

# **Cross-sectoral Forums in a Polycentric Governance Systems: Why are they Important to Actors?**

Manuel Fischer, Simon Maag

*Paper prepared for the panel “Complex Governance Systems and the Ecology of Games”,  
XVI Biennial IASC Conference (Utrecht, 10-14 July 2017)*

--- Very first draft, please do not cite nor circulate ---

## **Abstract**

Within an ecology of games in a polycentric governance system, actors have to decide in which venue to invest their limited resources. Cross-sectoral forums, which include government actors, scientific institutions and interest groups, are one type of venue within such a governance system. The analysis explains why actors lend importance to cross-sectoral forums as compared to other venues and channels in the governance system. Survey data from eight cross-sectoral forums and 132 members shows that actor type, the expected type of forum output, the role actors play within a cross-sectoral forum, as well as their perception of forum functioning all play a role. Cross-sectoral forums are particularly important to federal state actors, small actors, actors which look for knowing others actor' positions and viewpoints, and actors which feel that they can contribute to compromises.

## **Introduction**

Within complex, polycentric governance systems, cross-sectoral forums are one specific type of venue where actors can play their games (Berardo and Lubell 2016). Cross-sectoral forums give rise to repeated, organized interaction among different types of actors from public administration, interest groups, or science, and thereby establish cross-sector coordination (Fischer and Leifeld 2015). This again is crucial for successfully governing environmental issues and common-pool resource problems.

The ecology of games framework (Berardo et al. 2013; Lubell 2013) is based on the fundamental assumption of polycentric governance that many different venues and forums co-exist in parallel, and that actors need to make strategic decisions to allocate their scarce resources and time. This paper contributes to the question of why actors prefer some venues within the ecology of games over others, and asks why cross-sectoral forums are important to actors, as compared to other forums, venues, and channels in the entire polycentric governance system.

Four sets of factors are taken into account in order to explain the importance of cross-sectoral forums to actors. First, the role of actors in the overall governance system is expected to affect opportunity costs of participation in cross-sectoral forums. Second, the outputs actors expect from participation in cross-sectoral forums are important to understand the importance they lend to these forums. Third, the role actors play within these forums is taken into account. Fourth, the perception of the functioning of cross-sectoral forums affects the transaction costs of actors active within a cross-sectoral forum. The empirical analysis is based on data from a survey among participants (about 130 actors) of eight cross-sectoral forums (about 10-30 actors per forum) from the field of Swiss habitat and land use policy and relies on descriptive statistics and logistic regression models.

Analyzing this question is important for at least two reasons. First, given the largely voluntary nature of participation, it is critical to understand why actors participate in specific types of

forums within polycentric governance systems (Ansell and Gash 2008). In other words, if cross-sectoral forums should reach their full potential of successfully creating coordination among different societal sectors, we need to know how to design them in order to make them attractive for the “right” stakeholders. Understanding the factors which influence why actors consider cross-sectoral forums as important is one key aspect of knowing why they participate, or not, in forums. Second, beyond mere participation, the success of forums further depends on the commitment of its participants, that is, their willingness to contribute resources and to constructively engage into discussions and negotiations. This willingness in turn depends – at least partially – on the importance actors attribute to forums as opposed to other venues in polycentric governance systems.

The remainder of this article is structured as follows. The basic ideas of polycentric governance systems and the ecology of games framework are presented in the first theoretical part, before cross-sectoral forums are introduced as specific types of forums within a polycentric governance system. The four sets of factors influencing the importance that actors lend to these cross-sectoral forums are then discussed, and respective hypotheses are presented. Next, the data, variables and methods are described. The subsequent analysis part is followed by a discussion and some more general conclusions on the knowledge gained on cross-sectoral forums and the ecology of games.

## **Theory**

### ***Polycentric governance and the ecology of games***

In modern collaborative and polycentric governance systems (Emerson et al. 2012; Ansell and Gash 2008; Ostrom 2010), many different types of actors simultaneously interact, negotiate, compete over issues and take interrelated decisions in many different venues, within different jurisdictions and at different levels (Ostrom 2010; Lubell 2013). Decisions are taken across a

range of formal and informal institutions that constitute the overall governance system (Lubell et al. 2016; Ostrom 2010).

The ecology of games approach (Berardo and Lubell 2016; Lubell 2013; Lubell et al. 2014), just as the polycentric governance framework, assumes that actors are active in different forums, venues or “games”, where they interact with other actors, advance their opinions and views, discuss agendas, and negotiate solutions. Each venue within a polycentric governance system provides an opportunity for different actors to interact and make collective decisions (Lubell 2013). The ecology of games approach aims at understanding actors’ strategies, goals and trade-offs when choosing between venues or forums within the polycentric governance system.

### *Cross-sectoral forums as specific types of venues*

There are important differences between the many available venues and forums in a polycentric governance system. Actors might rely on these different venues in order to foster research, monitor and negotiate the implementation of rules (Mcginnis 2011), influence or veto policy decisions (Lubell 2013), giving visibility to their own policy positions, set the future issue agenda, learn on an issue, or simply to network and get in touch with other actors (Fischer and Leifeld 2015).

Cross-sectoral forums are one specific type of venue in an ecology of games (Lubell 2013; Berardo and Lubell 2016). Cross-sectoral forums give rise to repeated, organized interaction among actors from different societal sectors such as public administration, interest groups, or science, and thereby contribute to cross-sector coordination (Fischer and Leifeld 2015). However, cross-sector interactions are normally complicated by the fact that different societal sectors such as public administration, the private sector, and the scientific community have different types of internal organization, different roles in a policy domain, different perspectives on problems, as well as different professional languages (Crona and Parker 2012;

Huxham et al. 2000). By fostering repeated, institutionalized interactions between actors from different societal sectors, forums contribute to cross-sector communication, coordination, and collaboration. More specifically, improved cross-sectoral coordination can foster science – policy exchange (Weible 2008; Craft and Wilder 2015; Crona and Parker 2012), individual and collective learning (Heikkila and Gerlak 2013), or the successful implementation of policies (Robichau and Jr. 2009).

### ***Why are cross-sectoral forums important to actors?***

In order to get involved in discussions around a given issue, actors within a polycentric governance system have many different venues and channels at their disposal, such as creating direct contacts to administration and decision-makers, directly contacting the public through public campaigns, or participating in one of the many venues and forums that exist in polycentric governance systems. Actors must choose between many different venues and channels under constraints of scarce time, resources and information (Lubell 2013).

In order to understand why actors lend importance to cross-sectoral forums to get involved in discussions concerning a given issue, we rely on four sets of explanatory factors. All four sets of explanatory factors rely on a logic of costs and benefits involved in actors' forum participation. On the one hand, actors' opportunity costs of forum participation will be lower if they perceive alternatives, be it unilateral action or participation in other venues, as little attractive (Ansell and Gash 2008; Bryson et al. 2006; Scott and Thomas 2016). In this case, the balance between costs and benefits when participating in a cross-sectoral forum, as compared to participating in other venues, is positive, which should positively affect the importance actors lend to a given forum. On the other hand, transaction costs of interactions within cross-sectoral forums should influence actors' costs – benefit perceptions, and thus the importance that actors lend to cross-sectoral forums. Lower transaction costs generally lead to greater perceived effectiveness of the forum (Lubell et al. 2016). Besides costs, higher

perceived benefits from forum participation can equally affect the cost – benefit balance of forum participation, and thus affect the importance that actors attribute to their participation in given forums. While our variables do not directly measure opportunity and transaction costs, they are all related to costs and benefits that actors get from forum participation (Lubell et al. 2016), and thus their perception of the importance of the cross-sectoral forum within as opposed to other institutions in the governance system.

Many of our explanatory factors rely on actors' perceptions, which are important to understand environmental policy-making (Bennett 2016) and the behavior of actors in governance systems more generally (Fischer et al. 2016; Sabatier et al. 1987). Actors are subject to bounded rationality (Simon 1956; Jones 2003), that is, they will decide on what is important and what is not important according to their (limited) perceptions of the costs and benefits they have from forum participation.

#### *Roles of an actor in the overall governance system*

Roles that actors have within the entire polycentric governance system influence the opportunity costs of participation in a cross-sectoral forum. Depending on their roles in the broader governance system and their ability to achieve their goals in other venues and through other channels, opportunity costs of cross-sectoral forum participation might be too high.

On the one hand, we distinguish between three large societal sectors, that is, state actors, private interests, and scientific actors. First, state actors tend to have resources and authority relevant to collective decision-making. Yet, they also have the task to develop, set and implement binding norms and rules. State actors tend to strive for feasible solutions to political problems (Crona and Parker 2012). They should therefore lend quite some importance to cross-sectoral forums, as these forums allow them to bring different sectoral aspects together in the quest for feasible policy solutions. Second, the role of private interests in society is to articulate and feed in these interests and values into governance processes

(Crona and Parker 2012). Cross-sectoral forums are one of several venues in which private actors can be active in order to try to achieve their goals. Cross-sectoral forums include state actors which can thus be directly lobbied, but cross-sectoral forums almost never take binding decisions. Thus, whereas direct access to state actors might increase the benefits that private interests have from participation in cross-sectoral forums, the fact that binding decisions are taken elsewhere should lower benefits of participation for private interests. Cross-sectoral forums are thus neither important nor unimportant to private actors. Third, scientific organizations aim at producing complex knowledge, and tend to emphasize complexity over simple solutions readily applicable in politics (Crona and Parker 2012). In a purely positivist interpretation of science, the main goal of scientific organizations is not to get involved in policy discussions, but to produce scientific knowledge independently of other actors' opinions. However, with a trans-disciplinary perspective in mind, inputs from other actors in the field might be important for scientists for designing their research or diffusing their results.

Overall, there are reasons to believe that actors from different sectors lend more or less importance to forums, as compared to other channels and venues in an ecology of games. Yet, it is difficult to establish an exact ranking of the sectors in terms of the importance they lend to cross-sectoral forums, on theoretical bases only. Our first hypothesis is thus a very general one.

**Hypothesis 1: There are differences in the importance that actors from different sectors (state actors, science, interest groups) lend to cross-sectoral forums.**

Besides these broad actor categories, more specific differences within these sectors are important when aiming at understanding the importance that different actors lend to cross-sectoral forums. The first relates to a specific benefit that state actors on the highest, federal level, get from cross-sectoral forums. Federal state actors have the formal task to integrate all

actors which are important in a given issue domain and to create coordination among them. This, in turn, will allow them to access the knowledge and expertise needed to craft broadly acceptable policy solutions. Given that cross-sectoral forums are specifically designed to integrate knowledge from different sectors, opportunity costs of forum participation will be especially low for federal state actors, given that unilateral action or participation in other venues are little attractive to achieve this specific goal (Ansell and Gash 2008; Bryson et al. 2006; Scott and Thomas 2016). Some cross-sectoral forums are even specifically created by government actors to develop policies and gather expertise and knowledge (Lubell et al. 2016). Federal state actors should thus perceive cross-sectoral forums as especially important within the governance system.

**Hypothesis 2: Federal state actors lend more importance to cross-sectoral forums than other actors.**

The second more specific difference within the broad societal sectors is within the private sector. The category described above includes any type of private sector (that is, neither state actors nor scientific actors), independently of their size and influence in the governance system. However, interest groups, as compared to individual firms and individual persons, usually have an easier access to decision-making in general. The purpose of interest groups is to gather and organize individual interests, and the ability of interest groups to speak on behalf of entire parts of the economy or society grants them with influence in the governance system (Wilson 1990; Binderkrantz 2005; Boehmke et al. 2013). This is not the case for individual firms or individual persons. Their opportunity costs of participation in a cross-sectoral forum are lower for these actors, given that other options are far less attractive in terms of actually influencing the governance of an issue. Thus, these individual actors should lend more importance to cross-sectoral forums than collective interest groups and organizations.

**Hypothesis 3: Individual actors lend more importance to cross-sectoral forums than organized actors.**

*Expected forum output*

Whether actors attribute importance to a given cross-sectoral forum does not only depend on opportunity or transaction costs, but also on the benefits that actors hope to get from forum participation. If the specific outputs of cross-sectoral forums are important to actors, this increases the benefits they get from participation in the specific cross-sectoral forum. Analyzing the specific outputs for individual participants is important to understand the importance of cross-sectoral forums, as individual benefits can be seen as building blocks to higher-level outcomes. Individual benefits incentivize devoting time and effort to participate in forums (Emerson and Nabatchi 2015; Scott and Thomas 2017). What is more, forum participants who do not get enough benefits from their forum participation, as compared to the costs will likely stop participating in the respective forum (Fischer and Leifeld 2015).

Actors can get different types of outputs from forums. Joint benefits include the elaboration of mutual knowledge or joint problem understandings among actors, common definitions of policy problems, but also more concrete outputs such as joint position papers, or expert reports (Mayntz and Scharpf 1995; Börzel and Risse 2010; Sørensen and Torfing 2009; Ostrom 1990; Fischer and Leifeld 2015). Besides, forum participants can also benefit from policy forum outputs which correspond to individual benefits only, independently of the outputs for other forum participants and society as a whole (Fischer and Leifeld 2015; Lubell 2015). Actors might strive for asserting individual policy positions, legitimizing previous individual decisions, increasing their visibility and reputation, shifting the decision-making venue, reducing uncertainty and learning, as well as networking (Scott 2015) and trust-building (Berardo 2009). Given the specific goal of cross-sectoral forums to foster exchange among actors from different societal sectors, we focus on two types of outputs which should

be specific to these types of forums, that is, gathering knowledge about other actors' positions, as well as getting an understanding for the views and positions of other sectors.

**Hypothesis 4: Actors which perceive gathering knowledge about other actors' positions as an important forum output lend more importance to cross-sectoral forums than other actors.**

**Hypothesis 5: Actors which perceive creating cross-sectoral understanding as an important forum output lend more importance to cross-sectoral forums than other actors.**

#### *Role of an actor within a forum*

Besides the role actors have in the overall governance system, the role they occupy within a cross-sectoral forum influences the importance they lend to participation in a cross-sectoral forum. In general, the influence of an actor is important to understand its behavior in policy-making (Ingold and Fischer 2014; Ingold and Leifeld 2014), and can influence discussions within and the functioning of collaborative management (Berardo et al. 2014). Actors which occupy a leading role within a forum have a higher capacity to influence forum outputs in the direction of their preferences. As a consequence, this should increase the benefits they get from the cross-sectoral forum, as well as the importance the actor lends to a cross-sectoral forum as compared to other venues and channels in the governance system.

**Hypothesis 6: Influential actors lend more importance to cross-sectoral forums than other actors.**

Furthermore, there are different ways in which actors can be influential within a cross-sectoral forum. In cross-sectoral forums, fostering compromises between actors from different societal sectors and with different positions is a crucial output. If an actor is able to contribute to

fostering compromises, this will increase the perceived benefits from forum participation, and, consequently, the importance this actor lends to the given cross-sectoral forum.

**Hypothesis 7: Actors able to contribute to compromises within a forum lend more importance to cross-sectoral forums than other actors.**

#### *Perception of forum functioning*

Transaction costs of reaching a goal within a forum are lower if the forum functions well. For example, actors could have negative past experiences with cooperation (Ansell and Gash 2008), they can perceive a lack of leadership or metagovernance within a forum (Sörensen and Torfing 2011), or power imbalances in the forum in terms of agenda influence (Ansell and Gash 2008; Sörensen and Torfing 2011; Bryson et al. 2006; Cook 2015; Gerlak et al. 2013) can increase the transaction costs of actors' forum participation. Furthermore, the level of conflict within a forum has been shown to be the most important factor negatively influencing how actors perceive procedural fairness, forum efficacy, and the impact of forum outputs on decision-making (Lubell et al. 2016). On the contrary, if actors perceive forums to perform well, the transaction costs of forum participation are lower, and the importance of the respective forum increases.

**Hypothesis 8: Actors which perceive a forum to function well lend more importance to cross-sectoral forums than other actors.**

### **Cases, Data and Method**

#### *Selection of cross-sectoral forums*

The selection of the eight cross-sectoral forums in this analysis is based on an encompassing list of cross-sectoral forums active in Swiss environmental politics. This list was established based on several iterations of document and website analysis and snowballing among forum managers. From this list, we selected those forums that deal with habitat and natural hazard

governance. We further included only cross-sectoral forums with a government orientation (that is, which are geared towards policy-making or advice) or balanced forums (with no particular orientation), but did not take into account interest-group oriented (geared towards the fostering of private interests) or science oriented (geared towards scientific knowledge) forums. Thus, the overall ecology of games is the governance system of Swiss habitat and natural hazard governance, of which we analyze one particular type of venues.<sup>1</sup>

### ***Survey among forum members***

The population of this paper consists of all official members of the eight forums. They were identified based on lists accessible on the webpages of these forums. Thus, our variables are measured at the level of individual persons participating in these cross-sectoral forums, but we also know which collective actors they represent (except for a minority of individuals which do not represent any collective actor when participating in the forums). The number of forum members ranges from seven to 30, with a total of 159 actors which are members in the eight forums. The survey was conducted online during the winter of 2016/17. The response rate after two reminder emails amounts to 132 actors, resulting in a high response rate of 83% (see Table A1 in the Appendix for response rates per forum).

### ***Dependent and independent variables***

The dependent variable of our analyses assess the importance that an actor attributes to the cross-sectoral forum in question as compared to other ways of influencing governance in the policy field through other institutions and venues. This variable thus speaks directly to the Ecology of Games framework (Berardo et al. 2013; Lubell 2013), which aims at understanding how actors maximize their influence by choosing between venues within a polycentric governance system. The question which was posed to the survey respondents

---

<sup>1</sup> For a list of the nine forums, see Appendix 1.

reads as follows:<sup>2</sup> “Besides [forum], there exist many other channels through which you / your organization can get involved in discussions on the [forum issue] (e.g., direct contact to administrations, international forums, public campaigns, participation in other forums). As compared to these alternative channels, how important is [forum] for your organizations to bring in your positions?”. Response options were “unimportant”, “rather unimportant”, “rather important”, and “very important”.

Independent variables are the following. First, all actors representing scientific and research institutions were coded as scientific actors, government and administrative actors on all levels (federal, cantonal, municipal) were coded as state actors, and representatives of interest groups, NGOs, individual firms and individual persons were coded as “private interests”. For the more specific actor categories, government and administrative actors at the highest level of government (federal state) were coded as federal government actors, and individual firms and individual persons were coded as individual actors.

Second, importance of forum outputs as perceived by actors are based on a survey item asking respondents to indicate whether a given output, from a list of 14 outputs, is very important, rather important, rather unimportant, or unimportant to them. In our analysis, we included the outputs “exchange on substantive issue positions of other forum members”, “visibility for my organization and its issue positions” and “creation of mutual understanding among state actors, scientific actors and the private sector”.<sup>3</sup>

Third, the role of an actor *within* a forum is assessed through three variables. The influence of an actor within the forum is based on the idea of reputational power (Fischer and Sciarini 2015; Ingold and Leifeld 2014). All survey respondents were presented a list of all members of the respective forum and were asked to indicate those forum members which were most

---

<sup>2</sup> Original question in German or French

<sup>3</sup> All other outputs variables available from the survey (knowledge exchange, personal contacts and networks, exchange on activities of other actors, influence of my organization on the issue domain, sensitizing the public and decision-makers, compromises between actors, identification of future issues, studies, implementation plans, position papers, consultation and other services for my organization) have no significant influence on the dependent variable.

influential within the forum, according to their view. Based on that, we calculated the share of forum members which consider an actor to be influential within the forum. The capacity to contribute to compromises and to present their own claims is based on actors self-assessment. Survey respondents were asked to indicate whether they contributed to forum discussions in these two ways frequently, rather frequently, rather seldom, or seldom.

Fourth, actors' perception of forum functioning is assessed based on two variables. To assess their perception of the degree of polarization within a forum, survey respondents were asked to indicate whether they perceive issue positions of forum members to be very different, rather different, rather similar, or very similar. Finally, survey respondents were asked whether in their view, all key actors in the issue domain were included in the forum (almost entirely, mostly, partially, almost not).

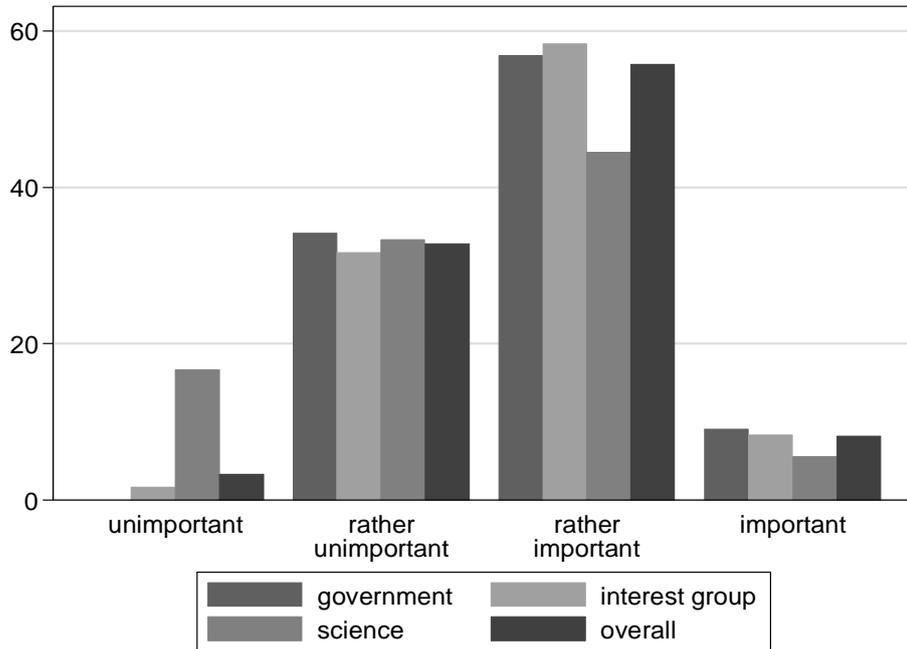
## **Analysis**

Figure 1 provides an answer to the first part of our question, that is, on how important forums are as compared to other venues within a polycentric governance system. For about 8% of actors, cross-sectoral forums are very important, and for more than 55% of forum members, forums are a rather important way to get involved in discussions on a given issue. For about 35% of actors, the respective forum is an unimportant or rather unimportant venue, as compared to other venues and channels of influence in the polycentric governance system.

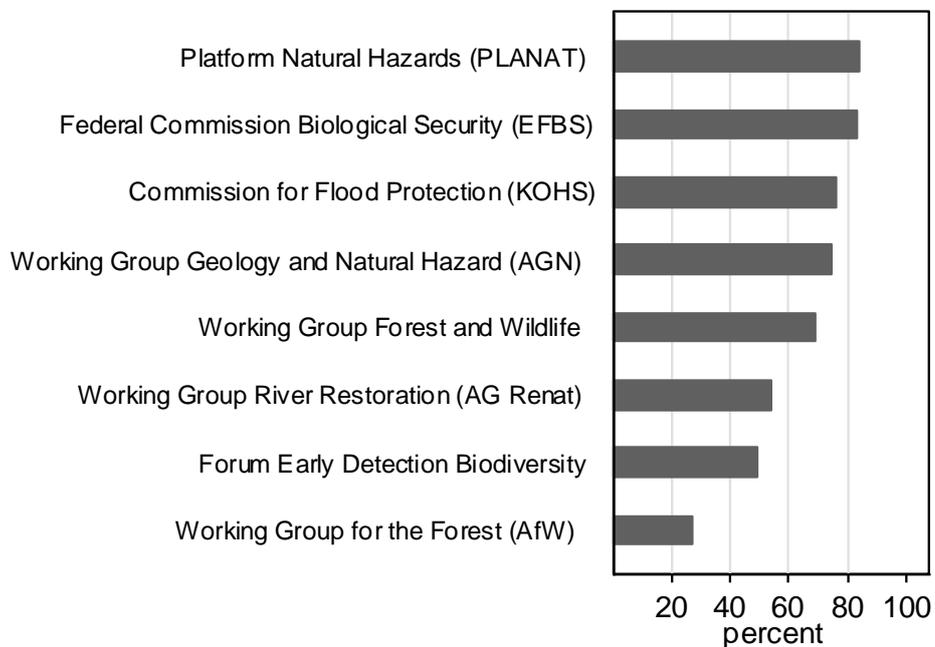
For the categories "rather unimportant" and "important", there are no differences between the actors from the three sectors, on average. Based on descriptive accounts of the category "rather important" only, it appears that actors from the scientific sector perceive cross-sectoral forums as less important than government actors and interest groups. More frequently than others, scientific actors perceive cross-sectoral forums as "unimportant", whereas no government actors indicated that the given cross-sectoral forum was unimportant to them, as compared to other channels and venues in the polycentric governance system.

Figure 2 shows that on average, five of our eight forums are considered rather important or important by 70% or more of their members as. The three remaining forums perform less well in terms of being important to their members to bring their positions into the governance system. In two cases, only about half of the members consider the respective forum as (rather) important. In one case, only about 30% of the members of the cross-sectoral forum perceive this forum to be (rather) important for bringing in their positions, as compared to other channels and venues.

**Figure 1. Importance of cross-sectoral forums as compared to other channels in governance system.**



**Figure 2: Share of respondents per forum perceiving the forum important or rather important compared to other channels in governance system.**



**Table 1: Regression models predicting importance of forums as compared to other venues (MLE regression coefficients, t-values in parentheses).**

	Model 1	Model 2
Sector (reference: interest group sector)		
<i>Government</i>	-0.19 (-0.39)	
<i>Science sector</i>	-1.32 (-1.90)	
Federal government actor		1.33* (2.26)
Individual actor		1.30* (2.00)
Knowledge about other actors' positions	1.08* (2.44)	1.13** (2.62)
Understanding for other sectors	0.02* (2.47)	0.03* (2.36)
Visibility for own positions	-0.01 (-1.49)	-0.01 (-1.41)
Actor's influence in forum	-1.56 (-1.52)	-2.51 (-1.72)
Actor's ability to contribute to compromises	0.95** (3.15)	1.01** (2.77)
Actor's ability to present own claims	0.29 (1.39)	0.49* (2.08)
Degree of polarization	-0.74* (-2.46)	-0.45 (-1.72)
Representation of key actors	0.43 (1.10)	0.36 (1.05)
cut1	1.34 (0.70)	3.19 (1.43)
cut2	4.64* (2.21)	6.55** (2.71)
cut3	8.51*** (3.42)	10.56*** (3.67)
bic	216.89	212.96
N	110	110

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Forum-clustered standard errors (estimated in Stata/IC 12.1)

In order to uncover the reasons why actors perceive a forum important or not, we estimate a number of regression models. As our dependent variable has four categories (unimportant, rather unimportant, rather important, important) which are ranked but with unequal increments, we primarily rely on ordered logistic regression. Furthermore, we have to consider that cases are nested in forums. In fact, a Kruskal-Wallis test with forum as the grouping variable is significant at the five percent level, thus suggesting that at least one forum differs significantly from the other forums with respect to our dependent variable<sup>4</sup>. As further tests revealed, it is mainly one forum (the AfD, see Table A1 in the appendix) that causes the Kruskal-Wallis test to be significant. Therefore, we rely on models using forum-clustered standard errors (Table 1). Models applying Huber-White correction of standard errors are reported in the Appendix (Table A3). We refrain from estimating multi-level models since we have no predictors at the forum-level. Given that, estimating multilevel models with an unbalanced data structure, a low number of cases and a categorical dependent variable is not feasible.

Model 1 in Table 1 includes the general actor types according to the three societal sectors, model 2 includes the more specific actor types according to hypotheses 2 and 3. Model 1 suggests that there are no significant differences between scientific actors, government actors, and interest groups (reference category). This result thus invalidates our general expectation formulated in hypothesis 1, which expected differences between the three sectors of government actors, scientific actors and interest group actors. Hypotheses 2 and 3 went into more detail with respect to different types of actors which might get specific benefits from participation in cross-sector forums, such as federal level state actors, or for which opportunity costs are low, given that other channels and venues are little attractive to them. Results in model 2 suggest that federal level government actors in fact lend more importance

---

<sup>4</sup> The Kruskal-Wallis equality-of-populations rank test is the equivalent of the one-way ANOVA test for categorical variables. It tests the null-hypothesis that samples (here: the members of a given forum) originate from the same distribution (population). A significant test result means that one or several samples are unlikely to originate from the same population.

to cross-sectoral forums, as opposed to lower level state actors, scientific actors, and interest groups. Also, individual actors such as individual persons or firms, which usually have little to no influence in the overall governance system, seem to benefit from their participation in cross-sectoral forums and thus lend higher importance to cross-sectoral forums, as opposed to other venues and channels of participation in the governance system. Empirical evidence thus fully supports hypotheses 2 and 3.

Hypotheses 4 and 5 focused on the forum outputs that actors consider important. Indeed, both regression models suggest that actors who think that gaining a better knowledge of other actors' positions is an important forum output, consider cross-sector forums an important channel. Furthermore, the creation of understanding across societal sectors, which is one of the *raisons d'être* of cross-sectoral forums, has a significant effect on the importance actors lend to cross-sectoral forums. However, the effect size is small. We further included a more "egoistic" output as a control variable, that is, the degree to which actors think that visibility for their own organization is an important forum output. This variable does not significantly influence the importance actors lend to cross-sectoral forums. Results thus support hypotheses 4 and 5.

The third set of hypotheses focuses on the role actors have within cross-sectoral forums. First, results from our statistical model suggest that the influence that an actor has within a forum does not influence the importance it lends to the respective forum. Influence within a forum is actually negatively related to the importance an actor lends to a forum, but the respective results are not statistically significant. One reason for this could be that the influence an actor has within a forum is related to the influence this actor has in the overall governance system. For actors which are generally influential within the governance system, the additional benefits they get from participation in a cross-sectoral forum as compared to participation in other venues and through other channels are probably limited. We thus have to reject hypothesis 6. By contrast, there is clear evidence in support of hypothesis 7 which suggests

that actors that actively forge compromises within cross-sectoral forums lend importance to this specific forum. Besides that, the models include a control variable which assesses whether actors which are able to make their claims heard in cross-sectoral forums think that the respective forum is important to them. In model 2, the respective coefficient is positive and statistically significant.

Finally, hypothesis 8 claimed that actors' perceptions of forum functioning influence the importance they lend to the respective forum. Perceived polarization of the cross-sectoral forum turns out to be a significant factor, but only in model 1. Whether actors think that the key actors dealing with the issue are included in the cross-sectoral forum does not significantly affect the importance they attribute to the forum.

## **Discussion and conclusions**

Within complex, polycentric governance systems, cross-sectoral forums are one specific type of venue where actors can play their games (Berardo and Lubell 2016). They give rise to repeated, organized interaction among different types of actors from public administration, interest groups, or science, and thereby establish cross-sector coordination (Fischer and Leifeld 2015). Actors in an ecology of games have to decide in which venue to invest their limited resources. Relying on cost – benefit arguments, the analysis explained why actors lend importance to cross-sectoral forums as compared to other venues and channels in the governance system.

A first set of hypotheses related to actor type suggests that neither of the three sectors, that is, government actors, scientific actors, and interest groups, lend more or less importance to cross-sectoral forums as compared to the other sectors. While in purely descriptive terms, scientific actors appear to lend less importance to cross-sectoral forums, these results do not stand to the statistical test with regression models. The effect of the type of actor, and the specific benefits that given types of actor can get from participation in cross-sectoral forums,

is more specifically related to the role of actors in the overall governance system, and concerns two types of actors: First, federal state actors lend more importance to cross-sectoral forums than other types of government actors (at lower levels), scientific actors, or interest groups. It is the task of federal state actors to coordinate a the discussion of crucial issues and the resolution of policy conflicts, and cross-sectoral forums provide them with a tool for addressing this task. Second, as compared to organizational actors, individual persons or individual firms usually have few opportunities to directly influence the overall governance system. For them, forums are a crucial opportunity to influence the discussions around a given issue. Our statistical model results are in line with this hypothesis.

Second, certain types of forum outputs appear to play a role for understanding the importance actors lend to cross-sectoral forums. Actors who think that getting knowledge on other actors' positions and increasing understanding for the viewpoints of actors from other sectors is an important forum output, lend more importance to cross-sectoral forums. By contrast, actors focusing on increasing the visibility of their own positions do not perceive cross-sectoral forums particularly important, as compared to other venues and channels in the governance system. This indicates that cross-sectoral forums indeed play a specific role in the governance system, in the sense that they contribute to mutual understanding and coordination between different societal sectors.

Third, the role of actors within cross-sectoral forums influences their perception of the importance of the respective forum, too. Again, results indicate that cross-sectoral forums focus on achieving compromises between different types of actors. Actors who think that they can contribute to compromises within the forum perceive the respective forum as important. Besides that, the ability to deposit their own claims also influences perceptions of forum importance. By contrast, the influence of actors within a forum does not affect the importance an actors lends to a given cross-sectoral forum. We do not know whether external power hierarchies are simply reproduced in cross-sectoral forums or whether these forums allow less

influential actors to have a say in the given issue – results from hypothesis 3 rather suggests the second. In any case, a potential power hierarchy within the cross-sectoral forum does not influence the importance actors lend to the forum in question.

Fourth, the perception of forum functioning has a small and inconsistent influence on the importance that actors lend to cross-sectoral forums. Results suggest that the lower the perceived polarization within a forum is, the more important the forum is for an actor. But the perception of whether key actors are included in the forum or not does not play a role. Overall, the perception of forum functioning has less of an influence than actor type, expected forum output, or the role an actor is able to play within a forum.

Further research ideas on cross-sectoral policy forums within an ecology of games abound. First, our analysis focused on government-oriented and balanced forums exclusively, whereas other cross-sectoral forums exist that are more oriented towards the interests of science and interest groups. The factors which influence the importance that actors lend to these forums might differ from the ones observed in this analysis. Second, given that this paper only analyzed actors which actually participated in forums, there is nothing we can say about the factors which influence whether actors participate or not in a forum (see also Berardo et al. 2014). There is most probably an effect of self-selection at work when analyzing only the members of cross-sectoral forums. The actors which think that participation in the respective forum is not worth the costs involved in participation will probably leave the forum or decided to not participate in the first place. To address this challenge, data on all potential forum participants would be needed, which requires a different research design and a different data basis.

## References

- Ansell, Chris, and Alison Gash. 2008. "Collaborative Governance in Theory and Practice." *Journal of Public Administration Research and Theory* 18 (4):543-71.
- Bennett, Nathan James. 2016. "Using perceptions as evidence to improve conservation and environmental management." *Conservation Biology*:n/a-n/a.
- Berardo, Ramiro. 2009. "Generalized Trust in Multi-organizational Policy Arenas: Studying Its Emergence from a Network Perspective." *Political Research Quarterly* 62 (1):178-89.
- Berardo, Ramiro, Tanya Heikkila, and Andrea K. Gerlak. 2014. "Interorganizational Engagement in Collaborative Environmental Management: Evidence from the South Florida Ecosystem Restoration Task Force." *Journal of Public Administration Research and Theory* 24 (3):697-719.
- Berardo, Ramiro, and Mark Lubell. 2016. "Understanding What Shapes a Polycentric Governance System." *Public Administration Review*:n/a-n/a.
- Berardo, Ramiro, Mark Lubell, and John T. Scholz. 2013. "Who Participates in an Ecology of Games and Why? A Comparison Across Weakly and Strongly Institutionalized Policy-Making Systems." Working paper.
- Binderkrantz, Anne. 2005. "Interest Group Strategies: Navigating Between Privileged Access and Strategies of Pressure." *Political Studies* 53:173-200.
- Boehmke, Friederick J., Sean Gilmard, and John Wiggs Patty. 2013. "Business as Usual: Interest Group Access and Representation Across Policy-Making Venues." *Journal of Public Policy* 33 (1):3-33.
- Börzel, Tanja, and Thomas Risse. 2010. "Governance without state: Can it work?" *Regulation & Governance* 4:113-34.
- Bryson, John M., Barbara C. Crosby, and Melissa Middleton Stone. 2006. "The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature." *Public Administration Review* 20:45-55.
- Cook, Jeffrey J. 2015. "Who's Pulling the Fracking Strings? Power, collaboration and Colorado fracking policy." *Environmental Policy and Governance* 25 (6):373-85.
- Craft, Jonathan, and Matt Wilder. 2015. "Catching a Second Wave: Context and Compatibility in Advisory System Dynamics." *Policy Studies Journal*.
- Crona, Beatrice I., and John N. Parker. 2012. "Learning in Support of Governance: Theories, Methods, and a Framework to Assess How Bridging Organizations Contribute to Adaptive Resource Governance." *Ecology and Society* 17 (1):32-50.

- Emerson, Kirk, and Tina Nabatchi. 2015. *Collaborative Governance Regimes*. Washington DC: Georgetown University Press.
- Emerson, Kirk, Tina Nabatchi, and Stephen Balogh. 2012. "An Integrative Framework for Collaborative Governance." *Journal of Public Administration Research and Theory* 22:1-29.
- Fischer, Manuel, Karin Ingold, Pascal Sciarini, and Frédéric Varone. 2016. "Dealing with bad guys: actor- and process-level determinants of the "devil shift" in policy making." *Journal of Public Policy* 36:309-34.
- Fischer, Manuel, and Philip Leifeld. 2015. "Policy forums: Why do they exist and what are they used for?" *Policy Sciences* 48 (3):363-82.
- Fischer, Manuel, and Pascal Sciarini. 2015. "Unpacking reputational power: Intended and unintended determinants of the assessment of actors' power." *Social Networks* 42 (0):60-71.
- Gerlak, Andrea, Tanya Heikkila, and Mark Lubell. 2013. "The promise and performance of collaborative governance." In *The Oxford Handbook of US Environmental Governance*, ed. S. Kamieniecki and M. Kraft. Oxford: Oxford University Press.
- Heikkila, Tanya, and Andrea K. Gerlak. 2013. "Building a Conceptual Approach to Collective Learning: Lessons for Public Policy Scholars." *Policy Studies Journal* 41 (3):484-512.
- Huxham, Chris, Siv Vangen, Christine Huxham, and Colin Eden. 2000. "The challenge of collaborative governance." *Public Management an International Journal of Research and Theory* 2 (3):337-58.
- Ingold, Karin, and Manuel Fischer. 2014. "Drivers of collaboration to mitigate climate change: An illustration of Swiss climate policy over 15 years." *Global Environmental Change* 24:88-98.
- Ingold, Karin, and Philip Leifeld. 2014. "Structural and Institutional Determinants of Reputational Power in Policy Networks." *Journal of Public Administration Research and Theory* online.
- Jones, Bryan D. 2003. "Bounded rationality and political science: Lessons from public administration and public policy." *Journal of Public Administration Research and Theory* 13 (4):395-412.
- Lubell, Mark. 2013. "Governing Institutional Complexity: The Ecology of Games Framework." *Policy Studies Journal* 41 (3):537-59.
- . 2015. "Collaborative partnerships in complex institutional systems." *Current Opinion in Environmental Sustainability* 12:41-7.

- Lubell, Mark, Jack Mewhirter, Ramiro Berardo, and John Scholz. 2016. "Transaction Costs and the Perceived Effectiveness of Complex Institutional Systems." *Public Administration Review* online.
- Lubell, Mark, Garry Robins, and Peng Wang. 2014. "Network structure and institutional complexity in an ecology of water management games." *Ecology and Society* 19 (4).
- Mayntz, Renate, and Fritz Scharpf. 1995. *Gesellschaftliche Selbstregulierung und politische Steuerung*. Frankfurt: Campus.
- Mcginnis, Michael D. 2011. "Networks of Adjacent Action Situations in Polycentric Governance." *Policy Studies Journal* 39 (1):51-78.
- Ostrom, Elinor. 1990. *Governing the commons. The evolution of institutions for collective actors*. Cambridge: Cambridge University Press.
- . 2010. "Polycentric systems for coping with collective action and global environmental change." *Global Environmental Change* 20 (4):550-7.
- Robichau, Robbie Waters, and Laurence E. Lynn Jr. 2009. "The Implementation of Public Policy: Still the Missing Link." *Policy Studies Journal* 37 (1):21-36.
- Sabatier, Paul, Susan Hunter, and Susan Mclaughlin. 1987. "The Devil Shift: Perceptions and Misperceptions of Opponents." *Political Research Quarterly* 40:449-76.
- Scott, Tyler A. 2015. "Analyzing Policy Networks Using Valued Exponential Random Graph Models: Do Government-Sponsored Collaborative Groups Enhance Organizational Networks?" *Policy Studies Journal*.
- Scott, Tyler A, and Craig W Thomas. 2016. "Unpacking the Collaborative Toolbox: Why and When Do Public Managers Choose Collaborative Governance Strategies?" *Policy Studies Journal*.
- Scott, Tyler A., and Craig W. Thomas. 2017. "Winners and Losers in the Ecology of Games: Network Position, Connectivity, and the Benefits of Collaborative Governance Regimes." *Journal of Public Administration Research and Theory* online.
- Simon, Herbert. 1956. "Rational Choice and the Structure of the Environment." *Psychology Review* 63 (2):129-38.
- Sörensen, Eva, and Jacob Torfing. 2011. "Enhancing Collaborative Innovation in the Public Sector." *Administration & Society* 43 (8):842-68.
- Sörensen, Eva, and Jakob Torfing. 2009. "Making Governance Networks Effective and Democratic Through Metagovernance." *Public Administration* 87 (2):234-58.
- Weible, Christopher M. 2008. "Expert-Based Information and Policy Subsystems: A Review and Synthesis." *The Policy Studies Journal* 36 (4):615-35.

Wilson, Graham K. 1990. *Interest Groups*. Edited by G. Peele. Oxford/Cambridge: Basil Blackwell.

**Table A1: Missions of the eight forums as well as their size and response rates.**

Acronym	Full name and mission	Members	Respondents	Response rate
AG W&W	<i>Working Group Forest and Wildlife</i> Exchange among experts on issues related to the interactions between wildlife and forest functions. Position taking on relevant issues.	30	24	0.8
AfW	<i>Working Group for the Forest</i> Discusses user conflicts related to forests and find solutions to preserve its diverse ecological, societal and economic functions.	23	18	0.78
AG Renat	<i>Working Group River Restoration</i> Supports experts from all levels and sectors involved in the implementation of the revised federal law on water protection.	28	25	0.89
EFBS	<i>Federal Commission Biological Security</i> Supports the federal government when preparing regulations relevant to biological security and advises the implementing actors.	15	12	0.8
FF Bio	<i>Forum Early Detection Biodiversity</i> Early detection of developments which are relevant for biodiversity and landscapes, thereby increasing the capacity to act of federals and cantonal authorities.	7	6	0.86
AGN	<i>Working Group Geology and Natural Hazards</i> Early detection of geological risks. Planning of preventive measures to protect people and infrastructure from natural hazards.	15	12	0.8
KOHS	<i>Commission for Flood Protection</i> Ensure consistent, high quality standards in the fields of flood protection, water engineering and maintenance.	23	21	0.91
PLANAT	<i>Platform Natural Hazards</i> Consults the federal authorities on issues of natural hazards and support the establishment of a “preventive paradigm”.	18	14	0.78
Total		159	132	0.83

**Table A2: Actor composition of the eight forums (only respondents).**

	Number	Percent
Government sector	44	33.3
> Federal level	16	12.1
> Cantonal and municipal level	28	21.2
Interest group sector	62	47.0
> Interest groups <sup>(1)</sup>	29	22.0
> Individual actors <sup>(2)</sup>	33	25.0
Science sector	19	14.4
Others <sup>(3)</sup>	7	5.3
<b>Total</b>	<b>132</b>	<b>100</b>

<sup>(1)</sup> economic interest groups, environmental groups, sport-/leisure groups, employees association, consumer association

<sup>(2)</sup> individual firms and individual persons

<sup>(3)</sup> forum employees, forums without advocacy orientation

**Table A3: Regression models, comparing models with forum-clustered standard errors to models with Huber/White robust standard errors (MLE regression coefficients, t-values in parentheses).**

	Model 1 (clustered SE)	Model 2 (clustered SE)	Model 1 (robust SE)	Model 2 (robust SE)
Sector (reference: interest group sector)				
<i>Government</i>	-0.19 (-0.39)		-0.19 (-0.40)	
<i>Science sector</i>	-1.32 (-1.90)		-1.32 (-1.92)	
Federal government actor		1.33* (2.26)		1.33* (2.25)
Individual actor		1.30* (2.00)		1.30* (2.25)
Knowledge about other actors' positions	1.08* (2.44)	1.13** (2.62)	1.08** (2.80)	1.13** (2.90)
Understanding for other sectors	0.02* (2.47)	0.03* (2.36)	<b>0.02</b> <b>(1.52)</b>	<b>0.03</b> <b>(1.92)</b>
Visibility for own positions	-0.01 (-1.49)	-0.01 (-1.41)	-0.01 (-1.41)	-0.01 (-1.40)
Actor's influence in forum	-1.56 (-1.52)	-2.51 (-1.72)	-1.56 (-1.24)	-2.51 (-1.87)
Actor's ability to contribute to compromises	0.95** (3.15)	1.01** (2.77)	0.95*** (3.33)	1.01*** (3.39)
Actor's ability to present own claims	0.29 (1.39)	0.49* (2.08)	0.29 (1.01)	0.49 (1.88)
Degree of polarization	-0.74* (-2.46)	-0.45 (-1.72)	<b>-0.74</b> <b>(-1.77)</b>	-0.45 (-1.10)
Representation of key actors	0.43 (1.10)	0.36 (1.05)	0.43 (1.24)	0.36 (1.07)
cut1	1.34 (0.70)	3.19 (1.43)	1.34 (0.65)	3.19 (1.64)
cut2	4.64* (2.21)	6.55** (2.71)	4.64* (2.35)	6.55*** (3.35)
cut3	8.51*** (3.42)	10.56*** (3.67)	8.51*** (4.16)	10.56*** (4.95)
bic	216.89	212.96	245.09	241.16
N	110	110	110	110

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Estimated in Stata/IC 12.1