



In the next 20 minutes...

1. Quick summary of a frameworks scan
2. Types of Adaptation indicators
3. Challenges to developing adaptation indicators
4. Principles for developing good indicators
5. Introduction to the adaptation indicators worksheet

The USDN 2015 National Adaptation Forum Sessions

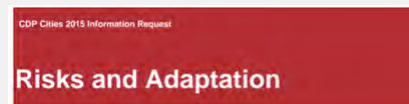
Challenges

- Indicators are not a perfect science
- Successful adaptation is context-specific
- City to city ranking is problematic

Needs

- Common indicator principles
- Shared list of good indicators

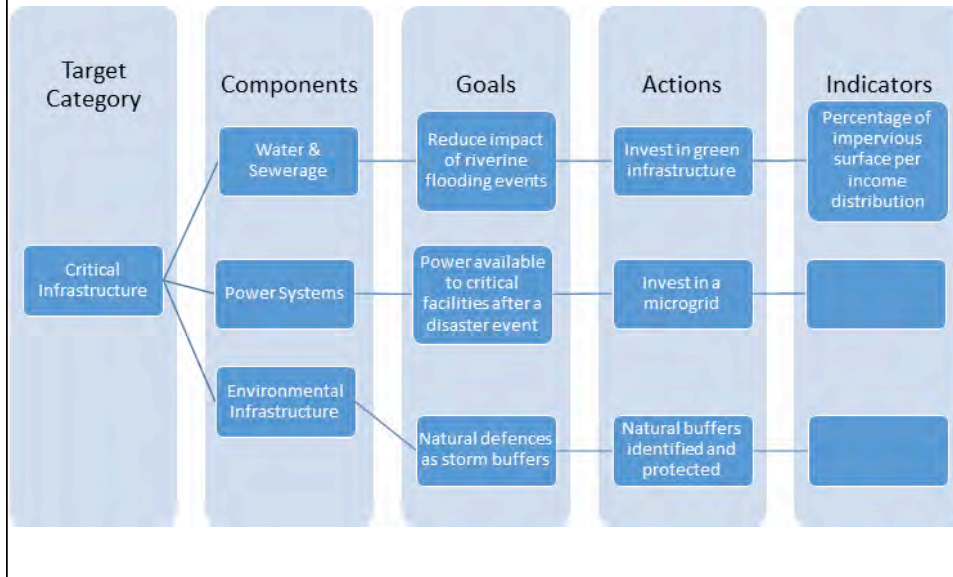
Scan of Resilience Frameworks



What Adaptation Indicators can Measure

Identifying Vulnerabilities	Tracking Progress	Measuring Success
Exposure	Process	Adaptive capacity
Sensitivity		Transformative capacity

What Adaptation Indicators can Measure



**APPENDIX E
POTENTIAL ADAPTATION INDICATORS**

OBJECTIVE 1.1: MINIMIZE RAINFALL RELATED FLOODING AND ASSOCIATED CONSEQUENCES.

Potential Indicators:

- Number and or cost of insurance claims related to water incurred losses
- Number of combined sewer overflows
- Percentage of permeable ground to total ground coverage

OBJECTIVE 2.1: INCREASE THE RESILIENCE OF VANCOUVER'S INFRASTRUCTURE AND ASSETS TO COASTAL FLOODING AND EROSION.

Potential Indicators:

- Percentage of the population in unprotected coastal flood prone areas
- Value of City assets in unprotected coastal flood prone areas
- Changes to salinity of groundwater

OBJECTIVE 3.2: INCREASE VANCOUVER'S CAPACITY TO RESPOND TO EXTREME WEATHER EVENTS AND RECOVER EFFECTIVELY.

Potential Indicators:

- Total losses (in dollars) due to weather-related events incurred by the municipality
- Number of times the EOC is triggered for weather-related events
- Proportion of key municipal facilities with back-up power sufficient to remain functional over and above life safety requirements.

OBJECTIVE 3.1: REDUCE SAFETY AND HEALTH RISKS FOR THE HOMELESS AND LOW-INCOME POPULATION DUE TO INCLEMENT WEATHER.

- Proportion of excess shelter beds during extreme weather
- Number of times extreme weather shelters are triggered annually
- Number of cases of mould reported in online rental database

OBJECTIVE 4.1: MINIMIZE MORBIDITY AND MORTALITY DURING HEAT WAVES.

- Heat related hospitalizations/mortalities
- Capacity of cooling centers
- Average distance to cooling centres from known hot spots/vulnerable population location
- Average temperature at assigned community hotspots
- Proportion of shade coverage (canopy cover)
- Number of new fountains in known hotspots

OBJECTIVE 4.2: MINIMIZE PER CAPITA WATER CONSUMPTION

- Water usage per capita
- Number of new grey water usage initiatives

OBJECTIVE 5.1: INCREASE RESILIENCE OF THE BUILT ENVIRONMENT TO FUTURE CLIMATE CONDITIONS

- Proportion of building permits issues that have LEED certification
- Proportion of buildings with green or cool roofs

OBJECTIVE 5.2: INCREASE THE LONG-TERM HEALTH AND VIGOUR OF URBAN FORESTS, GREEN SPACES AND TREES.

- Tree canopy coverage/total terrestrial area of the City of Vancouver
- Average increase/decrease in green space and trees (GCAP)
- Proximity of residents on average to natural areas (GCAP)

OBJECTIVE 6.1: INCORPORATE ADAPTATION CONSIDERATIONS IN CITY BUSINESS

- Number of climate-related public-private partnerships
- Number of adaptation projects or actions implemented per year
- Number of staff aware of climate projections

Challenges to Adaptation Indicators



- Defining Success
- Long Time-Horizons
- Counterfactuals
- Maladaptation
- Invalid Measures
- Unfunded Measures

Principles of Good Adaptation Indicators

Focus on Purpose



- Match to Vision and Goals
- Target to Stakeholders
- Assign Responsibility
- Create Decision-Relevance
- Translate for a Lay Audience

Think in Systems



- Determine Scale and Integration
- Create Bundles
- Choose Achievable over Comprehensive
- Consider Primary, Secondary, and Cascading
- Impacts

Be Evidence-Based



- Ensure Validity
- Account for Inequalities and Geographies
- Base on Performance and Consequence
- Account for Uncertainties

Thank You!

Mike Crowley
Director, Regional Resilience

 mcrowley@iscvt.org

 802-225-2943