

Short Visit to Germany

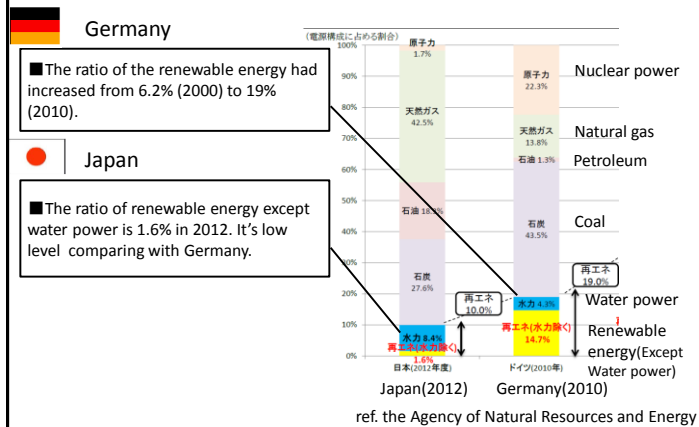
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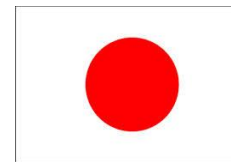
1.BACKGROUND & PURPOSE

Back Ground



Purpose

- To see advanced environmental action in Germany and to learn about it.







2.THE UNIVERSITY I VISITED

the University of Stuttgart

Baden-Württemberg
Capital: **Stuttgart**

Over view of Germany

- **Economic scale**: Rich state as Belgium and Sweden
- **Industry**: The main industry is the machine industry

About University of Stuttgart & Supervisor

- One of the “TU9”, which is the alliance of 9 great institutes of technology.
- My supervisor: Ortwin Renn who specializes in Environmental Sociology and Technology Assessment.




About research

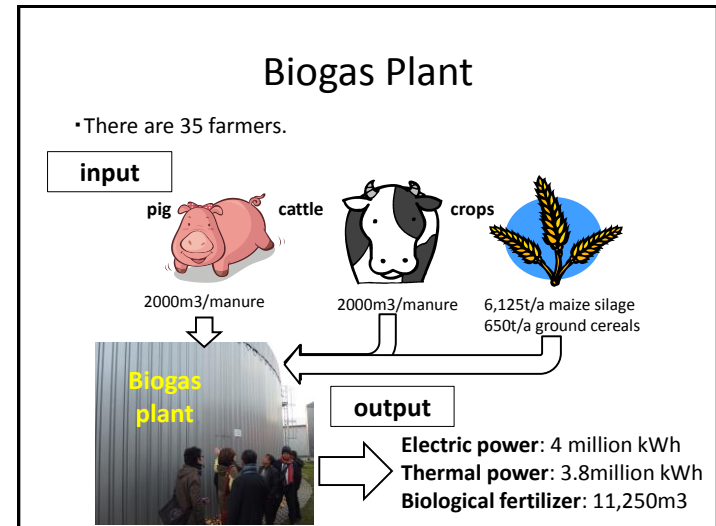
- Case study 1: visiting Feldheim introduced by one of my laboratory member.
- Case study 2 : visiting Freiburg which is famous for the eco-friendly city.





Energy self-sufficient village - Feldheim-

- Feldheim is the special village in German because it is the only village that is enenergy self-sufficient.
- About 83 km southwest outside of the German capital, the Berlin.
- Population:128



Biomass Plant

- Woodchip heating plant

Industrial forests



by-product

furniture



Wood chip



Produce heat

Solar Energy Farm

- Total Power capacity: 2.25 MW
- They don't work in winter because of hours of sunlight



Wind Farm

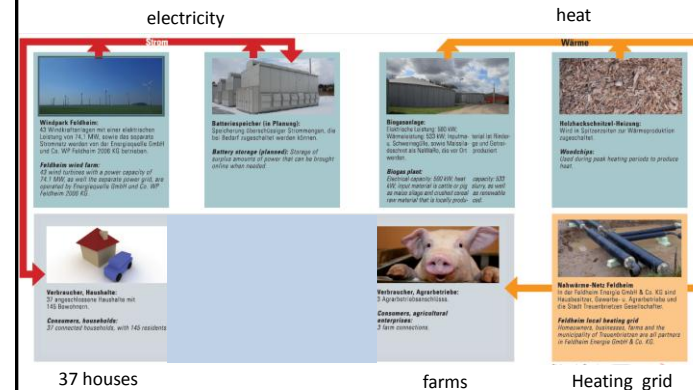
- Main electric plant
 - 43 turbines
 - Total power capacity: 74.1 MW
 - Total annual output: 129 million kWh
- They only use less than 1% of the electricity and the rest is sold to the public grid.



Strong wind and flat land

Fit for the wind farm

The summary of Feldheim



• the point is all villagers invested these plants.



The location

- Freiburg is famous as the eco-friendly city.
- One of the famous environmental action is forest (Schwarzwald) restoration.

Schwarzwaldc image in 1970s

Schwarzwaldc image in 2013

Eco-friendly activities about house

- Freiburg decided that houses constructed after 2011 should use **two fold windows** and **30cm heat insulating material** and put **solar panels** on the roof.

Two fold window

Keeps warm
Keeps warm
Insulating material

Solar panels

The houses in Vauban area

The soccer stadium

Eco-friendly activities about traffic

- Tram and bus runs everywhere in the city
- 95% residents can go to the station or bus stop in 5 minutes from their home
- The roads for the bicycle
- Parking area for 9000 bicycle
- Around 1/3 residents use bicycle as means of transportation

Cultural Exchange (food)



The people I met in Germany



What I learn in this short visit

- I learned Germany geographic features is fit for wind energy (the wind is strong and the flat land is large).
- German people's environmental awareness is very high and they have done many eco-friendly actions.
- Not knowing words but understanding culture is important to communicate.

Thank you!



References

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