Do Adaptive Policies Mean Effective Policies? Some Implications for Governing CCA and DRR

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Outline

- Background: Adaptive policies
- How adaptive are policies in Japan
  - › How soon?
  - › How frequent?
  - › How effective?
- Implications: DRR vs NRM
- Conclusion

The Conundrum of Three Commandments in a CCA Bible

- Developed countries have a lot to offer for developing countries in CCA
- Lessons from DRM can help CCA
- Adaptive learning and adaptive management are crucial for CCA

Conceptual Background of the Research

- General consensus: Most developing countries are vulnerable to climate change impacts while most developed countries have capacity to help developing countries.

- Climate change adaptation is a developmental problem?

The Discourse of Developed Countries vs Developing Countries

- **Paragraph 3, Copenhagen Accord:** "Enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa. We agree that developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries.

Japan and Adaptation

- Developed country in the Asia region with greater environmental consciousness and greater contribution to development assistance.
    - › **ODA:** Japan has spent nearly 1.8 billion USD towards adaptation and related activities overseas over the 1997-2003.
    - › **GEF Trust fund**: Japan has contributed to GEF trust fund and LDCF (about 20% of total funding)
    - › Satoyama Initiative
    - › Indonesia Climate Change Program Loan
    - › JICA capacity building programs (often carried out in Japan)

The apparent strength seems to be financing while there is more than meets the eye!

What about Technologies, Policies and Institutions?

- Japan is a technology super power in the region:
  - › What adaptation technologies are available?
  - › How relevant they are to developing countries?
  - › How much 'adoption' is required for maximum benefit in these countries?
- o Policy formulation and implementation:
  - o What policies were introduced?
  - o What was the success of these policies?
  - o Can this success be easily transported to the developing country context?
- Institutional systems:
  - › What institutional innovations exist?
  - › To what extent climate change adaptation is mainstreamed into institutional processes?
  - › Can these innovations be replicated elsewhere?

This Research Endeavor: Developed Countries and Adaptation

- A multi-country project on 'Strengthening Capacity for Policy Research on Mainstreaming Adaptation to Climate Change in Agriculture and Water Sectors' funded by the Asia Pacific Network for Global Change Research Project No. CRP2009-02NMY-Pereira.
- What Japan has to offer to developing countries in terms of mainstreaming adaptation in the agriculture sector?
  - › Identifying and overcoming barriers to mainstreaming climate change adaptation (Year I)
  - › Designing and implementing policies that are adaptive in nature (Year II & III)
  - › Measuring progress in mainstreaming adaptation into institutional processes (Year II & III)

Adaptive Policies

So, What are Adaptive Policies?

- Adaptive policies
  - › Are those policies that have changed with changing circumstances/triggers /problems that these policies are developed to address.
- What is not an adaptive policy?
  - › A policy that doesn't change with the changing circumstances.

Adaptive Policies vs Policy Dynamics

Policy Dynamics	Adaptive Policies
⦿ Feedback connections between various actors and policies over years.	⦿ How policies accommodate responses to emerging challenges.
⦿ Policies have both positive and negative feedback connections leading to equilibrium and stability in the system.	⦿ Policies have to face both known and unknown conditions leading to un-intended consequences.

Why Stress on Adaptive Policies

⦿ Climate change is full of uncertainties and knowledge on projected climate change impacts & needed responses continue to emerge.

⦿ Postponing actions until reliable information is made available is not an option, it may be too late!

⦿ Hence, a policy environment that can learn and evolve with evolving knowledge is required to deal with uncertain challenges like climate change.

How we Identified Adaptive Policies and Responses?

	NRM	DRM
Step I: Identify an issue that has long history and how it has evolved over the years.	› Land use › Agriculture labor	2004 typhoon impacts
Step II: Enlist policies introduced to address these issues over the years	› Land use regulations › Incentives for farming (e.g. subsidies)	Typhoon response measures
Step III: Identify how these policies changed over the years in response to the changing stimuli and judge state of the issue along the course	› E.g. Number of amendments	› E.g. Number of amendments

A policy that has undergone most changes with changing stimuli can be identified as adaptive!

Three Important Questions Asked were

- How soon the policies were introduced?
- How frequently the policies have undergone change?
- How effective the policy was in achieving the policy objective?

How Soon Policies were Introduced?

- Refers to when a policy was introduced in reference to identification of the issue.
- The problem: Difficult to pin point the exact month or even a year when a particular issue has emerged due to
  - The slow nature of their evolution
  - Several issues are interlinked
- One way is to extensively search published articles to see the first reported date!

Example I: NRM
How Soon Policies were Introduced?

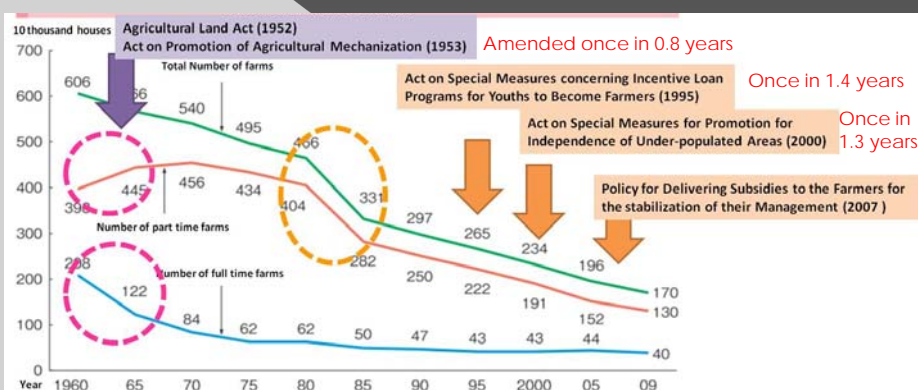| Period	Major Issues	Major Policies
Reconstruction period (1940s-60s)	Labor flow, farm land, restoration of farming, declining farming population	Staple food control act, Agricultural cooperatives act, Agricultural land act, Act on agricultural mechanization
Post-Agricultural basic act period (1960s-70s)	Labor flow, farming popoulation decline, environmental quality, income disparity	Agricultural basic-act, free trade, establishment of agricultural cooperatives
Low economic growth period (1970s-80s)	Labor flow, farming popoulation decline, environmental quality, income disparity	Land use planning act, reconstruction of paddy fields, national rice cultivators committee
Globalization period (1980s-90s)	Labor flow, farming popoulation decline, environmental quality, income disparity	Approval for GATT, free trade, new agricultural policy
Structural reforms period (1990s-2000)	Labor flow, farm land use change, aging of farming population	MAFF Env. Sound agriculture headquarters, staple food control act, new rice policy
Realignment of agriculture (2000 onwards)	Labor flow and aging farming population, Farmland use change, rice excess production, decline in farm land use, crop losses due to heat etc.	Restriction of GMOs by local governments, income compensation scheme for rice farmers

Source: Multiple sources

NRM: How Frequently were the Policies Amended?

Policy/Act	No. of Amend	Period	Avg. amend per year
Agriculture cooperatives act	83	1948-2010	**1.3**
Agricultural land act	66	1953-2010	**1.2**
Land improvement act	55	1951-2011	**0.9**
Staple food control act	27	1943-1994	**0.5**
Act on promotion of improvement of agricultural management infrastructure	19	1989-2010	**0.9**
Act on subsidies for agricultural improvement	16	1961-2010	0.3
Agricultural improvement promotion act	16	1950-2004	0.3
Act on promotion of agricultural mechanization	13	1962-2006	0.3
Act on special measures concerning incentive loan program for youths to become farmers	11	1995-2010	**0.7**
Food, agriculture and rural areas basic act	10	2000-2010	**1**
Act on stabilization of supply, demand and prices of staple food	9	2000-2010	**0.9**
Act on special measures for promotion of independence for underpopulated areas	9	2000-2011	**0.8**
Act on promoting the introduction of sustainable agricultural production practices	3	2002-2010	0.4
Agricultural policy	3	1978-1999	0.1
Policy for delivering subsidies to the farmers for stabilization of agriculture	1	2009	0

Source: Compiled from multiple sources

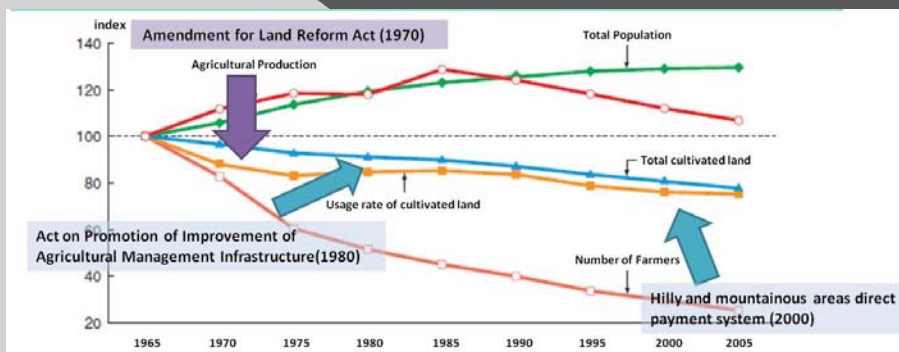# NRM: How effective the policies were?

Issue: Declining number of farmers

(Data source: MAFF, 2011a)
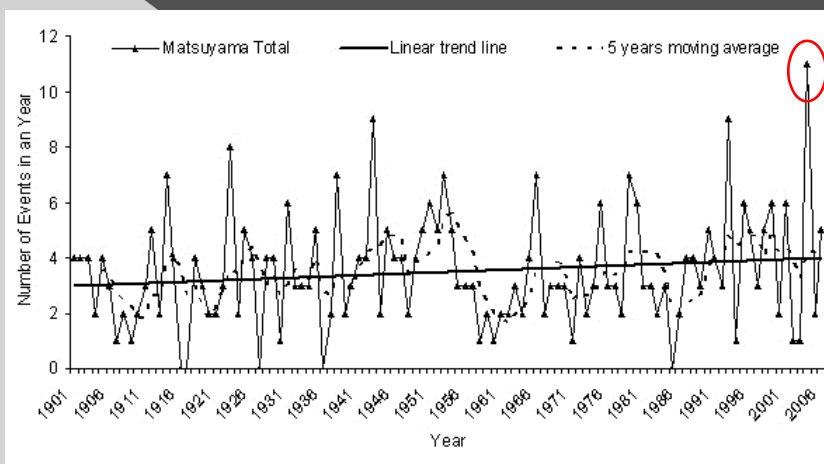
NRM: How effective the policies were?

Issue: Declining agricultural land

(Data source: MAFF, 2011b)

NOTE: Land usage change includes abandoning of cultivated land and farming land used for other industrial means

Example II: DRM
Typhoon Response in Saijo City, Japan

Long term trend of heavy precipitation (>50mm/day) events recorded at Matsuyama Observatory, Ehime Prefecture, Japan (**Source:** Using data from JMA)

Responses to Typhoon (Amendments to DRM plan)

S No	Area of DRM Plan Amended	No of specific amendments	Year of Amendment
1	Hazard, risk and vulnerability assessment	9	**2004**, 05, 06 & 07
2	Redundancy	2	**2004** and 06
3	Rescue and evacuation	6	*2005* and 07
4	Relief management	2	*2005* and 06
5	Forecasting climatic events	6	*2005* and 07
6	Dissemination of early warning	1	2006
7	Quick damage assessment	2	2006 and 07
8	Linkage with other stakeholders	4	2006 and 07

Source: Prabhakar et al., 2011

Results of Amendments to DRM Plan

- Better rescue and relief of elderly people and those living in remote locations.
- Drastic reduction in death and disabled in subsequent typhoons.
- Improved communication due to ample redundancy built into the communications system.

NRM vs DRM

- DRM experiences have contrasting differences with NRM experiences:
  › Clarity about the stimuli to which the institutional agent responds
  › Clarity with which institutional roles are defined
  › Time scales in which issues become clearer for agents to respond
  › Complexity in converting responses to outcomes

So, Adaptive or Effective... or both?

- Higher the <u>importance</u> (e.g. public pressure/opinion) of the issue more the 'urgency to show response',
- Understanding on the <u>causality of the issue</u>,
- <u>Consensus</u> within government and institutions responsible for policy formulation and implementation,
- <u>Complex feedback connections</u> between policies, and
- Nature of <u>institutional environment</u> within which policies are formulated and implemented.

Cont…

- It is not a must that all 'adaptive' policies (as defined in this study) would mean effective policies.
- Policy effectiveness largely depends on factors such as understanding on the causality, consensus among stakeholders, actual driving forces (as against visible driving forces) behind formulation of the policy.
- And…move from reactive governance to predictive governance…

Thank You!

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