

Wind Power Landscapes

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1. CIRED

2. « Wind Power and Landscape »

3. « Landscapes of Energies »

4. Room for co-operation

CIRED
(EHESS –ENPC)

Origin

- Founded in 1971
- Reaction to the Club of Rome theories on the limits to growth
- Designing environment-development harmonization strategies (Sustainable Development)
- Research agenda aiming at public policies / economic regulations and long run deployment of innovation

Research agenda

- **Prospective modeling**
 - Hybrid (BU/TD) recursive energy-economy-emissions modelling
 - Consistent technical + macro-economic LT scenarios
 - Efficiency and costs of climate and energy policies
- **Social, institutional and territorial dimension of technological deployment (non cost factors)**

Research agenda

- Prospective Integrated Modeling (Economics – Environment- Technological Change) (>> IMACLIM, used for the 2008 World Energy Outlook)
- Environmental costs and societal vulnerability: prevention, remediation, adaptation
- Public policies and sustainable development (energy, water, transportation)
- The political economy of climate policy

Activities

1. **Mastère Economie du Développement Durable** (Nanterre, Ehess, Agro, Engref, Enpc, Mines de Paris, Polytechnique, IFP, INSTN);
2. **Direction du GIS R2DS en Ile de France**: DIM Ile de France sur le développement durable(70 équipes dans 15 institutions)
3. **Direction du GIS Larsen** (EDF, Cired, Paris-Sud) sur les systèmes électriques
4. **Participation au GIS-Climat Ile de France** (futur RTRA): CNRS, CEA, Ecole Polytechnique, UVSQ, Université Pierre et Marie Curie
5. **Animation du réseau Sécante** sur les dynamiques non linéaires et les vulnérabilités (ENS-Ulm, LMD, LSCE, Cired)

« Wind Power and Landscape »

An international research project

- Three countries
 - France (CIRED),
 - Germany (U. of Bremen),
 - Portugal (Nova U. of Lisbon)
- Funded by
 - French Ministry for the Environment and the Energy (MEDAD),
 - French Energy Council (CFE),
 - French Agency for the for the Energy (ADEME)
 - Region Ile de France (R2DS network)

Comparing Wind Power Policies

- **National policies**
 - Devising process
 - Perspective of overall energy policies and institutions
 - Planning institutions and authorization procedures
- **Implementation**
 - Local case studies (five cases per country)

Comparing Wind Power Policies

- **Germany**
 - 1) Emergence of a (Wind)-Energy Landscape: Case study Northern Friesland
 - 2) Seascape: The conquest of the sea through windmills in Northern Germany
 - 3) Transformation of an industrial landscape: Infrastructure of a newly emerging wind energy industry (Bremerhaven)
 - 4) Aesthetic pollution? Wind energy and the ambiguous roles of nature and landscape in Germany
- **France**
 - 1) Birds, turbines and the making of wind power landscapes (Aude, France)
 - 2) Shifting landscapes: wind power landscapes and the development of the French Wind Power Development Zones (Aveyron, South France)
 - 3) French “seascape”: Veulettes-sur-mer as a pre-figuration
 - 4) Urban / peri-urban wind power landscape: the case of Ile-de-France
 - 5) The stalemate of visual protection: wind power and the Chartres Cathédrale (Eure et Loir)
- **Portugal**
 - 1) Landscape, natural environment and economic profit – is there space for everyone?
 - 2) Wind power *versus* environmentalists’ power – constraints and discourse ambiguities on protected landscapes
 - 3) Windmills in Barão de S. João – Nein Danke! German immigrants against visual pollution of „their“ chosen landscape.
 - 4) Big enterprises, big wind parks, big business – beyond new landscapes of energy?
 - 5) Small windmills in big cities – pacific uses of urban landscape by private owners

Wind Power Policies

“Green” energy policies but ...

... as wind power get deployed :

- Territorial and planning dimension
- Landscape and local acceptance issues

>> Very different depending on the country

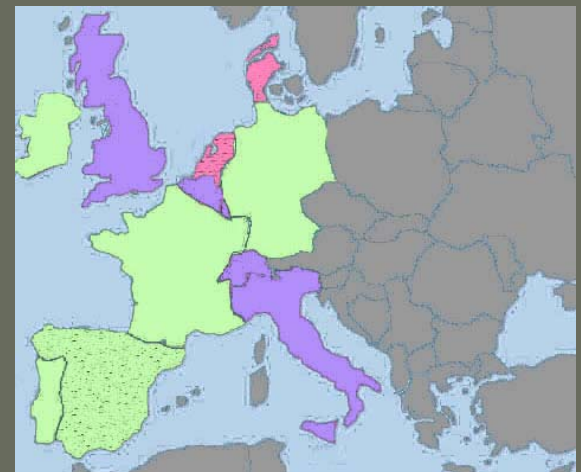
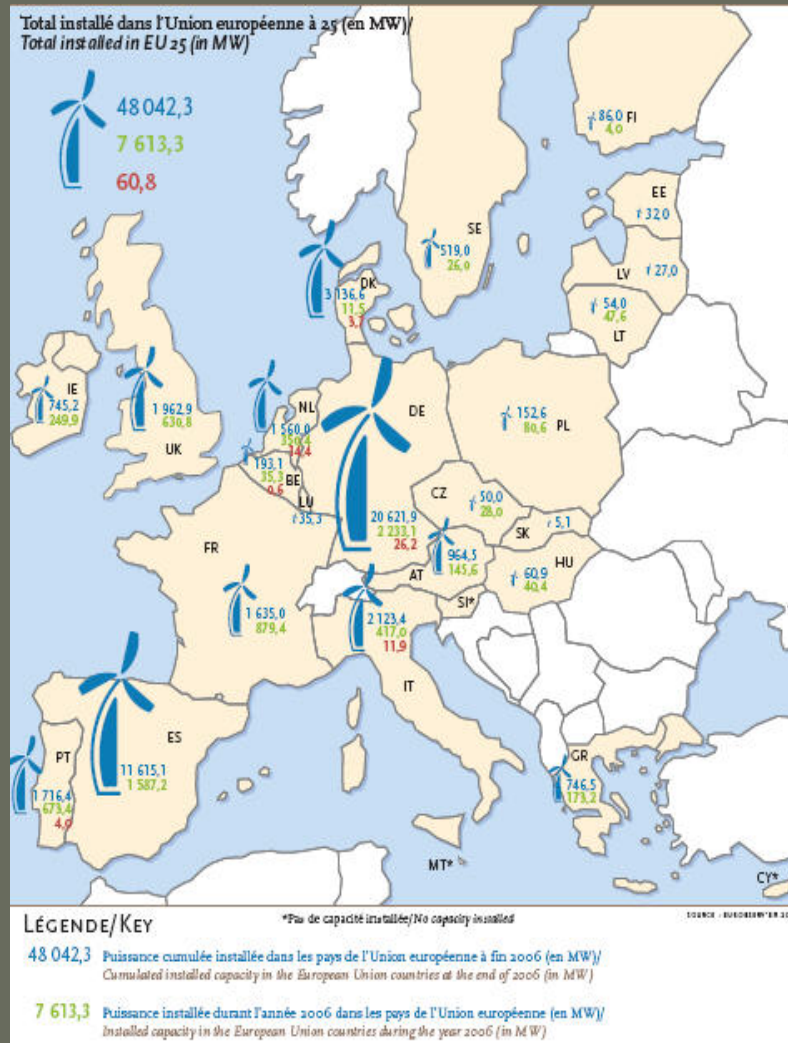
>> Understanding differences

Renewable Energy Policy in Europe

- Policy steps :
 - Voluntary targets on renewables (2001)
 - Mandatory targets as regards the share of electricity from RE (2007)
 - Mandatory targets as regards the share of energy from RE (2008)

Wind power in Europe

- Weak correlation between instrument and installed capacity



- Analyze factors other than price – quantity instruments

Wind Power in France

- Official objective
 - 14GW à 2010
 - 23GW for 2020
- Capacity development
 - Installed capacity, about 2 GW
 - Under instruction, about 6 GW
- Share of RES in Electricity consumption
 - 16 % in 2001 ; 12.6% in 2006

Wind Power in France

- **Policy steps**
 - Fixed tariffs adopted in 2000
 - First planning instruments in 2005
- **Administrative refusals**
 - 25% at the national level
 - 0 to 56% depending on the regions
 - Mostly for landscape protection

Wind Power in France

- Late implantation of planning framework
- Issue of decentralization in energy policy
- Tradition of administrative landscape protection
- Success dependent on the type of planning process implemented

“Landscapes of energies”

“Landscapes of energies”

An inter-disciplinary research network

- Social and landscape issues in relation to the emergence of renewable energies
- 34 participants, 15 countries

“Landscapes of energies”

An inter-disciplinary research network

- ESF 2007 exploratory workshop “*Emerging Energies, Emerging Landscapes*”
- PECSRL conference Session (Fall 2008)
- Two Special issues under review in international peer review journals
- 2008: Running for an ESF Eurocore Theme

Room for co-operation

“Landscapes of energies”

An inter-disciplinary research program?


- 2008 : Applying for a Eurocore Program
- 2009 : If successful, launching a call for national research projects
- 2010 : Start of the Research Program, ESF networking the research programs

“Landscapes of energies”

An inter-disciplinary research program?

- Magyar Tudományos Akadémia (MTA)
Hungarian Academy of Sciences
- Országos Tudományos Kutatási
Alapprogramok (OTKA)
Hungarian Scientific Research Fund

are ESF Member Organisations in 2008

A coastal scene featuring a stone wall in the foreground with waves crashing against it. In the distance, a lighthouse is visible on the horizon under a cloudy sky. The text "Thank you for your attention" is overlaid in the center of the image.

Thank you for your attention