P13 / Comparative perspectives on energy and adaptation

Topic : POLICY DESIGN, POLICY ANALYSIS, EXPERTISE AND EVALUATION

Chair : Maya Jegen (Université du Québec à Montréal)

GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

This panel seeks to stimulate discussion on adaptation policy research by addressing and updating epistemological and methodological issues surrounding adaptation policy effectiveness. How do we know we are producing effective adaptation policy? What are the risks that adaptation initiatives produce promising policy outputs but which fail to translate into effective policy outcomes? Significantly, this panel is co-chaired by political scientists as well as climate science researchers at Ouranos, a consortium on regional climatology and adaptation based in Montreal, who are particularly interested in bringing together research addressing adaptation policy from a science-policy nexus perspective.

The issue of adaptation policy effectiveness looms large. Despite rising on the climate change political agenda, adaptation policy research continues to struggle with what adaptation is, how it can be measured and hence insights into how adaptation can be scaled-up—referred to as the “dependent variable problem” (Dupuis and Biesbroek, 2013; Howlett and Cashore, 2009; Purdon and Thornton, In Press). While the adaptation literature has developed important analytical tools for understanding different facets of adaptation—including concepts such as sensitivity, adaptive capacity/resilience and vulnerability (Burton et al., 2002; Holling, 1973; Keim, 2008)—daunting questions emerge about what this means in practical terms of preparing for future climate change. Without improving our understanding about constitutes adaptation, it is difficult to differentiate effective adaptation initiatives from those that are maladaptation or merely greenwashing (Ayers and Dodman, 2010).

Almost ten years ago, Dessai et al. (2009) argued, however, that an exclusive focus on climate modeling was flawed and urged a focus on developing adaptation policy in the face of deep uncertainty and a lack of predictive power. Arguably, the current consensus is that a focus on policy outputs is a more promising research strategy than a focus on policy outcomes (Bernstein and Cashore, 2012; Biesbroek et al., 2018). For example, in a widely used definition, adaptation is described as “[t]he process leading to the production of outputs in forms of activities and decisions taken by purposeful public and private actors at different administrative levels and in different sectors, which deals intentionally with climate change impacts, and *whose outcomes attempt to substantially impact* actor groups, sectors, or geographical areas that are vulnerable to climate change” (Dupuis and Biesbroek, 2013: 1480, emphasis added).

Yet sophisticated climate science modeling efforts at various scales might be expected to inform the allocation of resources and planning for adaptation, especially as modeling capacity improves (Hertel and Lobell, 2014; Kahil et al., 2015). Research organizations such as Ouranos as well as CGIAR have pioneered such research in adaptation and food security (Hannart and Naveau, 2018; Mapfumo et al., 2017; Nelson et al., 2009; Thornton et al., 2018). New organizational forms such as “boundary organizations” also attempt to bring together scientists and policy-makers in order to improve the exchange of information, policy learning and decision-making processes (Lemos et al., 2014; O'Mahony and Bechky, 2008). What impact might recent developments in public policy, organizational management and climate science have for the prospect of crafting more effective adaptation policy?

CALL FOR PAPERS

We cordially invite papers for an ICPP4 panel entitled **Climate Change Adaptation Policy and Climate Science: Re-examining Policy Outputs, Policy Outcomes and Policy Effectiveness.** This panel seeks to stimulate discussion on adaptation policy research by addressing and updating epistemological and methodological issues surrounding adaptation policy effectiveness. How do we know we are producing effective adaptation policy? What are the risks that adaptation initiatives produce promising policy outputs but which fail to translate into effective policy outcomes? What impact might recent developments in public policy, organizational management and climate science have for the prospect of crafting more effective adaptation policy?

Despite rising increasingly higher in the climate change political agenda, adaptation policy research continues to struggle with what adaptation is, how it can be measured and hence insights into how

adaptation can be scaled-up —referred to as the “dependent variable problem” in the policy studies literature. Yet sophisticated climate science modeling efforts at various scales might be expected to inform the allocation of resources and planning for adaptation, especially as modeling capacity improves. Research organizations such as Ouranos as well as CGIAR have pioneered such research in adaptation and food security. New organizational forms such as “boundary organizations” also attempt to bring together scientists and policy-makers in order to improve the exchange of information, policy learning and decision-making processes.

We invite scholars working on issues of climate science, adaptation and public policy from theoretical, empirical or normative perspectives to submit an abstract. Policy practitioners from international organisations, national and subnational governments as well as non-state actors are also encouraged to share their experiences. Special emphasis will also be paid to comparative approaches as well as research and researchers coming from developing countries, where climate adaptation needs are arguably most urgent.

Significantly, this panel is co-chaired by political scientists as well as climate science researchers at Ouranos, a consortium on regional climatology and adaptation based in Montreal, who are particularly interested in bringing together research addressing adaptation policy from a science-policy nexus perspective.

Panel Co-Chairs

- Mark Purdon (Professor, Département de stratégie, responsabilité sociale et environnementale, École des sciences de la gestion, Université du Québec à Montréal)
- Maya Jegen (Professor, Département de science politique, Université du Québec à Montréal)
- Caroline Larrivée (Scientific Program Director and Team Leader Vulnerabilities, Impacts and Adaptation Group at Ouranos)

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Chair : Maya Jegen (Université du Québec à Montréal)

Session 1

Wednesday, June 26th 14:00 to 16:00 (MB 2.265)

Regional Energy Cooperation: An Comparative Analysis of Regional Power Pools in Scandinavia, Southern Africa, and West Africa

Maxfield Peterson (Political Science)

In an effort to expand energy access to rural regions of African states, governments, international organizations, private firms, and state-owned enterprises have cooperated to develop regional power pools (RPPs). RPPs are regional energy markets designed to allow states to buy and sell surplus electricity across international borders, theoretically reducing generation costs and smoothing supply-side conditions, especially those associated with renewable energy sources (wind, solar, hydro) that may be seasonally dependent. This work evaluates the comparative success and failure of three major RPPs: The Nordic Electricity System (Nordel), the Southern African Power Pool, and the West African Power Pool. This analysis employs Ostrom's theoretical political economy framework of Common-Pool resource management to derive conclusions about why some RPPs succeed and others fail. It is argued that 1) failure to efficiently share information about supply and demand forecasts prior to the formation of institutional commitments leads to both inefficient construction of transmission infrastructure and a lack of credible commitments on the part of participants, 2) institutional supply is a necessary but not sufficient condition for successful RPP construction, and 3) consistent with Ostrom's original argument, malaligned discount rates on future energy yields prohibits the establishment of an effective institution for common-pool resource management.

Note to Panel Reviewers:

This paper speaks directly to the panel's thematic focus on expanding modern energy access to the most impoverished residents of the developing world. While regional power pools are not exclusively for renewable forms of energy, they are a uniquely relevant solution to the challenges renewables face in meeting baseload demand due to seasonal supply shifts. The paper is consistent with the panel's emphasis on cross-country policy analysis in its focus on the domestic challenges of international policy coordination. Finally,the paper embraces the panel's emphasis on the role of political economy in energy policy by applying Ostrom's classic framework of common-pool resource management.

The Energy Policy Evolution of Green Industry in Taiwan and the Perspectives of the Investments in Renewable Energy in Overseas Markets

Shih-Chieh Huang

The development of green industry not only drives the growth of the green economy but also plays an essential role in a country's energy transition. In May 2016, Taiwanese government launched energy transition officially while the Taiwan green industry starts a new chapter for developing and constructing new technology innovation. However, the current challenge Taiwanese government meets is to formulate policy for strengthening the advance development of green industry and also toward investing in the overseas market. By reviewing the historical energy policies and analyzing the development of international renewable energy market and the sharing of distributions of export market, this paper will propose development strategies for green industry in Taiwan. This paper is significant for scholars who study comparative energy policy because it provides how a national government formulates energy policy in order to response to climate change. It is also relevant for policymakers and bureaucratic representatives and politicians, since it sheds light on the steps the national government should take in order to meet its renewable energy targets and complete its energy transition.

Community Adaptation Efforts After Extreme Weather Events

Leanne Giordono (Oregon State University)

Boudet Hilary

The scientific community largely concurs that a link exists between the increasing frequency and intensity of extreme weather events and climate change, although attribution of a single hazard event or specific losses to climate change is not possible. Scholars also contend that extreme weather events may provide the best opportunity for changing public attitudes, and perhaps behavior, toward climate change. This study is driven by the following main research questions: (1) what factors prompt and shape awareness? (2) under what conditions do communities undertake policy change in response to extreme weather events? This study analyzes 15 cases of extreme weather events experienced in the United States between 2012 and 2015, using fuzzy set/Qualitative Comparative Analysis (fs/QCA) to identify conditions that lead to changes in awareness and policy. We rely on theoretical contributions from research on social movements and collective action to explore what motivates people to take action or to stand on the sidelines. Preliminary results suggest that extreme weather events tend not to lead to social movement activity, but that community awareness and adaptive policy change occurs under selected conditions related to the nature of the event, recovery process and community characteristics. Our work fills an important gap in the literature on climate change engagement by illuminating contextual factors and mechanisms that either facilitate, or impede, climate-related action in the wake of an extreme weather event. We expect that our presentation will spark dialogue about the conditions that yield community-based policy changes, as well as discussion about measurement of climate change awareness and changes to adaptation policy.

MESO-LEVEL ANALYSIS ON RICE-FARMERS' ADAPTATION MEASURES FOR SLOW ONSET HAZARD: THE CASE OF SALTWATER INTRUSION IN THE PHILIPPINES AND VIETNAM

Catherine Roween Almaden (Asian Institute of Management)

CRC ALMADEN 1, T.T. DIEP2, AC ROLA 3, RDT BACONGUIS 3,
JM PULHIN 3, JV CAMACHO, JR. 3, RC ANCOG 3

1 Economics Department, Xavier University-Ateneo de Cagayan, Philippines
2 Tra Vinh University, Vietnam
3 University of the Philippines Los Baños, Philippines

This study examined the factors influencing rural rice-farmers’ choice of adaptation measures for slow-onset hazard brought about by saltwater intrusion in selected rice-farm communities in the Philippines and Vietnam. Specifically, this study determined the influence of social, economic and institutional factors as well as farmers’ perception and level of awareness on climate related events on the choice of adaptation measures to address saltwater intrusion. The study classified adaptation measures into specific categories and developed a multi-criteria assessment tool on adaptation measures. This led to the development of a measure-based adaptation index (MAI) which addressed a number of shortcomings of previous studies and captured the variation in adaptation measures implemented by the rice farmers in terms of the number of adaptation measures implemented by the rice-farmers, feasibility of implementing the measures and the extent to which they are applied. Econometric approach was applied to determine the factors influencing rice-farmers’ choice of adaptation measures. The results indicated that adaptation takes place at different levels based on the propensity to adapt, the variety and diversity of adoption of various measures, and the feasibility of the various measures. The results also underscored that socio-economic and institutional factors significantly influence rice-farmers’ choice of adaptation measures to saltwater intrusion. The study is suggestive of important innovative interventions and policy implications crucial in the optimization of the current adaptation measures employed and the potential adoption of new measures.