

## Community Governance Perspectives Support Social-Ecological Systems and Resilience

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## Social-Ecological Systems

- **Definitions:**

- Integrated system of nature and society with reciprocal feedbacks (Berkes & Folk, 1998)
- Relationship between social and ecological systems using knowledge systems to respond to environmental feedback (Berkes et al., 2003)
- Holling (1973) and others –adaptive renewable cycle, panarchy, resilience and transformability

## Resilience

### 1 Social

The ability of groups or communities to cope with external stresses and disturbances resulting from social, political and environmental changes (Adger, 2000);

### 2 Social-Ecological

- (a) the magnitude of shock that the system can absorb and remain within a given state;
- (b) the degree to which the system is capable of self-organization, and
- (c) the degree to which the system can build capacity for learning and adaptation (Folke et al., 2002)

## Research Questions and Frameworks

- **Framework for this study:**

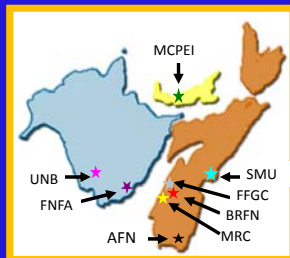
- MEA (2005): Ecosystem Services (provisioning, regulating, cultural and supporting)
- **Governance Initiatives:** Community-based

- **Research Questions**

- What are the social-ecological linkages between ecosystems and communities within and around the Annapolis Basin
- How do coastal communities identify and/or understand resilience within and across these systems?

## Coastal CURA

- Community-University Research Alliance of First Nations communities, fishery-related groups and university participants

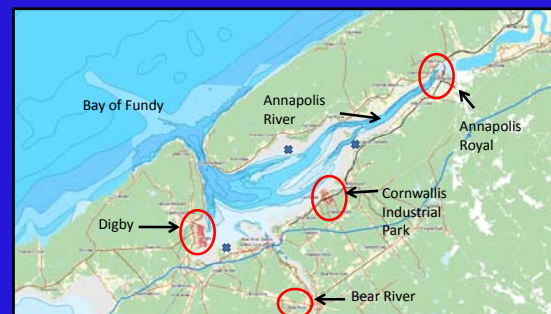


### Four goals:

- ❖ Increased community engagement in coastal management
- ❖ Sharing knowledge for improved governance of coastal resources
- ❖ Innovative research initiatives and effective capacity building
- ❖ Improved networking between communities involved in coastal governance

<http://www.coastalcura.ca>

## Annapolis Basin



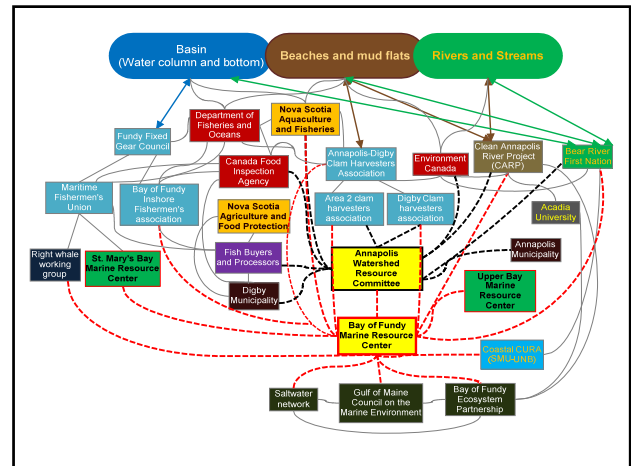
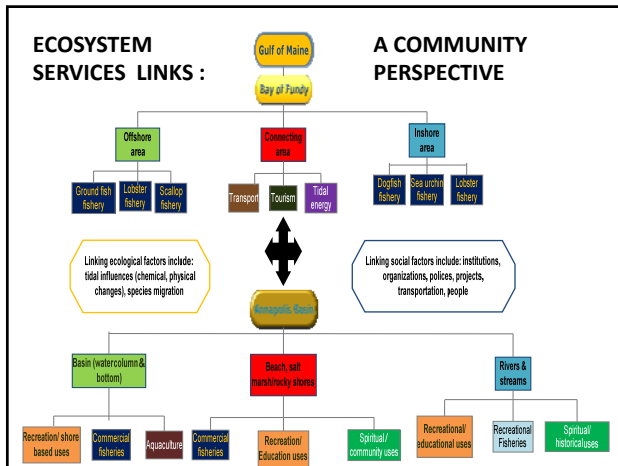
## Participants

- ❖ Bear River First Nation (BRFN)
- ❖ Clam Diggers Association (DCHA)
- ❖ Harvesters Association (Area II)
- ❖ Fundy Fixed Gear Council (FFGC)
- ❖ Annapolis Watershed Resource Committee (AWRC)
- ❖ Clean Annapolis River Project
- ❖ Bay of Fundy Marine Resource Centre (MRC)
- ❖ Saint Mary's Bay Marine Resource Centre (BRC)
- ❖ Upper Bay Marine Resource Center (UBMRC)
- ❖ Bay of Fundy Ecosystem Partnership



## Issues

- Water Pollution (land based sources)
- Habitat destruction (stream and river banks)
- Depleted fish stocks, risks to habitats, prices
- Access to beaches (aquaculture leases)
- Safe spaces for information access & dialogue
- Political and financial support for community based organizations and groups



## Resilience: From a Community Perspective



Despite the difficulties faced by you or your organization how were you able to continue with your day to day activities?

## Insights on SES and resilience from a local perspective:

- Reciprocal relationship between ecosystem services & stewardship
- Different scale and implications for information exchange –local early warning system
- Key links e.g. MRC, AWRC, bringing different organizations, habitats, interests together
- Resilience - gaps in terms of how resilience factors combine under different situations and how to work with this concept

## Policy Implications and Next Steps

- Reciprocal paths (ecosystem services/stewardship)
  - Support existing groups and associations to build stronger networks across different habitats and issues (early warning and response systems)
- Recognition of different knowledge sources and skills
- Question
  - How can government and academic institutions empower communities to continue being responsible stewards of their environment?

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**Thank You** 😊