



## Realizing the True Value of Natural Assets: Progress and Opportunities

For: ICLEI Canada's 2020 Livable Cities Forum  
Natural Capital: Valuing Nature as Infrastructure

**Joanna Eyquem PGeo. CWEM. CEnv.**  
Director, Climate Programs, Quebec  
Intact Centre on Climate Adaptation  
[joanna.eyquem@uwaterloo.ca](mailto:joanna.eyquem@uwaterloo.ca)

December 2, 2020



Generously supported by:



# Agenda

2

1. Why do we need this session?
2. What are Natural Assets?
3. Valuing Natural Assets
4. Progress
  - a) Canada
  - b) International
5. Key Opportunities





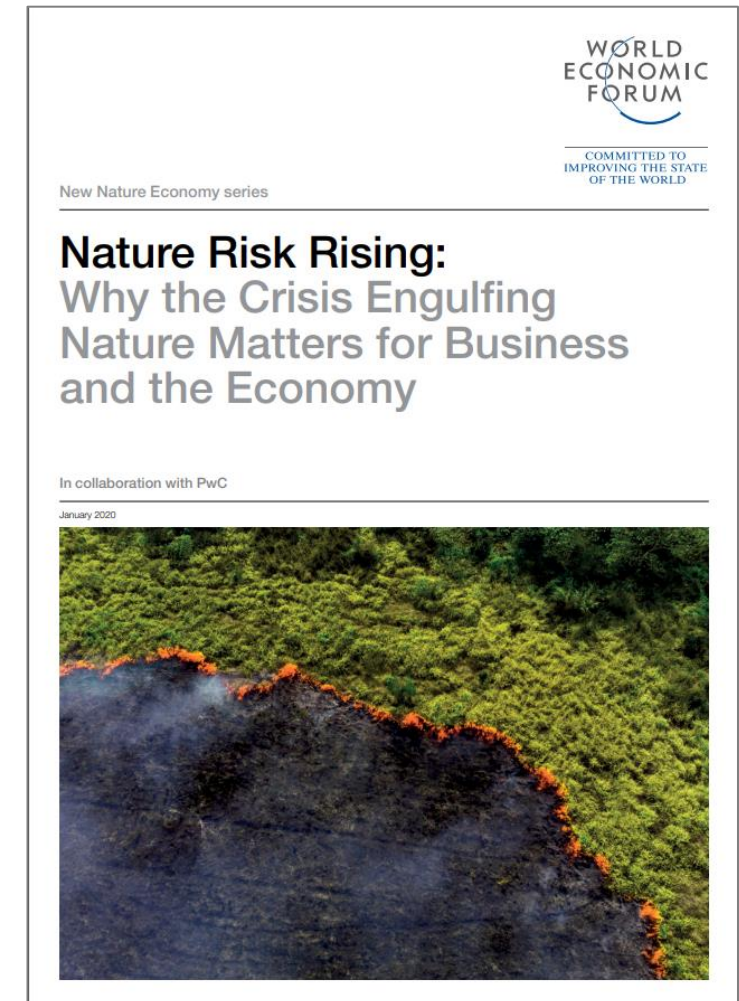
## Why do we need this session?

3

- **Natural Assets are Victim to Economic Market Failure and the Tragedy of the Commons:**
    - Nature is a public good that provides ecosystem services
    - Not “traded” in typical markets = no direct monetary value
    - People can benefit from ecosystem services even if they do not invest / pay for them.
  - Costs of damage / benefits of restoration are not factored into traded markets or economic decision-making
- = Making decisions that are not economically sound and diminish natural capital.**

### ***World Economic Forum - New Nature Economy Series 2020:***

*“Fighting climate change is critical – but not enough – to halt biodiversity loss and safeguard nature”.*



# What Are Natural Assets?

4

## Natural Assets:

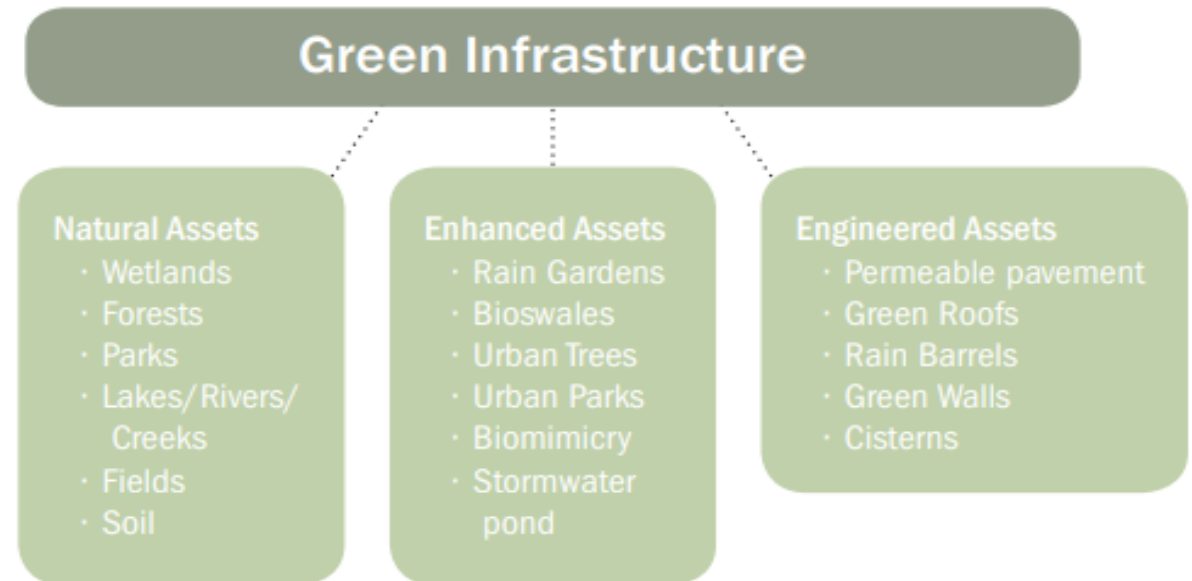
- Intact ecosystems, including wetlands, rivers, forests, coastal marshes, dunes and other naturally occurring systems\*

## Enhanced or Engineered Assets:

- Mimic natural function or incorporate vegetation / allow for natural processes in their design.

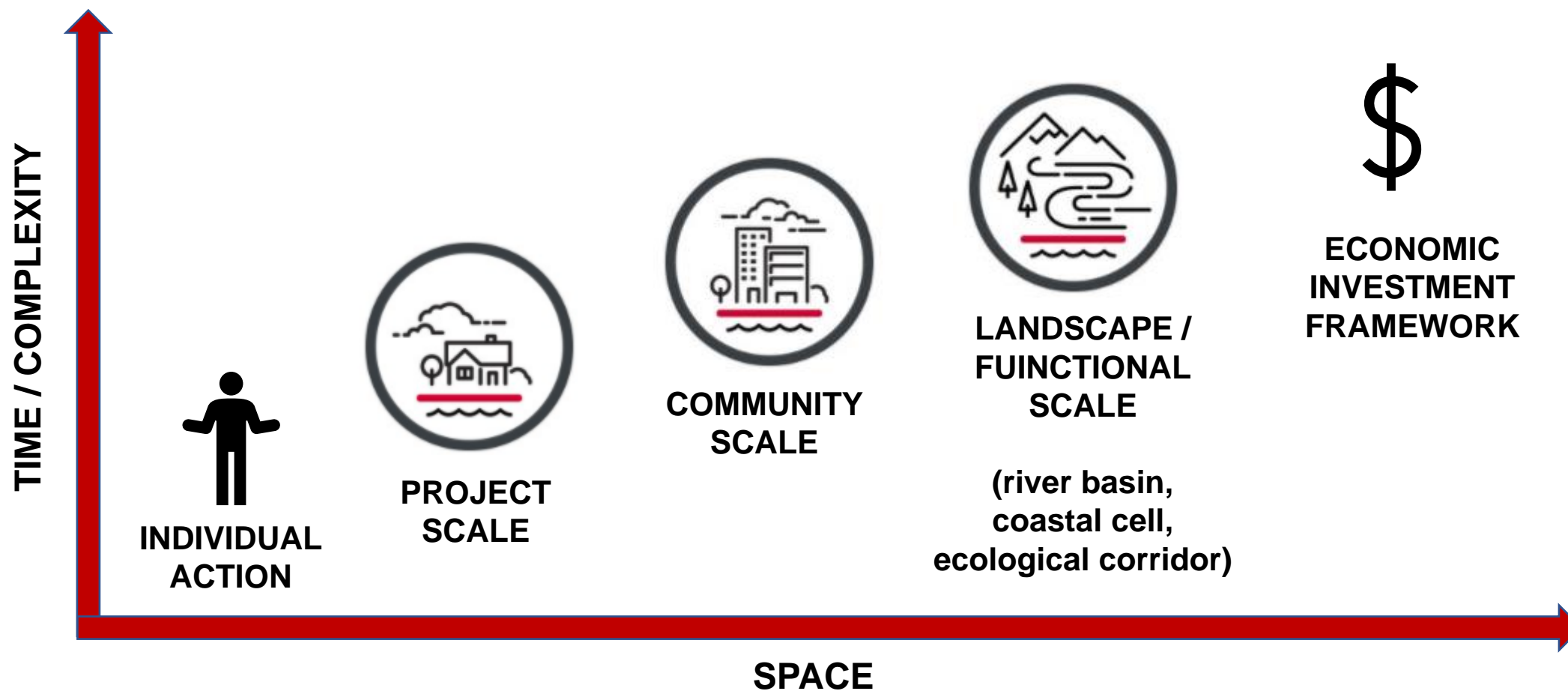
## Green Infrastructure

- May cover all
- Definition expanded in Canada



## Natural Assets Function at Different Scales

5



\*Icons from Calgary's Flood Resilience Plan

Source: <https://www.calgary.ca/uep/water/flood-info/mitigation-and-resilience/flood-projects.html>

# Valuing Natural Assets

6

## Ecosystem Services

### • Provisioning

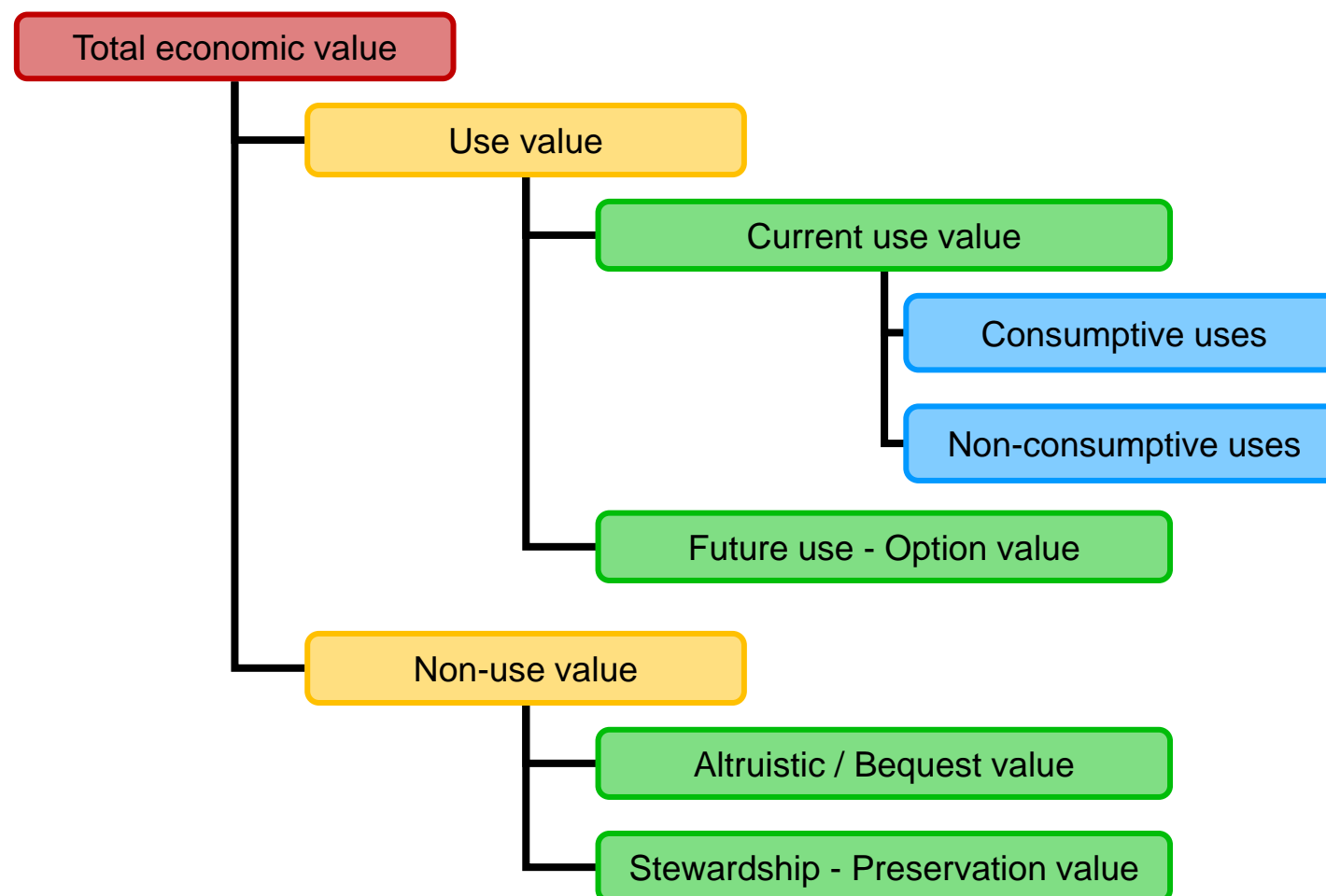
- Water
- Food
- Forestry products

### • Regulation and support

- Carbon sequestration
- Air Quality
- Water Quality and Quantity
- Flooding and Erosion Control
- Biodiversity and Habitats
- Pest Management
- Nutrient Cycling
- Pollination

### • Cultural

- Recreation
- Aesthetics



## Progress in Canadian Municipalities (last 10 years)

7

- Several **municipal-scale initiatives** to inventory and value natural assets
- Evolution from valuation based largely on spatial area, to valuation of certain **functions** (e.g. flood risk reduction), up to river basin scale
- Practical examples incorporating natural assets into municipal **asset management planning**
- Funded as an **additional activity**, undertaken by forward thinking municipalities, NGOs, research groups...
- **Nature is highly valuable!**
- **How do we « mainstream » in the new nature economy?**

*Town of Riverview, NB*

*Town of Florenceville-Bristol, NB*

*Village of Riverside-Albert, NB*

*Greater Montreal, QC*

*Greater Quebec City, QC*

*National Capital Region, ON/QC*

*Rivière Chaudière, QC*

*Oshawa, ON*

*Region of Peel, ON*

*Town of Oakville, ON*

*London, ON*

*York Region, ON*

*Richmond Hill, ON*

*Town of Gibsons, BC*

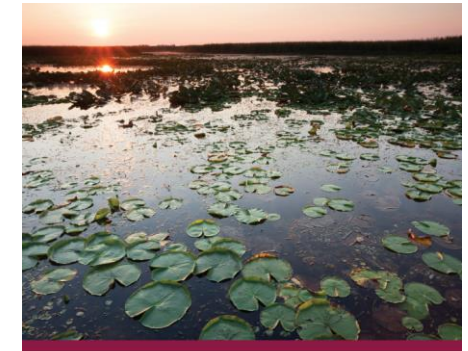
*District of Sparwood, BC*

*City of Courtenay, BC*

*District of West Vancouver, BC*

*City of Grand Forks, BC*

*City of Nanaimo, BC*



TBC RAC INTACT CENTRE HSD WATERLOO intact

**Combating Canada's  
Rising Flood Costs:**

Natural infrastructure is an underutilized option  
September, 2018

*Protect what you have*

*Restore what you've lost*

*Build what you must*



## Progress in Canadian Municipalities (last 10 years)

8

### Exploration of Innovative Financing Solutions to Integrate Natural Capital

#### Nature-Based Insurance Solutions

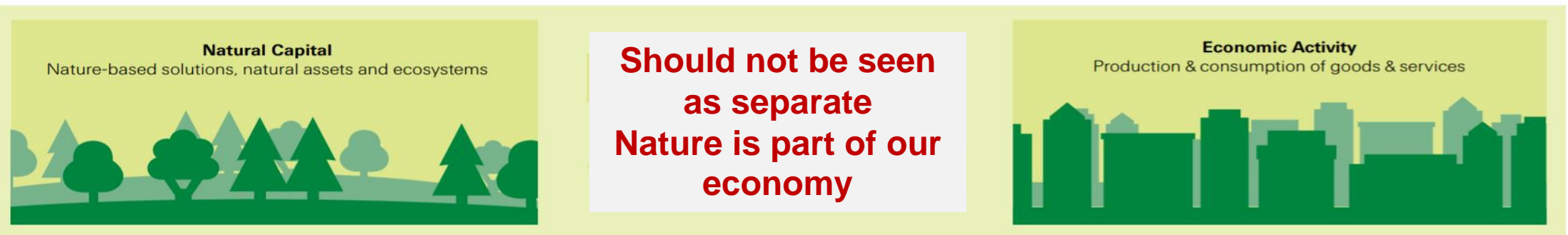
Insurance Bureau of Canada  
Swiss Re  
Municipal Natural Assets Initiative  
20 municipalities

#### Institutional Investment in Natural Capital

Fondation investment in  
Land Degradation Neutrality  
fund



Fonds LDN



*The World Economic Forum<sup>1</sup> estimates \$44 trillion of economic value generation – more than half of the world's total GDP – is moderately or highly dependent on nature and its services, and is therefore at risk with the degradation of nature*



# Progress Internationally

9

- Engagement of national governments
- Incorporation into formal decision-making
- Global business dependancy and opportunities highlighted by the economic and financial sector

## Enabling a Natural Capital Approach: Guidance

March 2020



Statistical bulletin

### UK natural capital accounts: 2020

Estimates of the financial and societal value of natural resources to people in the UK.



### Biodiversity and Ecosystem Services A business case for re/insurance



Biodiversity & Ecosystem Services (BES) Index



Source: Swiss Re Institute and multiple data sources (see appendix for all details)



### Ecosystem Service Benefits in Benefit-Cost Analysis for FEMA's Mitigation Programs Policy

FEMA Policy FP-108-024-02

## Key Opportunities

10

1. Use of **Total Economic Value** to recognise and maximise multiple benefits in decision-making.
2. Creation of **new natural capital markets** (e.g. payment for ecological services, land stewardship agreements, rebates for climate resilience measures)
3. Facilitate **disclosure** of natural asset values in public-sector financial reporting.
4. Infrastructure funding targeted to **natural** assets (narrower definition within « green infrastructure »)
5. **Preservation** and **restoration** of natural assets as a cornerstone of climate action AND underpinning economic transition and public health.

