



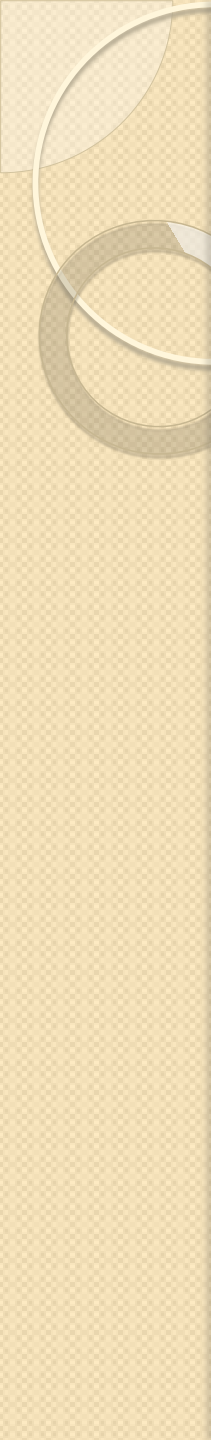
Policy Integration and Cross-Sector Approach to CC Adaptation Strategy

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Uses of 'Sector' in Policy: a mixed-bag concept

- 'Sector' as in political-administrative sectors of government: denoting the way national government bodies are functionally organized (e.g. finance sector; education sector defense or national security sector)
- 'Sector' as used to refer to social sectors that government is trying to effect (i.e, social groups, classes or communities)
- 'Sector' as used to refer to natural and human systems that government response is focused on (e.g. health; water management system; etc.)



Systems and Sectors highlighted by IPCC (2007) in vulnerability study

- Freshwater resources and their management
- Ecosystems
- Food, fibre and forest products
- Coastal systems and low-lying areas
- Industry, settlement and society
- Health

Sectors identified in some Asian developing countries' NAPA/National Communication documents

- Agriculture
- Forestry
- Aquaculture
- Energy and transportation
- Human health
- Animal husbandry
- Arable farming
- Water resources
- Water resources & Renewable Energy
- Forest and Biodiversity
- Natural Disaster and Infrastructure
- Associated Capacity Building Requirements
- Health system
- Forest eco-system
- Natural ecosystems
- Coastal zone
- Infrastructure and energy

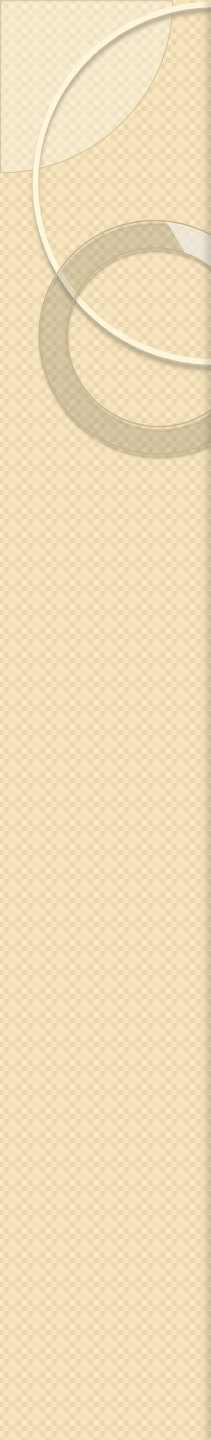
Systemic characteristics of vulnerability and adaptation

- Vulnerability to climate change impact is vulnerability of a system/s.

Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate change and the variation to which a system is exposed, its sensitivity and its adaptive capacity. (IPCC, 2007: Climate change 2007: Impacts, Adaptation and Vulnerability)

- Adaptation to climate change impact is adaptation of a system/s.

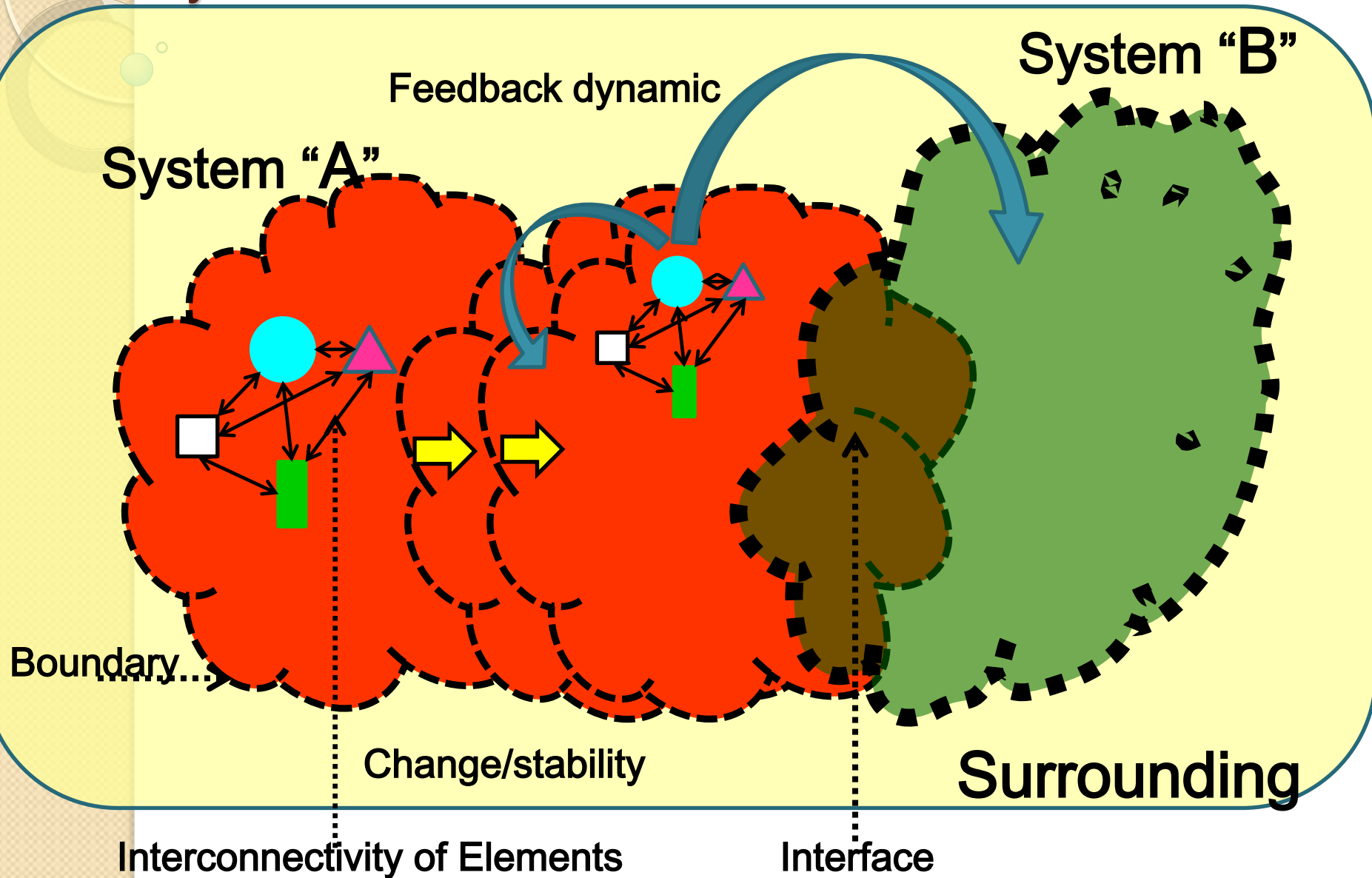
Adaptation is the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. (IPCC, 2007: Climate change 2007: Impacts, Adaptation and Vulnerability)



What are the characteristics of a system salient to understanding of vulnerability and adaptation

- Behavior or process of change/stability
- Inter-connectivity of elements within and interfaces with other systems
- Boundary/scale
- Feedback dynamics

Systems: change, inter-connectivity and interface, boundary and scale and feedback dynamics



Illustrative examples of systemic characteristics in climate change

(1)

- On behavior or process of change/stability of a system
 - Forest ecosystem property of carbon sequestration is constantly in a flux of change (due to man-made or naturally-induced alterations), but may also be in relative stability.
- On inter-connectivity of elements within and interfaces with other system/s
 - Inter-connectivity of elements:
 - In fresh water resource system, tree species in mountain slopes are connected with water retention of soil and stream flow.
 - Interface with other systems:
 - Land use and river systems are interconnected and mutually affect each other.

Illustrative examples of systemic characteristics in climate change

(2)

- On system's boundary or scale:
 - Individual small scale farming vis-à-vis larger system: Forest clearing by individual farmers for bio-fuel cultivation can affect the carbon sequestration capacity of forest region.
 - Large scale to individual household system: Regional flood-induced soil erosion can ruin river-based livelihood activities of individual households such as fishing or precious metal panning in rivers.
- On feedback dynamics:
 - Failure of a farming system in the interior can result in rural poor migration to low-lying coastal areas as an adaptive action, that in turn increases the vulnerability of a certain coastal system to disasters.

Cross-Sector Policy Integration and Coherency: Definition (PEER 2009)

- Climate adaptation policy integration and coherency
 - The incorporation of the aims of climate change adaptation in all stages of policy-making in other policy sectors (non-environmental as well as environmental)
 - Complemented by an attempt to aggregate expected consequences for climate change adaptation into an overall evaluation of policy, and a commitment to minimize contradictions between climate policies and other policies

Policy integration can be divided to vertical and horizontal integration

Sample matrix for evaluating coherency in policy integration

	Adapting Agriculture & Forestry	Sustaining Water Supply	Abating Flood Risk	Conserving Biodiversity	Protecting Public Health
Adapting Agriculture & Forestry		Supply concept crucial to A&F in dry regions	Agricultural use of retention areas	Impacts of (changing) cropping on vulnerable and moving species	Sufficient supply of nourishment
Sustaining Water Supply			Integrated River Basin Management	Impacts of droughts, irrigation and extraction	Drinking and bathing water Quality
Abating Flood Risk				Positive effects of restoring natural basins and retention areas	Direct risks of injury and drowning
Conserving Biodiversity					Invasion of harmful species
Protecting Public Health					

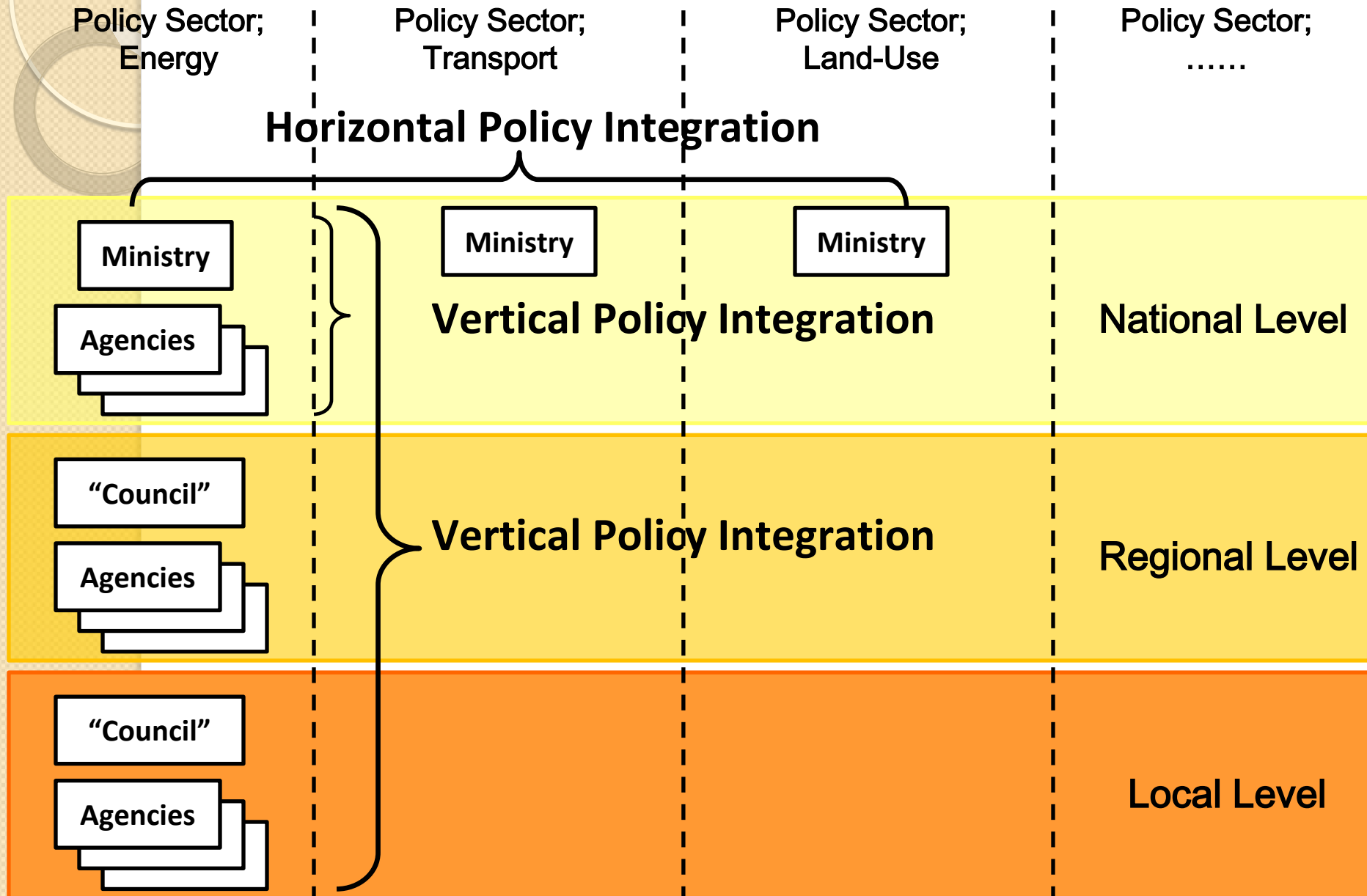
Horizontal Policy Integration

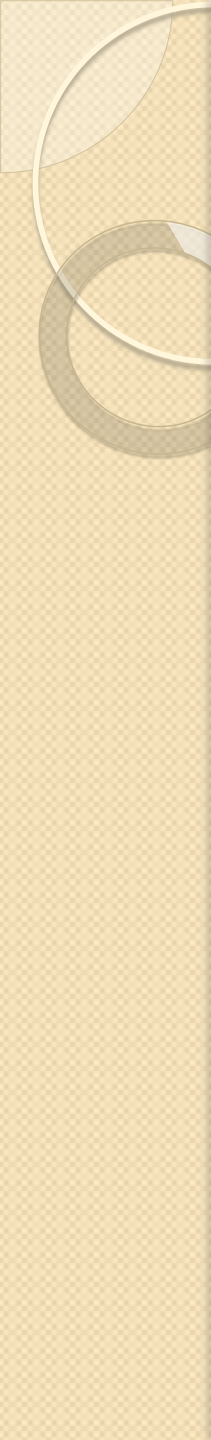
- Horizontal integration refers to cross-sectoral measures and procedures by the government, or a governmental body, e.g., a commission, undertaken in order to mainstream or bring about a comprehensive integration of climate change adaptation aims into public policies. (PEER, 2009)

Vertical Policy Integration

- Vertical policy integration within governmental levels refers to the integration of climate policies into a specific sector. It includes sector-specific strategies and decisions made at ministerial level, as well as the integration of climate policy into the strategies, measures and actions taken by different agencies under the supervision of a ministry. Vertical policy integration can be assessed at just one level, but also refers to integration throughout many levels (i.e. national , regional and local state). (PEER, 2009)

Illustration of Vertical and Horizontal Policy Integration

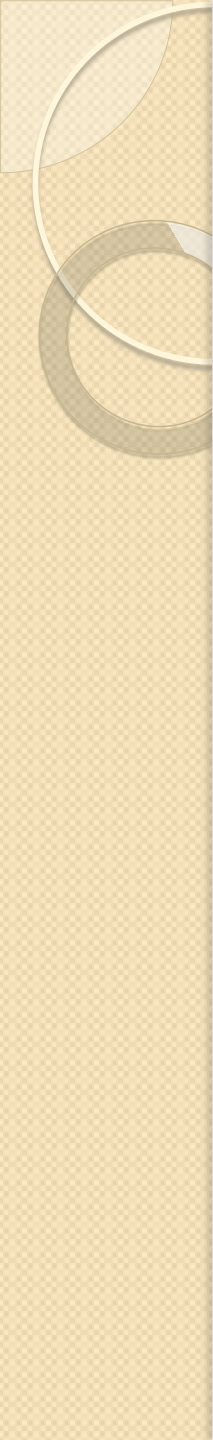




Checklist for Improving Integration and Policy Coherence for CC Adaptation

- Criteria I: *Is there a common understanding of climate change adaptation?*
- Criteria II: *Is there a clear commitment and leadership?*
- Criteria III: *Are institutional conditions in place to steer the adaptation policy integration?*
- Criteria IV: *Is stakeholder involvement in decision-making encouraged?*
- Criteria V: *Is the diversity of knowledge and the scientific input to problems adequately managed?*

(Adapted from “Improving Policy Coherence and Integration for Sustainable Development”, OECD Policy Brief 2002).



Thank you!