Social responsible innovation in offshore wind

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Research problem

How to systematically embed *social values*

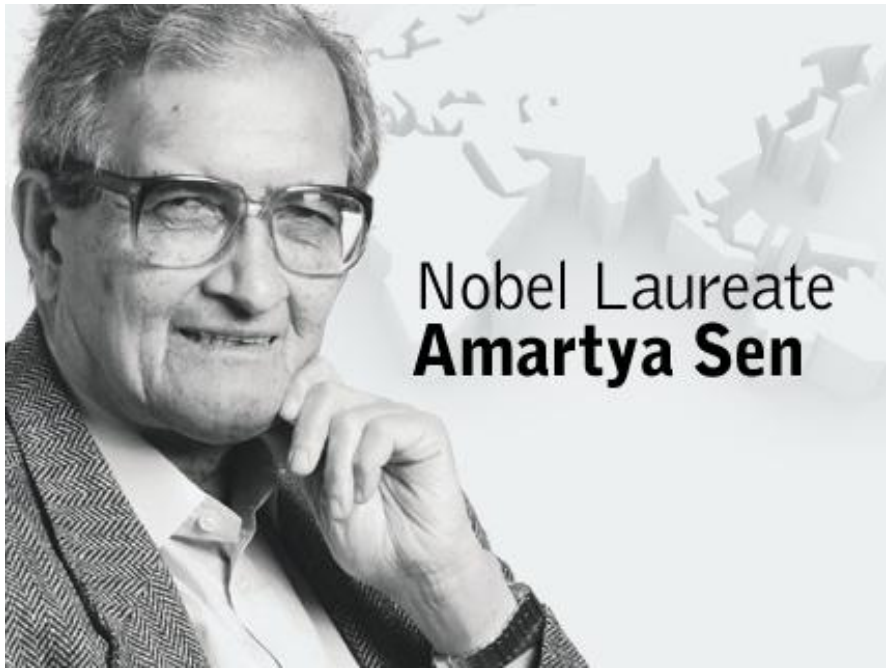
in the *technical and institutional design* of offshore wind energy systems in order to facilitate their *social acceptability*?

Normative evaluation of energy systems

- Stakeholders acceptance:
  - Subjective: people's *preferences or interests*
  - Short-term perspective
- Social acceptability:
  - Normative: what people *should* strive for. Enduring convictions about what is good or bad (inter-subjective)
  - Long-term perspective

How to identify normative societal values?

- -> Value theory
- Capability approach of A. Sen



Embedded values in wind energy infrastructures

- Examples embedded values:
  - Technical:
    - Underground cables to protect nature
    - Development of a super grid to increase reliability and reduce costs
  - Institutional:
    - Community ownership of wind turbines in order to serve distributional justice
    - Priority access for wind energy in the electricity system in order to stimulate sustainability

Framework for a normative evaluation of energy systems

			Subject of acceptability		
			General public	Market	Community
Object of acceptability	Technology	Component			
		Subsystem			
		System			
	Institutions	Regional/ local			
		National			
		International			

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Type 1 value conflicts within T or I

			Subject of acceptability		
			General public	Market	Community
Object of acceptability	Technology	Component			
		Subsystem			
		System			
	Institutions	Regional/ local			
		National			
		International			

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Type 2 value conflicts between T and I

			Subject of acceptability		
			General public	Market	Community
Object of acceptability	Technology	Component			
		Subsystem			
		System			
	Institutions	Regional/ local			
		National			
		International			

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Type 3 value conflicts between different subjects of acceptability

			Subject of acceptability		
			General public	Market	Community
Object of acceptability	Technology	Component			
		Subsystem			
		System			
	Institutions	Regional/ local			
		National			
		International			

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Conclusion: Towards a value sensitive design of offshore energy systems

- Ex ante approach
- What institutional and technological designs serve what values?
- How to anticipate and resolve possible value conflicts?
- Trade-offs, complementarities, dilemma's?
- How to derive at 'value robust' designs?
- Need for context specific research & analysis