



# Assessing Abilities of Policies to Reduce Vulnerability to Climate Change

Livia Bizikova  
lbizikova@iisd.ca

April 2016

# Aspects of Adaptation Planning



## Starting Points for Addressing Vulnerability to Climate Change

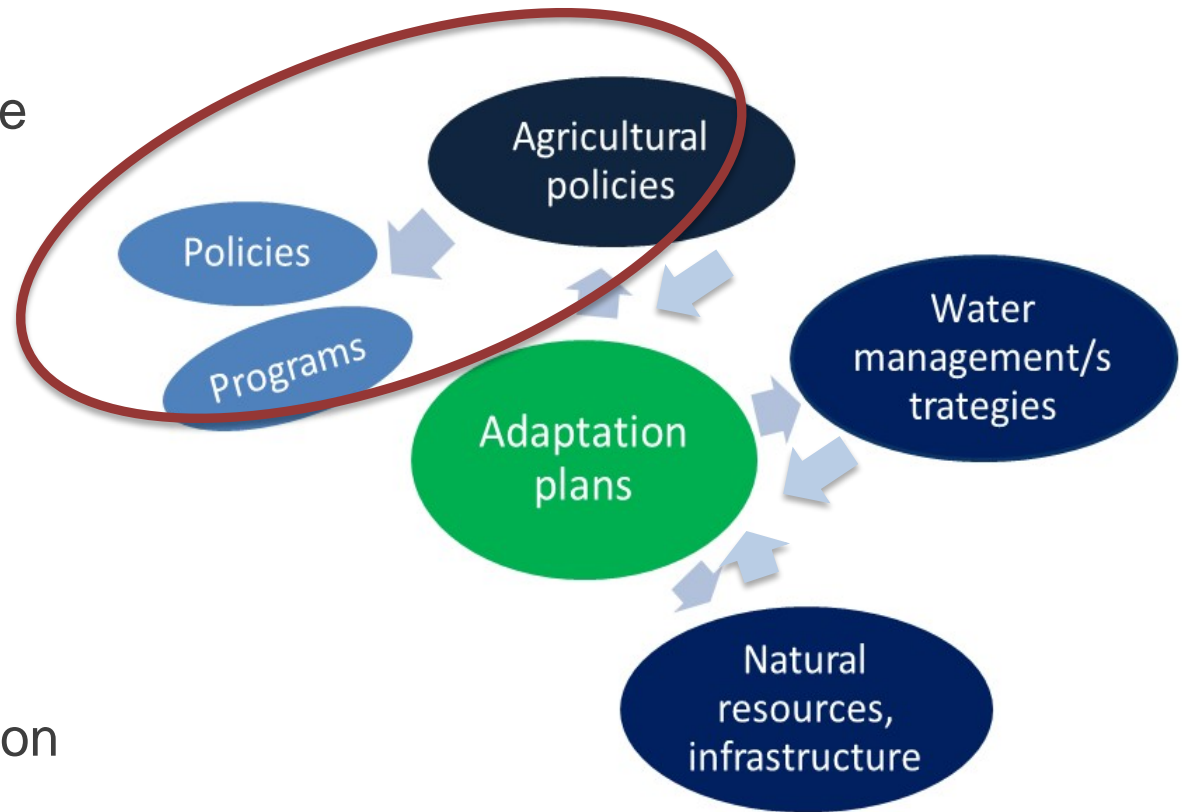
- Assessing climate change impacts, looking at vulnerabilities and identifying efforts to adapt is the focus of planning efforts for cities, municipalities, provinces, countries
- Increasing number of these jurisdictions focus on developing targeted and comprehensive adaptation strategies and plans to reduce vulnerability to climate change, integrate adaptation needs and promote resilience



# Adaptation Plans in Context

Adaptation planning interacts with other policies

- Critical to work with the integrated nature of adaptation plans
- Policy coherence to identify synergies and trade-offs between policies
- Issues of mal-adaptation







# Policy Assessment

## Working with ADAPTTool - key components



**1. Vulnerability Analysis**

8. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)

	AgriRecovery Program	Community Pasture Program	Go Teams	Ag-Weather Program	EFAP
8.1. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.2. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.3. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.4. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.5. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.6. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.7. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.8. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.9. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.10. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.11. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.12. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.13. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.14. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.15. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.16. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.17. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.18. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.19. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					
8.20. How the intervention actions responded to the stressor? (Score 3 if action is directly supported by a policy, 2 if indirectly supported, & 0 if not supported)					

**2. Adaptive Capacity Analysis**

8. Is the policy itself vulnerable to drought and excess moisture? Is the policy itself vulnerable to the stressor (score 2 if no, 1 if marginally, and 0 if yes)

Policies and Programs	Score	Notes
AgriRecovery Program	1	An increase in the frequency in flood and drought related disasters could put fiscal pressure on federal and provincial governments.
Community Pasture Program	1	Yes, drought is a cyclical phenomenon and occurs from time to time. Drought conditions result in a reduction of total grazing days, which in turn reduces revenue to the CPP. The CPP Business Plan 2008-2011 states on page 36 that "the challenge is further compounded as drought conditions and the potential effects on revenues are usually not known until well in fiscal year, thus it is difficult to plan in advance". However, the business explored three options to "manage the variability" and to "reduce risk to the program and to the Department". The first option is to make use of a "contingency fund" which would be built up over a 4 year period at a maximum of \$170 million, using revenue from the program in good production years. This fund could be drawn down in years of drought or other years where revenues were down. In 2007, during the writing of the Business Plan 2008-2011, it was advised by Departmental officials that there was no legal or financial tool available to the Department to avoid such a fund. The second option is to use the Departmental staff or subsidies to look over the cost of the CPP budget expenses in a manner of a program is created by the stressor as the service provided by team members shifts focus to current conditions, while affecting the deliverance of stated objectives (e.g. 2008 floods put a hold on the objective on drought information dissemination).
Go Teams	1	No. Drought and excess moisture will not cause the Ag-Weather program to stop if a regular activity.
Ag-Weather Program	2	
EFAP	1	If there is an extreme event producers are so snapped up in trying to deal with the extreme event they don't have time to complete the projects that they have been approved for in the given timeline. In this situation there is somewhat of an ability to carry over funds to the following year (i.e. provide extensions on projects)
Agricultural Sustainability Initiative (ASI)	1	By its very nature, the ASI program promotes adaptive capacity that reduces vulnerability and increases resilience of key agriculture subsectors to drought and excess moisture resulting from climate change. However, given the uncertainty associated with climate change particularly in relation to the frequency and intensity of future drought and excessive moisture (DEM) events, its effectiveness is vulnerable to such a stressor. This highlights the need to incorporate a risk management approach to deal with anticipated impacts.
Provincial Planning Regulation - Policy Area 3: Agriculture	1	Being a regulation, the Policy Area itself is not vulnerable to the stressor. Its application is vulnerable in that it does not take into consideration several factors, particularly as related directly to agriculture, including: changes in land use; moisture of topsoil; long term supply of farmland; and future climate conditions (e.g. that grasslands will likely migrate northward, that crops may change). The Policy Area focuses on preserving existing agricultural lands more than increasing agricultural lands, although there are provisions for increasing them. However, the Policy Area generally does not impede any adaptation activity, other than provision of policy 2.1.

9. Does the policy enhance the capacity of actors within the sectors to adapt? (based on Smith et al 2001) [2 = yes; 1 = partially; 0 = no]

Policies and Programs	Access to Financial Resources	Contribution to Adaptive Technology	Access to relevant Info and Skills	Access to relevant Infrastructure	Access to Institutions and Networks	Equitable Distribution of Resources	Average
AgriRecovery Program	2	up until now No - however a specific program could be developed in response to farmers in response to the program can be seen as a form of redistribution of payment of grazing services. The program's allocation policy favours	up until now No - however a specific program could be developed in response to farmers in response to the program can be seen as a form of redistribution of payment of grazing services. The program's allocation policy favours	1	1	1	2.12
Community Pasture Program	1	Over the past number of years the CPP has made a significant	Due to the remoteness of the community partners, communications on a timely basis has been a	1	2	1.2	2.14
Go Teams	1	The service provides information on where to obtain financial resources and assist clients apply to no access to financial resources	This is the core function of the service program.	2	1	2	2.15
Ag-Weather Program	0	Provides access to weather and climate info, but not direct access to	1	2	1	1	0.0.8

Are anticipated adaptation actions supported by policies?

Do stakeholders' have capacities to adapt if needed?  
Are unanticipated adaptation supported by measures in the policies?

# Policy assessments in Canada



Using ADAPTool to assess policies in different provinces

- Total 51 policies were assessed
- Sectors: agriculture, water, parks and infrastructure, mining, forestry
- Policies assessed: long-term strategies, regulation, incentives, risk management and allocation programs





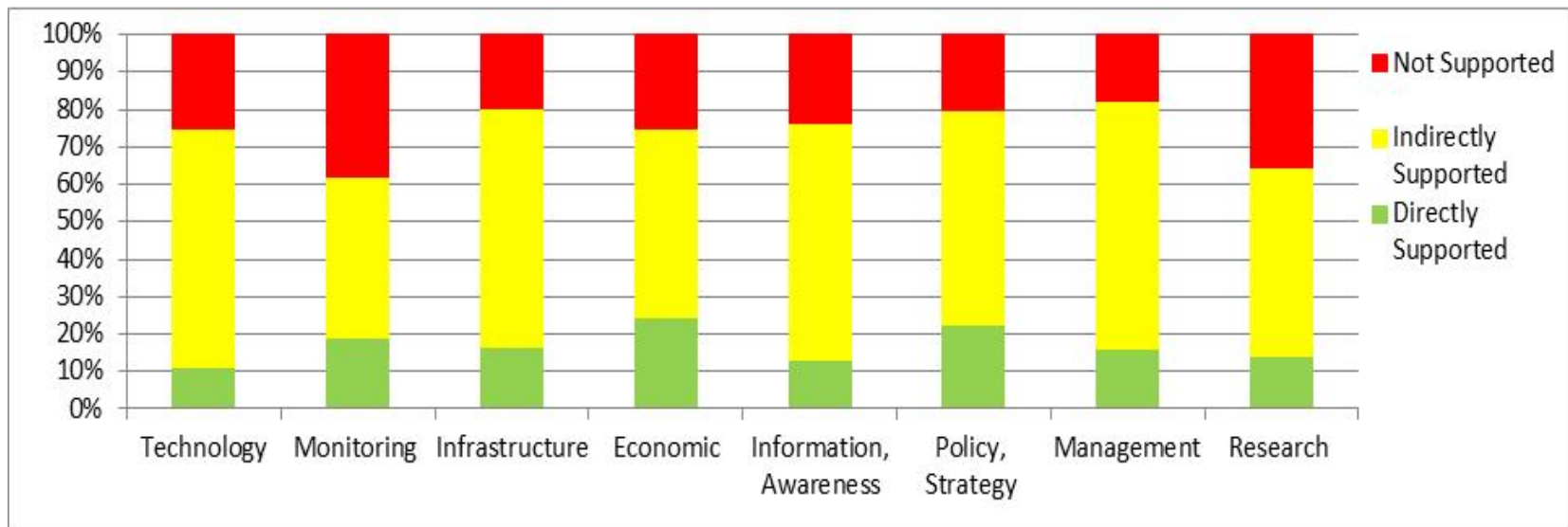
# Policies & Adaptation Needs

Adaptation actions are supported directly and often indirectly by policies

- In total 566 adaptation needs were identified across 6 sectors

Examples:

- *In the policy, seed zone boundaries are set but could be adjusted with an approval process.*
- *The “policy” does not inhibit the action, but the lack of data and information likely would; policy-makers are not actively working on this currently.*
- *The policy allows this action, but it is not part of the current work plan.*





# Policies & Capacities to Adapt

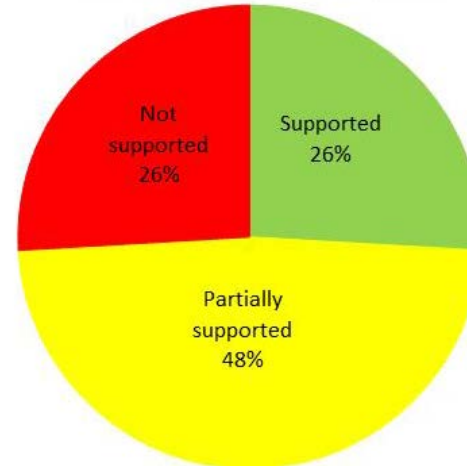
## Supporting capacities of Stakeholders

- All types of capacities are covered, but at different levels

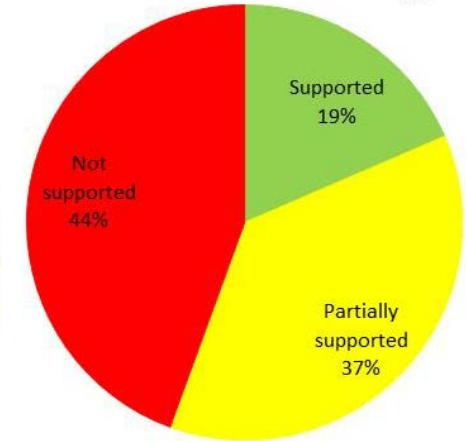
### Examples:

- *The programs provide information about pest management and best management practices to farmers.*
- *The policies provide information about methods of accessing water withdrawals.*
- *There is regular reporting about changes in water use and climate variability.*

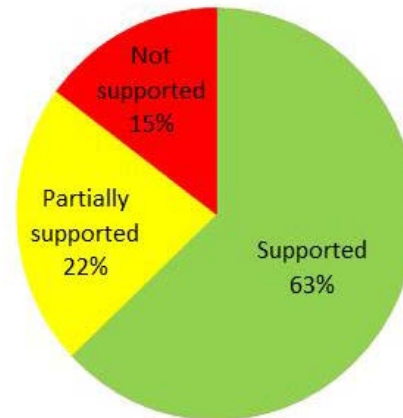
Access to Financial Resources



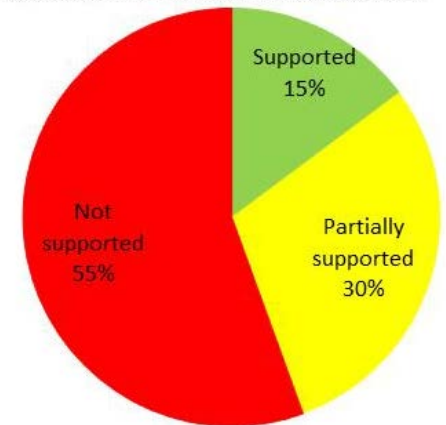
Access to Relevant Technology



Access to Relevant Information and Skills



Access to Relevant Infrastructure

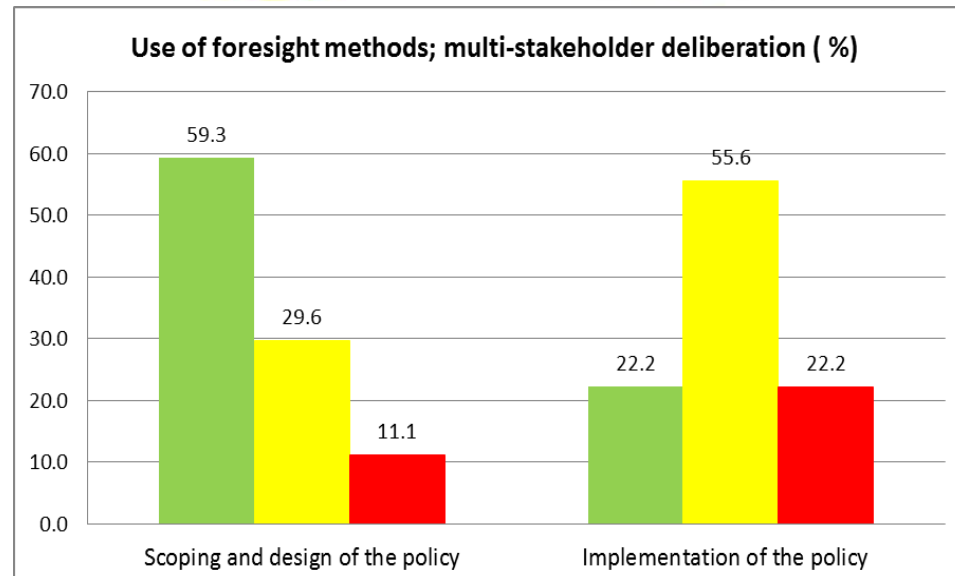
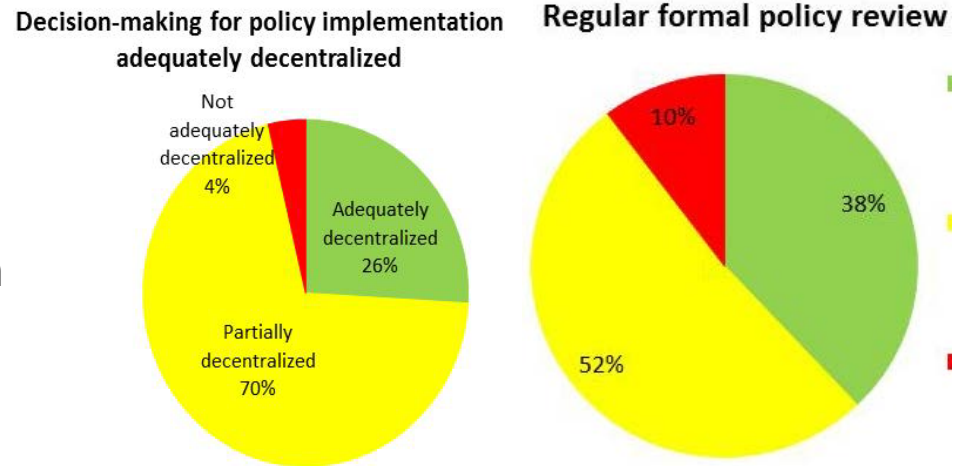


# Policies Addressing Uncertainty



## Role of Adaptation Planning to Challenge the Policy Process

- Foresight methods and multi-stakeholder deliberation used in the scoping and implementation
- Policies enabling self-organization and social networking
- Implementation adequately decentralized
- Adequate variety in the suite of policies and programs (e.g., economic, regulatory, expenditure, institutional policy instruments)
- Regular formal review process in place that can detect emerging issues



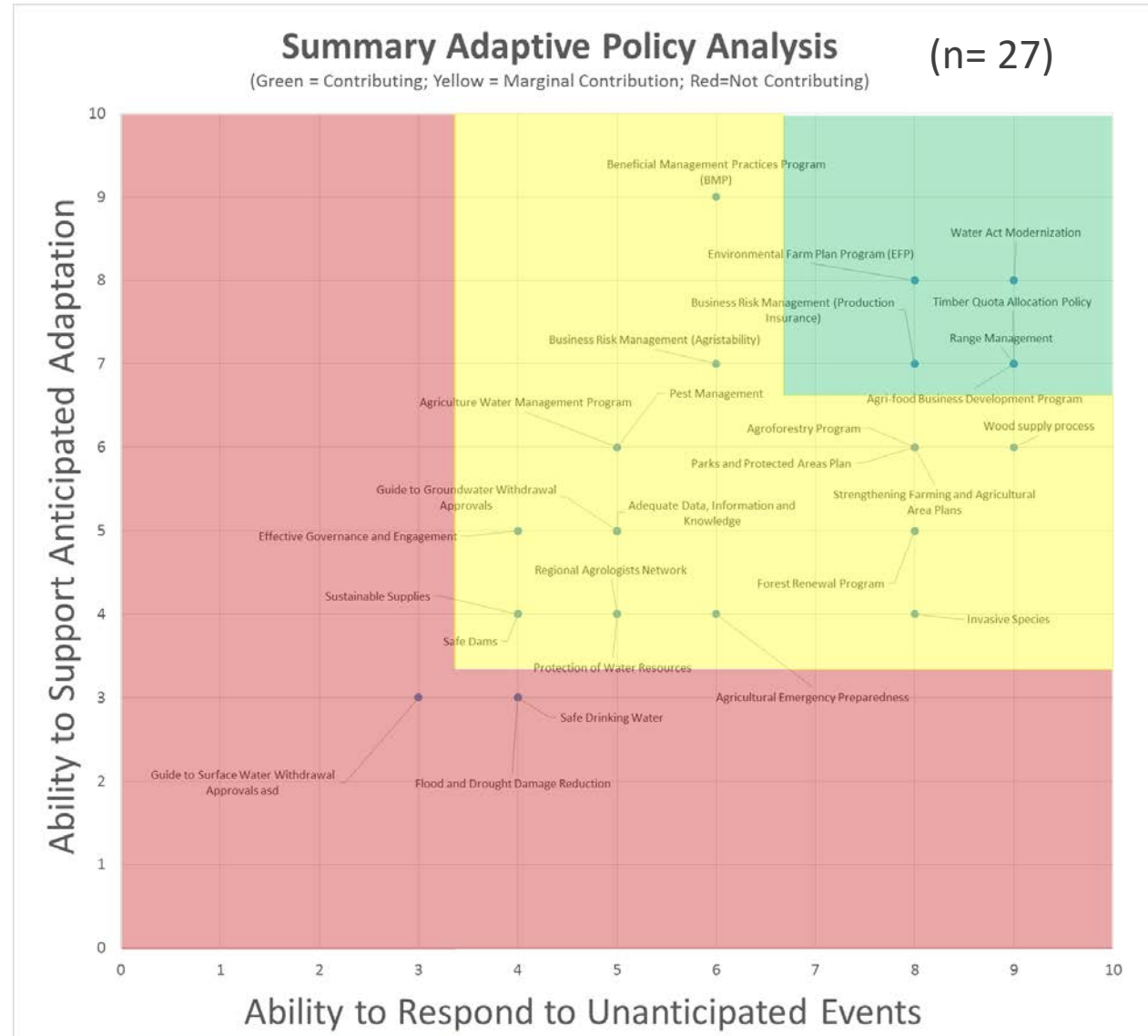


# Policy Support for Adaptation



Moderate-level of support for adaptation

- Limited policy coordination
- Mal-adaptation is rare
- Regular policy reviews and other assessments to make sure policies are targeted/relevant





# Policy Design & Adaptation

## Policy Focus and Policy Process

- ADAPTool is not a policy evaluation tool, but aims to provide guidance for policy-makers on how well their policies support adaptation needs as well as can respond when needed
- Most policies can support adaptation; it is more how they are translated into programs
- Policy design challenges: the focus is on creating a set of policies that cover different aspects of the sectoral needs/management and adaptation needs is one of them
- Role of Adaptation Planning to Create Innovation in the Policy Process