How to strengthen the interface for sustainable development between science and policy communities?

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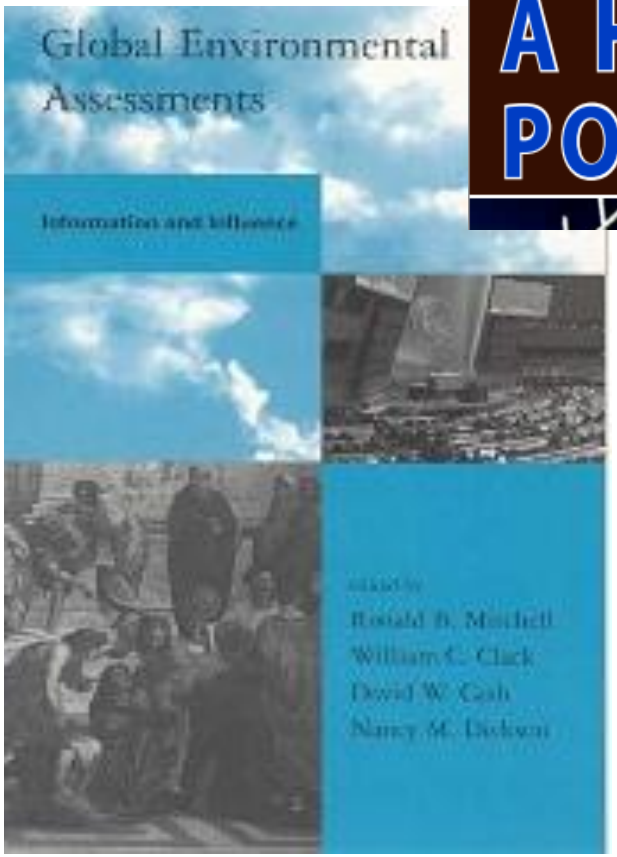
Goal

- compile indicators?
- authorize scientific knowledge?
- Respond to the SD challenge?



SCIENCE POLICY ASSESSMENT AND RESEARCH ON CLIMATE

Conducting research, education and outreach to improve the ability of climate science policies to support climate-related decision making

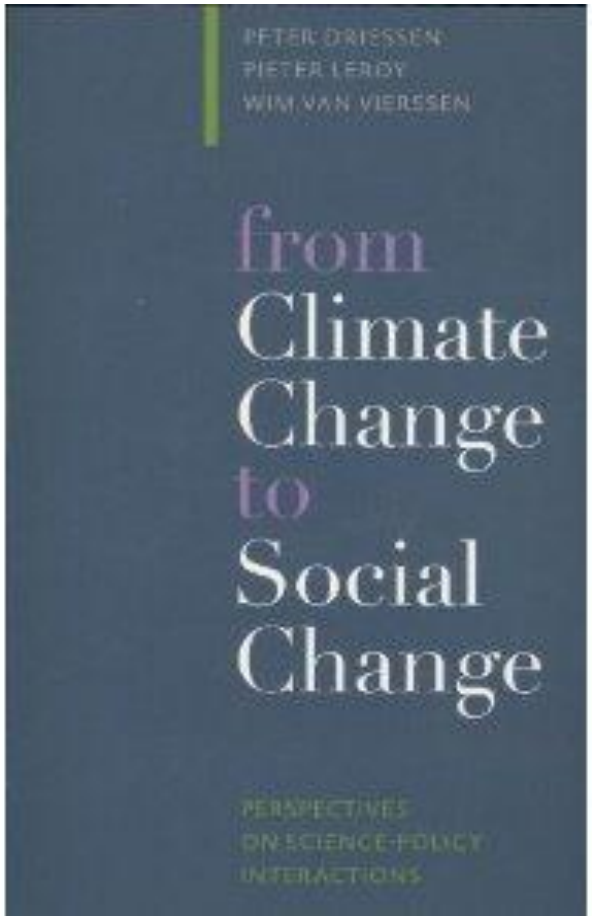
USABLE SCIENCE:
A HANDBOOK FOR SCIENCE POLICY DECISION MAKERS

User-inspired

research & assessments

Knowledge → Action

Earnest, information-seeking decision makers



- "For climate change to be able to lead to social change, there would have to be a drastic overhaul of science, of politics, and of the interactions between them…''

- "The interaction between science and politics is anything but a purely managerial question … " (pp. 168, 170)

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Current Opinion in Environmental Sustainability

Impacts, adaptation and vulnerability to global environmental change: challenges and pathways for an action-oriented research agenda for middle-income and low-income countries

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The socio-economic impacts of environmental stresses associated with global environmental change depend to a large extent on how societies organize themselves. Research on climate-related societal impacts, vulnerability and adaptation is currently underdeveloped, prompting international global environmental change research institutions to hold a series of meetings in 2009–2010. One of these aimed at identifying needs in middle-income and low-income countries (MLICs), and found that effective responses to the challenge of reducing vulnerability and enhancing adaptation will drive research and policy into challenging and innovative areas of research. Producing impacts, vulnerability and adaptation knowledge requires greater inclusion of MLIC researchers and a rethinking of the research structures, institutions and paradigms that have dominated global change research to date. Scientific literature discussed in this article suggests that governance issues need to become central objects of empirically based, detailed, multiscalar and action-oriented research, and that this needs to address the politically sensitive and seemingly intractable issue of reducing global inequities in power and resource distribution. The scientific literature suggests that without effective action in those directions, current trends toward greater inequality will continue to both reflect and intensify global environmental threats and their impacts.

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Introduction

It sounds like a paradox: 'catastrophic and irreversible damage to natural systems from climate change need not result in catastrophic and irreversible damage to humans... [even though] ...catastrophic and irreversible damage to humans can result even from modest changes in natural systems' ([1••], p. 89). The critical factor is how societies develop and organize themselves – whether they do so in ways that render them vulnerable or resilient to current and future environmental stresses caused by global climate change in interaction with other environmental, political and economic trends, both global and local [2].

Pathways toward effective strategies for enhancing societal resilience and adaptation[1] to environmental stresses in general, and climate change in particular, have received relatively little attention in research and policy thus far [4]. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC-AR4) [3] reflected an enhanced focus on climate-related societal impacts, adaptation and vulnerability (IAV).[2]

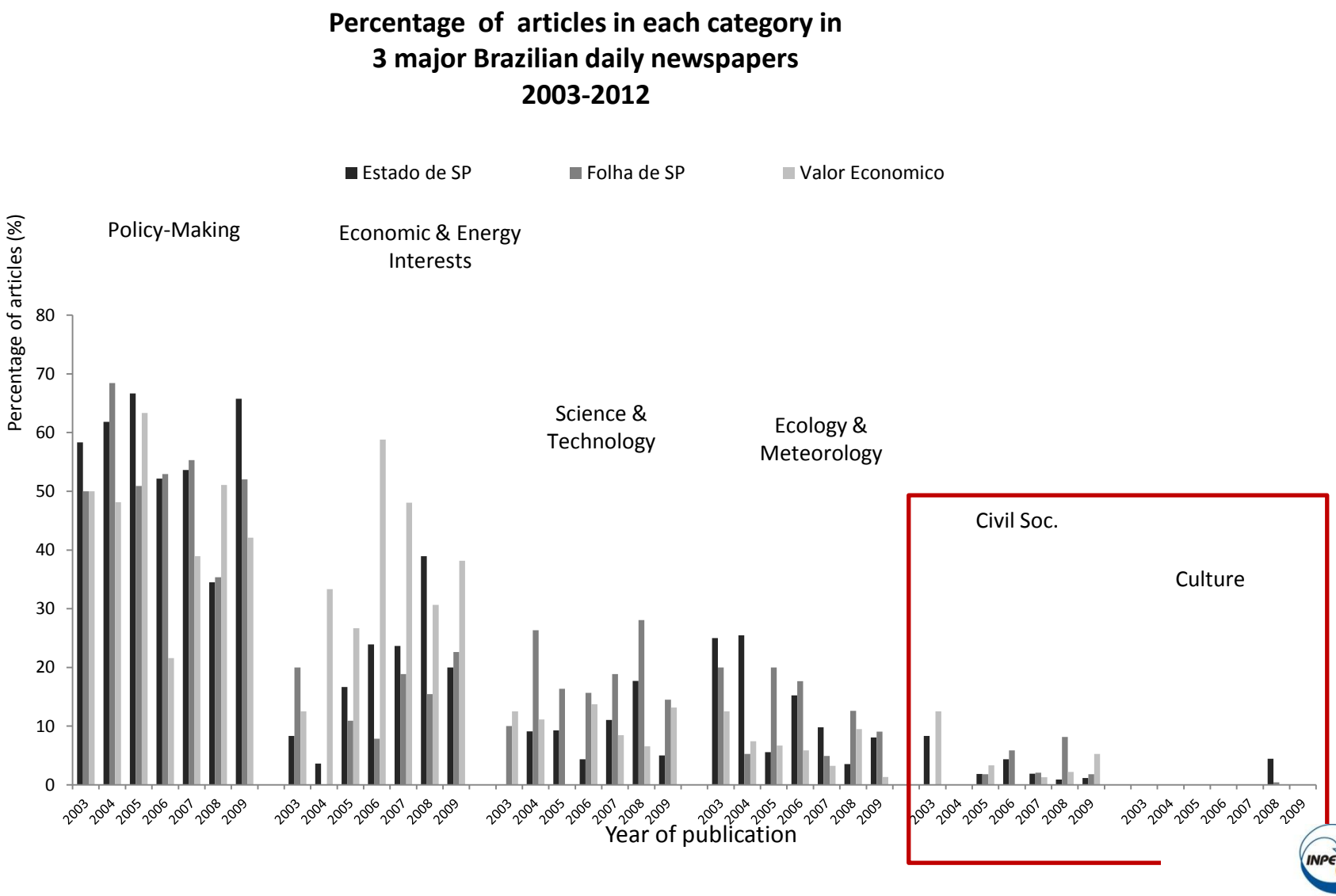
[1] Adaptation is the process of adjustment to experienced or anticipated negative climate-related impacts in order to reduce vulnerability to climate extremes [3]. It includes a wide range of activities, from direct adaptations such as dike construction to prevent inundation and relocation of plantation areas and populations away from vulnerable areas, to indirect adaptations associated with capacity building, institutional transformation and research.

[2] Direct impacts of climate change on geobiophysical dynamics have

Media Research under COMPON (www.compon.org)

- Scientific knowledge about national emissions sources versus problem framing/solutions in focus in climate discussions in Brazil
  - Raises questions about information structures, including the science-policy interface
  - Illustrates need for integrated (cross-sectorial) approach to policy for SD

FOCI OF BRAZILIAN NEWSPAPER ARTICLES THAT MENTION CLIMATE CHANGE, PER CATEGORY



ciência para sustentabilidade

Ministério da Ciência, Tecnologia e Inovação

GOVERNO FEDERAL BRASIL PAÍS RICO É PAÍS SEM POBREZA

Livestock sector:

Great ecolocial impact
Source of majority of Brazil's emissions: 50%+

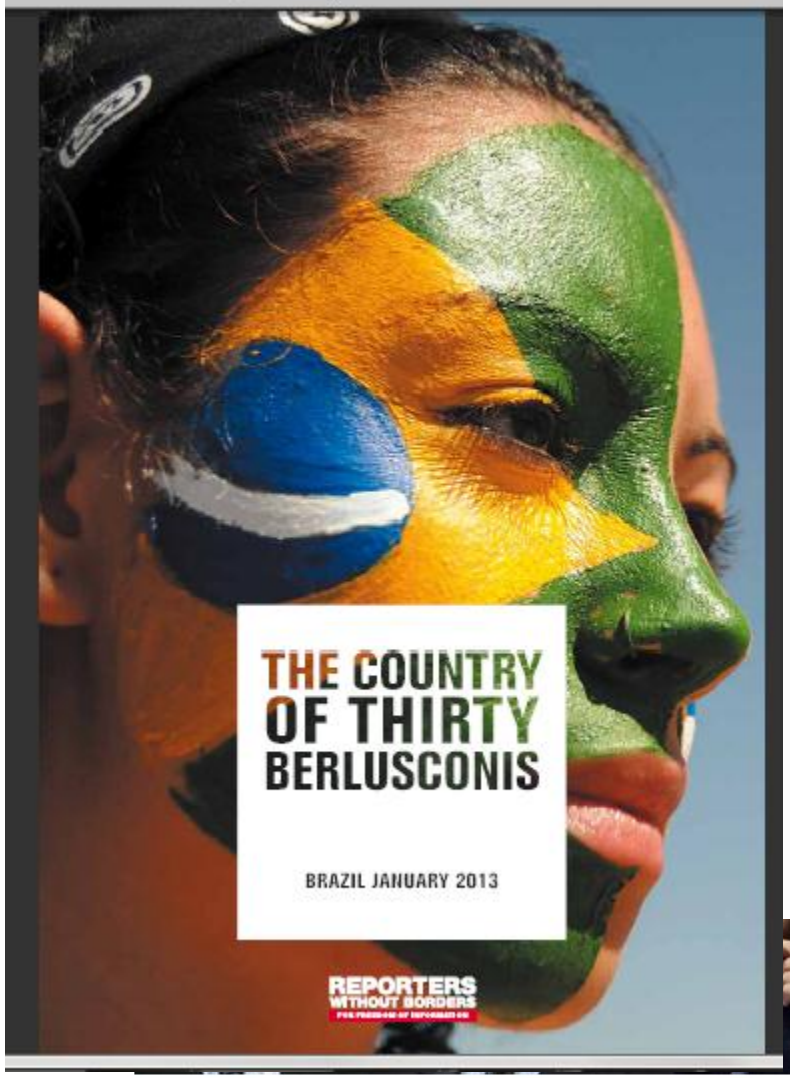
Energy sector: ~15%

NUMBER OF CC ARTICLES CRITICAL OF MEAT CONSUMPTION

	2007 **Folha SP**	2009 Valor Econ. ½ year only	2009 **Estado SP**	2012 **O Globo**
Mention CC	779	159	260	
Mention CC & meat	21 <3%	6 <4%		17
Critical of meat consumption	3	0	5 (1) *397 words*	5 (0) 228 words
Refuting meat-consumption *criticisms*	3	1	3 *1845 words*	0

Length of refutations of criticisms: **4.6 times greater**

“need to reduce deforestation”



Concentration of media ownership

"The media as a **mechanism of control** throughout Latin America, benefitting media owners and **political elites**"

Media bosses occupy
1 in 10 seats in the House of Representatives,
1 in 3 seats in the Senate

Agricultural lobby is the strongest force in government; **no transparency**

Television licensing used by politicians to serve their personal interests; **no public input nor transparency**

media owners

ADC Asociación por los Derechos Civiles

OPEN SOCIETY JUSTICE INITIATIVE

Repórteres sem Fronteiras publicam relatório intitulado "Brasil, o país dos 30 Berlusconi", em referência ao ex-primeiro-ministro italiano, dono de um império de comunicação na Itália. Segundo o documento, a "topografia midiática" brasileira pouco mudou desde o fim da ditadura. "O Brasil apresenta um nível de concentração de mídia que contrasta totalmente com o potencial de seu território e a extrema diversidade de sua sociedade civil", diz a ONG francesa

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engaging non-scientists as solution

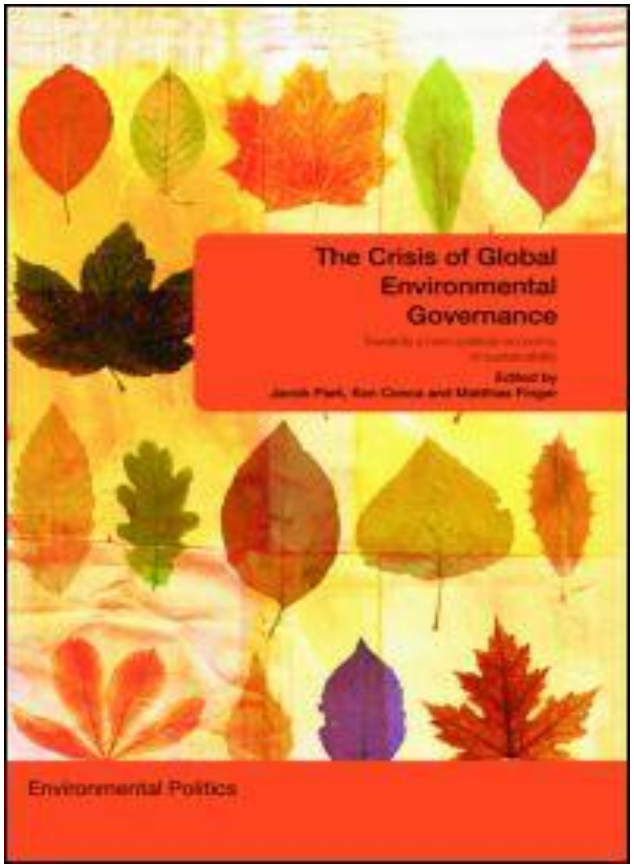
“participation”

“stakeholders”

Sirloin steak represents social upward mobility

Conclusion

- Responding to the SD challenge and improving the science-policy interface requires
  - questioning prevalent assumptions about the nature of the problem and how to proceed
  - Systemic, integrated approaches to science & policy
  - Technical knowledge exists and must be used, but crucial to identify and analyze assumptions, cultures, needs & constraints in science & policy communities



- “Approaching the world’s environmental challenges as a question of technical knowledge, to be filtered through existing institutional government arrangements, is very much part of the problem”

Future Earth – source of hope?