



# EIA as a Conflict Mitigation Tool for Wind Farm Projects in Japan

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# **1. Energy situation in Japan**

The operation ratio of Japan's nuclear plant



Nuclear Plant cannot be restarted by <u>local opposition</u>
The renewable energy movements has been enhanced

## 1. Wind energy in Japan (Introduction)

#### Wind Energy is important option in Japan

- High potential: over 200GW (MOE, 2011)
- High market competitiveness
- Geographic difficulties (70% is mountain)
- Financial procurement mechanism was poor



	Japan	Germany	UK
Area	378,000km <sup>2</sup>	357,000km <sup>2</sup>	243,000km <sup>2</sup>
Flat land ratio (Approx.)	25%	70%	70%
Economic Incentive	RPS 2003~ FIT 2012~	FIT 1990~ FIT' 2000~	RPS 2002~
Total Capacity (GWEC 2011)	2.5GW	29.1GW	6.5GW

## 1. Wind energy in Japan (Regulation)

### Regulation for wind farm is undeveloped

- EIA was not legally required under the EIA Act, until the recent amendment.
- Environmental Conflicts have been exposed
  - Conflict ratio: at least 25% (over 10MW)
    - Significant barrier against development



	Japan	Germany	UK
EIA Act	<b>○ 2012~</b>	○ 2001~	◯ 1994~
SEA	△ Program 2013~	<b>O Plan</b>	O Plan
Zoning	×	⊖ specific	riangle not specific

# 2. Research Scope & Aim

"effectiveness" of EIA as a conflict mitigation tool

How could EIA help conflict mitigation?

*"ineffectiveness" of EIA* as a conflict mitigation tool

- Are there any limitation which EIA could not cover?
- Which factors make EIA ineffective?

[ Presentation Aim ] To demonstrate "effectiveness" and "ineffectiveness" of EIA as a conflict mitigation tool under Japanese contexts using multi-cases analysis framework to show the challenges we are facing now.







# **2. Focused Variables**

## Site characteristics **Public Participation** → **Outcome Project difficulty** EIA support public participation (both procedure & modification) EIA **Public Project Difficulty** → Outcome **Participation** Site specific characteristics determine project difficulty **Project Outcome**









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Plot multi-cases to same plane and compare the distribution



### ► 18 field interviews were held in 4 prefectures

with local government officers (prefecture & municipality), developers, environmental groups and local groups.

Planning documents, particularly EIA documents



## **3. Variable calculation (Project Difficulty)** 13



## **3.** Variable calculation (Participation)



## **3.** Variable calculation (Outcome)

#### 4-level evaluation for "outcome" was defined by 4 aspects

- 1) Whether was a conflict arisen or not?
- 2) Timing: before construction or after construction?
- 3) Was the conflict resolved or continued 4) small or large?



## **3. Demonstration by case studies**



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# 4. Conclusion

In Japan, the movement of renewable energy has rapidly enhanced by the Fukushima nuclear accident, on the other hand the regulation for wind farm still be undeveloped.

Though the demonstration by multi-cases analysis,

- The effectiveness of EIA as a conflict mitigation tool could be demonstrated. (Strong Public Participation)
- The ineffectiveness of EIA also could be demonstrated, and it bring 3 challenges to us.
  - Exclude sensitive site characteristics at earlier stage. (SEA, Zoning)
  - Enhance public participation
  - Change the awareness by developer by showing the importance to take above measure