

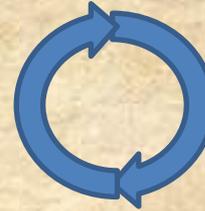
# Barriers and Bridges to integrating Eco-health into policy applications: A “global reality check” workshop



- Jerry Spiegel** - Integrating Eco-health into policy applications:  
**A framework for considering Barriers and Bridges**
- Brama Kone** - Integrating Eco-health into policy applications:  
**A West and Central African perspective**
- Rima Habib** - Health Research and Policy in the Arab World:  
**Dealing with a Changing Political Landscape**
- Paul Hoole** - The short term and long term **response to natural disaster:**  
**Tsunami in Sri Lanka.**
- Mario Caffera** - Arising bioclimatic issues for **assessing dengue early warnings** and related procedures at the southern boundaries of *Aedes Aegypti* in a Climate Change and Variability era
- Edouard Kouassi**- Discussant

# EcoHealth-Informed Policy

# Policy-Informed EcoHealth



**1. What are the key barriers?**

**2. What are effective bridges?**

**3. How can a “global ecohealth policy network” assist?**

# EcoHealth-Informed Policy

## Policy-Informed EcoHealth

**1. What are the key barriers?**

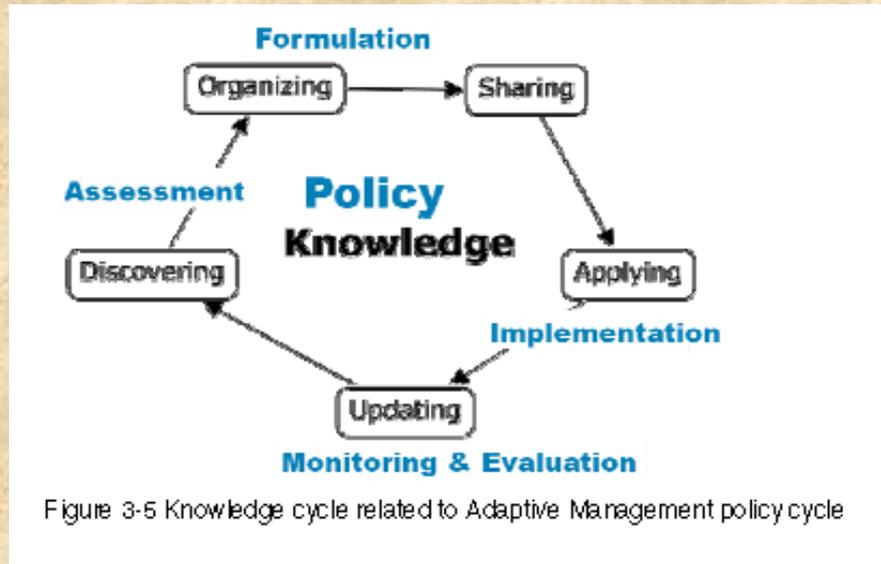
**2. What are effective bridges?**

**3. How can a “global ecohealth policy network” assist?**

- Are policy/political/problem “window” opportunities being adequately anticipated and addressed ?
- Is progress being made to (accumulatively) strengthen capacities to address complexities?
- Is communication linking researchers and policy makers well-established or ad hoc ?

# Barriers and Bridges to integrating Eco-health into policy applications: A “global reality check” workshop

## Integrating Eco-health into policy applications: A framework for considering Barriers and Bridges



Source: Report on conceptual framework for science-policy barriers and bridges. (2010) PSI-Connect Report)

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# Background

- To date, EcoHealth initiatives have predominantly focused on case study applications to demonstrate the value of applying such an approach to understanding and addressing complexity...

A New Editorial Vision for *EcoHealth*



To make the journal more topical and therefore more desirable to readers, we will encourage *Policy papers* in *EcoHealth*.

Transdisciplinarity

Equity

Participation

Sustainability

Gender

# Objective

- To identify factors that must be considered **to enable more systematic application of ecohealth-relevant policy options.**
  - i.e. beyond *scientific* merit of “identified issues”
- To apply the concepts of “Barriers” and “Bridges” **to effective policy formulation & implementation**
  - Draw on an approach that historically has been pursued to explore the feasibility of adaptive systems to overcome the failure of linear modes of understanding and their policy prescriptions.

Gunderson, L. H., C. S. Holling, and S. Light. 1995. *Barriers and bridges to renewal of ecosystems and institutions*. Columbia University Press, New York, New York, USA.

# Outline

**1. Overview of “policy” studies perspectives**

**2. Preliminary review of literature**

- Preliminary scoping review of articles citing key policy sources (18 meeting criteria of key citations)
- insights from recent *Policy Science Interactions* study

**3. Discussion of key themes**

**4. Selection of some guiding questions to consider**

# A perspective on characteristics of Science versus Government agencies

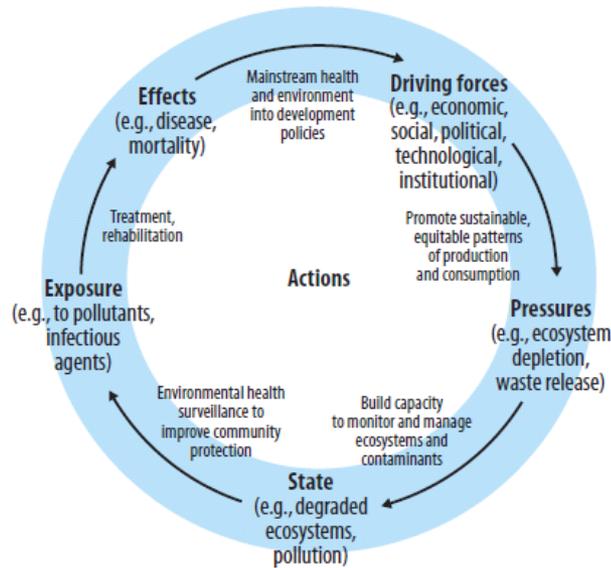
<b>Science</b>	<b>Government</b>
Probability accepted	Certainty desired
Inequality is a fact	Equality desired
Anticipatory	Time ends at next election
Flexibility	Rigidity
Problem oriented	Service oriented
Discovery oriented	Mission oriented
Failure and risk accepted	Failure and risk intolerable
Innovation prized	Innovation suspect
Replication essential for belief	Beliefs are situational
Clientele diffuse, diverse, or not present	Clientele specific, immediate, and insistent

**Manning, E.W.** 1988. *Models and the decision maker*. Pages 3-7 in R. Gelinas, D. Bond, and B. Smit. *Perspectives on Land Modelling*. Workshop Proceedings. Polyscience, Montreal, Quebec, Canada

# Some Frameworks re EcoHealth & Complexity

ECOHEALTH AND WATERSHEDS

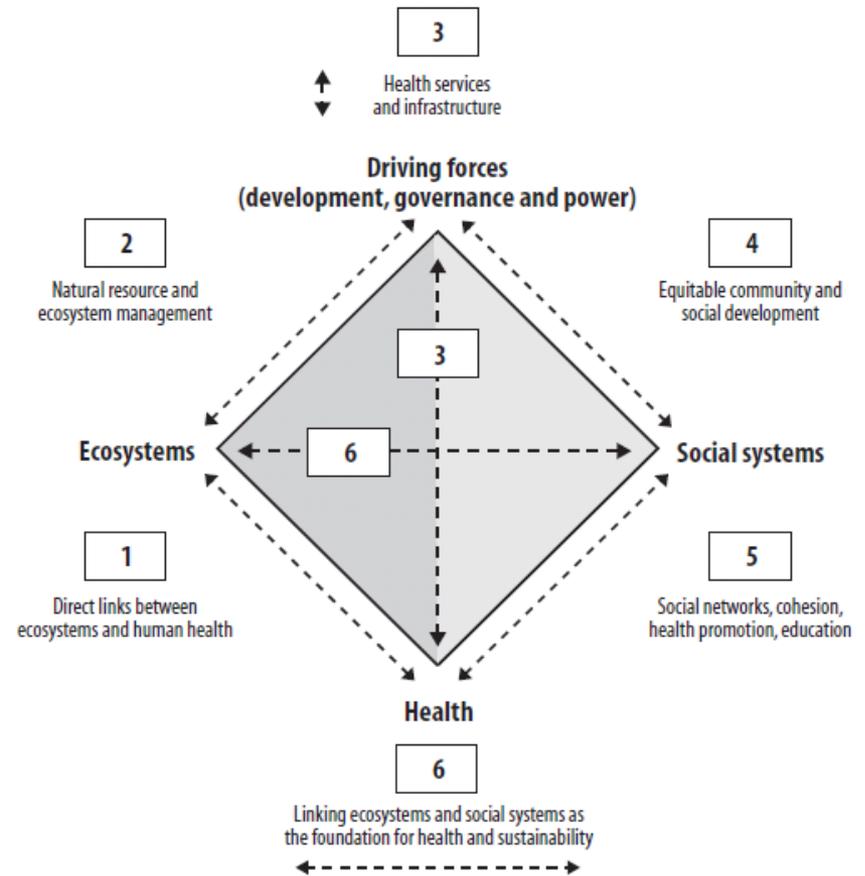
Figure 1: The DPSEEA model



(Source: Carneiro *et al.*, 2006, adapted from Corvalan *et al.*, 2000).

Cited in NESH, 2008

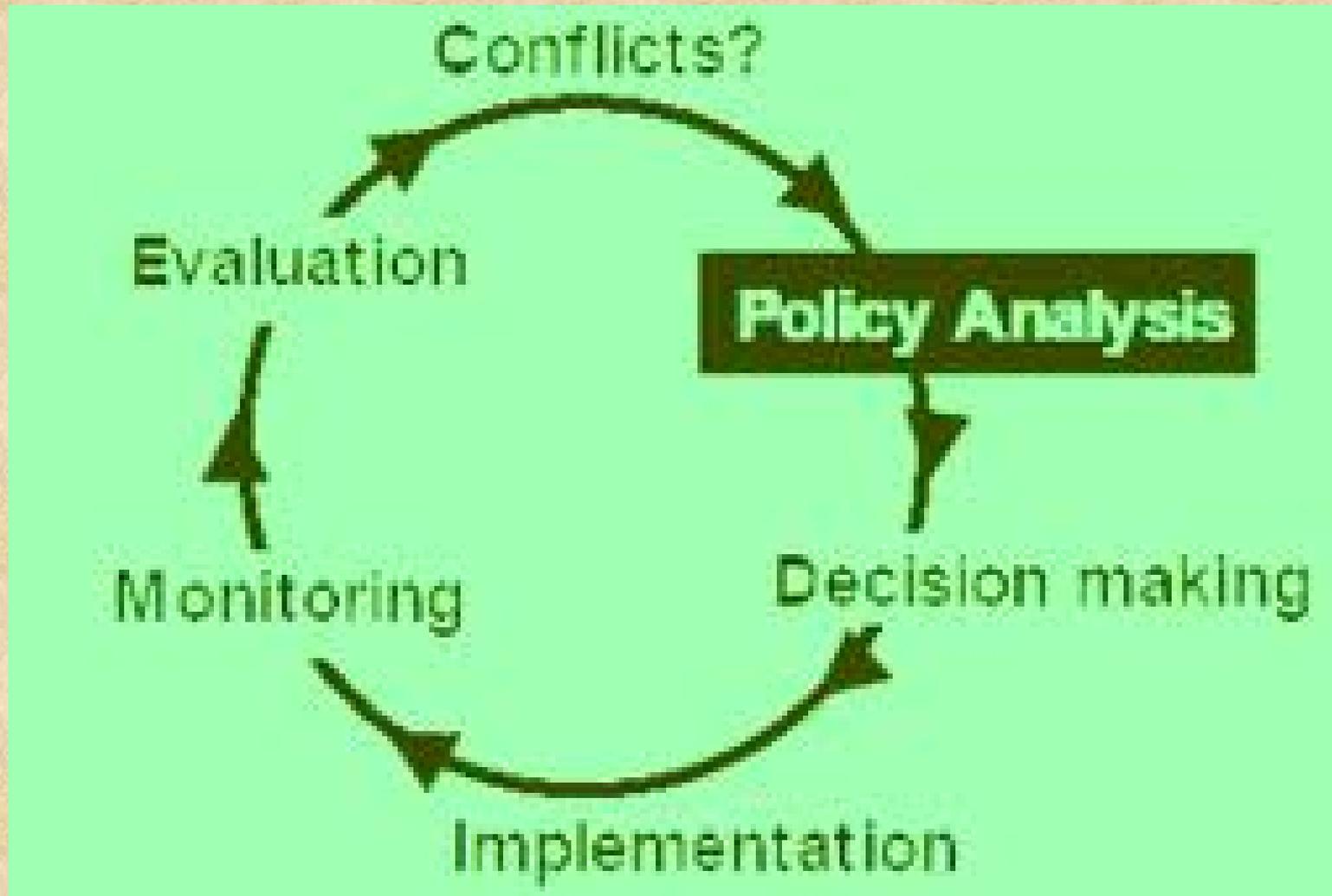
Figure 3: Prism Framework of Health and Sustainability



Source: Parkes, Panelli & Weinstein, 2003

Cited in NESH, 2008

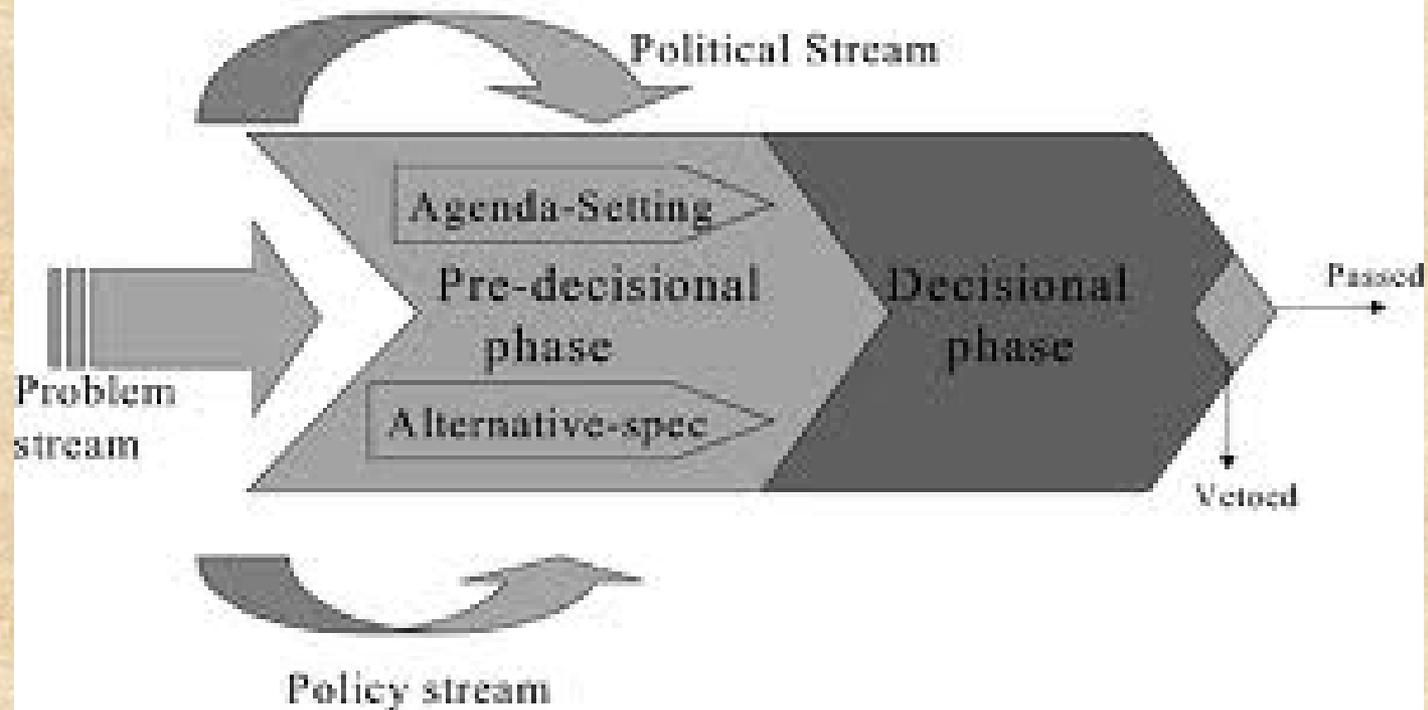
# Policy Analysis & Decision-Making

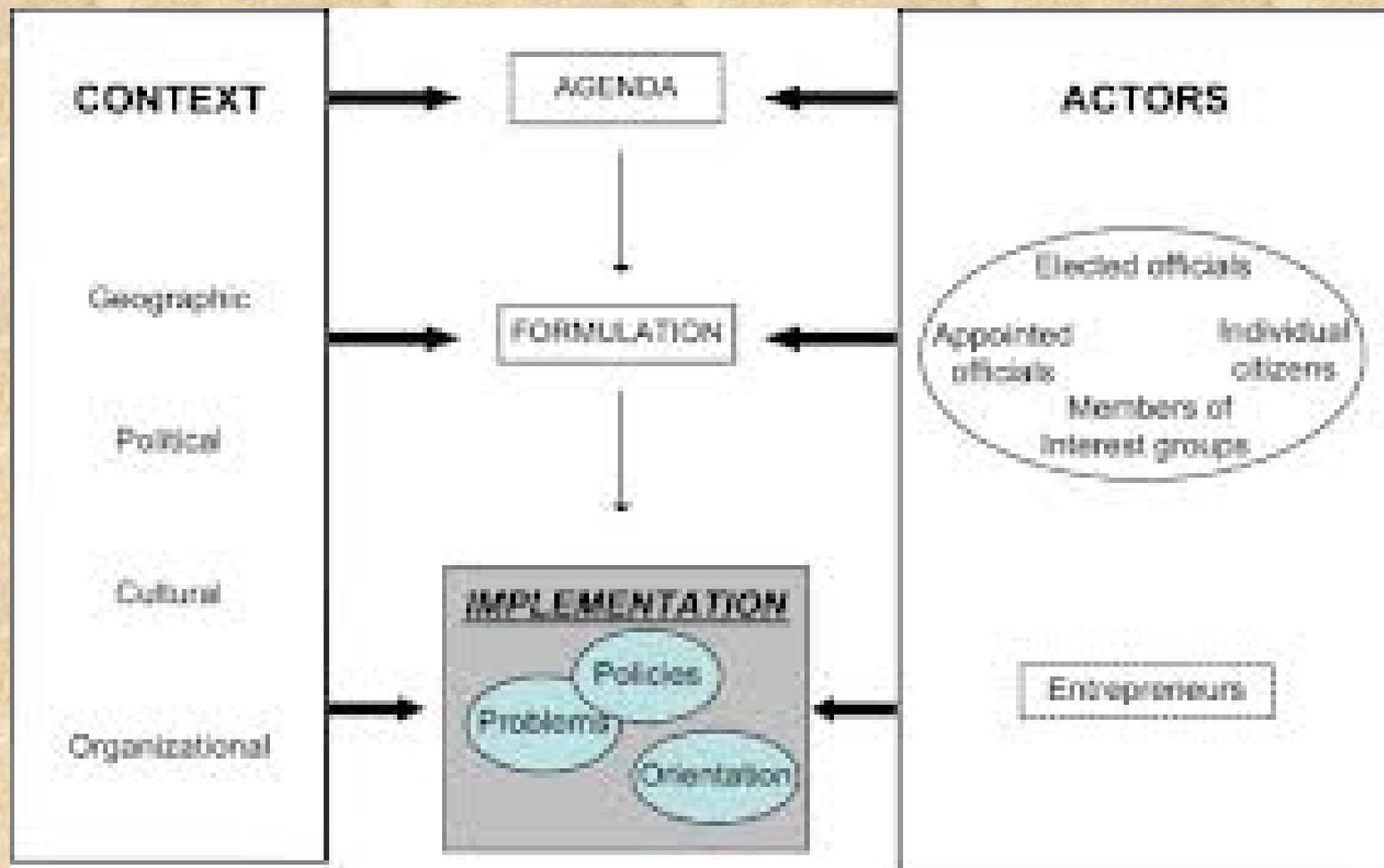


# Policy Cycle

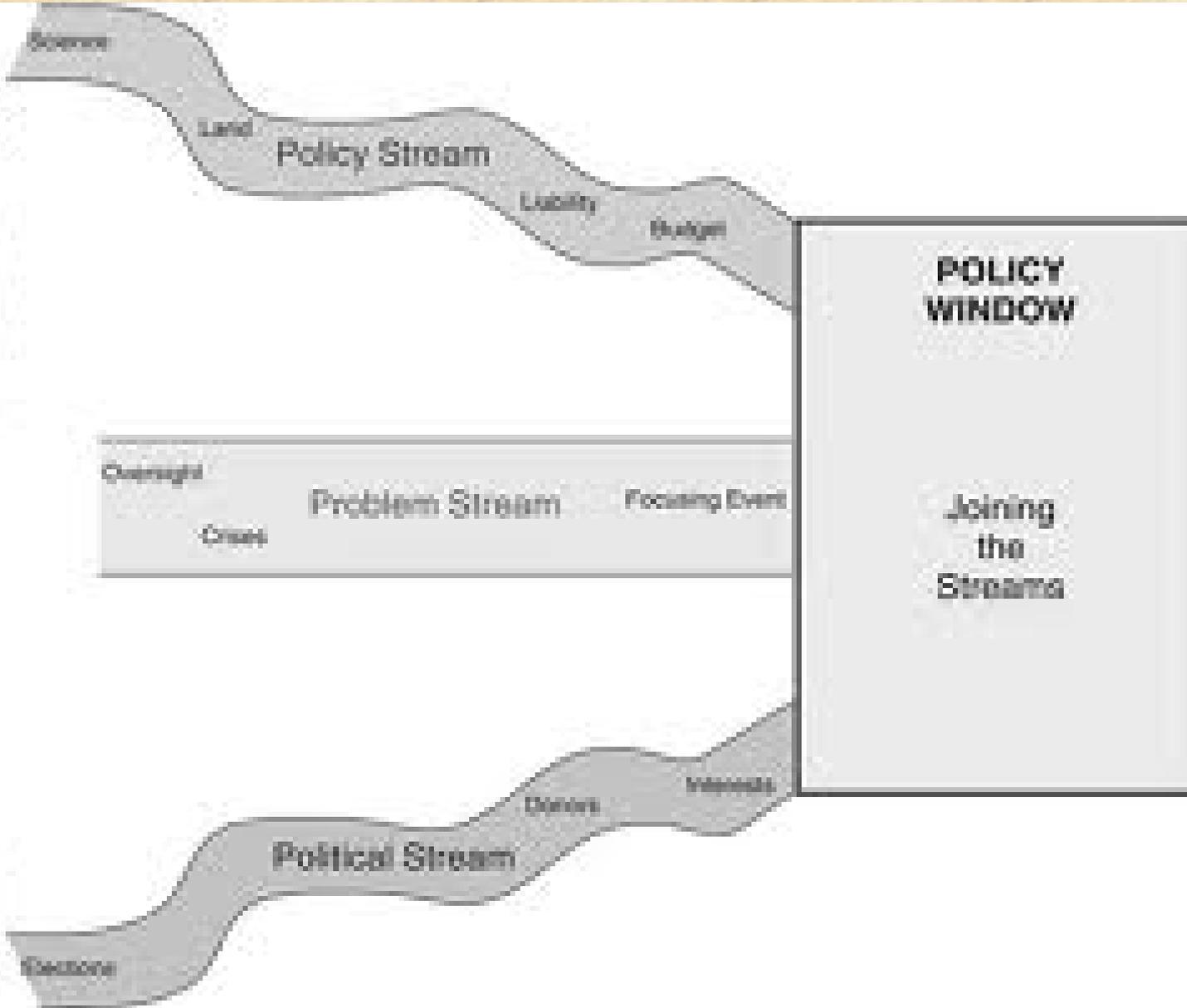
1. Agenda setting (Problem identification)
2. Policy Formulation
3. Adoption
4. Implementation
5. Evaluation

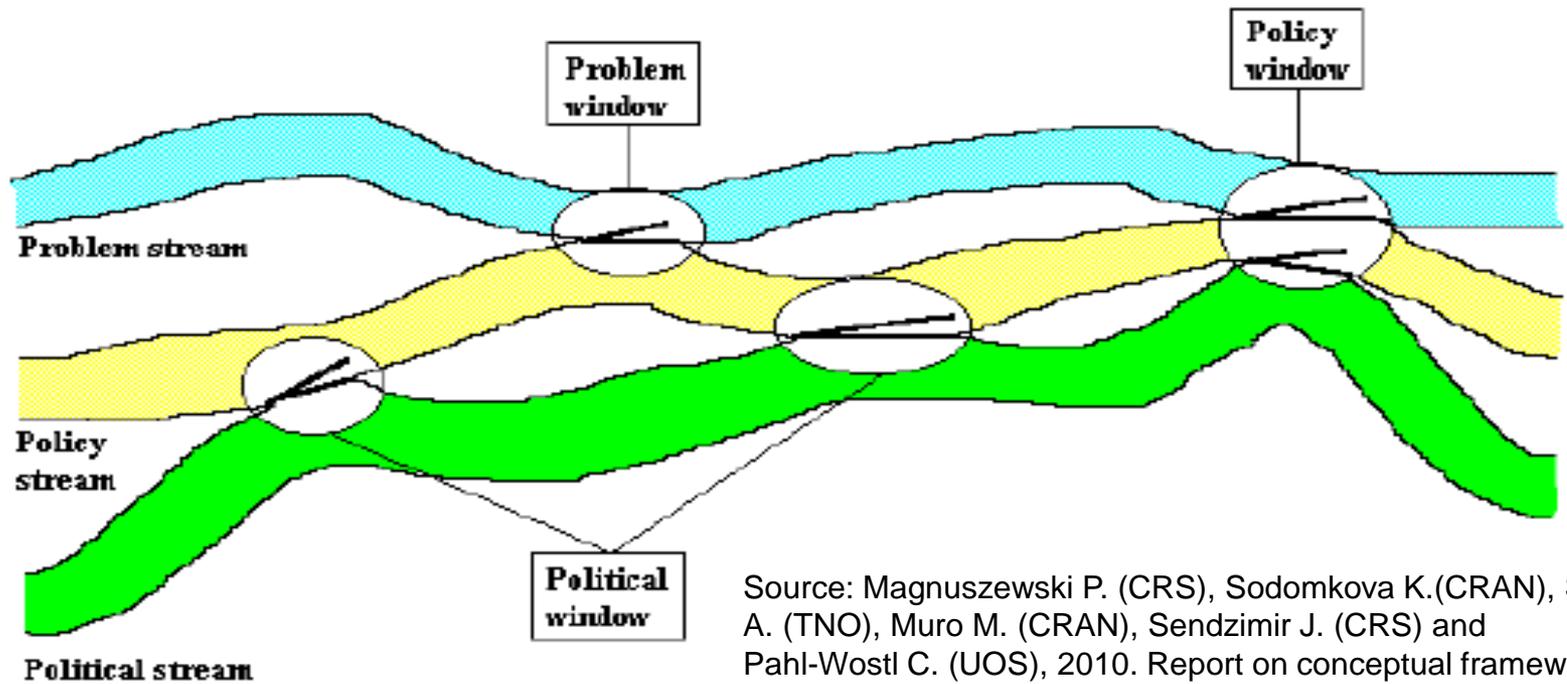
# Kingdon (1983)





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E  
G  
O**





Source: Magnuszewski P. (CRS), Sodomkova K.(CRAN), Slob A. (TNO), Muro M. (CRAN), Sendzimir J. (CRS) and Pahl-Wostl C. (UOS), 2010. Report on conceptual framework for science-policy barriers and bridges. **(PSI-Connect Report)**

Figure 2-1 The model of Kingdon (1992) with the different windows of opportunity

“We conceive of three process streams flowing through the system – streams of problems, policies and politics. They are largely independent of one another, and each develops according to its own dynamics and rules. But at some critical junctures the three streams are joined, and the greatest policy changes grow out of that coupling of problems, policy proposals, and politics.”

(Kingdon, 1995)

Fig. 1. Theoretical framework for the transformation of knowledge to policy actions



# Stages of Knowledge Utilization

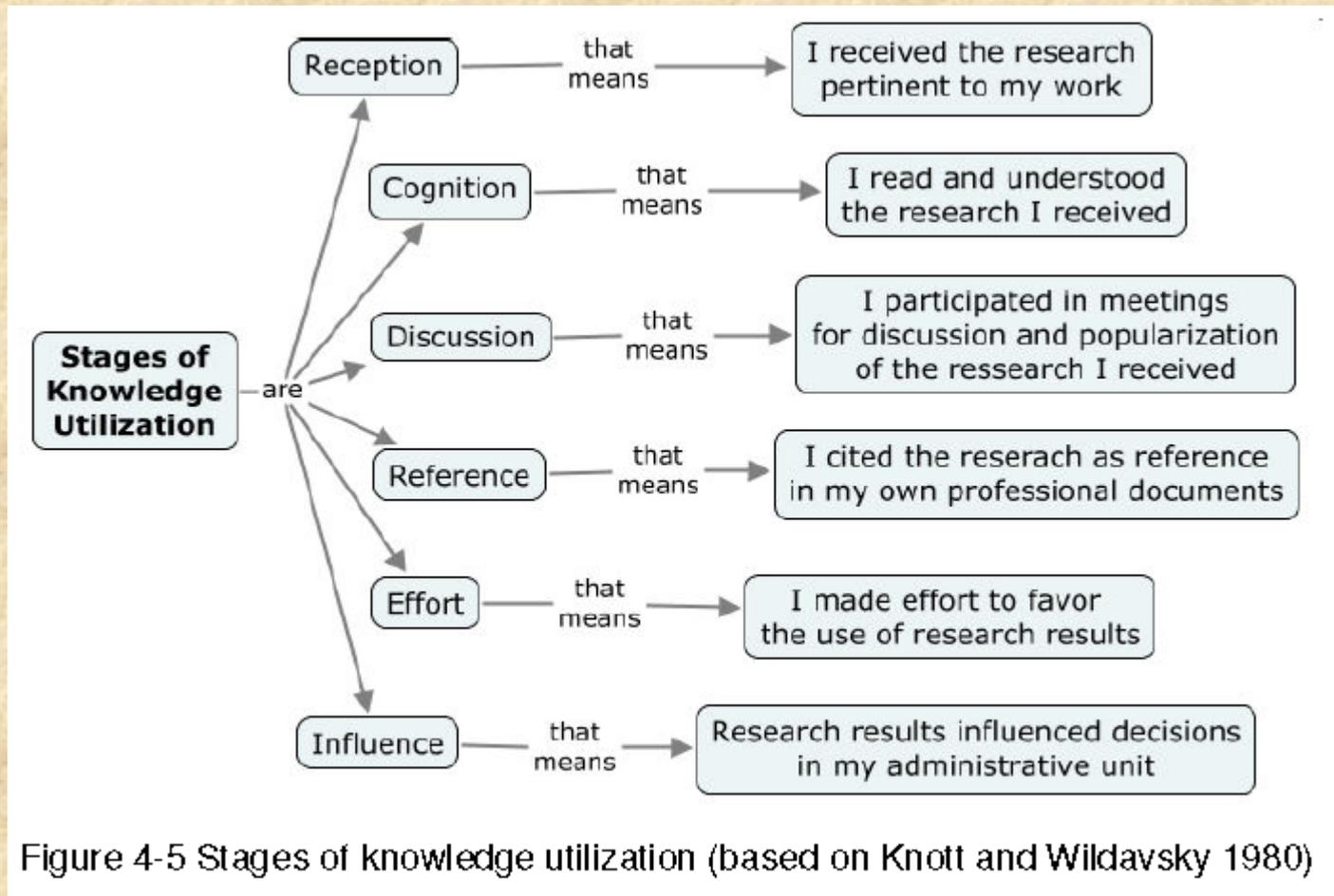
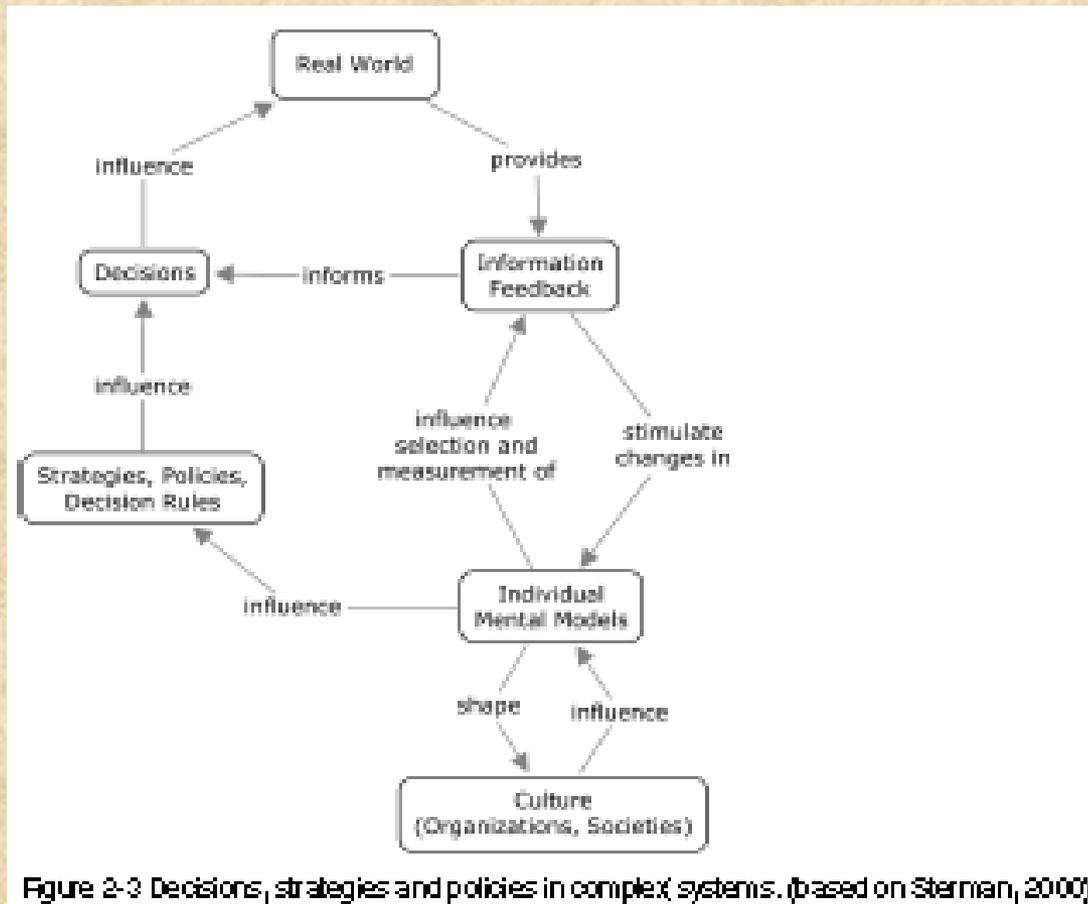


Figure 4-5 Stages of knowledge utilization (based on Knott and Wildavsky 1980)

- PSI-Connect Report (2010), p. 32.

***“It must be realised that science is needed both to help develop the policy and to evaluate the policy. Science is before and after; policy is the meat in the scientific sandwich”*** - Choi et al.. (2005), “Can scientists and policy makers work together?” *Journal of Epidemiology and Community Health*, 59, p. 634.

# Systems Approaches & Mental Models



- PSI-Connect Report (2010), p. 13.

Systems Approach increases our capacity to learn in complex systems by helping us see circular patterns of causation, a much more complex pattern than our default assumption that chains of causation are linear. By examining what structure created the problem of concern, we start to understand that our decisions create closed chains of causes and effects – feedbacks.....

- PSI-Connect Report (2010), p. 13.

# Framing policy processes 1

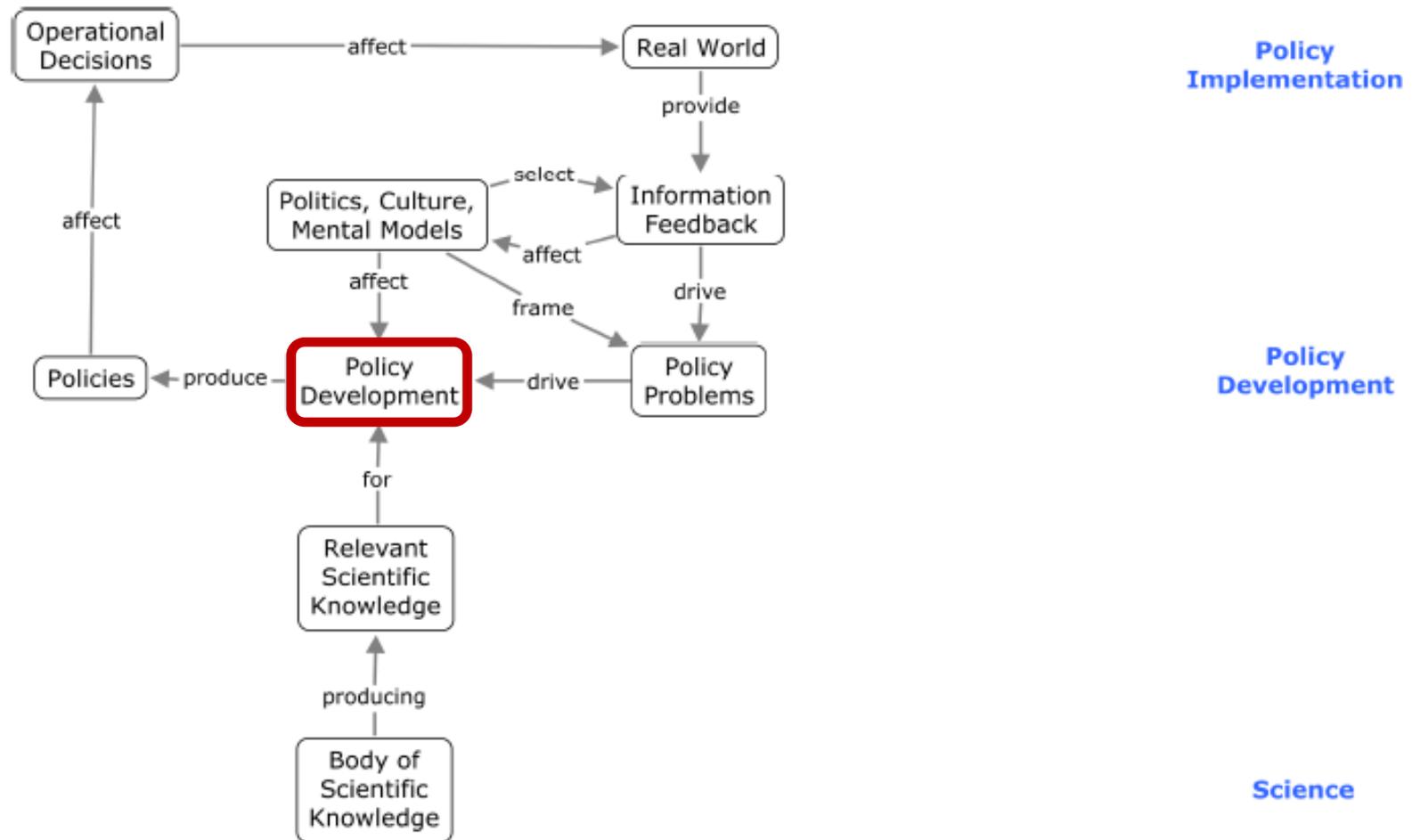


Figure 5-1 Policy processes

# Re-framing policy processes 2

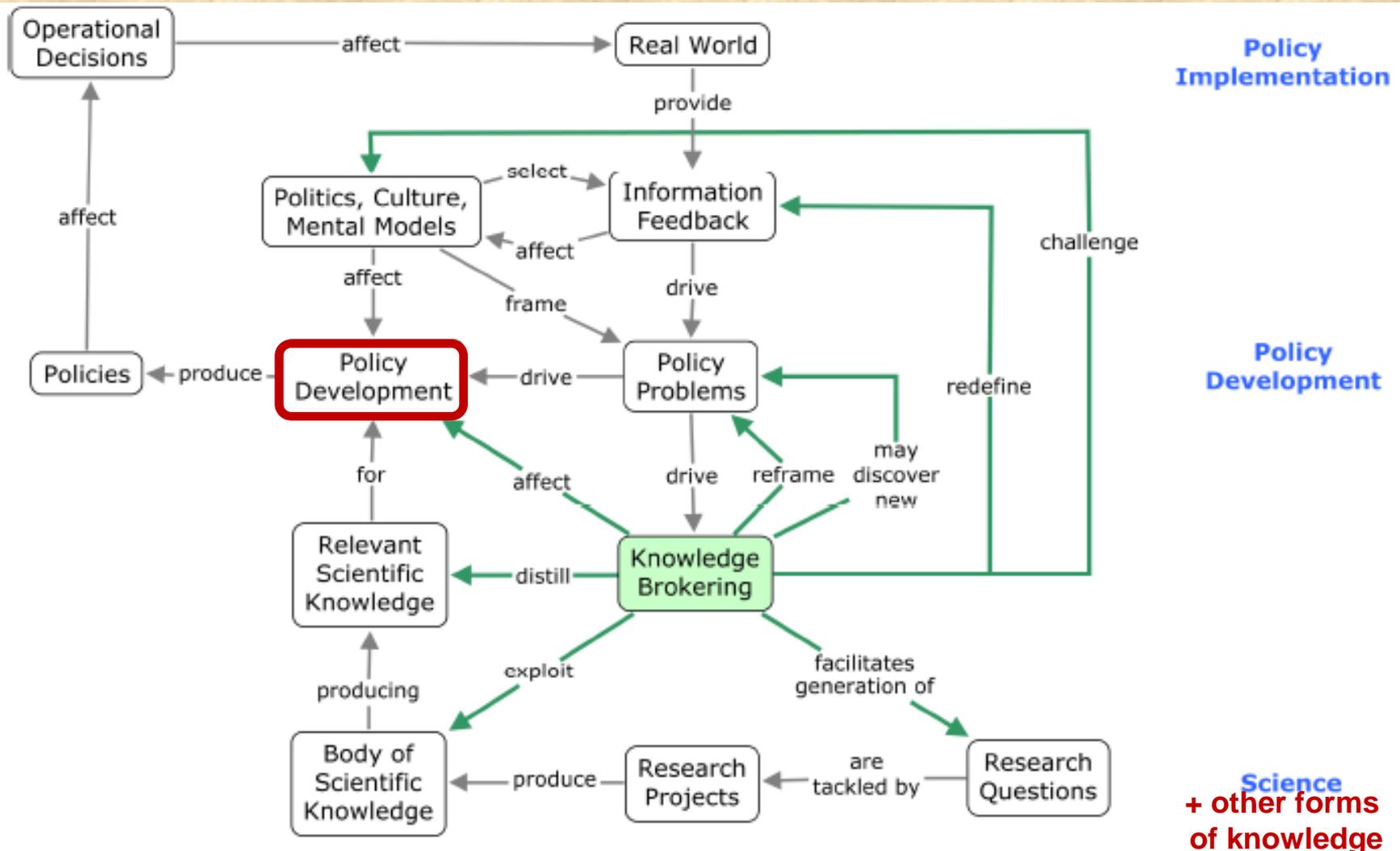


Figure 5-2 Conceptual framework for policy science interactions enhanced by knowledge brokering

# What is “knowledge brokering”?

- A **Knowledge broker** is an intermediary (an organization or a person), that aims to **develop relationships and networks** with, among, and between producers and users of knowledge by providing linkages, knowledge sources, and in some cases knowledge itself, (e.g. technical know-how, market insights, research evidence) to organizations in its network.
- While the exact role and function of knowledge brokers are conceptualized and operationalized differently in various sectors and settings, a key feature appears to be the **facilitation of knowledge exchange or sharing between and among various stakeholders**, including researchers, practitioners, & policy makers.

# Framing Barriers (and Bridges)

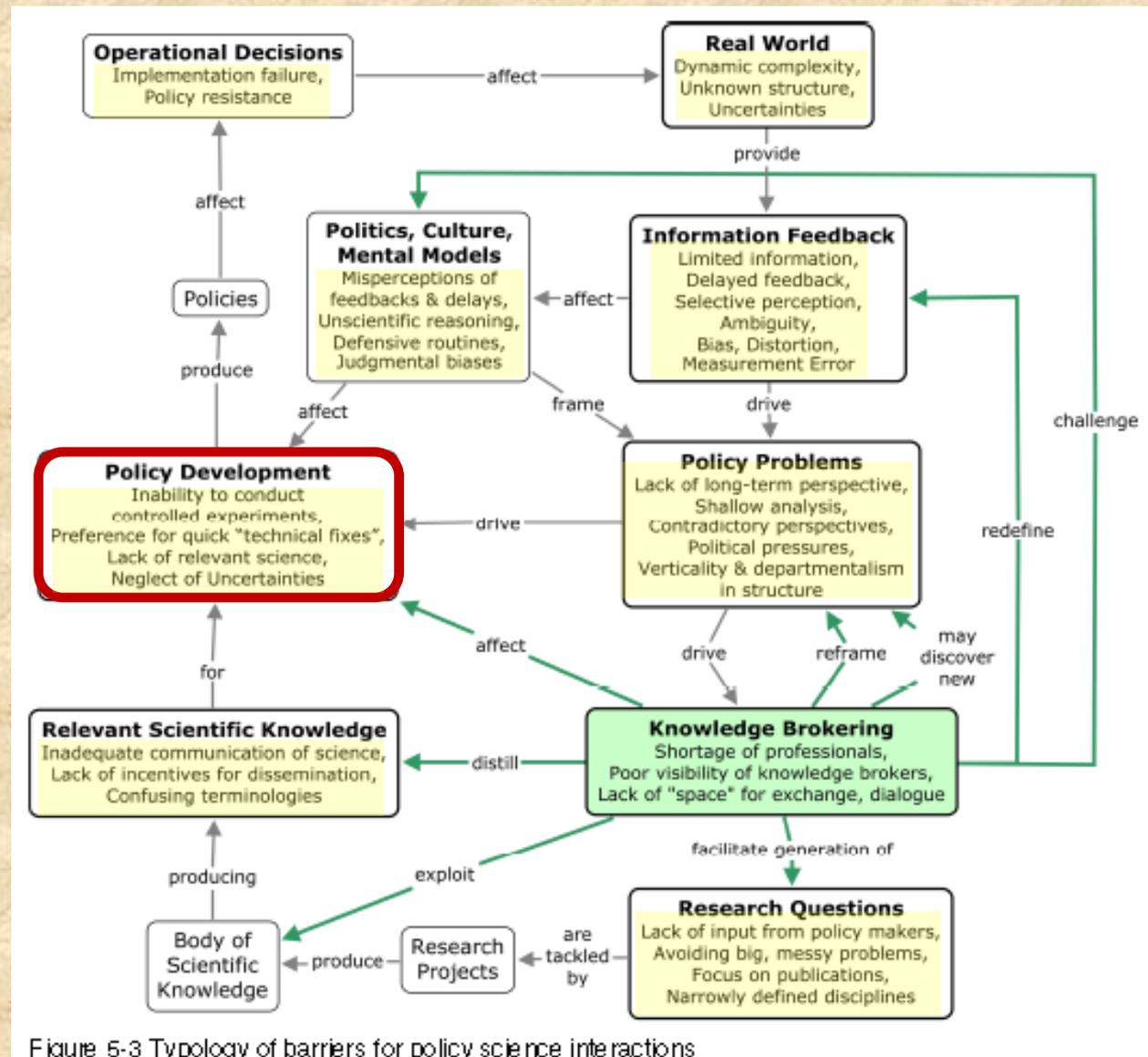


Figure 5-3 Typology of barriers for policy science interactions



# Barriers



1. Divergent *nature* of science and policy work
2. Lack of a neutral, safe *space*
3. *Performance* measurement systems
4. Horizontally-constrained *organizational structures*

...If the knowledge brokering activity is organised at the same moment as the window of opportunity is open, the activity can be successful....

- PSI-Connect Report (2010), p. 48.



# Bridges



## 1. Knowledge brokering

- Processes      Strategies      Techniques      Tools
- Individuals      Organizations

## 2. Systematic interactions (between “cultures”)

## 3. Intersectoral spaces (for policy)

## 4. Communities of practice

...The emergence of “bridging organizations” seems to lower the costs of collaboration and conflict resolution, and enabling legislation and governmental policies can support self-organization while framing creativity for adaptive co-management efforts. A resilient social-ecological system may make use of crisis as an opportunity to transform into a more desired state.

- Folke et al. (2005) Adaptive governance of social-ecological systems. *Annu. Rev. Environ. Resour*



# Conclusion

Emerging EcoHealth communities of practice are especially well positioned to stimulate a transformation of how social and political institutions are responding to challenges of equity and sustainability...

... but can benefit from closer attention to the science and art of policy and science-policy interaction.



# Guiding questions



1. Are policy/political/problem “window” opportunities being anticipated and addressed ?
2. Is progress being made to (accumulatively) strengthen capacities to address complexities?
3. Is communication linking researchers and policy makers well-established or ad hoc ?



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