LOICZ II

Issues of scale in bridging the natural and social sciences

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Questions

- does coastal policy have a 'correct' scale?

- at what scales do coastal human communities operate?

- how can we aggregate and scale up scientific results for policy?

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Question 1

- Mutually supporting at different scales
- Overriding of one policy by another
- Community upwards versus national downwards (e.g. south africa)
- Issues that transcend boundaries of nation (e.g. wadden sea)
- Inclusion of catchment-coast interactions
- Spatial (and temporal) displacement

- Different issues need different policy perspectives
- Nesting of mutually reinforcing policies, coupling
- Subsidiarity

- How to bridge NS and SS − (N) science underpins scale selection

- Dimensions of scale

- NS and SS begins studies at different spatial scales – cm2 versus community → difficulties of finding a common scale, need to relate back to 'system' being addressed

- Globalisation: effects on consumer preferences at global scale determines how we use resource systems at more local scales

- Temporal scales: lag effects on ecosystem change → temporal displacement of cause & effect

Question1 - discussion

- Aggregation of many to one
- Hierarchy: e.g. global shrimp price can devastate at local level – which level calls the shots? What is a 'good' decision?

Generic

- Scaling mismatches in coastal management
  - Temporal: dynamics & variability; sustainable devt = intergenerational; goals: vulnerability, resilience, functional diversity
  - Spatial: gap between micro and larger scales, e.g. catchment – m'nt of coast means catchment-coast as minimum spatial scale
  - Governance: winners & losers, at what scale ,at what price/compensation?; local politics Vs national agreements; uniform quality standards etc. may not be either achievable or rational
  - Biological hierarchies

  - Scale breaks – continuity of scales?

- What defines a coastal community?
  - Physical location
  - Local activities
  - Resources used
  - ……
  - **Social coherence**
  - **culture**
- Scale break: administrative boundaries
- Moving target as communities change
- Allow each other to operate? Power play

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Question 2

- GECHS
- Spatial boundary on coastal communities
- Globalisation has enlarged the scope of the problem beyond the group(s) affected
- Vulnerability as definer?
- People can create continuous scale for community; identify where they belong per issue
- Household offers grain
- Question is wrong – do we want to focus questions of scale on 'community'
- Gradation/continuum of communities
- Operates at the scale you define it
- Stakeholder approach to define/specify community
- Community is a self-governing/self-organising unit

gechs

- Vulnerability capacity of communities to anticipate, cope with, resist and recover from the impacts of environmental change (Vogel 1998) Vulnerability then has five characteristics

- 1) dynamic-cumulative over time

- 2) non-linear-thresholds-critical turning points when human security is threatened

- 3) multi-scale problem

- 4) multi-dimensional problem, i.e., ecological and social

- 5) political problem

Question 3

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