



CANADIAN HIGH ARCTIC RESEARCH STATION

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EBM Approaches to Monitoring in Canada's Arctic

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What defines EBM?

a societal management system that considers and limits the activities of human communities within the sustaining ecological envelope on which all communities depend

- is applicable at any scale of human community organization (household, community, region, country, continent, planet)
- to be successful create a culture of social functioning that:
 - empowers and engages communities in their own future
 - recognizes and develops policies to maintain critical ecological services provided within the ecological envelope
- to monitor success of an EBM approach
 - engage communities in setting goals that maintain social-ecological values while sustaining socio-economic success
 - implement sustainable monitoring that provides useful information on critical elements of community EBM

Monitoring EBM: A Systems Approach



Social ecological systems

....have biophysical and social components that interact in coherent ways so that their identity and structure can be determined, and their functioning and feedbacks described

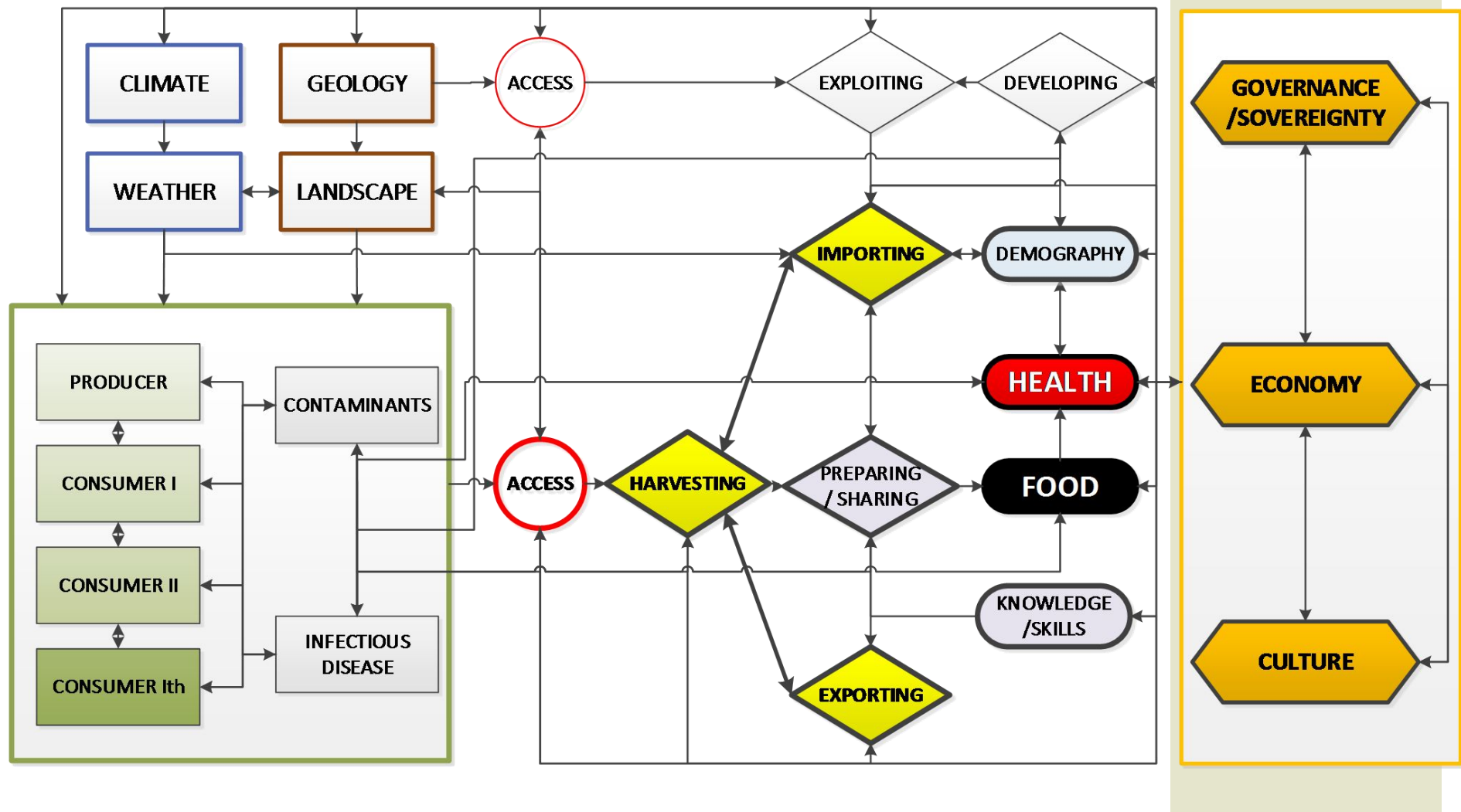
Resilience

....is the capacity of a social-ecological system to absorb disturbances and reorganize while undergoing change, so as to still retain essentially the same function, identity, structures and feedbacks.

Thresholds

....are points where the characteristic structure and function of the social-ecological system change abruptly; threshold change in a complex system may involve a **regime shift** where system drivers and feedbacks change significantly

Monitoring EBM: Conceptual Models



Monitoring EBM: Key Program Elements

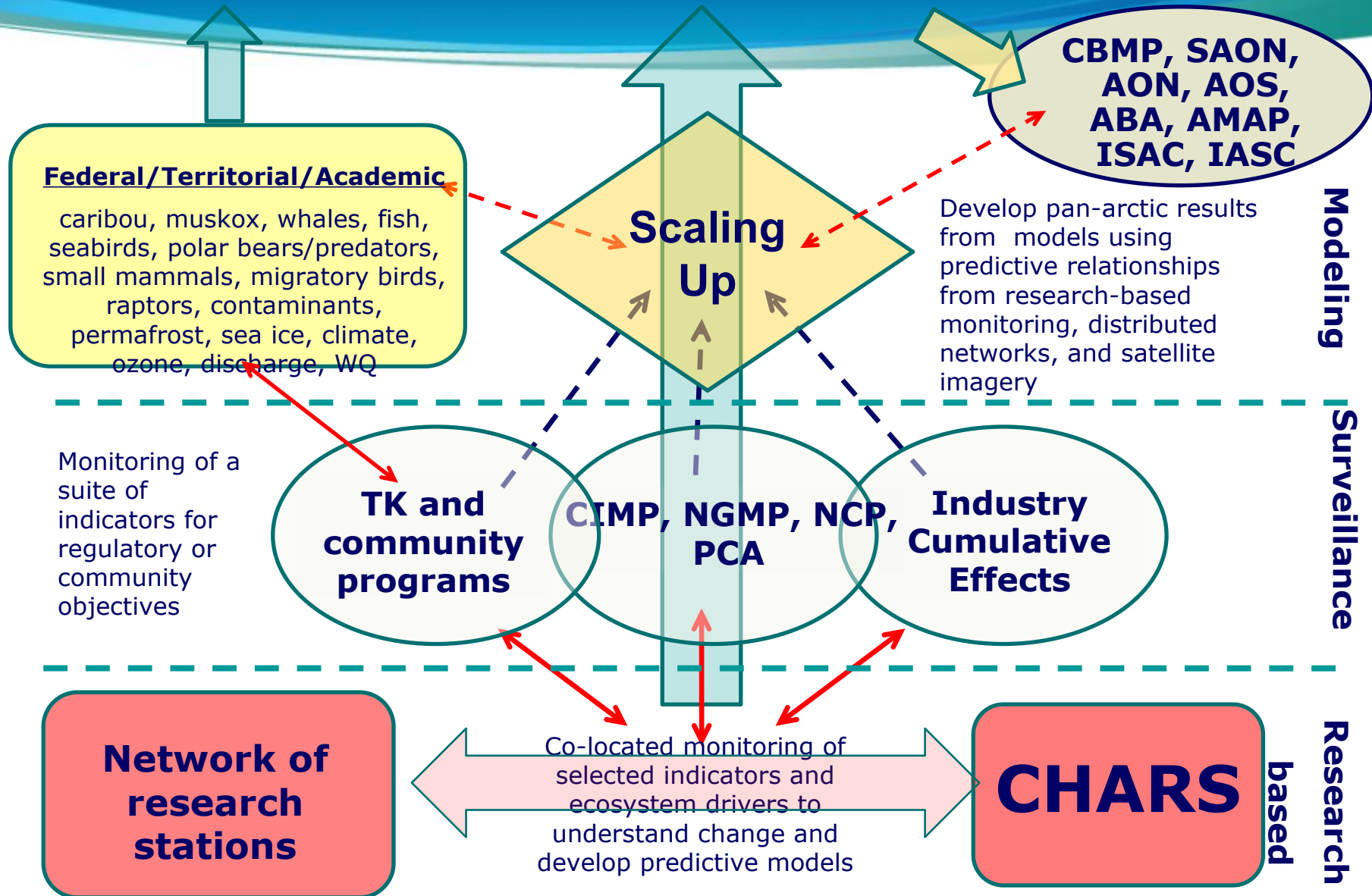
Sustainable: A sustainable monitoring system is one that generates *useful information* - client supported

Useful: that information required to understand and communicate *most critical aspects* of the present state and near-future states of the social ecological system

Consultative: most critical aspects are arrived at through *consultation with monitoring clients* - policy makers, communities and community leaders, industry, government regulators – work backwards to monitoring indicators from consultations

Adaptable – monitoring systems must be *able to change* as new priorities or new methods arise

Monitoring EBM: Putting it all Together



Key Insights So Far?

Complexity and difficulty of implementing EBM approaches

- getting stakeholder buy in – ‘playing in the sandbox’
- improving local capacity - bridging the science–TLK gap
- ensuring sustainability – monitoring should be useful

Build on existing strengths of communities

- historical resilience behind long term survival in Arctic landscapes
- strong and ongoing connection to ‘place’
- important local and traditional knowledge
- capacity for travelling and working on the land and sea

Take the long view

- ‘what's the plan?’ – CHARS monitoring WG/consultations
- build a network of invested partners (communities, governments, academia)
- start small with achievable pilots – learn by doing - adapt

Questions or Comments

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