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Transitioning towards adaptive water management

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Introduction

Growing awareness of the complexities and uncertainties in the field of water management has generated critical consideration about existing water management paradigms. Instead of "traditional" management practices aiming for optimal use and control of resources, scholars of the adaptive (co-)management literature have promoted more flexible and so-called adaptive strategies as to allow the system to react to stress, and its managers to respond to changing conditions (Walters and Holling 1990, Johnson 1999). It has been suggested, *inter alia*, that adaptability in water management is enhanced by an emphasis on "soft solutions" such as flood retention areas, and decentralized and open decision-making systems (Gleick 2003, Pahl-Wostl et al. 2006). Central element of such a management system is the capability to adapt to and direct change. This paper focuses on the micro-level of policy-making and on individual change agents; the so-called "policy entrepreneurs". Building on the work of Kingdon (1984) and Mintrom (2000), we define policy entrepreneurs (PEs) as risk-taking bureaucrats that seek to change policy. PEs are involved throughout the policy change process and are, much as in the case of business entrepreneurs, on the alert for opportunities; they see chances to connect policy proposals (solutions) to problems and participants (to political momentum). Throughout the past decade, PEs have received more and more attention and have become increasingly recognized as important political actors (see, e.g. Schiller 1995, Schneider et al. 1995, Mintrom 2000). Yet, apart from Roberts and King (1991) and Huitema and Meijerink (2009), none of these studies systematically specify the actions that PEs take to facilitate policy changes. In this paper our aim is to conceptualize the actions of PEs. We believe this knowledge can deepen our understanding of the way in which transitions towards adaptive water management, and more generally, policy change can be directed.

Research design

The case study informing our analysis on the actions of PEs is the water management system in The Netherlands, known for its long experience in local and regional water governance, and its rich and diverse institutional context in water governance. Given the new needs to anticipate on climate change effects, in combination with the continuous subsidence of soil and the spatial claims, the nature of problems facing Dutch water managers has become increasingly complex. As can be witnessed in many countries, Dutch water projects require not only technical solutions (e.g. raising dikes) but also spatial solutions, such as reserving land for floodplains. As a consequence, rather than working alone, as they did in the past, water managers now often need resources and support from a wide range of organizations, policy programs, and policy domains (Van der Brugge et al. 2005). In brief, the situation in the Netherlands requires many policy changes in a complex governance structure, making it a particularly interesting country for the study of the role and actions of PEs.

To develop systematic ideas on the actions of Dutch water management PEs at local level, we conducted both a theoretical and an empirical study consisting of 25 in-depth interviews, one focus group, and an extensive mail survey (response rate 70.5%). The interviewed PEs in Dutch water management were selected by stratified sampling. The survey included all 339 PEs at Dutch local governmental bodies concerned with water governance (census). To identify all these Dutch water management PEs, we contacted key informants in all 491 Dutch local governmental bodies working with water (response rate 95.3%). In a uniform and consistent manner all key informants were asked whether or not they could - in their own organization - identify one or more "individuals holding bureaucratic positions, known for their innovative ideas and their drive to change water policy; individuals characterized by their ability to think creatively and their willingness to take risks".

Entrepreneurial strategies

Analyzing the combined results of the theoretical study on the micro-level of policy-making along with the results of the interviews, focus group and survey, we inductively established that in their efforts to direct policy change, PEs use essentially four broad types of strategies: (1) attention and support-seeking strategies; (2) linkage strategies; (3) relational management strategies; and (4) arena strategies. Each of these comprises of two or more sub- strategies.

Attention and support-seeking strategies

The ultimate goal of a policy entrepreneur is to achieve policy change. To realize this change, we found in the first place that PEs use several strategies to demonstrate the significance of a problem and to "sell"

their preferred policy to a wide range of participants. Important strategies to draw attention to new ideas are the use of small-scale pilot projects (Huitema and Meijerink 2009) as well as indicators (Kingdon 1984). However, the most important criterion for a new idea to be considered is the availability of a problem (Cohen et al. 1976, Kingdon 1984). Actors with a new idea will thus always try to present their idea as a solution; the corresponding strategy we refer to as correlating. This implies that part of the effort to gain attention and support for a new idea entails demonstrating the magnitude of a problem. To this end, PEs use indicators and highlight focusing events (Birkland 1988). These theoretical notions are supported by our in-depth empirical study of policy entrepreneurs in Dutch water management: the use of indicators and actual working examples (pilots) is clearly prevalent: respectively 70.8% and 75.7% of the PEs perceive these strategies as very or extremely important. The perceived importance of focusing events to demonstrate the magnitude of a problem is remarkably low: only 19% feels it is very or extremely important, whereas 25.1% perceives this activity not important at all. Correlating, on the other hand, is considered the most important means to get support; we found that 83.5% of the PEs in Dutch water management feel it is very or extremely important to present their ideas as solutions. Finally, all PEs argue that it is the *framing* of data or a crisis that can transform conditions into problems; in fact 61% of the PEs consider rhetoric persuasion crucial. By using rhetoric persuasion, PEs do not try to get preferred policy innovations to be adopted by changing the alternatives, but try to change preferences through arguing within existing dimensions of current policy discussions (Birkland 1988). Our interviews also were rich with examples showing that PEs frequently use rhetoric persuasion. For example, one policy entrepreneur explained: "When I aim to acquire a European subsidy, I emphasize the social, economic, and ecological problems in the area. But when I try to acquire a provincial subsidy for the very same project, I tell them how the project complements their program."

Linking strategies

An important conclusion is that PEs are mostly unable to accomplish their objectives alone. Often, various individuals, groups, and organizations are involved in a specific policy issue and/or the necessary resources to accomplish change are divided over different actors. For this reason, PEs frequently seek collaboration and link with individuals and groups in coalitions. This study has demonstrated that most PEs are positive about broad coalitions: 65.5% of the PEs stated to feel that the advantages of broad coalitions outweigh the disadvantages; *vice-versa* only 4.4%. As the composition of a coalition will make certain outcomes more probable than others, PEs are very likely to apply the so-called selective activation strategy, that is, "assess which actors are essential at given moments in a policy process, whether and how to involve them" (Pahl-Wostl et al. 2006: 26). This can also imply exclusion. Our empirical study revealed that PEs in Dutch water management not only reflect deeply about *which* parties *when* to

involve, but also on the total number of participants in a coalition. Yet, the data suggest that PEs, in fear of relational damage, generally try to avoid explicit exclusion. Issue-linkage, instead, is a very popular linking strategy. This strategy entails the linking of two or more issues, both the addition of dimensions to a problem, as well as the combination of solutions with other solutions, for substantive and/or strategic reasons (Huitema and Meijerink 2009). The importance of issue-linkage is supported by evidence from our study: 92.7% of the PEs consider issue-linkage an important key for success. In addition, we found that PEs in Dutch water management to a lesser extent also link policy games, that is to say, the linking two or more parallel or future policy games for strategic reasons: 68% perceives game linking as very important.

Relational management strategies

More than any other strategy, PEs emphasized the importance of relational management strategies. This explains why PEs make substantial efforts to network and to build relationships of trust. Trust building is by almost all PEs perceived as the most important relational management strategy: 91.8% feels this strategy is very or extremely important. This study also demonstrated that PEs generally spend much time networking. Networking matters because they help PEs to discover opportunities to build coalitions, gather reliable information in a relatively easy and efficient manner, and because it enables the entrepreneur to understand the preferences and worries of other participants (Kingdon 1984, Mintrom 2000, Williams 2002). Entrepreneurs emphasized that relational management is by no means solely an external concern. In fact, the present study revealed that PEs feel the game within their organization (support of the internal political board and bureaucratic organization) is as crucial as the external game. Networking with the 'home' organization, for example, is perceived more important compared to networking with any external actor.

Arena Strategies

Except for attention and support-seeking strategies, linking strategies and relational management strategies, PEs play strategically with the policy arena, i.e. the locus in which their policy game is placed and wherein problem definitions and policy ideas are turned into policy decisions (Timmermans and Bleiklie 1999). There are two different arena strategies: one focusing on time, one on place. In a variety of ways, time plays an important role in policy-making. In the first place, PEs should be alert to, and anticipate for, the right moments (Kingdon 1984). In addition, the PEs involved in this study regularly underlined the importance of the order and timing of the above-mentioned strategies: 78.2% feels, for example, that the timing of the launch of ideas influences the degree of support and resistance. A second

arena strategy is venue shopping, associated with the choice between the various possible places where one can effect change (Baumgartner and Jones 1991). Apart from subsidy acquisitions, we found that PEs experience little freedom in the choice of possible places where they can effect change: consequently no more than 67% feels it is an important strategy which enhances their chances for policy change.

Conclusion

By focusing on the micro-level of policy-making, we found that in their efforts to direct policy change, PEs always use a combination of attention and support-seeking strategies, linkage strategies, relational management strategies, and arena strategies (see Table 1).

Attention and Support-seeking Strategies	Linking Strategies	Relational Management Strategies	Arena Strategies
• Pilot projects • Indicators • Focusing events • Correlating • Rhetoric persuasion	• Coalition building • Selective activation and exclusion • Issue-linkage • Game linking	• Developing trust • Networking	• Timing • Venue shopping

Table 1: Strategies of PEs

Given the range of strategies that PEs use, one may ask whether the conclusion would be justified that this steering and coupling is straightforward and unproblematic. Our finding that the use of all entrepreneurial strategies involves strategic dilemmas *alone* suggests that this is certainly not the case. Yet, more research on the effectiveness and appropriateness of distinct entrepreneurial strategies is required. The next step in our research is to analyze *when* strategies have *what* effect. In addition, we believe that to understand to what extent the context in which this research was conducted might have influenced our results, future research needs to draw on an extended research design that includes international comparisons. Finally, future research is needed on how policy entrepreneurship can be facilitated and stimulated within governmental organizations. We believe that the role of PEs in directing change will become more and more important and offers great promise for making significant contributions to adaptability.

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