



Planning for Climate Change: An Oxymoron

w e b i n a r



CANADIAN INSTITUTE
OF PLANNERS

INSTITUT CANADIEN
DES URBANISTES

Agenda

1. **The Canadian Institute of Planners (CIP)**
2. **Defining Climate Change**
3. **CIP's 6 Step Process**
4. **Case Study:**
5. **Shared Responsibilities**
6. **Research Project – University of Guelph**
7. **Closing Thoughts**



Who We Are

- Mike Sullivan MCIP RPP
 - Registered Professional Planner (Ontario)
 - Chair, CIP's Climate Change Sub-Committee
 - Principal, SullivanPlan (Welland, ON)
- Gary Willson MCIP RPP
 - Registered Professional Planner (Alberta)
 - Co-chair, CIP's Climate Change Sub-Committee
 - Principal, GW Associates (Calgary, AB)



The Canadian Institute of Planners (CIP)

- Founded in 1919. Office in Ottawa. Governed by a Board of Directors.
- Recognized voice of planners nationally and internationally
- Coast to coast to coast membership
- Topic-based advocacy:
 - Indigenous Peoples
 - Healthy Communities
 - Climate Change



RPP Mission: Independent professional opinion, in the **public interest**

Manage Land Use Change = Build Great Communities

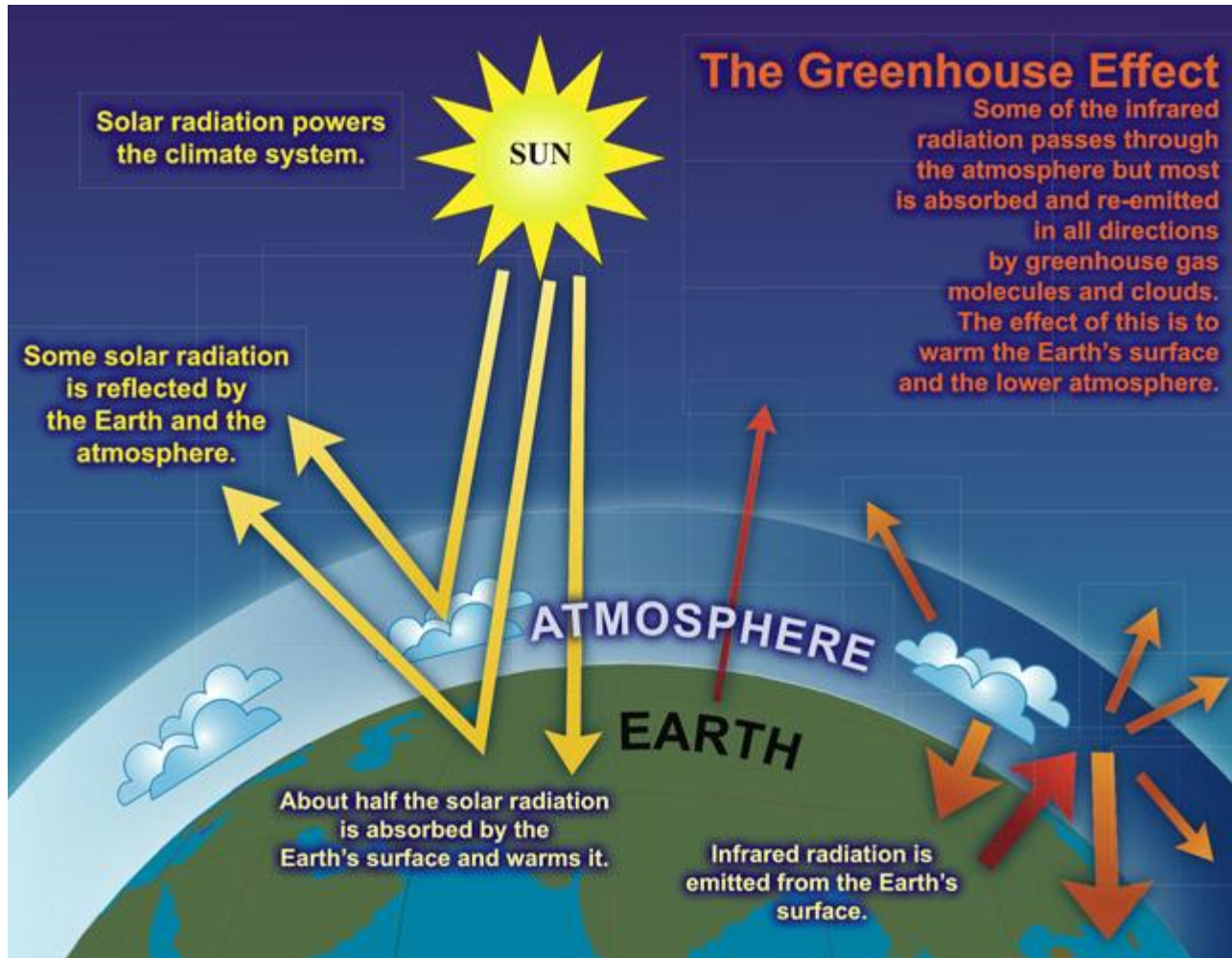


Basics of Climate Change

- **Climate:**
 - The average pattern of weather usually taken over a 30-year period for a particular region. Climatic elements include precipitation, temperature, humidity, sunshine, wind velocity, phenomena such as fog, frost and hailstorms, and other measures of the weather
- **Weather:**
 - State of the atmosphere at a given time and place and is usually reported as temperature, air pressure, humidity, wind, cloudiness, and precipitation
- **Climate Change:**
 - Changes in long-term weather patterns caused by natural phenomena and human activities that alter the chemical composition of the atmosphere through the build-up of greenhouse gases which trap heat and reflect it back to the earth's surface (*Environment and Climate Change Canada Archive 2013*)



Climate Change...



Breadth of Impacts

CLIMATE CHANGES

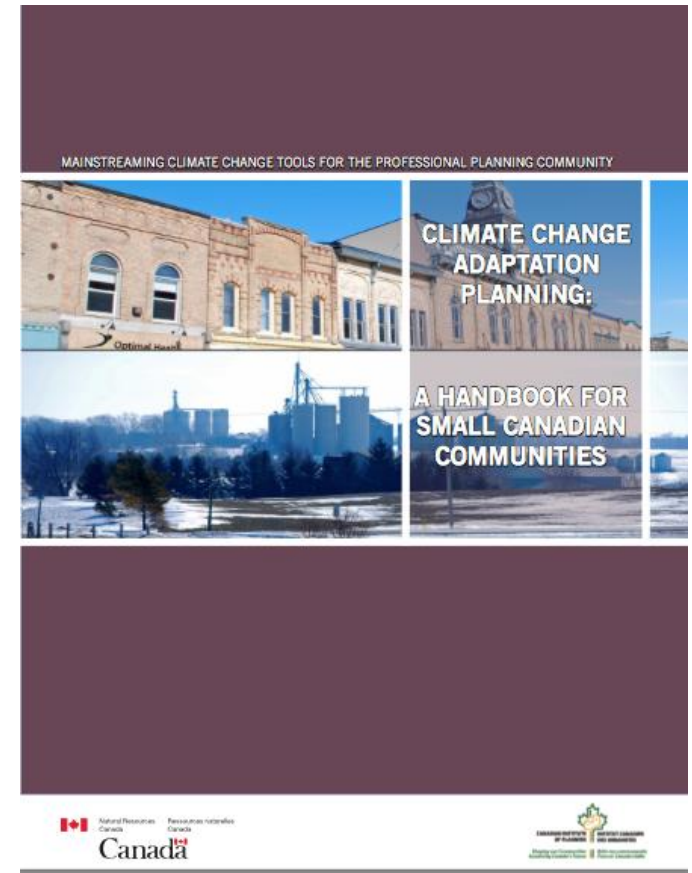
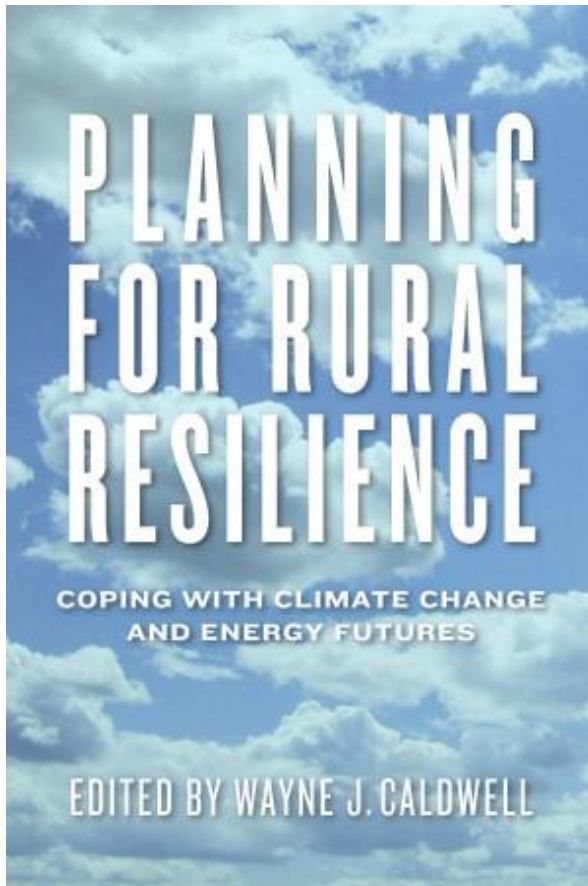
Temperature
Wind Patterns
Precipitation
Air Mass Characteristics

Frequency & Severity
of Extreme Weather

Erratic Weather
Patterns



Planning References



CIP's response

- **Professional obligation** to PLAN for action:
- 'Moving from Risk to Resilience' (*IISD*)
- Particular interest:
 - CIP Website: “**Topics in Planning**” “**Climate Change**” “**Resource Library**”
 - www.adaptationtools.com (NRCan resource)



CIP's Climate Change Focus

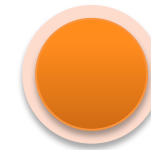


ADAPTATION

Local Cost | Global Benefit



DISASTER RISK
REDUCTION



MITIGATION

Local Cost | Local/Global Benefit

Immediate



Short Term

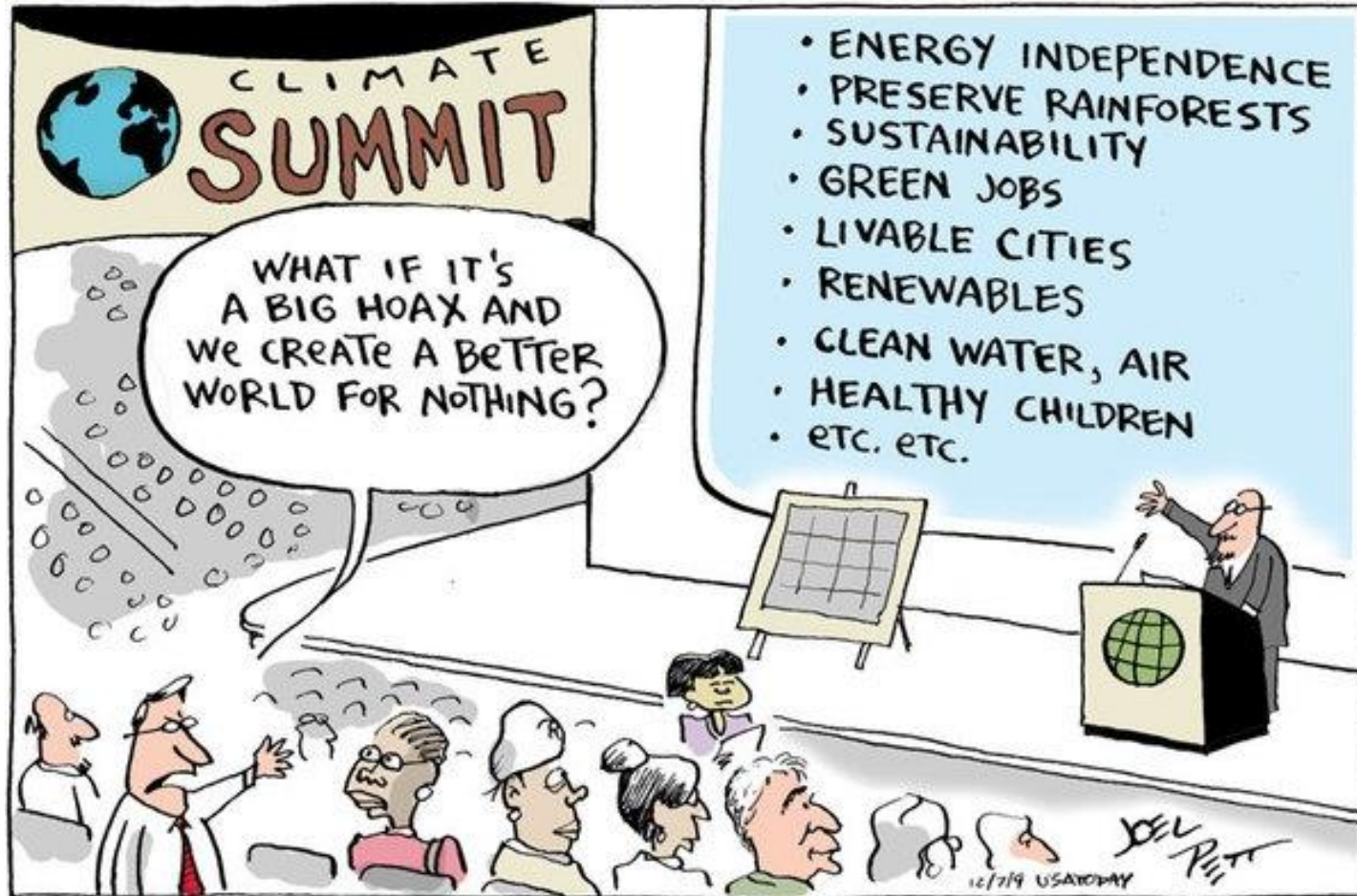


Medium to Long Term

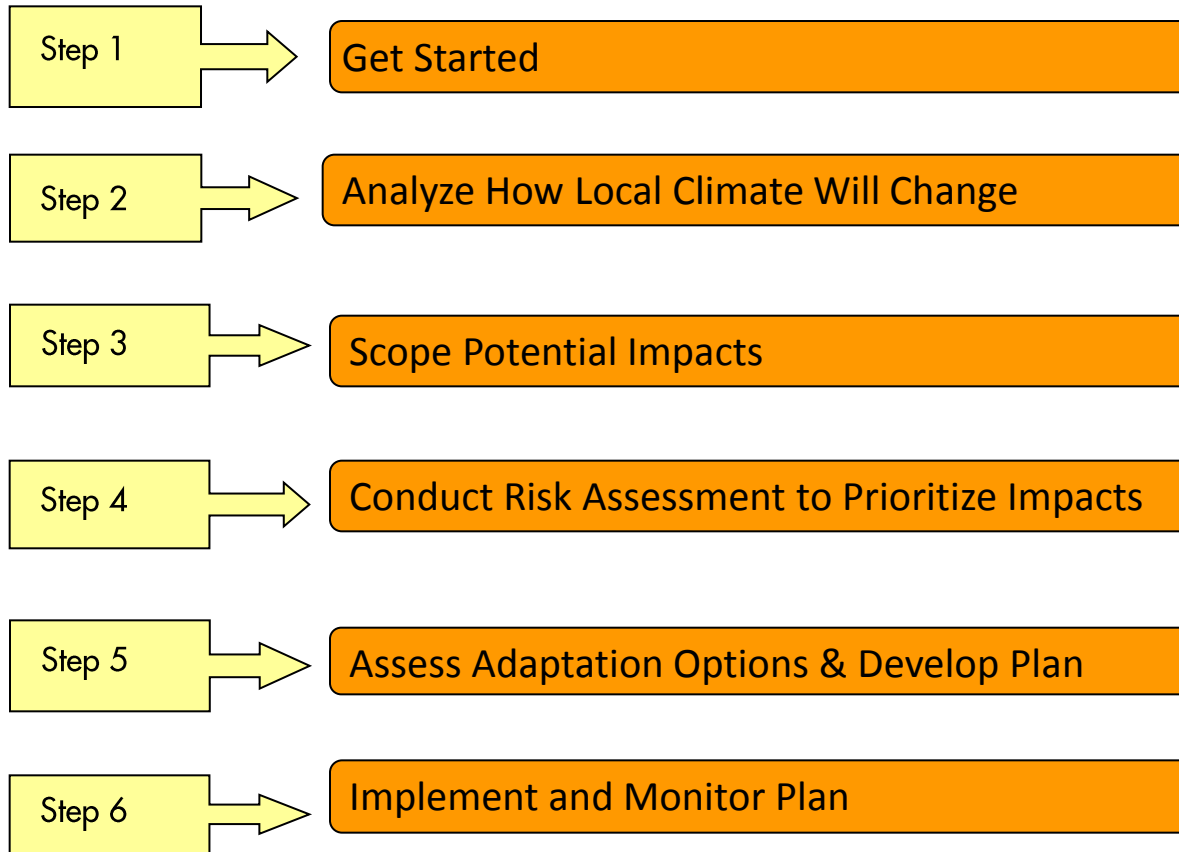


Each of the key components of climate change response
are complimentary and build on one another.

Some Context...



Planning for Climate Change - Process



POLICY

IMPACTS

RESOURCES

Planning for Climate Change – STEP 1

1. Get Started

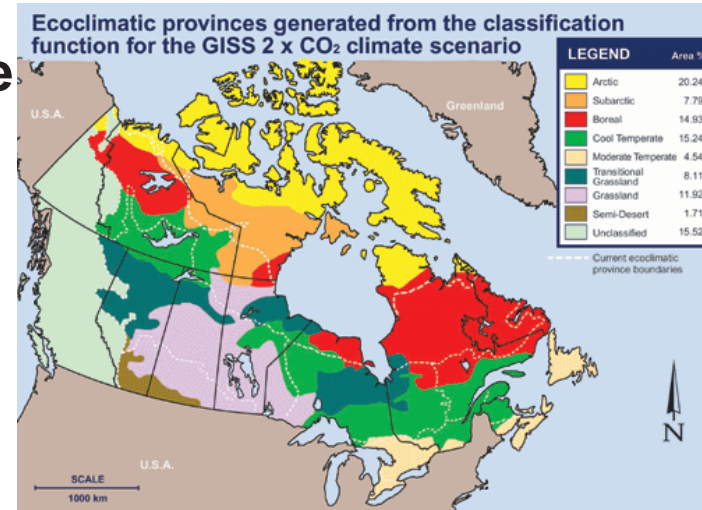
- **Build** public, political, staff **awareness**
- Identify **champion(s)**
- Determine stakeholders and engagement process
- Get **commitments**: staffing & materials
- **Involve** appropriate departments and agencies



Planning for Climate Change – STEP 2

2. Analyze How Local Climate Will Change

- Gather scientific knowledge/data
 - Environment Canada
 - Natural Resources Canada
- Compile community based knowledge
 - Find local weather buff/science teacher
 - Environment Canada website
 - University/College resources
 - Local weather clubs/storm chasers
- Build climate scenario



<http://climate.weather.gc.ca>

- **KISS Method**

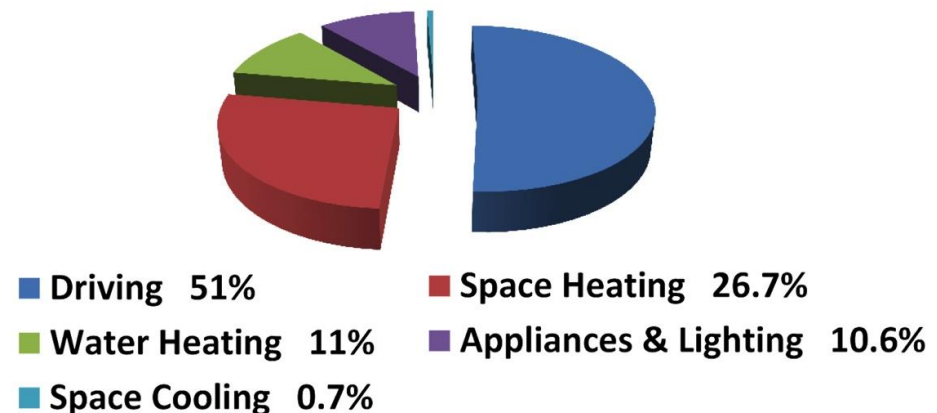
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	-3.3 (26)	-3.3 (26)	0.9 (34)	6.7 (44)	14.1 (57)	19.6 (67)	23.2 (74)	22.6 (73)	18 (64)	11.8 (53)	5.7 (42)	-0.1 (32)	9.7 (49)
Average low °C (°F)	-12.6 (9)	-12.4 (10)	-7.1 (19)	-1.4 (29)	4 (39)	9.6 (49)	13.8 (57)	13.5 (56)	9.1 (48)	3.8 (39)	-1.1 (30)	-8.1 (17)	0.9 (34)
Precipitation mm (inches)	106.4 (4.19)	85.5 (3.37)	91.8 (3.61)	87.8 (3.46)	97.7 (3.85)	93.2 (3.67)	85.8 (3.38)	87.3 (3.44)	95.4 (3.76)	108.6 (4.28)	110.8 (4.36)	123.1 (4.85)	1,173.3 (46.19)

Planning for Climate Change – STEP 3

3. Scope Potential Impacts

- Inventory of climate change impacts
- Document consequences and prospects
- Review inventory with stakeholders
- Revise inventory
- Identify Priority Issues

Sources of Personal Greenhouse Gas Emissions in Canada 2001



LOSS OF PERMAFROST



STORM SURGES



WILDLAND FIRES



DROUGHT



HEAT WAVES



INFRASTRUCTURE FAILURE



Planning for Climate Change – STEP 4

4. Assess Risk and Opportunities

- Assess risks
- Assess opportunities
- Evaluate municipality's adaptive planning capacity
- Prioritize risks and opportunities



Planning for Climate Change – STEP 5

5. Prepare Adaption Plan

- Establish planning principles (*include mitigation but emphasize adaptation*)
- Specify and prioritize policies and actions
- Perform gap analysis
- Assign responsibility and draft CCAP

PRIORITIZE = designate or treat (something) as more important than other things.



Gap Analysis



Planning for Climate Change – STEP 6

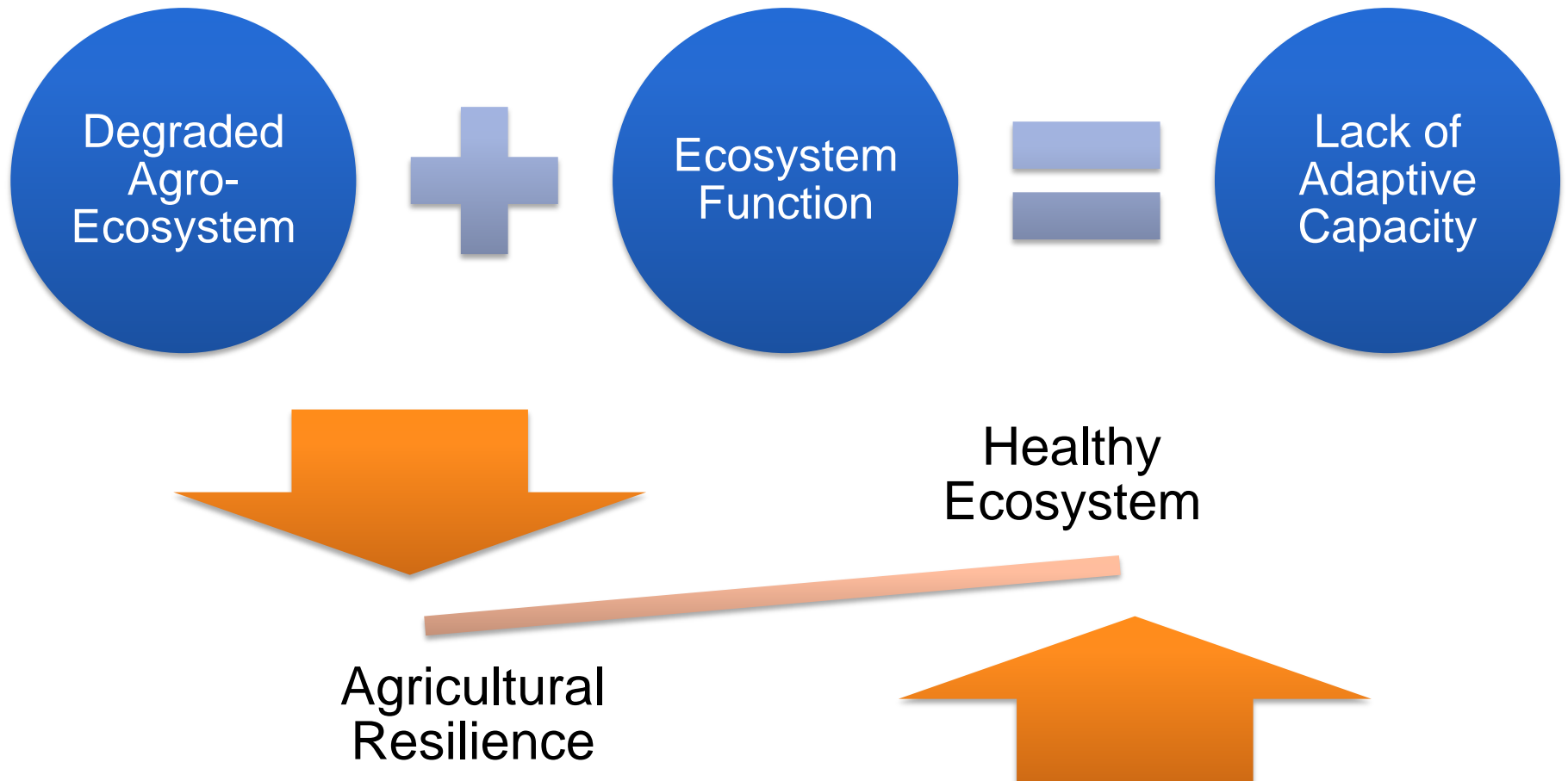
6. Adopt, implement, monitor, review Action Plan

- Obtain approval of plan
- Develop implementation strategy
- Incorporate adaptation in policies, plans, and budget
- Establish and monitor key indicators and milestones
- Review and revise Plan annually



Planning for Rural Resilience - Example

- “Practical Response: Options for Agriculture” (Graves et al)



Planning for Rural Resilience - Solutions

Recommendation	Supported By
Incorporate Wheat, Forages, and Legumes into corn-soybean rotations	Thorough, widely taken up Environmental Farm Plans
Build Soil Organic Materials / increase soil health	
Soil conservation practices + Set asides	
Appropriate use of non-dependable land	
Develop Hard, resistant crop varieties	Plant-breeding research
Conserve Agricultural Land	Agricultural land reserves & Regulation
Integrate crop and livestock systems	Policy to regulate large farms and consumer choice

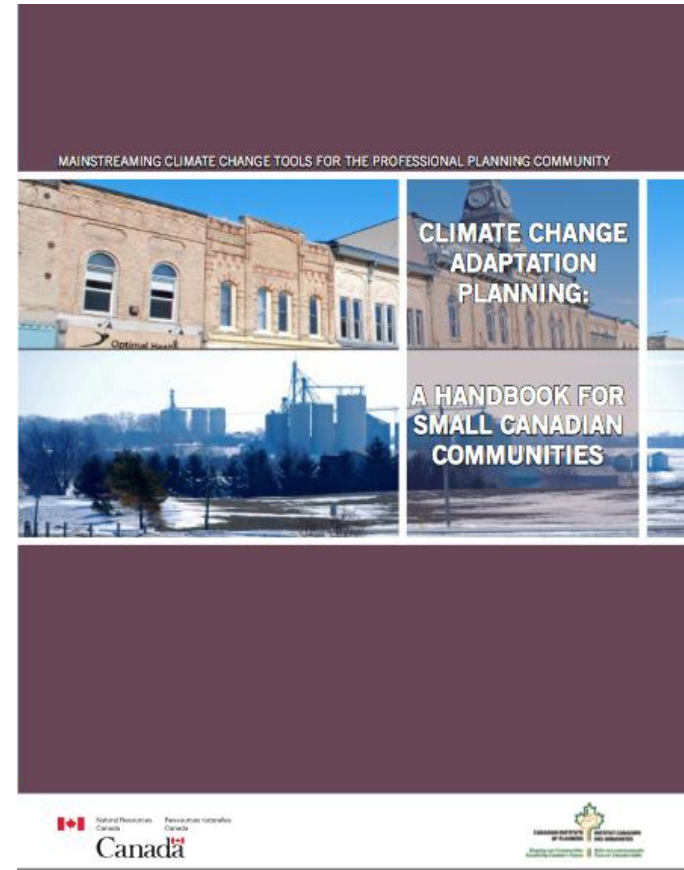
Planning for Rural Resilience – Next Steps

- Difficult choices need to be made
- Government financial assistance will be required
 - Crop choices
 - Longer term, broader crop rotation
 - Allow farmers to transition to new practices
- Use drought resistant practices
- Municipal governments **CAN** be champions here, by making changes needed
- Bottom-up approach is required (easier than top down)
- **Short term risk = Long term opportunity**

Planning for Climate Change: An Oxymoron?

- No. It's an obligation!
- **CIP Code of Professional Practice**
 - Section 1.2
- **IGNORING DOESN'T HELP!**
- Rural communities are likely more effected by changing climate, with fewer resources

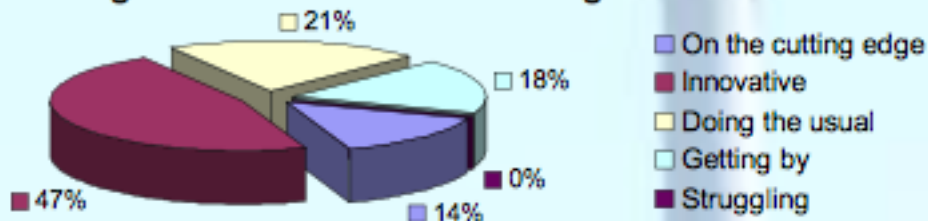
- **ACTION** = Prioritize, prioritize, prioritize (budget, staffing)
- **SMALL ACTIONS = BIG RESULTS!**



<https://www.cip-icu.ca/Files/Resources/RURAL-HANDBOOK-FINAL-COPY>

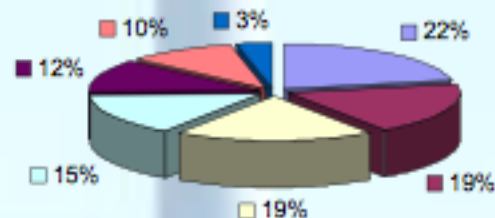
University of Guelph Research Project

Municipalities Position With Respect to Climate Change & Environmental Planning



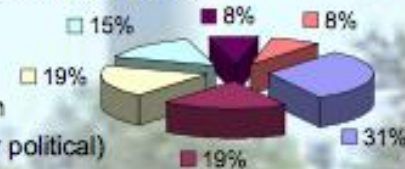
Environmental Planning Themes As Identified By Municipality

- Official Plan Policies
- Water Protection Policies
- Environmental Policies
- Partnerships - MOE, MNR, NGOs
- Agricultural Policies
- Planning Processes – Provincial Policy Statement, Bylaws
- Other



Constraints Identified In Developing and Implementing Innovative Environmental Policy and Programs

- Staff resources (internal or external)
- Inter-governmental/political coordination
- Lack of support or awareness (public or political)
- Funding
- Lack of data/information
- Other



Who's Responsible: STEP by STEP

STEP	PLANNER	INTERDEPARTMENTAL TEAM	COMMUNITY	MUNICIPAL COUNCIL	IMPLEMENTATION TEAM
1	X			X	
2	X				
3	X	X	X		
4	X	X	X		
5	X	X	X		
6				X	X

We live in a great country: Let's **Plan** it!



About Our Organizations (cont'd)

International Institute for Sustainable Development (IISD)

- Established in 1990, IISD is an independent, non-profit organisation that provides practical solutions to the challenge of integrating environmental and social priorities with economic development
- Reports on international negotiations, conduct rigorous research, and engage citizens, businesses and policy-makers on the shared goal of developing sustainably.
- has offices in Canada, Switzerland and the United States, and operates in over 70 countries around the world
- IISD is also deeply engaged with different partners in a number of adaptation-focused initiatives, including the [National Adaptation Plan \(NAP\) Global Network](#), for which IISD serves as Secretariat, and the development and use of the [CRiSTAL](#) (Community-based Risk Screening Tool – Adaptation and Livelihoods) planning tool and its specialized versions. IISD is also a partner in the [Prairie Climate Centre](#), which provides access to climate data and support for adaptation planning on the Canadian Prairies.