

Healthy Oceans – Healthy Coasts International Leadership Conference towards achieving SDG14

The SDGs and Obligations –
the Nexus of SDG14 to Other Development Goals
Thematic Panel 1

Dan Lane, Professor Emeritus, University of Ottawa/ Professeur associé,
Centre de recherche marine, Université Sainte-Anne, Petit de Grat Campus,
Petit de Grat, Nova Scotia

Chair – Board of Directors, IOI-Canada

Thematic Panel 1: Topics

- ① Mitigation and adaptation to climate change; including risks and hazards
- ② Legal and institutional policy response in achieving the SDGs
- ③ Human health and the SDGs
- ④ Society and social adjustment to SDGs; the role of cultural heritage



IOI-Canada:

<http://internationaloceaninstitute.dal.ca>



www.coastalchange.ca

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UNDP MAPS (Jan 2016)

Mainstreaming, Acceleration, and Policy Support

- * Mainstream the agenda in national plans, strategies and budgets to generate awareness and help governments
- * Accelerate progress on Sustainable Development Goal(SDG) targets, provide tools and focus on relevant country context
- * Policy Support to coordinate and pool policy to achieve the SDG targets
- * Integrated services: poverty reduction, growth and productive employment, gender equality and the empowerment of women, HIV and health, access to water and sanitation, climate change adaptation, access to sustainable energy, sustainable management of terrestrial ecosystems, oceans governance, and promotion of peaceful and inclusive societies.

Ways & Means of Achieving SDG14

(Source: UNDP Support to the Implementation of SDG14)

1. creation of an enabling policy environment for ocean restoration and protection through the development of ocean and coastal management strategic planning **tools and methodologies**
2. promote **bottom-up approaches** to maintaining aquatic ecosystem services at smaller planning scales (municipalities, provinces, local watersheds)
3. build upon and advance existing or anticipated regional or global **multilateral agreements**
4. creation of new **Marine Protected Areas (MPAs)**
5. foster **partnerships** that represent a vital component of UNDP's **long-term strategic approach** to improving ocean and coastal management

1 Climate Change: Risk & Hazards - UNFCCC - COP 13 Bali (2007)

- * Decisions adopted: **Bali Action Plan**
- * ... support urgent implementation of adaptation actions
- * through vulnerability assessments, prioritization of actions, capacity-building
- * integration of adaptation actions into sectoral and national planning

C-CHANGE



CANADA-CARIBBEAN
Coastal Climate Adaptation Strategies



***C-Change International
Community-University
Research Alliance
(ICURA) funded jointly by
the IDRC and SSHRC of
Canada***



C-CHANGE ICURA 2009-2015+

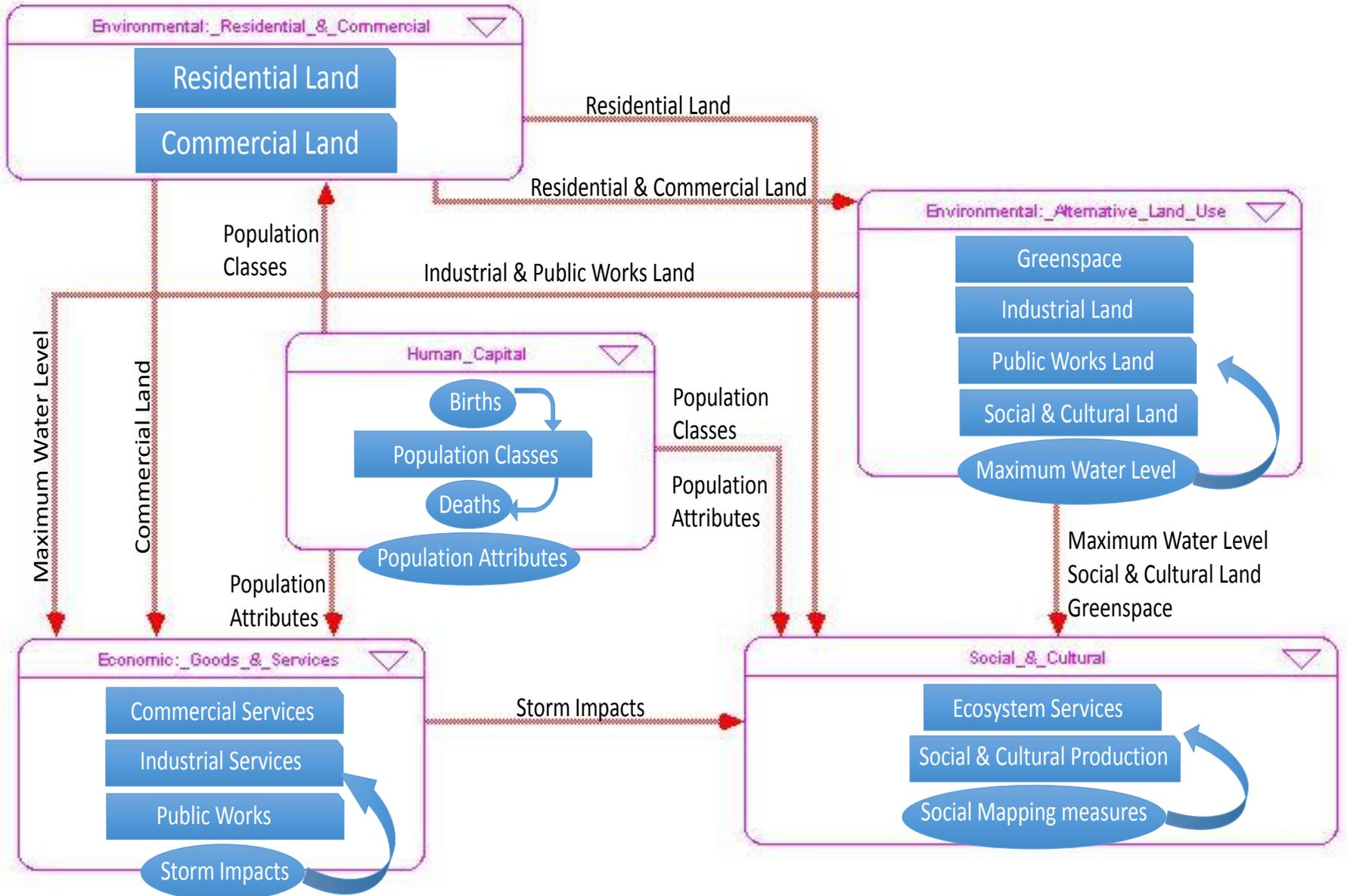
- 5 year international research alliance
 - 5 universities and 8 partner communities
 - Interdisciplinary researchers
 - Canada and the Caribbean
- Focus on community management of adaptation to coastal environmental change

C-Change Objectives: “Enhance Community Preparedness”

- * Provide “Guidelines” for Action Planning at Local Level * #2
- * Provide support tools for decision making * #1
- * Raise Governance priority for preparedness (local government committees) * #1
- * Encourage Local Community Strategic Planning * #2 #5
- * Strengthen Links among local Business, Government (all levels), Community leaders re preparedness * #5 #3

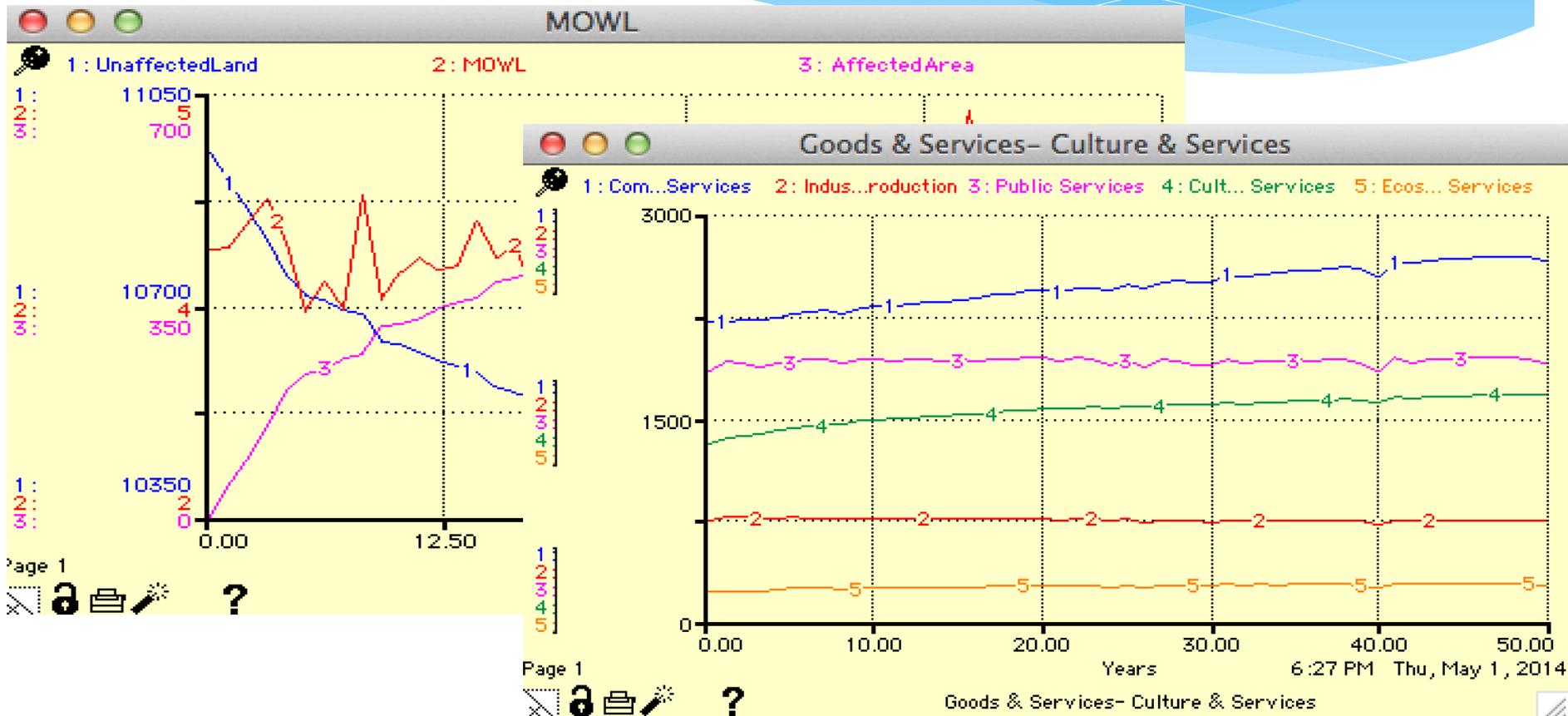
Community Profile – Multicriteria Methods (#1)

	Dimension	Valuation Sub-categories
1	Environmental	Topography, Land and Marine Use, Natural Resources, Climate
2	Economic	Employment, Industry, Property, Occupation, Revenues, Earnings, Public Works, Built Environment
3	Social	Population, Health, Education, Communications, Community Dynamics, Governance
4	Cultural	Places, Groups, Events, Language



System Dynamics View – Tools

(SDG#1)



1 Climate Change: (Mitigation &) Adaptation Adaptation Strategy Options (#2)



(1) Protect

Hard armouring (sea walls, groins)

Soft armouring (mangroves, wetlands)

- No changes to buildings or use
- Costly - Requires expert design, needs periodic maintenance and upgrading



(2) Accommodate

Continued use of lands / structures, with some changes

- Low costs / Low regrets
- No costs / No regrets (mangroves)



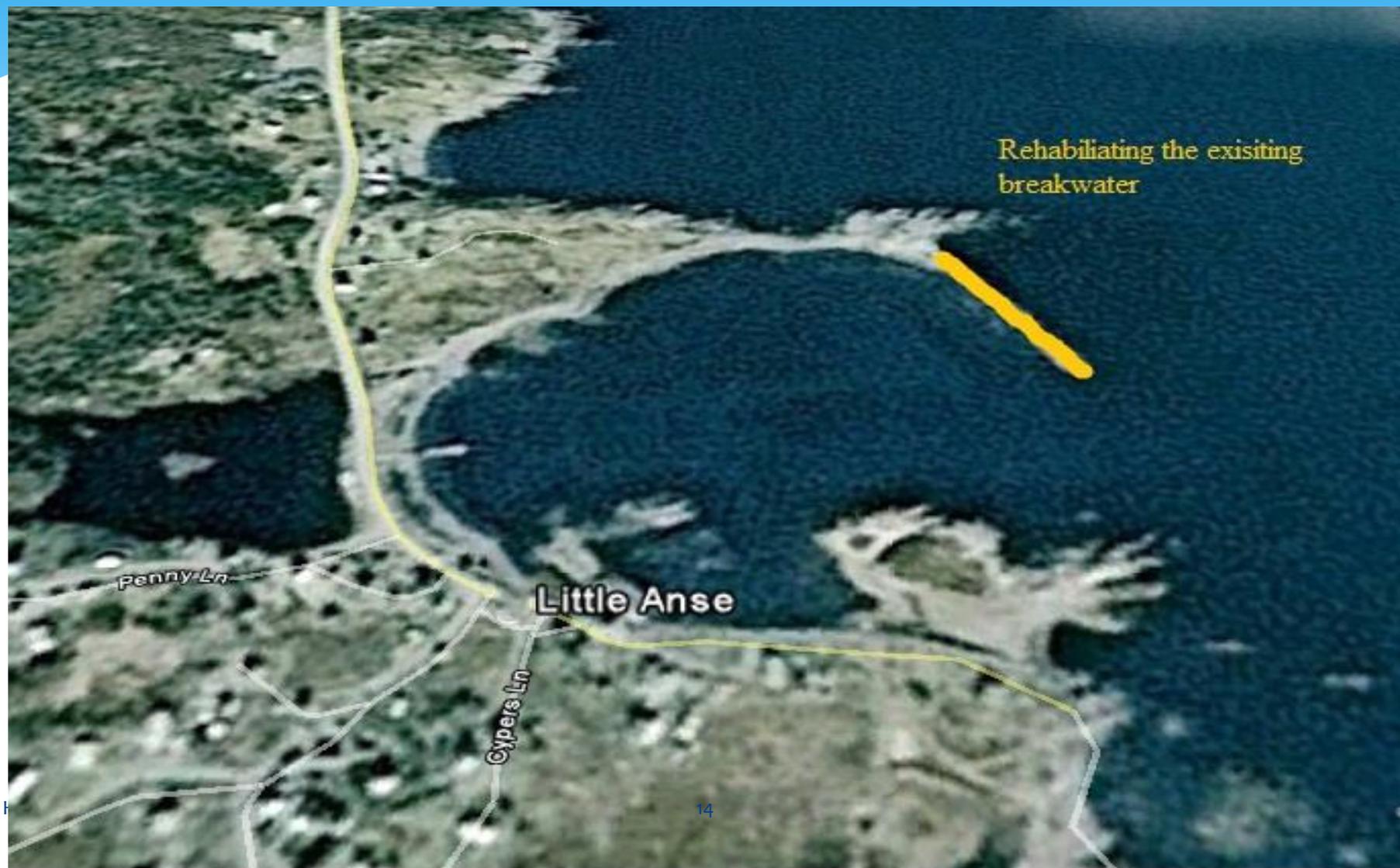
(3) Retreat

Accept that flooding and damage will occur

- Protect/accommodate not feasible
- Change uses, move structures

(4) Do Nothing

Little Anse Breakwater (#1,2) – “Accommodate” (Mostofi and Lane SEPS 2016)



Vulnerability Gap with Strategy

(#1 #5)

Community Status

Worst Case

Ideal State



$SQ(o)$
 $U(o) < 1$

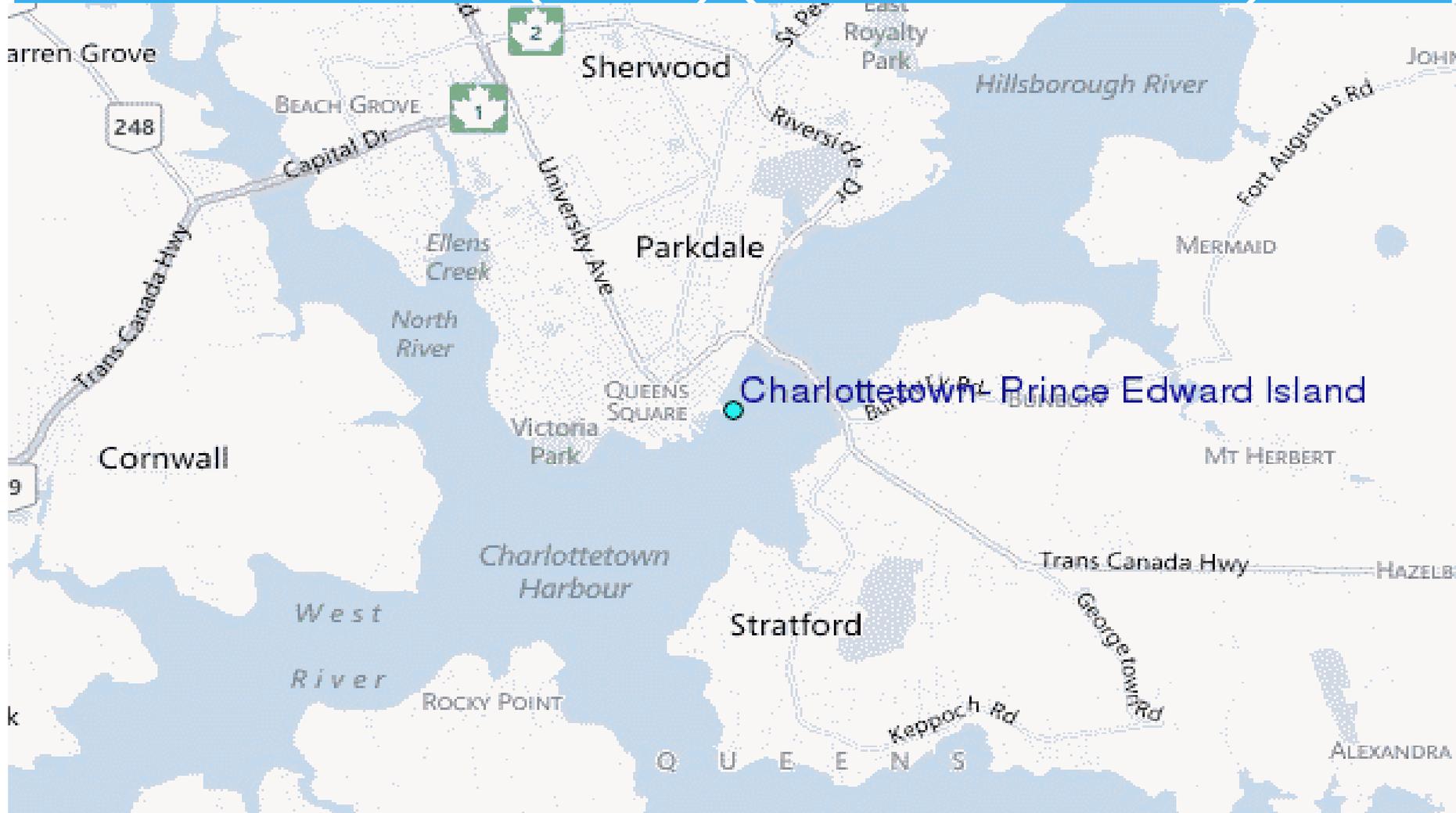
SQ^*
 $U = 1$



$U(o) < U(A) < 1$
 $SQ(o) < SQ(A) < SQ^*$

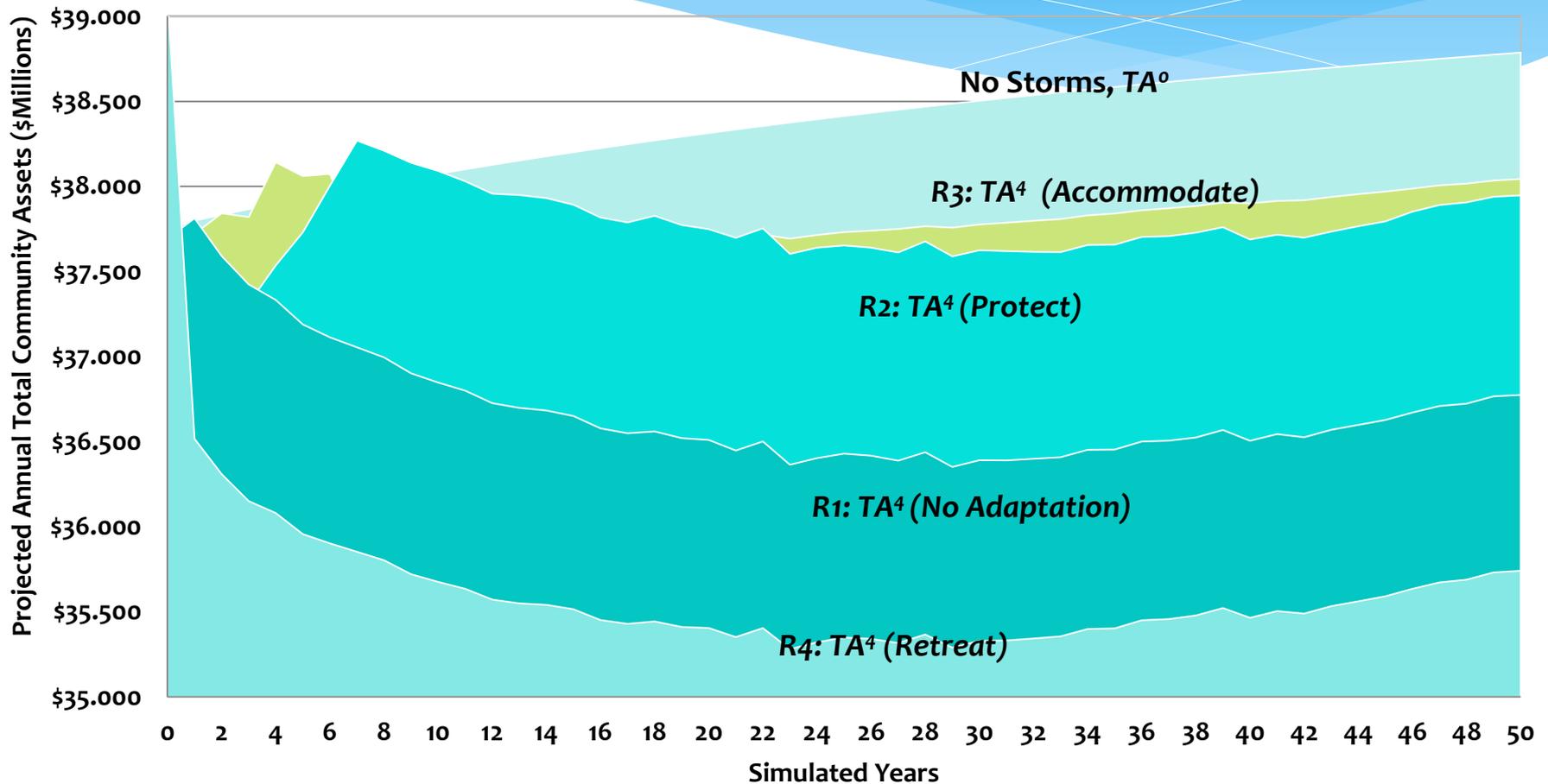
Adaptive Capacity:
 $AC(A) = R(A)/V(o)$
 $U[AC(A)] = U[R(A)]/U[V(o)]$

City of Charlottetown, P.E.I. (#1,2,5) Lane et al (2016) (JDRM in review)

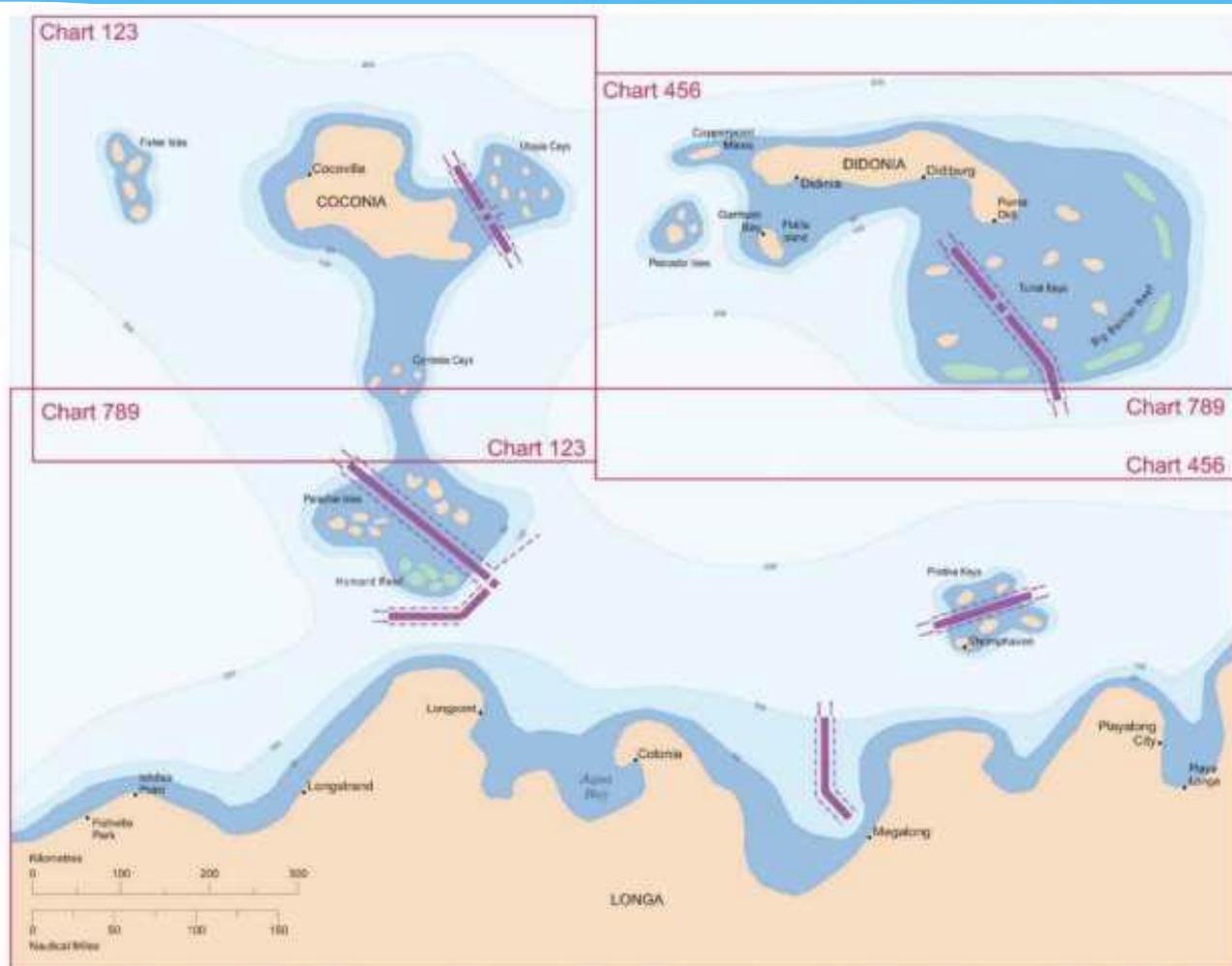


System Dynamics Simulation – “Accommodate”/“Protect” Strategy

Charlottetown Annual Projected Expected Total Community Assets,
High Storm Severity Scenarios R1 to R4

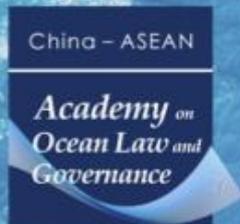


IOI-Canada Training Programme Integrated Simulation (#1,2,3,4,5)



2nd Program of China-ASEAN Academy on Ocean Law and Governance (#1,2,3,5)

7 November 2016, 2nd program of China-ASEAN Academy on Ocean Law and Governance launched in Haikou, Hainan Province. Co-organized by the NISCSS, China-Southeast Asia Research Center on the South China Sea and IOI-Canada.

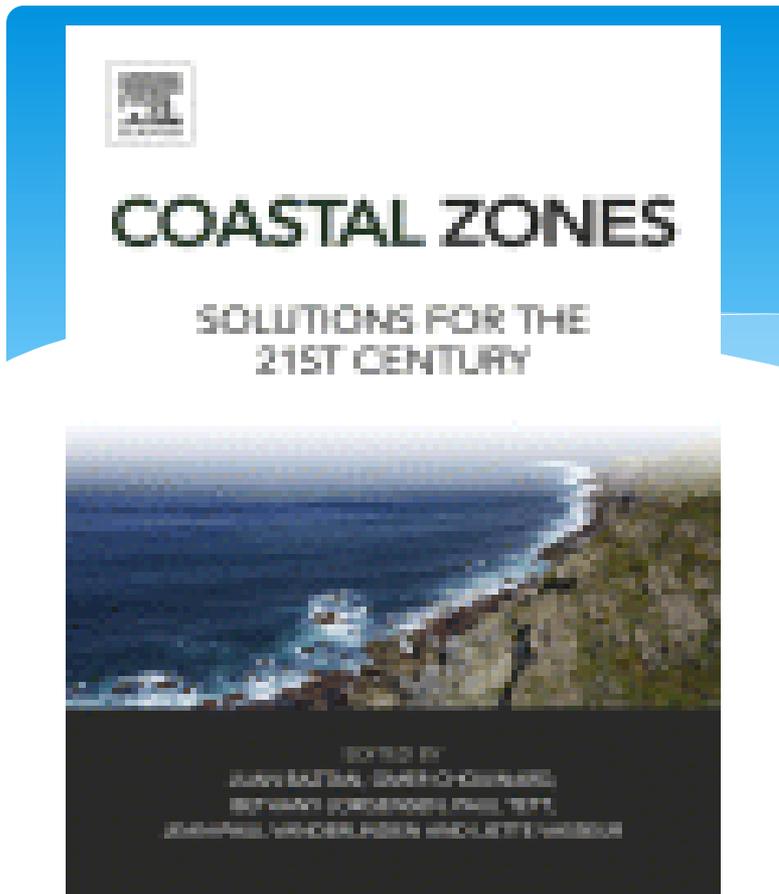


CHINA-ASEAN
ADVANCED ACADEMY
ON OCEANS LAW AND GOVERNANCE
SECOND PROGRAM

NOVEMBER 7-16, 2016 HAIKOU, CHINA

2 Legal and Institutional Policy Response in achieving the SDGs

- * Rio+20 (1992-2012), Agenda 21 – Chapter 17
- * *Laudato Si'*
- * IOI-Canada Training Programme Modules:
 - ✧ *Law of the Sea*
 - ✧ *Maritime Security*
 - ✧ *Integrated Coastal and Ocean Management*



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 Juan Bazztan, Omer Chouinard,
 Bethany Jorgensen, Paul Tett,
 Jean-Paul Vanderlinden and Liette
 Vasseur
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c0010 **Managing Adaptation to Changing Climate in Coastal Zones**

Daniel E. Lane¹, Colleen M. Clarke¹, John D. Clarke¹, Michelle Mycoo², Judith Gobin²

¹Telfer School of Management, University of Ottawa, Ottawa, ON, Canada; ²The University of the West Indies, St. Augustine Campus, Trinidad and Tobago

Chapter Outline

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s0010 **INTRODUCTION**

p0015 Coastal zones are the most biologically and economically productive regions in the world. Over 40% of the world’s population lives within 150km of the shore (United Nations Atlas of the Oceans, 2010), and that figure is growing. In Canada, approximately 38% of Canadians live within only 50km of one of three surrounding oceans—the Atlantic, Pacific, or Arctic Oceans—or one of the Great Lakes. In the Caribbean region, coastal populations in 28 independent territories and island states are generally clustered along thin bands of land in close proximity to the shore. An estimated 60% of the Caribbean’s total population of approximately 40 million people lives within less than 100 km from the coast, and approximately 40% of the population resides within a mere 2 km of the coast.

p0020 These coastal zones, where land and water interact, are key landscapes when considering (1) the environmental challenges faced by human societies and (2)

Coastal Zones. <http://dx.doi.org/10.1016/B978-0-12-802748-6.00010-3>
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Policy Recommendations

Rio +20

- * Identify community priorities (#2)
- * Cede authority to local communities (#2)
- * Measure, track, and exercise preparedness (#1 #5)
- * Implement the precautionary approach & plan strategically (#1 #5 #3)
- * Build an education legacy (#2)

Laudato Si'

- * ...dialogue that includes everyone
- * We require a new and universal solidarity.
- * draw on the results of the best scientific research available today
- * Article 186 and the Rio Declaration (1992)
- * change is impossible without motivation and a process of education (Article 15)

3 Human Health and the SDGs

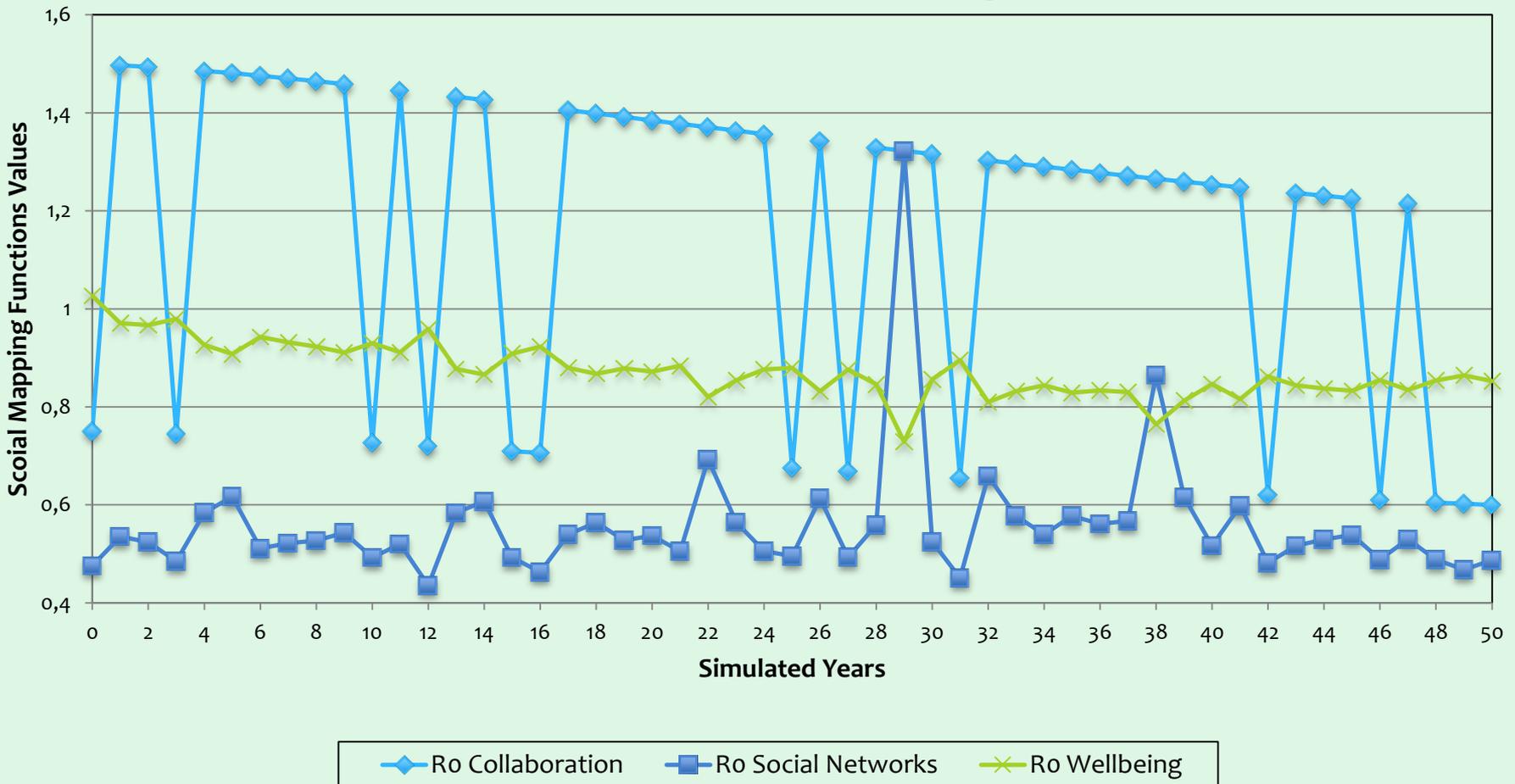
4 Society and Social Adjustment to SDGs

- * Lane et al paper in IJCCIR (2017)
- * Proposed measures for Social Indicators (**#1**):
 - Collaboration
 - Social Networking
 - Well-being (Human health indicator)
- * Focus on community dynamics to develop, implement, and monitor social indicators (**#1 #2 #5**)

Monitor/Collect Social Indicators

Lane et al (2017) *IJCCIR*

City of Charlottetown Projected Annual Social Mapping Functions: (1) Collaboration (2) Social Networks (3) Well-being
Base Case: Low Storms, No Adaptation



Achieving SDG14 – Conclusions

1. creation of an enabling policy environment for ocean restoration and protection through the development of ocean and coastal management strategic planning **tools and methodologies**
 - ✓ **Develop decision support systems for adaptation strategies, implement G2B authority, Government as auditor NOT regulator**
2. promote **bottom-up approaches** to maintaining aquatic ecosystem services at smaller planning scales (municipalities, provinces, local watersheds)
 - ✓ **Provide support, increased resources and decision-making authority to local governments and industry, deputize industry in Science and structured Data collection (e.g., commercial fisheries)**
3. build upon and advance existing or anticipated regional or global **multilateral agreements**
 - ✓ **Include responsible, local industry in agreements**
4. creation of new **Marine Protected Areas (MPAs)**
 - ✓ **Develop multi-use Marine Conservation Areas**
5. foster partnerships that represent a vital component of UNDP's **long-term strategic approach** to improving ocean and coastal management
 - ✓ **Become strategic (longer-term) in planning, prioritize the future**