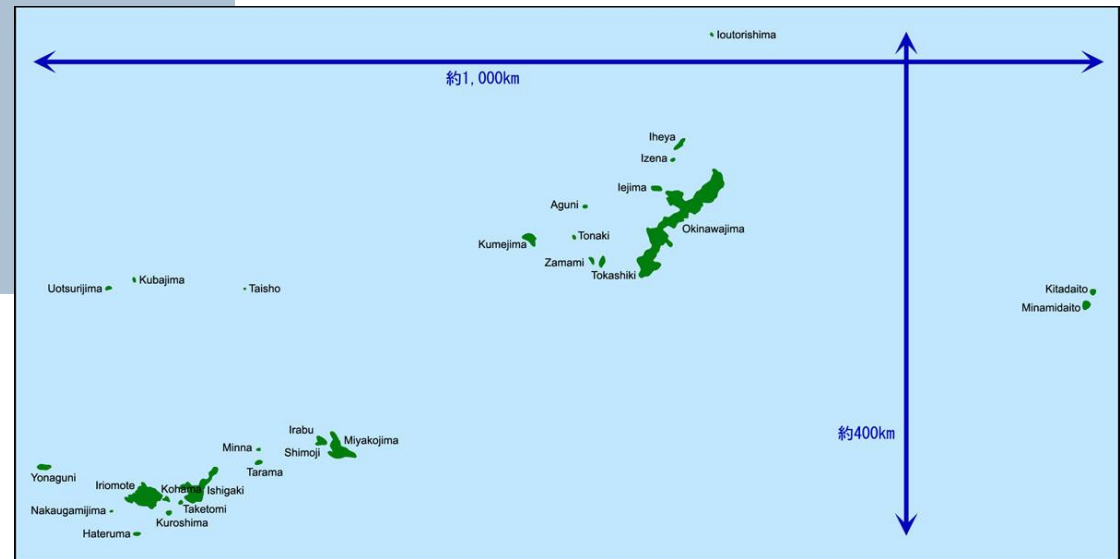


International Conference on Climate Change and Coral Reef Conservation  
In Okinawa, Japan (June/29-30/2013)

Session 2  
Energy strategies and Policies for the  
**Mitigation of Climate Change**  
in the context of small islands including Okinawa

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# What is Okinawa?



- Okinawa consists of about 160 islands, 40 islands are inhabited.
- Total land area is about 2,266km<sup>2</sup>, it is 0.6% of total Japan.
- Total population is about 1.4 millions, it is 1.2% of total Japan.
- Over 50% of the total area and over 90% of the population in Okinawa island.

# To Stop the Global Warming

- Carbon Free Energy (Renewable Energy)
  - Nuclear Power
  - Natural Energy (Solar, Wind, Geothermal, Ocean)
- Carbon Neutral Energy (Renewable Energy)
  - Biomass Energy
- Carbon Reduction
  - Energy Savings
  - High Efficient Energy (Recycle energy)
- Carbon Sink
  - Carbon Absorption by trees
  - Carbon Absorption by the sea

# Renewable Energy in Miyako Island



Bio Alcohol Station



Bio Alcohol Factory from Sugar Cane



Mega Solar Site at Fukuzato, Miyakojima



# Bio and Recycle Energy

- Bio Alcohol (Ethanol) from Sugar Cane
- Bio Diesel Fuel (BDF) from organic oil
- Bio Methane Gas from bio waste materials
- Waste Heat from incinerators or factories



Power Generation by Waste Heat  
(Covanta, Honolulu)



Power Generation by Bio Methane  
(Naha, Okinawa)

# New Type of Wind Turbine on the Sea



Wind turbines with wind diffusers on a float in Hakata bay, Fukuoka, Japan

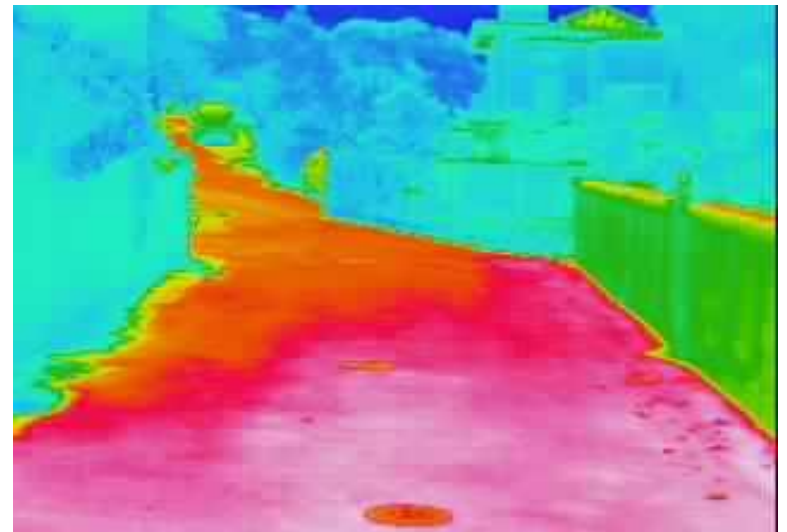
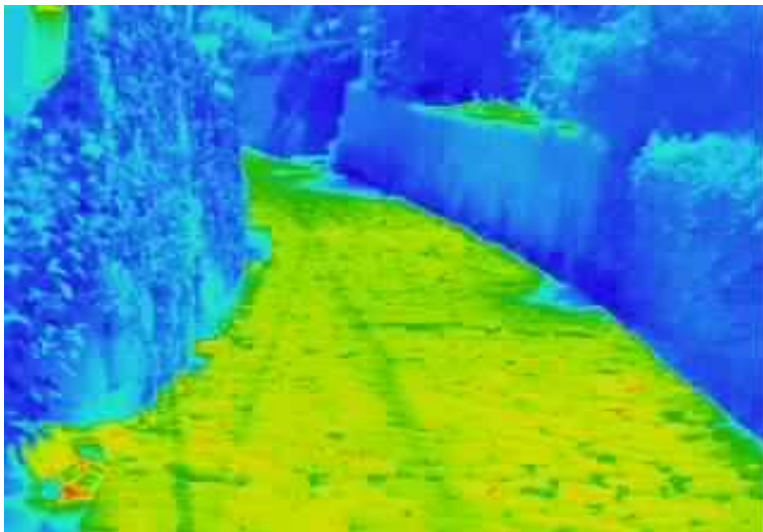


Test of a Self-float type wind turbine, Goto-City, Japan

# Damages on wind turbines By typhoon 0314



# “Shuri-Kinjo” Historical Heritage Area

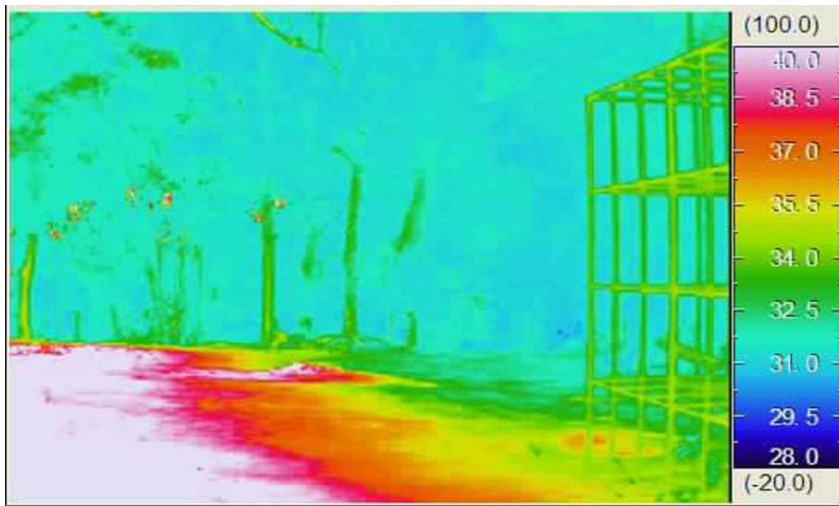


Stone Pavement

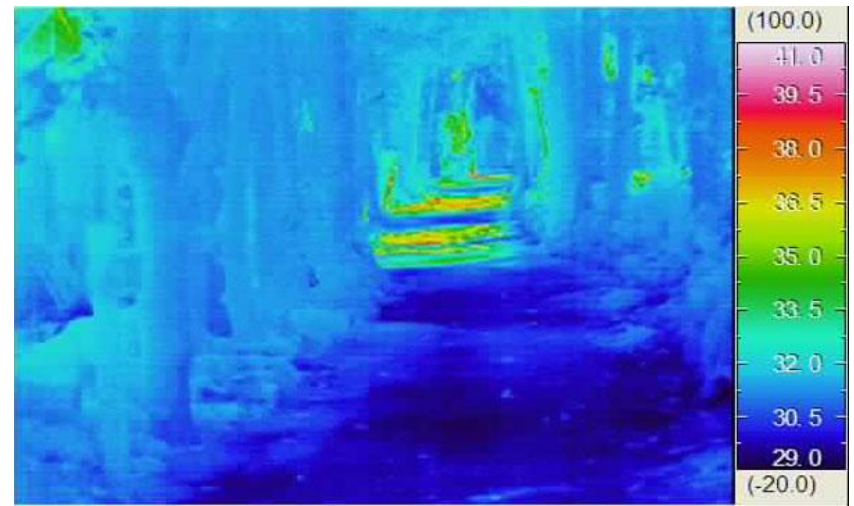
Asphalt Pavement



# “BISE” Traditional Area with FIKUGI Trees

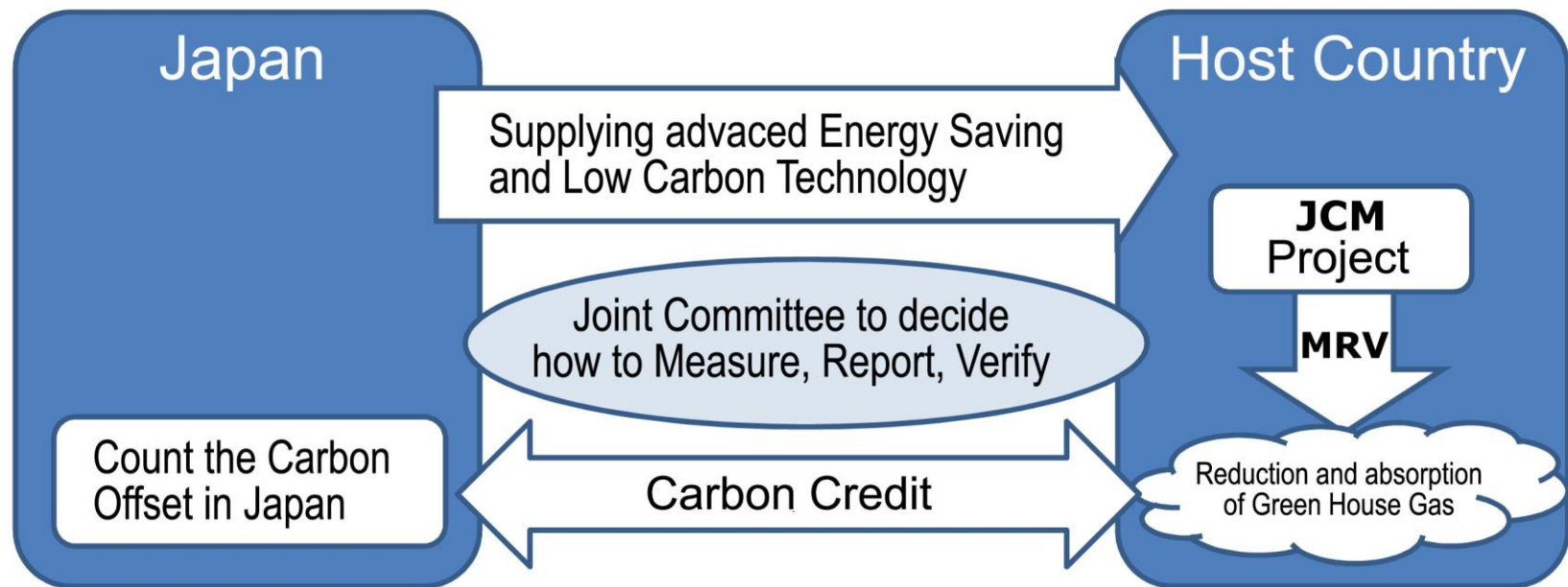


13:00, 7/Aug./2008



15:00, 7/Aug./2008

# Joint Crediting Mechanism, Bilateral Offset Credit Mechanism by Ministry of Environment, Japan



Easier to apply between two countries than CDM of Kyoto Protocol