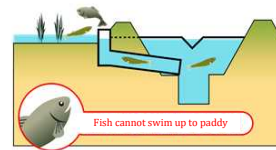
- Shiga Prefecture is promoting the "Fish Cradle Paddy Field Project" by which to maintain agricultural productivity while restoring paddy field environments where fish can spawn and thrive.

## Methods of restoring paddy fields as spawning and breeding sites for lake fish

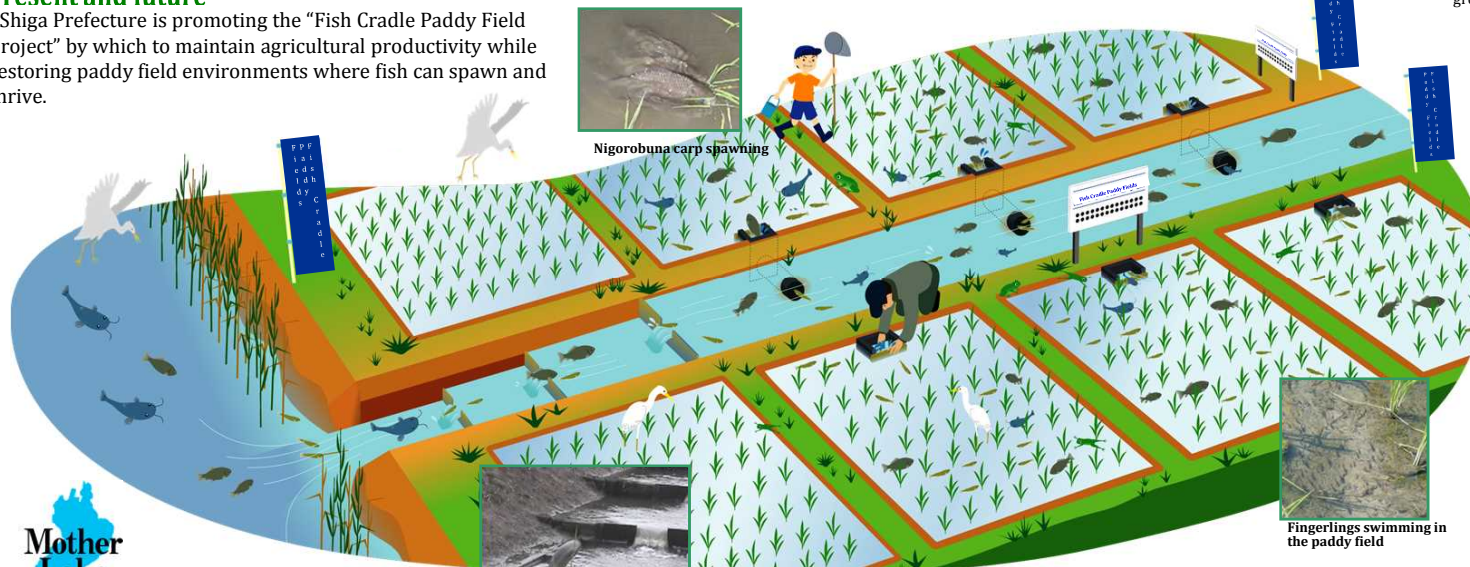
- Install fishways (fish ladders) with a series of steps that reach the level of paddy fields, so that the water level of the drainage canal is level with the paddy field surface.
- Fish coming from Lake Biwa can enter paddy fields via paddy outlets to spawn.



Paddy field Height difference between paddy fields and drainage canals resulted from land consolidation



Eliminate height difference between paddy fields and drainage canals by installing fishways



Nigorobuna carp spawning



Catfish going upstream (jumping the fishway!)



Fingerlings swimming in the paddy field

## Effects of Fish Cradle Paddy Fields

Restoration of the local ecosystem is expected to increase environmental awareness among local residents, revitalize the local community and stimulate development of brand agricultural products.



Nigorobuna carp fingerlings growing in paddy fields



We aim to market rice produced in fish cradle paddy fields as eco-friendly brand rice.



Parents and children participating in a living creature observation session held in the fishway



Elementary school children catching fingerlings



Local residents jointly install fish ladders. (Children drove in stakes for the first time.)

Fish ladders were installed under the "Farming Village Conservation Project through Collaboration across Generations" (Measures to Conserve and Improve Land, Water and Environment in Shiga Prefecture)

For details, visit our website. <http://www.pref.shiga.jp/g/noson/fish-cradle/>

Video available showing catfish jumping in migration upstream to their spawning grounds!

Inquiries: Rural Development Promotion Division, Department of Agriculture and Fisheries, Shiga Prefectural Government

TEL:077-528-3962 E-mail:gh01@pref.shiga.lg.jp



Website

Mother Lake

Mother Lake, Lake Biwa  
—Shiga Prefecture is dedicated to protecting this precious lake.

# We will pass down the Biwa Lake System to the next generation

## Our Biwa Lake System Studies



## High School Student Representative Uta Kataoka & Noa Ohta

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Uta Kataoka Noa Ohta

High School Representatives of the Biwa Lake-to-Land Integrated System (Graduates of Shibukawa elementary school)



Presentation at the Ministry of Agriculture, Forestry and Fisheries

### Activity history

- August 2017 Coca-Cola Environmental Education Award ⇒ Grand Prize
- December 2017 Biodiversity Action Award ⇒ SDGs prize
- January 2018 Reported activities to the superintendent of education and the director general of the Agricultural Department of Shiga
- February 2018 Low-Carbon Cup ⇒ Minister of Education Award
- March 2018 School Pride Eco Award ⇒ Grand Prize

### After graduation from elementary school

- November 2018 Presented at the field visit for Japanese Important Agricultural Heritage
- January 2019 Presented at the Ministry of Education, Culture, Sports, Science and Technology
- March 2019 Participated in the certification briefing session for Japanese Important Agricultural Heritage at the Shiga Prefectural Office
- May 2019 Participated in a tea picking experience with the Governor of Shiga
- September 2019 Presented at the Food Symposium at Ritsumeikan University
- November 2019 Presented the Biwa Lake System at an SDGs conference at the University of Shiga Prefecture ⇒ Grand Prize
- December 2019 Served funazushi at a symposium at the International Conference on GIAHS



Certification Ceremony of Japanese Important Agricultural Heritage System

At an SDGs conference at the University of Shiga Prefecture

Serving funazushi

Presentation at an agricultural group event

# Making and communicating traditional local cuisine

## Event for introducing traditional local cuisine



To a local company



To Kusatu-Higashi High school



To Komyoji Temple



To the Governor of Shiga Prefecture

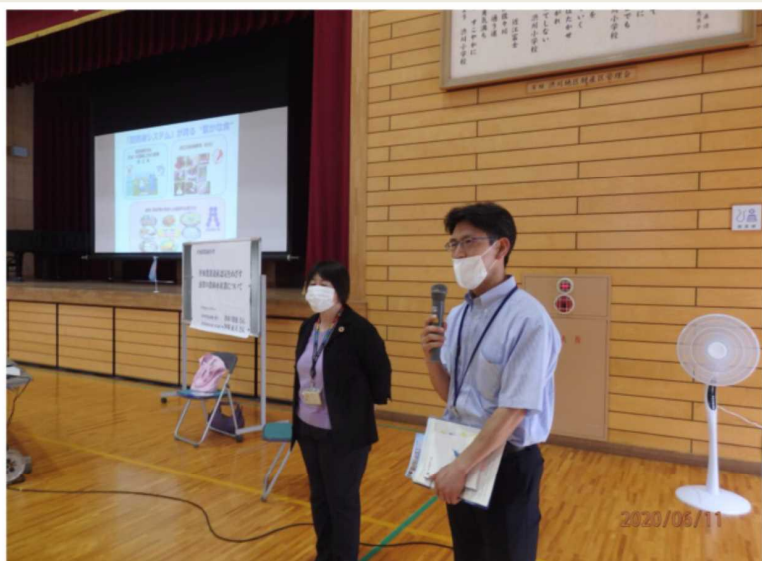


To the Mayor of Kusatsu City

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# Learning about the Biwa Lake System together

## Agriculture, Forestry and Fisheries Coexistent with Lake Biwa



At a visiting lecture of Council for Promoting Agriculture, Forestry and Fisheries Coexistent with Lake Biwa in Shiga



An observation on life in rice paddies



Traditional Eri Fishing



Lake to Land-Focused Environmentally Sound Agriculture-certified rice

世界農業遺産学習

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# Communicating the Biwa Lake System through exchange with various domestic audiences

Communicating the charm of the Biwa Lake System beyond Shiga

Exchanges with other GIAHS sites

Exchanges with distant locations through online meetings

broadcasting from a local FM station

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## Communicating the charm of the Biwa Lake System as elementary students



Making and communicating traditional local cuisine



At an exhibition



Visiting a corporation

**Communication to thousands of people with careful consideration of the learning cycle**

**(learn -> think -> act)**

Public relations activities at a FM radio station and via online meetings with distant areas.



FM broadcasting



Exchanges with distant locations through online meetings

6

Continued activities with Biwa Lake fishermen as junior high school students



Getting ready to make funazushi wearing a GIAHS happi coat





Learning about traditional funazushi from a Biwa Lake fisherman





# Serving the funazushi at a symposium



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# Helping out at the Ohmi tea harvest



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# With Governor of Shiga Prefecture, Taizo Mikazuki



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# Presenting the Biwa Lake System at an SDGs conference at the University of Shiga Prefecture



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# Presenting our activities at the field survey for designation as Japanese Important Agricultural Heritage System



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# Presenting with the Committee at the Japanese Important Agricultural Heritage System screening panel meeting



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## We will pass down the Lake Biwa System

by communicating the value of lake-to-land-focused environmentally-sound practices, and inviting consumers and other actors to participate in collaborations with people around the world

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## At the Certification Ceremony of Japanese Important Agricultural Heritage System



We will be responsible for our future and pass down the Biwa Lake system to future generations. <sup>21</sup>