



# Land-based Aquaculture in Kamoenai Village

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Land-based aquaculture: fish farm on land

# About the village

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Population : 803 people

(The second smallest in Hokkaido)

Town of fishery industry

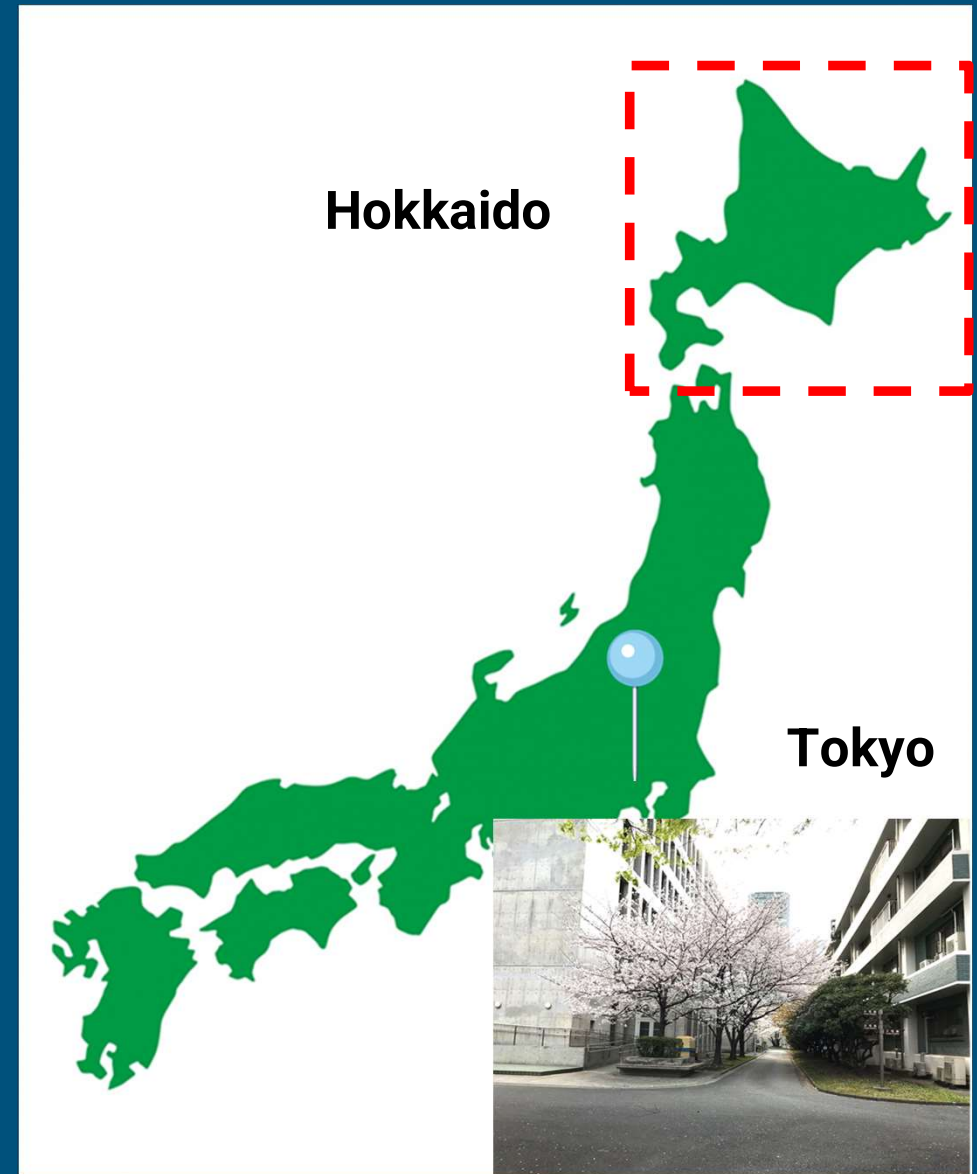


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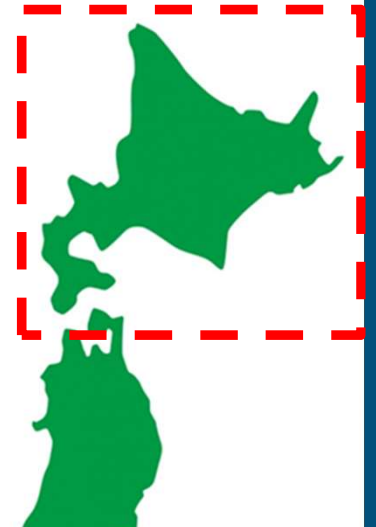
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Hokkaido



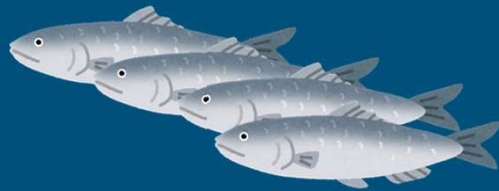
Kamoenai  
Village



# The reason behind starting land-based Aquaculture

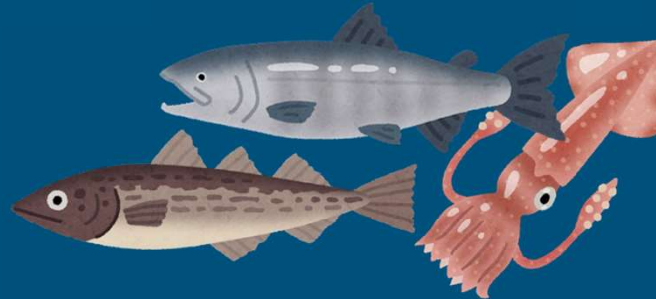
©History of the village

17C~20C



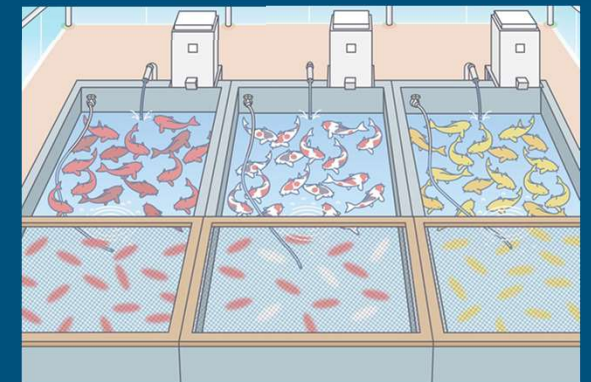
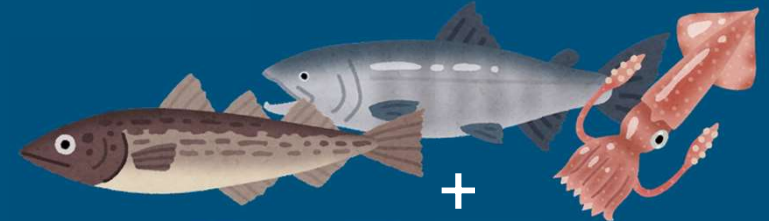
Herrings

20C



Alaska Pollack, Trout, Squid

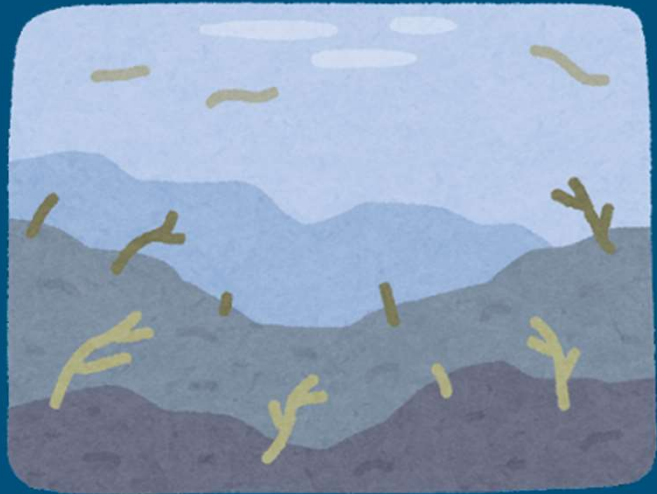
The present



Fish farming

# The reason behind starting land-based Aquaculture

©Problems the village is facing



Decline or disappearance of seaweed beds



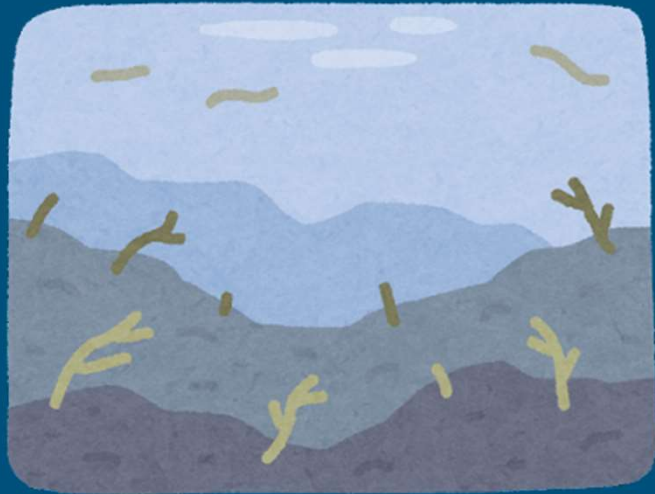
The lack of successors in fishing industries



Land shortage (Field, Habitable area)

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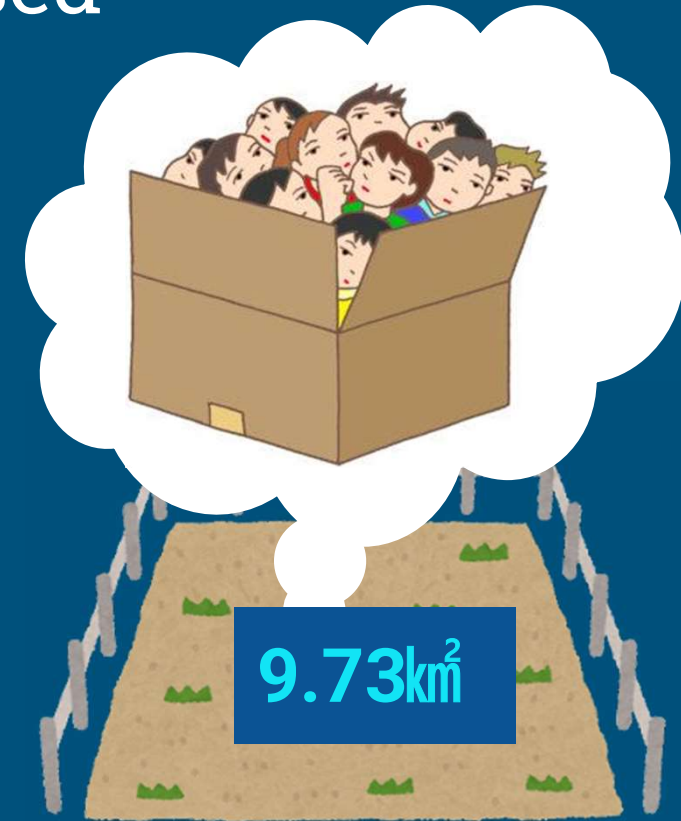
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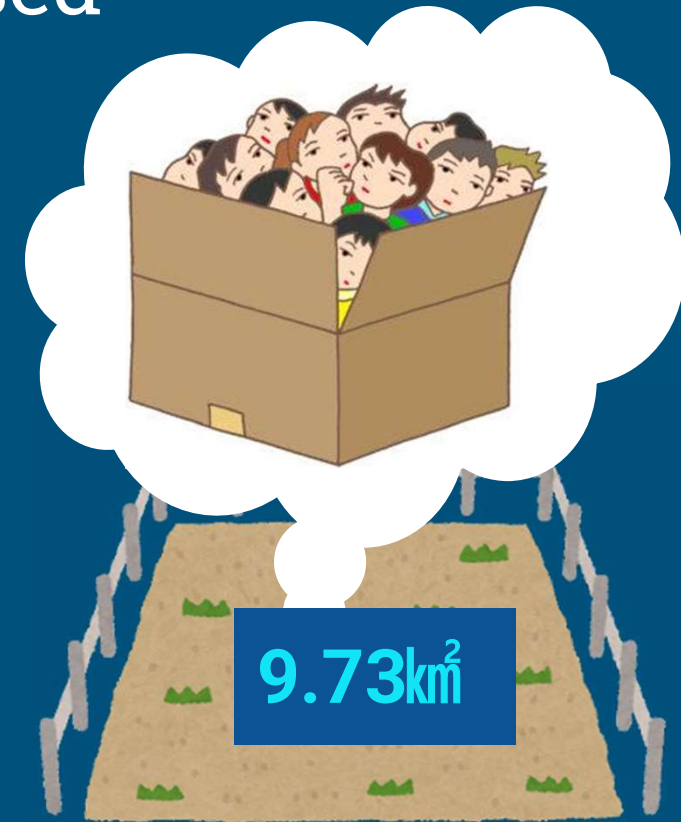
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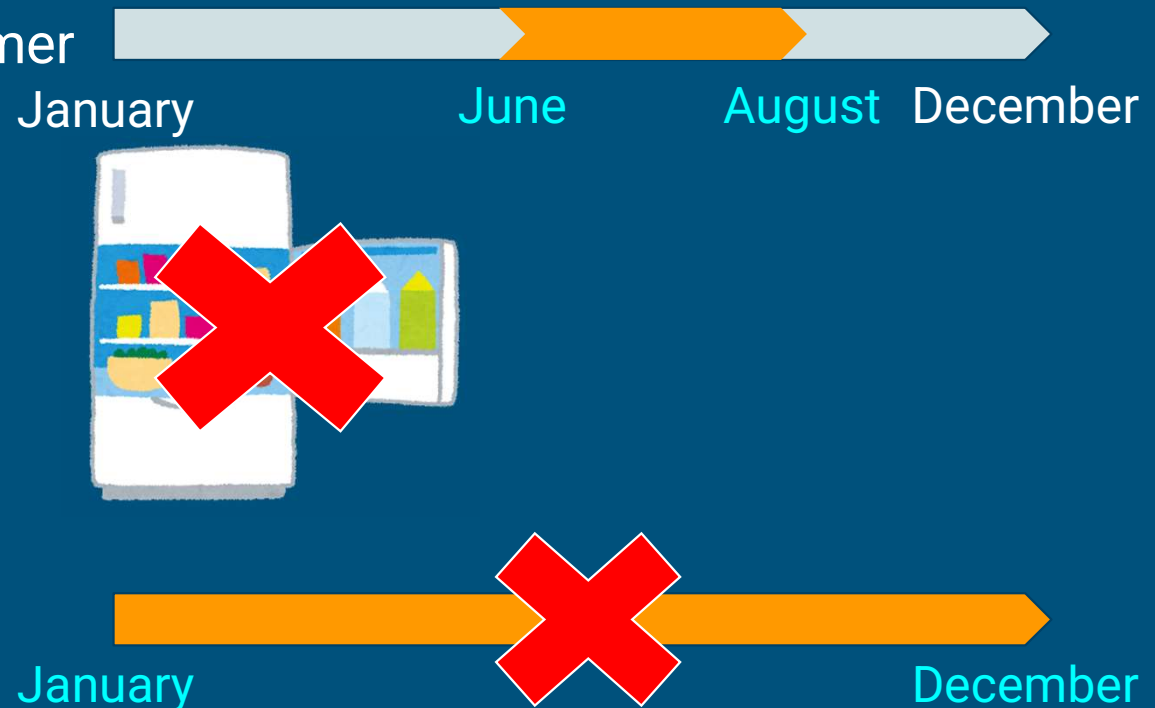


# The reason behind starting land-based Aquaculture

- Can only be caught during the summer
- Freezing will lower price



They can't be sold all year around.



# Overview of the land-based aquaculture in Kamoenai village

Land-based aquaculture  
of sea urchin using Internet of Things (IoT)



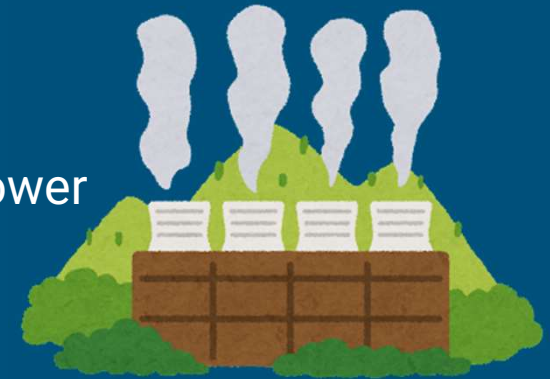
< feed >



Chinese cabbages  
(nonconforming vegetables)

< Power >

Geothermal power  
generation



# Problems to be solved

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- Land-based aquaculture

- ⇒ Prevents ocean pollution caused by leftover feeds

- ⇒ Can be done even though there is only a small land

- ⇒ Make operation easier by using IoT

- ⇒ Can ship year-round and stabilize supply

# Problems to be solved

- Using Imperfect Chinese cabbages

⇒ Reduce food loss

⇒ Cut down feeds costs



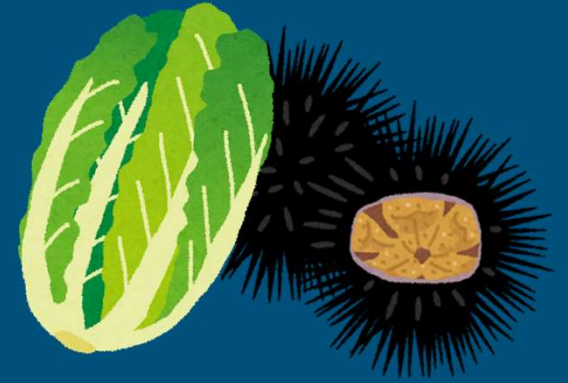
- Utilize renewable energy

⇒ Cut down electricity bill

⇒ eco-friendly



# The future of Kamoenai village



- improve fisherman's income
- progress village's recognition
- create employment

⇒ young people move to village



# How this case benefits Japan and Thailand

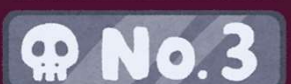
Can benefit both Japan and Thailand in many ways



· Prevents vanishments of small rural towns



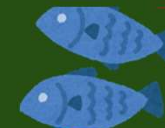
· Improvements to the negative image/stereotypes of fishery



· Protecting mangrove forests



· Source of income and food for slums



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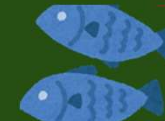
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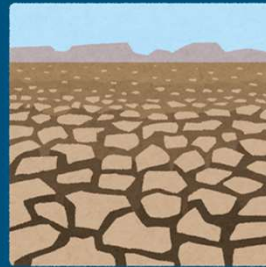
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# How this case benefits Japan and Thailand



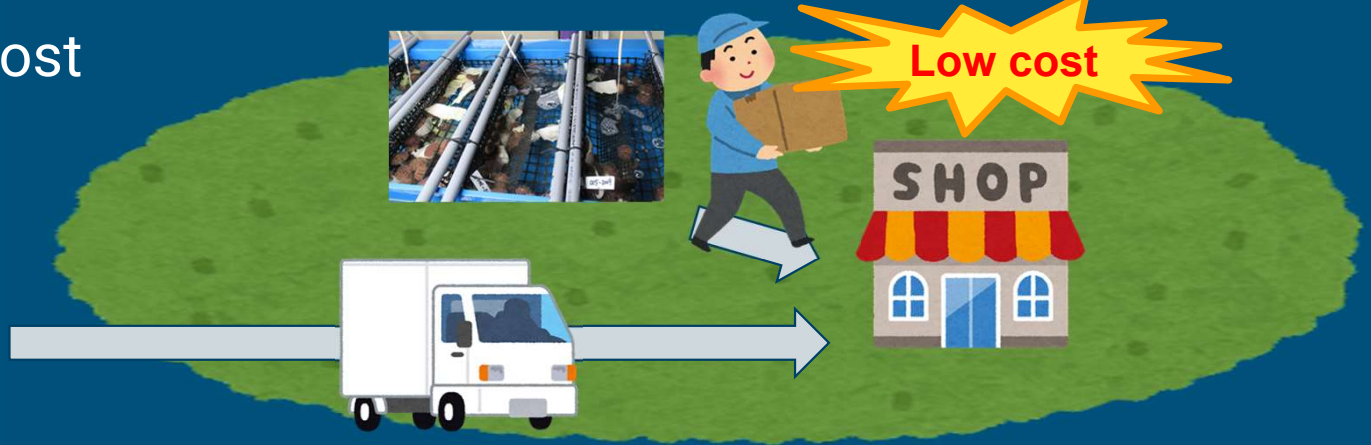
• Unaffected by natural disasters



○ Stable catch = stable income

• Can be done in areas far from huge body of water (rivers, lakes, ocean)

○ Cuts down shipment cost





# Conclusion

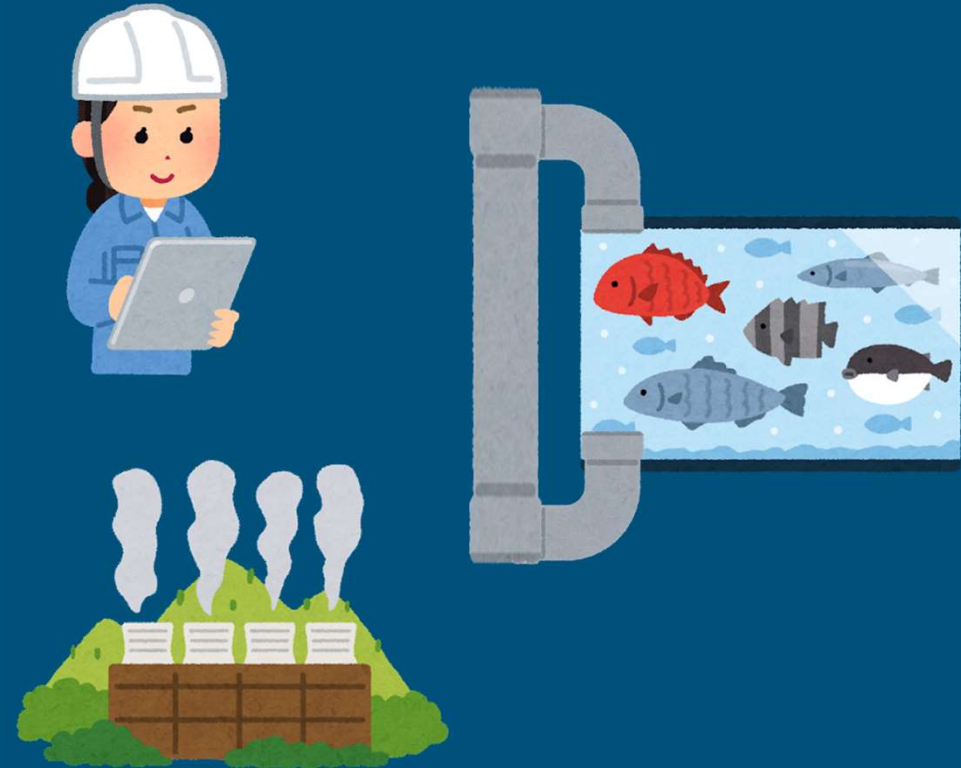
## Land-based Aquaculture has the potential to solve many social issues.

- The use of IoT

→ Easy to maintain

- Complete filtering system
- The use of renewable energy

→ Can be fully independent in the future



# References

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# Thank you

Feel free to ask any questions about the presentation.