



**Task 28 within IEA R&D Wind:**

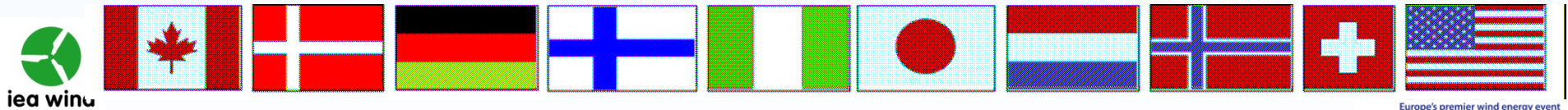
# **Social Acceptance of Wind Energy Projects**

**„Winning Hearts and Minds “**

**EWEC 2010**

**Warsaw / Poland, April 20<sup>th</sup>**

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# Introduction: Social Acceptance

windkraftgegner.de

Windkraft ist keine Alternative!





# Introduction: Social Acceptance

- **High general support, but resistance to projects**
  - Local resistance, vivid debates, media-effective actions
  - Organised opponents, websites, fundamentalists
- **Social acceptance: powerful barrier for policy goals**
  - Wind energy has different impacts e.g. on landscape than other technologies, e.g.
    - Due to small scale projects many siting decisions necessary
    - Moving elements in landscape
  - Social acceptance long time experiences in energy sector (Hydro, Nuclear, Transmission lines, Wind farms)  
→ **Best practices already exists!**



# IEA Wind Task 28

- **International working group**
    - Exchange, collection of knowledge, discussion, dissemination → Accelerate exploitation of full wind energy potential
    - Embedded into IEA Implementing Agreement for Co-operation in R&D of Wind Energy systems
    - Participating countries from Europe (7), North America (2) & Asia (Japan)
    - Experts from various disciplines (planners, engineers, sociologist, psychologists, environmental scientists...)
- **Cross-country & interdisciplinary approach**





# IEA Wind Task 28

## State-of-the-Art

- State-of-the-Art-Report
- Networking
- Creation online library

## Best Practice

- Best-Practice Report
- Established Network
- Actual online library

## Dissemination

- International Seminar
- Publications
- Dialogue

- **Outcomes**

- Establishment of international forum
- Translation of research results of social scientists in language of planners and engineers
- Reports (State-of-the-Art, Best Practice)
- Tools, Guidelines, Seminars, Publications...







# IEA Wind Task 28



## Task 28, Social Acceptance of Wind Energy Projects

### Search

Project/Publication:  Institution:  Author:  Abstract:  Find Reset

☐ 1 Definition of Social Acceptance ☐ 3 Stakeholders / target group ☐ 5 Procedural Design ☐ 7 Implementation strategies  
☐ 2 National Wind Energy Concepts ☐ 4 Distributional Justice ☐ 6 Well-being

### List of projects/publications

Project/Publication	1	2	3	4	5	6	7	Institution	Author(s)	Year	Country	Language	Last Edit	Att.
<input checked="" type="checkbox"/> The Attitude towards On-land and Off-shore Power Generation – A Danish Perspective	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The Royal Veterinary and Agricultural University	Jacob Ladenburg	2006	Denmark	English	12.10.2009	0
<input checked="" type="checkbox"/> Best Practices Guidelines in Australia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Australien Wind Energy Association	Auswind	2006	Australia	english	08.10.2009	0
<input checked="" type="checkbox"/> Social Acceptance of Wind Energy Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EPFL-CdM-CSI	Mary Jean Bürer / Christopher Tucci	2008	Switzerland	english	08.10.2009	0
<input checked="" type="checkbox"/> Code of Conduct für Windkraftprojekte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pierre Strub, freischaffender Berater	Pierre Strub / Christine Ziegler	2008	Switzerland	german	08.10.2009	0
<input checked="" type="checkbox"/> Position on Setbacks for Large-Scale Wind Turbines in Rural Areas in Ontario	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Canadian Wind Energy Association	Canadian Wind Energy Association	2007	Canada	english	07.10.2009	0
<input checked="" type="checkbox"/> Public Perceptions of Wind Power Generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Japan Society of Energy and Resources	Naoto Tagashira / Yasuko Senda	2009	Japan	Japanese	30.09.2009	0
<input checked="" type="checkbox"/> Diffusion Model of Renewable Energies Considering the Learning Effect and Environmental Value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Journal of Japan Society of Energy and Resources	Susumu Uchida / Yoshiro Higano	2008	Japan	Japanese	30.09.2009	0

[www.socialacceptance.ch](http://www.socialacceptance.ch)

Projectlist

### Trust and community: Exploring the meanings, contexts and dynamics of community renewable energy

☐ 1 Definition of Social Acceptance ☐ 5 Procedural Design  
☐ 2 National Wind Energy Concepts ☐ 6 Well-being  
☐ 3 Stakeholders / target group ☐ 7 Implementation strategies  
☒ 4 Distributional Justice

Institution:

Author(s):

Year:

Country:

Language:

Additional Info:

Uploaded by:

Project is public: ☒

**Abstract**

Community renewable energy projects have recently been promoted and supported in the UK by government policy. A community approach, it is argued in the rhetoric of both government and grassroots activists will change the experience and outcomes of the energy sustainable technology implementation. In this paper, we consider how interpersonal and social trust is implicated in the different meanings given to community in RE programmes and projects, and in the qualities and outcomes that are implied or assumed by taking a community approach. We examine how these meanings play out in examples of projects on the ground, focusing on two contrasting cases in which the relationships between those involved locally have exhibited different patterns of cohesiveness and fracture. We argue that trust does have a necessary part to play in the contingencies and dynamics of community RE projects and in the outcomes they can achieve. Trust between local people and groups that take projects forward is part of the package of conditions which can help projects work. Whilst trust may therefore be functional for the development of community RE and potentially can be enhanced by the adoption of a community approach, this cannot be either assured or assumed under the wide diversity of contexts, conditions and arrangements under which community RE is being pursued and practiced.

Documents	Filesize	Uploaddate
Walker _ Devine-Wright 2009.pdf	226 KB	23.10.2009

## Web database:

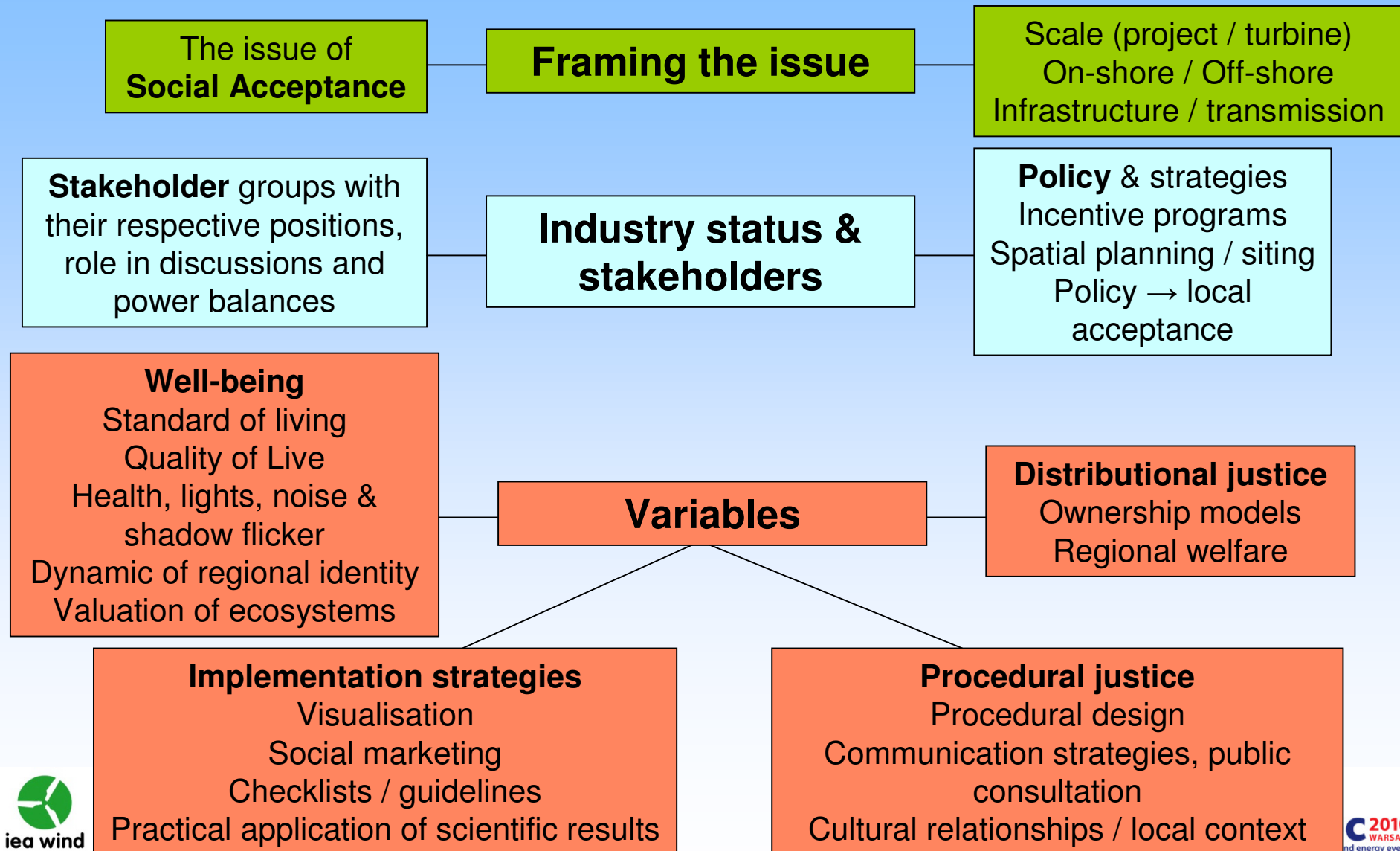
142 entries, >16 countries, 6 languages

79 available to the public





# Overview





# Stakeholders

- **Complex framework**

## Market acceptance

Utilities

Grid owners / operators

Developers

Financial institutions

## Institutional acceptance

National administration

State / regional administration

## Community acceptance

Indigenous residents

"Neo-rurals"

Local landowners

Local Administration / authorities

Visitors / tourists

## General acceptance

National NGO's

Local NGO's

Opinion makers

Policy makers

General opinion

Experts

Media

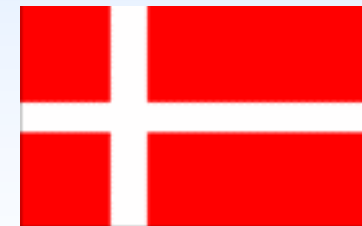
Educators





# Policies and Strategies

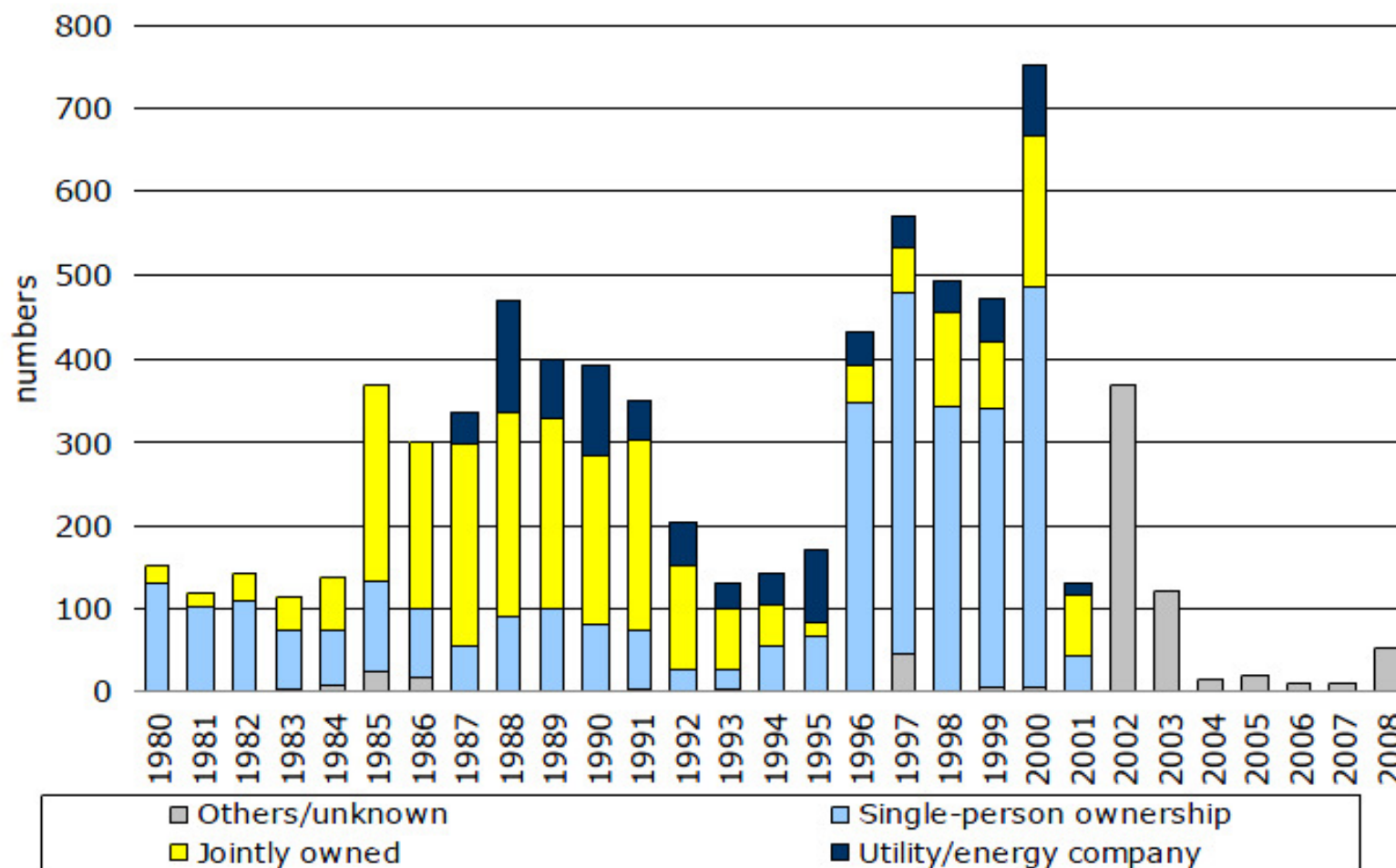
- **New Danish legislation**
  - Introduced **range of issues to help implementation of national targets**
  - Promoting **local acceptance**, amongst others
    - Compensation for loss of property value
    - Local option for share purchase
    - Green scheme
    - Guarantee scheme
    - Wind Turbine Secretariat





# Denmark

Ownership of Danish wind turbines





# Well-being

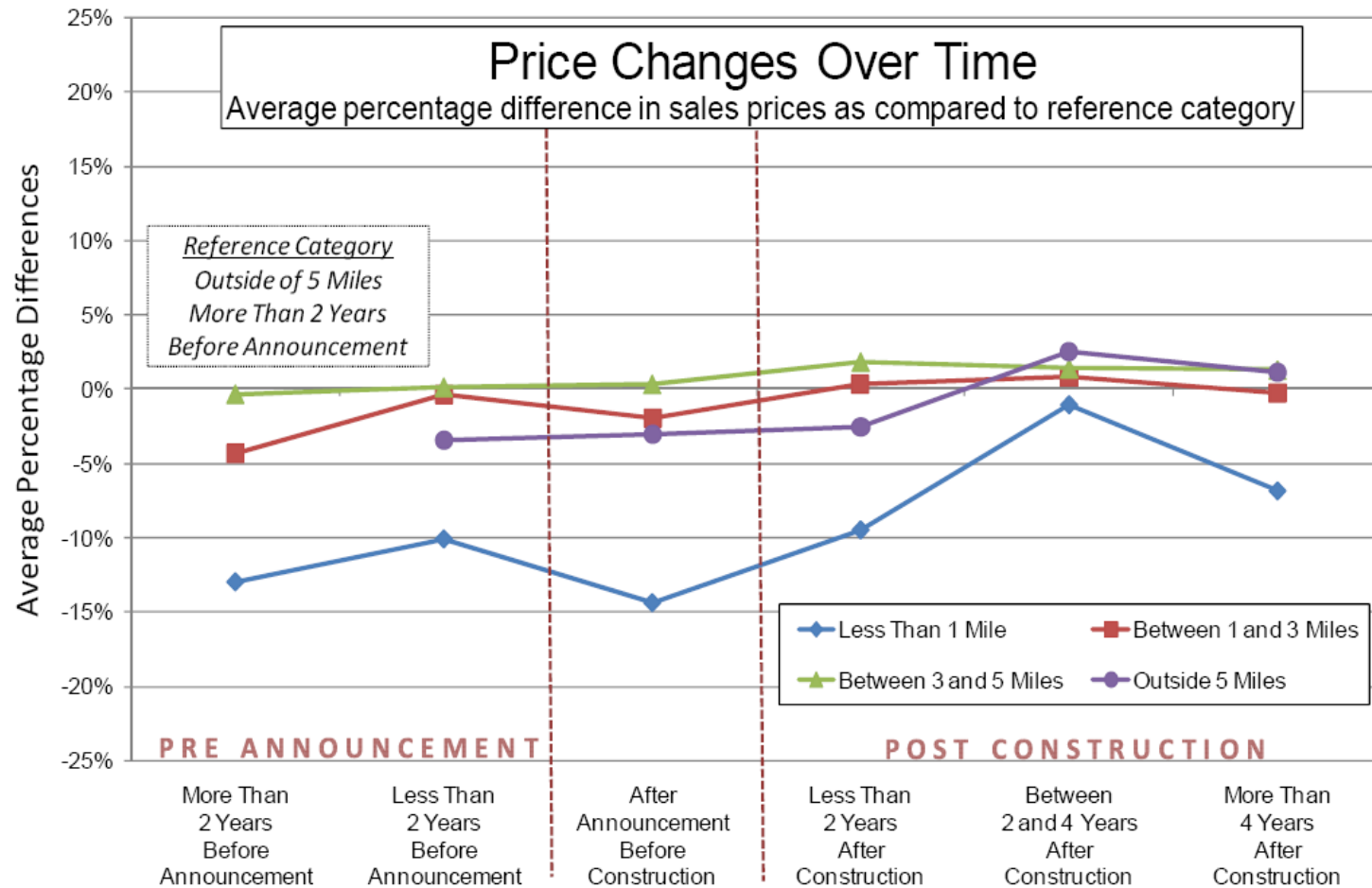
- **Well-being influenced by personal attitudes**
  - Environmental issues
  - The importance of your home landscape
  - Feeling towards the developer or the authorities
- **Well-being also concerns standard of living**
  - Impacts of wind energy on electricity rates
  - Tax income, job creation, business boost
  - Fear of house-price depreciation





# US: house-price depreciation

Homes Nearest the Turbines Were Depressed in Value Before Construction and Appreciated the Most After Construction While Homes Further Away Were Largely Unchanged Over Time





# Valuation of ecosystems

- Biodiversity **is important reason for resistance**
  - Strengthen knowledge basis for ecological data
  - Address issue at an early stage
  - Dialogue between science and society
    - New knowledge generation & communication





# Norway: Green Energy Camp 2009

- **An 48-hour "think-thank" with participants from industry, environment organisations and research**
  - Create a concept that could contribute to realisation of good wind power projects
  - A concept that was to be handed over to the Minister for Oil and Energy at the end of the camp







# Distributional justice

- **Sharing benefits**
  - Positive appreciation of costs and benefits
- **Benefits of "Community wind" in Japan**
  - Mobilization of people & capital all over the country
  - Identification with projects, e.g. with names on turbine
  - Generation of additional benefits for communities





# Japan: Community Wind



- **Benefits for investors, e.g.**
  - Social responsible investment
- **Benefits for municipalities, e.g.**
  - Visitors, 300-750 investors for each project



# Procedural design



- **Fair process**
  - “Winning hearts and minds”
  - Turn affected people into involved parties
  - “NIMBY” does not explain opposition
- **Importance of local context**
  - Stakeholder framework is complex
  - Wind energy issues bring forward divides / cleavages in local communities
  - Local history, experiences and structures must be taken into account
    - Each project is unique!





# Canada: guidelines for local governments

- **Preliminary information**
  - Through consultation with independent experts
  - Have a specific person dealing with the wind power issue in the community
- **Consultation with the local population**
  - Identify the preoccupations and expectations
  - Determine possible compromises
    - Debates, public assemblies and forums.
- **Alternative actions**
  - Identify alternatives to the proposed project
  - Propose local financing possibilities
  - Achieve a large consensus for the location



## Switzerland: 4 MW “Wind farm”

- 2 Enercon E82, 7.5 GWh/a, installed 2009
- 7 years planning procedure





# Distributional Justice



- **Community wind**

- Company with 650 shareholders
- Attractive conditions for locals

***But: Very little local or regional response, lack of finances***

- **Regional welfare**

- Earnings of municipality: taxes and building lease
- Substantial income for municipality
- Feed-in tariff in Switzerland low: Green energy sold to a higher price to the City of Zurich
- Higher income also for municipality

***But: Public debate: “Our resources are sold out”***







# Procedural Justice

- **Planning procedure**

- According to national and state guidelines, photomontages, detailed project descriptions, meetings
- Lead with state authorities, close contacts with municipality
- 3 times possibility for objections by local population: no opposition

***But today: Planning is questioned → Media***

- **Communication strategies**

- Media conferences by start and end of construction
- Very little response

***But Today: Some “loud” opposition***

***→ ¾h in national television!***

***→ Good news is no news!***





# Well-being

- **Valuation of ecosystems**

- Compensation for installation of the 2 turbines:
- Obligation for higher eco-value of the farming ground, unfertilised, (flowers, rocks, attractive for butterflies, etc.)

***But bat protectionist oppose: to attractive for bats!***

- **Dealing with noise**

- Planning value adhered, but at night even 45 decibel is “loud ”
  - **1/3 technical** (measurements, noise limits, etc.)
  - **1/3 social** (being part of project, having influence, etc.)
  - **1/3 ?????** (no explanation, very much related to person)



# Measures

- **Acceptance**
  - Meeting with opponents and proponents, together with planning authorities,
  - Explanation of optimization strategies
  - “Day of open doors” for population, inauguration
  - Plate on tower with all the share holders
  - Offering shares to the municipality
- **Technical**
  - Immediate measure: Limit power output at night time
  - Optimization, depending on wind direction



# Excursion with Shareholders





# Conclusions

- **Social acceptance is a big issue**
  - Range of checklists, guidelines, case studies, best practice projects for variety of stakeholders (communities, industry, authorities...)
- **What remains to do:**
  - Learning from each other
  - Synthesis into “Best Practice catalogue”
  - Dissemination of knowledge to planners, developers and engineers
  - Promotion of involvement (process, ownership, trust)
  - Building of knowledge, debunking of myths
  - Best practice projects everywhere





*Thank you for your attention!*

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