Shiga Prefecture Agriculture is the Best Solution to Climate Change!

Taizo Mikazuki
Governor of Shiga
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Shiga and Lake Biwa

Shiga in Japan

Location of Lake Biwa
Basic information about Lake Biwa

- Surface area: 670.25 km²  
  (1/6 the size of Shiga)
- Length of shore: 235 km
- Water volume: ~27.5 billion m³
- Average depth: ~41 m
- Maximum depth: 103.58 m
- Minimum width: 1.35 km
Impact of Climate Change in Shiga

Trend in the average temperature: +1.3°C in 100 years

The annual average temperature in Hikone, Shiga (1894-2018)

A further rise of about 2.9°C by the end of the century is predicted. That is the same average temperature as present-day Miyazaki.
Animal and Plant Life is Already Changing

- Butterfly that lived further south
- Cherry Blossoms at Lake Biwa Canal
- Blue-green algae appeared later than usual, in late autumn (November 6, 2015)
Every winter, Lake Biwa turns into a holomictic lake that has a uniform temperature and density from top to bottom. However, this year, the lake stayed meromictic because of the warm winter.
Impacts of Climate Change on Agriculture in Shiga

Deterioration in the appearance of rice due to summer heat

white immature grains

cracked rice grains
Impacts of Climate Change on Agriculture in Shiga

Destruction of vinyl greenhouses by typhoon No. 21 (September 2018)
The Shiga government is taking measures to **mitigate** climate change and **adapt** to it. Shiga established its **Center for Climate Change Adaptation** in January 2019. It was the second in Japan.
Adapting agriculture to climate change in Shiga

Shiga’s environmentally-conscious agriculture area is the largest in Japan.

The new rice cultivar, Mizukagami, is tolerant to high temperatures
Mitigating Climate Change’s Effects on Agriculture

Shiga’s environmentally-conscious agriculture area is the largest in Japan.

Environmentally-conscious agriculture in Shiga (planting cover crops)
Mitigating Climate Change’s Effects on Agriculture

Environmentally-conscious agriculture in Shiga (extending the duration of the midsummer drainage on paddy fields)

Shiga’s environmentally-conscious agriculture area is the largest in Japan.
Environmentally-Conscious Agriculture in Shiga

Adapting to climate change

Maintaining sustainable food production

Reducing greenhouse gases through “mitigations”
Mitigating Climate Change’s Effects on Agriculture

Techniques to reduce greenhouse gases in tea fields
Certified as a Nationally Important Agricultural Heritage System! (February 2019)

Also preparing its Globally Important Agricultural Heritage Systems (GIAHS) application to the FAO!
Shiga Prefecture Agriculture is a Solution to Climate Change!

Developing environmentally-conscious agriculture and the Lake Biwa System and connecting them to the next generation

Sustainable Development Goals
17 Goals to Transform Our World

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice and Strong Institutions
17. Partnerships for the Goals
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Thank you for your attention.