

VISIONS OF THE FUTURE FOR FACILITY SITING

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Outline

© *Lessons from the Past*

© *Visions of the Future:
Institutional Change*



Lessons from the past

Evolution of facility siting policy:

1. Traditional scientific management approaches

- ❑ Technically-based site-screening and selection process
- ❑ Decide-announce-defend approach
- ❑ Hierarchical approach

2. Market-based instruments

- ❑ Compensation
- ❑ Economic incentives and bargaining
- ❑ Bartered consent approach
- ❑ Voluntary, market approach

Lessons from the past

Evolution of facility siting policy:

3. Provision of information and making the community an active participant in the siting process

- ❑ Voluntary/partnership siting approach
- ❑ Egalitarian siting process

4. Comprehensive approach

- ❑ 'Facility Siting Credo', *Kunreuther et al.* (1993)
- ❑ Sequential Multi-stage Siting Process, *Quah and Tan* (2002)

Lessons from the past

The Facility Siting Credo

Kunreuther, Suskind and Aarts (1993)

When planning and building Locally Unwanted Land Uses (LULUs), every effort ought to be made to meet the following objectives:

- 1 Seek consensus through a broad-based participatory process
 - 2 Work to develop trust
 - 3 Achieve agreement that the status quo is unacceptable
 - 4 Choose the facility design that best addresses a solution to the problem
 - 5 Fully address all negative aspects of the facility
 - 6 Seek acceptable sites through a volunteer process
 - 7 Consider a competitive siting process
 - 8 Work for geographic fairness
 - 9 Keep multiple options on the table at all times
 - 10 Guarantee that stringent safety standards will be met
 - 11 Fully compensate all negative impacts of a facility
 - 12 Make the host community better off
 - 13 Use contingent agreements
 - 14 Set realistic timetables
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Lessons from the past

Sequential Multi-stage Siting Process

Study of site selection

- Environmental impact assessments (EIA)
- Benefit-cost analysis
- Mitigation
- Public hearings
- Negotiation
- Compensation

Quah and Tan (2002)

Lessons from the past

Recent Experiences

- Failed to deliver approved sites
- Because the policy evolution have only moved **policy instruments** without major changes in the **political institutions**.
- **Political institutions** is a set of formal and informal rules to determine *who* is eligible to make decisions and *how* the decision should be made at each level in the decision process.

Lessons from the past

Recent Experiences

- ◎ Depends on whether or not the context of the political institution can minimize the failures of political institutions.
- ◎ Failures of political institutions:
 - rent seeking
 - agency problem
 - opportunistic behavior
 - poor accountability of politicians
 - voter ignorance

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Three Planers

◎ A Local Government

◎ Two Groups of Communities:

- the host community
- the benefiting community



Visions of the Future: Institutional Change

Who is eligible to make decisions

- Host community is active in participating
- Benefiting community remains ignorant
 - free riders
- Government
 - the agent of the benefiting community
 - Ineffective because of
 - agency problem
 - rent-seeking problem
 - low trust in governments
- Solution
 - Full-scale participation of both host community and benefiting community

Visions of the Future: Institutional Change

How the decision should be made

- Democratic system of governance
 - **One-person-one-vote** election of representatives
 - Delegate the power of governance to governments
- Two explanations of government failures
 - **Asymmetric information**
 - Difficult for the principals to monitor agents
 - **Free-rider problem**
 - Principals have no incentives to monitor agents
- Fundamental reason of NIMBY
 - **the public good nature of the system of governance**

A robust and effective political institution for managing facility siting

Federal system of governments formed by a number of functional, overlapping and competing jurisdictions (FOCJ)

- Functional
- Overlapping
- Competing
- Jurisdictions



A robust and effective political institution for managing facility siting

- Examples:
 - Water FOCJ
 - Solid waste FOCJ
 - Radioactive Waste FOCJ
- Advantages:
 - No free-riders
 - No spillovers
 - Political environment is much simpler



A robust and effective political institution for managing facility siting

- Vote with their feet
- **One-dollar-one-vote:**
 - ‘Dollar’: a unit of taxes
 - The Principle of Interest-Pay-Participation (PIPP)
 - An individual’s shares of political right and aggregate benefits are equal to his/her share of aggregate costs.
 - FOCJ w/ PIPP seems politically unacceptable. However, there are many existing FOCJ w/ PIPP:
 - Water Associations (Genossenschaft) in Germany
 - River Basin Agencies (Agence de l’Eau) in France
 - Water Boards in the Netherlands
 - Traditional Irrigation Institutions

A robust and effective political institution for managing facility siting

- Solid waste FOCJ operates several incinerators and dumps
- Members:
 - users (the benefiting communities)
 - producers of the services (the host communities of incinerators and dumps)
 - One-dollar-one-vote system
 - Solid waste parliament
 - Solid waste government
- No free-riders, no spillovers
- Not to shirk their own responsibility
- Strong incentives to monitor
- Government officials and parliament representatives would pay attention to what their principals say, and not what the interest groups say.
 - No agency problem and rent-seeking problem
 - higher trust in the government and the parliament

Thank You for Your Attention

