Steering for broad social outcomes in governance networks;
The effects of participation and network management

Paper for the International Public network Conference at Department of Public Administration, Erasmus University Rotterdam, 28-30 June 2010

E.H. Klijn
B. Steijn
J. Edelenbos

Governance networks are presented as one of the answers to fragmentation and specialization in modern public life. By improving horizontal cooperation and active management better (social) outcomes should be achieved in situations where integrated solutions are required and resource dependencies exist. Governance networks are especially said to be suitable for so called wicked problems. Wicked problems are also characterized by value conflicts. Environmental projects for instance often involve value struggles between ecological values, economic values transport values or 'liveability' values. In those situations governance networks should provide broad societal outcomes that are outcomes that can satisfy various values at stake.
Active participation of stakeholders but also active network management to work on innovative solutions should provide these outcomes according to many authors in the field of governance. In this paper we look at the effect of participation and active network management on the effects of achieving trust and broad societal outcomes. Using survey material from respondents involved in environmental projects we show that projects with higher level of participation of stakeholders and more active network management result in higher trust level between participants and better (and broader) outcomes.

Author information
Professor Dr E.H. Klijn (Professor, Department of Public Administration, Erasmus University and Visiting Professor at the School of Public Policy, University of Birmingham)
Prof. Dr J. Edelenbos (Professor, Department of Public Administration, Erasmus University)
Professor Dr B. Steijn (Professor, Department of Public Administration, Erasmus University)
Correspondence address
Prof. E.H. Klijn
Department of Public Administration
Erasmus University Rotterdam
PO Box 1738
3000 DR Rotterdam, The Netherlands
email: klijn@fsw.eur.nl

1. Introduction: governance networks, wicked problems and outcomes

Governments are facing many complex problems that need collective actions of a lot of actors besides governments. These wicked problems are policy issues that involve many actors, where the actors often disagree about the nature of the problem and the desired solution (Rittel and Webber, 1973). In addition, there is usually insufficient or controversial knowledge about these problems, which makes it difficult to interpret them and to find appropriate solutions for them. It is no easy task to come up with a solution for complex policy problems. The most important reason for this is that it almost always involves tricky conflicts between values. Should we prioritize transport values, liveability values or environmental values in a policy process about traffic and road problems. Complex policy issues have another characteristic that makes them special: they often occur within actor networks and they need innovative solutions that satisfy the various preferences of actors. We call these governance networks since they form around policy problems 9or service delivery) and involve various actors.

A governance network perspective on wicked problems

Governance has been defined in many different ways by many different authors. There is consensus in most of the literature that with governance, the processes of decision-making and management are stressed instead of the organisation, and that these processes can usually be characterised as being strongly horizontal and complex, due to the large number of actors involved as well as the complexity of the problems (see: Rhodes, 1997; Pierre, 2000; Sorenson & Torfing, 2007). That governance processes are horizontal does however not mean that there are no power differences between actors. Power differences are connected with resource inequalities and asymmetrical dependency relations (Rhodes, 1997; Koppenjan and Klijn, 2004).

There is not much reason to differentiate between governance and governance networks. At best, we can specify that governance relates to the interaction process (and its guidance) while networks relate to the empirical phenomenon that policy issues are solved within networks of actors. Thus, we will use governance networks as an indication of *more or less stable patterns of social relationships (= interactions, cognitions and rules) between mutually dependent public, semi-public and private actors, that arise and build up around complex policy issues or policy programmes*.[1]

Why would governance be a good form of governing?

There are several arguments mentioned in the literature why governance would be 'the answer' to steering problems in our society and especially to wicked problems. If we look at the literature (see for instance: Kooiman, 1993; Rhodes, 1997; Pierre and Peters, 2000; Koppenjan and Klijn, 2004) we can see various arguments why governance is becoming more important.

1. *veto power*; society has changed and various societal actors have become more important for realizing public policy, public implementation and service delivery. Because various actors have important resources they are indispensible for policy making

[1] Despite the stability in the relations of the network, interactions within networks can still be capricious, because actors deploy their own strategies. For an elaboration of this point, see Koppejan & Klijn, 2004; Klijn, 2007.

and therefore networks of interdependent actors emerge (Scharpf, 1978; Pierre and Peters, 2000; Agranoff and MCGuire, 2001). In this argumentation governance and horizontal forms of coordination are crucial because governments have no other alternative.

2. *better solutions and innovation*; governance processes should generate more information because more different stakeholders, which have specific information, are involved. Thus governance processes can generate better solutions because they mobilize more information sources and generate broader definitions of the problems because of the stakeholder information (Fisher, 2003; Koppenjan and Klijn, 2004)

3. *democratic legitimacy*; a part of the literature on governance does not stress questions of dependency (or veto power) or better solutions but also emphasizes that governance processes allow for more direct involvement of stakeholders and thus could contribute to the growing gap between citizens and politicians and public administration (Hirst, 2000; Sorensen and Torfing, 2007) or at least are the indication of the search for new forms of citizens participation (Lowndes et all, 2001; Young, 2000). Whether these new forms of including stakeholders by means of various governance processes conflict with the classical representative institutions or not is a debate between scholars (see for an overview: Klijn and Skelcher, 2007).

governance and social outcomes: this paper

If the arguments from the governance literature are to be believed, than stakeholder involvement is crucial for achieving good outcomes in governance networks. Good being socially acceptable outcomes that satisfy various values that are stake. Thus broad social outcomes. Stakeholder involvement enhances the chances for implementation, increases the innovative character of solutions and enhances democratic legitimacy. We could even phrase it somewhat differently: governance networks are actually an attempt to bring together a number of actors who are dependent to search for a solution. They are an attempt to establish and solidify ties and relation and to build a certain amount of trust among actors to achieve solutions. Trust then in our conception of governance networks is a something to be build (not p[resent as a natural coordination mechanism) and an important intermediate variable to achieve innovative outcomes (see Edelenbos and Klijn, 2007; Klijn, 2010).

However the same literature on governance and governance networks also stresses that these outcomes and the coordination of actions of government and stakeholders can hardly be achieved without network management (Agranoff and McGuire, 2001; Koppenjan and Klijn 2004; Meier and O Toole, 2007).

In this paper we look at the influence of both stakeholder involvement, network management activities and trust on reaching a broad number of societal outcomes. We use a survey among respondents involved in environmental projects to explore these relations. In section 2 we explain our conceptual framework of governance networks, trust outcomes and network management. Section 3 contains the methodology of the research. section 4 looks at our empirical findings. We end with some reflections

2. Socially desirable outcomes in governance networks: a conceptual framework

How will we find 'good', socially relevant outcomes from complex and political processes in governance networks?[2] This is a question that is more easily asked than answered.

Simple tasks, simple answers?

Finding out what good results are in the context of governance networks is, in itself, rather tricky. This is strongly connected to the 'wicked' character of the policy issues in governance networks.

This seems relatively simple for a classic government task such as taxation. We assess the outcomes of the tax authorities as 'good' when the taxation is performed efficiently and fairly. Thus, when the tax authorities do not make too many mistakes and do not send wrong assessments, and when the entire process is wrapped up in time and when people are not too displeased with it, we can say that a good result has been achieved. It is also relatively simple to translate these kinds of requirements for a good outcome and a good process (the taxation itself) into relatively simple performance criteria, such as the desired pass time of an application, the number of allowed mistakes, and so on.

As one sees, we now find ourselves in the world of the New Public Management (Hood, 1991; Osborne & Gaebler, 1992). We have a fairly clear picture of what we want, and how we want to monitor it. We can also link an organisation to this relatively easily. An executive service, such as the tax authorities, but also related tasks, such as social welfare subsidies and the determination of punishment (prisons), can be privatized in a relatively simple way, or 'hived off' or organized as a separate agency and monitored through prior determined performance indicators. Problems do occur regularly even with tasks such as these which can be quantified quite easily. Executive processes and the agencies that perform them are nearly always more complex than anticipated beforehand. Executive government bodies also regularly come under fire. We must realise, however, that only a small proportion of the total number of bodies are usually involved, and that media attention in fact usually involves a strong magnification of the problems (Van Thiel, 2008).

Network outcomes: a battle of values

Regrettably, things do not work as simply with the more complex decision-making processes. In these kinds of processes, it is often not very clear what a good outcome is, or which criteria should be used to assess a good outcome.

The reason for the fact that univocal criteria for good outcomes are not easily defined has to do with the conflict of values in complex policy issues that we mentioned earlier. In environmental decision-making processes for instance various values clash with one another. Here, transport values conflict with liveability values, economic values and environmental values. All these different values are represented by different actors, who all want to be involved in the decision-making process. There is nothing illegitimate

---

[2] A policy proposal in this view is better when (see Kloppenjan & Klijn, 2004):

- more of the actors involved are content with the proposal (*satisfying* criterion, see also Teisman, 1992);
- later versions of the proposal are more capable of incorporating criticisms of earlier versions (intrinsic quality);
- the proposal does not charge the costs of the solution unilaterally outside the actors involved/the network.

about this, because it is a part of a mature democracy in which actors can articulate their interests and where decision-making is a relatively open process.
Thus the decision-making process in governance networks itself is a quest for solutions and the collection of the necessary information to be able to do so. It is an attempt to unite the various values with one another (Klijn, 2008). This means that we can only judge the outcomes of complex processes in networks by checking if a good attempt was made to combine the various values. This usually has to be done through the process itself. Only there do actors learn about the possibilities, does new information become available, and where creativity is required, because many different parties must be satisfied.
If interesting social content and outcomes are developed during the decision-making process, the idea of a common interest literally has become an empty concept, and something that can only refer to the generally accepted ways in which we have organised our actions (such as the general principles for good management, an open and accessible process, etc.). Policy proposals should be able to be justified and withstand criticism in a sound open democracy. They have to be capable of acquiring support from a solid coalition of actors, and this can be achieved by taking the interests of the parties involved into account when developing solutions and connecting them with one another. A healthy distrust of actors who appeal to the common interest seems appropriate.

A conceptualization of outcomes in governance networks
So our first step in the conceptual model is to address the problem of outcomes and how to measure them. There has been much discussion in the governance literature on how to measure outcomes of complex decision-making processes in networks. The main conclusion is that measuring these outcomes is a difficult task. One of the reasons for this is already mentioned in the previous section: that actors favour different values and this have different goals and it is thus difficult to pick a single goal by which to measure outcomes for these processes. Measuring outcomes is also problematic because decision-making processes in governance networks are lengthy and the goals of actors are likely to change over time. Goal displacement is the negative term for this phenomenon; learning the positive term (see Koppenjan and Klijn 2004).
Another problem our research encountered is that it is not possible to assess the 'objective' outcomes (realized dwellings, infrastructure, time of decision-making, and so on) of the wide variety of projects mentioned by the respondents. This paper addresses this problem by using perceived outcomes as a proxy for these outcomes and by using more than one criterion to measure them. This is in keeping with the fact that goals change and that actors have different views about the outcomes. A distinction has been made between content outcomes (the innovative character, cost efficiency, and so on) and process outcomes (managerial effort, support of the stakeholders involved). This distinction is also used by other scholars on governance networks where, besides 'hard performance' criteria that are more content oriented (like efficiency, whether solutions solve problems at hand etc.), a wide variety of other measures are mentioned for evaluation (see, for instance, Skelcher *et al*. 2005), including measurements that include stakeholder support and democratic anchorage (Klijn and Skelcher 2007; Sørensen and Torfing 2007). For this paper we used a combination of content and process outcomes since our interest is in the broad social outcomes..

The content outcomes are characterized by a number of aspects derived from the literature on governance networks and network management.

Combining a large amount of literature we distinguished several types of outcomes. For this paper we used 9 types of outcomes being:
1. *innovation*; the innovative character of outcome: the way in which the project showed innovative results (see Nooteboom 2002);
2.*integrated solution*; the integrative aspect of the solution, that is, the way in which the plan represents different environmental functions (housing, recreation, and so on) (see De Jong and Edelenbos 2007).
3.*content contribution of stakeholders*; the recognizable contribution made, which refers to the impact of the involvement of the stakeholders in the decision-making process (see Edelenbos and Klijn 2006);
4. the *problem-solving capacity* of results. This is the extent to which the solutions really address the problem (see Innes and Boohler 2003);
5.*Robusstness*; the robustness of the results, that is, the future robustness (time frame) of the results (see Koppenjan and Klijn 2004);
6. *Efficiency*; the relationship between the costs and benefits of results from governance networks. This element ensures that the costs of the plan do not overrun the benefits of a project (see Mantel 2005).
7. *conflict resolution*; the way in which conflicts have been averted and/or solved (Süsskind and Cruikshank, 1987).
8. *Network building*; this outcomes looks at frequency of contacts that have been established between the actors (c.f. Meier & O'Toole, 2001).
9. *Support*; the support for results coming from governance networks. This refers to the extent to which stakeholders are satisfied with the results achieved (c.f. Koppenjan and Klijn, 2004).

With these criteria we have 9 possible dimensions of outcomes that can be judged in decision-making processes in networks. We will consider outcomes of governance networks more broader (or maybe more varied is a better term) when they satisfy more of these dimensions. It is now time to turn to our dependent variables: stakeholder involvement, network management and trust. We start with stakeholder involvement.

governance as organizing stakeholder involvement
There is a lot of literature that stresses the impact of stakeholder involvement and its supposed beneficial results for outcomes, both in terms of raising the quality of policy proposals and enhancing the support for decisions. The literature on participation for instance stresses that involvement of stakeholders and enhances both the support for policy proposals and raises the quality of the decisions made because more information is becoming available (see: Berry et al, 1993; McLaverty, 2002). A similar argument can also be found in the literature on new forms of democracy that stresses the importance of openness and accessibility (Dryzek, 2007).
Similar lines of reasoning can be traced in many studies on governance networks and policy discourses (see Fischer, 2003; Hajer and Wagenaar 2003). Wicked problems in networks need involvement of many actors because they are difficult to tackle and

therefore much knowledge is needed from various sources (Koppenjan and Klijn, 2004). This argument resembles other arguments in favour of stakeholder involvement that stress the plurality and diversity of governance processes in governance networks (Jessop, 1998). This is not only desirable from a normative point of view but also increases the possibility that many interests are weighted in the process and that the problem definition accepted and used in the process is wider. This also prevents that the chosen problem definition at the start and the considered solutions are fixed at the beginning (Fischer, 2003). Since governance processes in governance network tend to take a long time and often show unexpected developments both problem definitions and possible solutions tend to change also. Early determination then is not very productive to solve complex issues in governance networks (see also Hajer and Wagenaar 2003; Fischer, 2003).

But besides these argument about a supposed higher quality of the decisions, either because more information becomes available, better problem definitions are chosen or a larger variety of solutions are looked at, one can often find a simple argument of power. Because some stakeholders have veto possibilities including them in the decision-making process will simply reduce the veto power in that process (see Young, 2000). Although, research has also shown that stakeholder support grows if stakeholder input leads to a follow up in formal decision-making (Edelenbos et al, 2006).

Although one can find a substantial amount of literature that stress difficulties in the relation between governance networks and traditional democracy, one cannot find much literature that stresses negative impacts of stakeholder involvement per se. Critics either point out to the tension between or even the threat of governance networks to traditional democratic institutions (see for instance the classical literature on iron triangles (Cobb and Elder, 1972), but also others observe possible tensions or point at the risk of lack of openness of these networks resulting in the possible domination of certain stakeholders (see for instance Klijn and Koppenjan, 2000; Edelenbos, 2000; Sorenson, 2002). The last criticism is actually a plea for more stakeholder involvement, to open up governance networks. Only the argument about the tensions between governance networks and democratic institutions could be viewed as an argument that more stakeholder involvement will lead to worse outcomes.

Thus the dominant opinion in recent literature, certainly in the governance network literature, seems to be that stakeholder involvement is good for decision-making processes in governance networks. More involvement of stakeholders has a positive effect on the outcomes in governance networks, either because it creates variety or because it leads to broader support for decision-making. Therefore we expect stakeholder involvement to relate positively to outcomes and also to the varied character of outcomes:

> *H1*: *More intense stakeholder involvement within governance networks around environmental projects will lead to the achievement of more varied outcomes of these networks.*

The second step is the conceptualize the importance of trust in networks.

governance as vehicle for finding solutions: building trust and finding solutions

Where in other perspectives like the New Public Management trust is not important since performances are achieved by contracts, performance indicators, penalties and monitoring, trust is important in governance processes. In complex decision-making processes trust is a means to cope with complexity, because vertical means of control are difficult to use because of the interdependencies (Lane and Bachman, 2001). Trust becomes an important coordination and interaction mechanism (Edelenbos and Eshuis, 2009). However trust is not easily achieved since it requires intensified interaction and has to be build.
Trust refers to a positive expectation that other actors refrain from opportunistic behaviour even when they have the opportunity to do so (see e.g. Edelenbos and Klijn, 2007). Trusting another actor means that one is willing to assume an open and vulnerable position. One expects the other actor to refrain from opportunistic behaviour even if the opportunity for it arises without having any guarantee that the other party will indeed act as expected (Deakin and Michie, 1997; Deakin and Wilkinson, 1998). Thus, the actor believes and expects that the other actor will take both actors' interests into account in the interaction processes (Rousseau et al., 1998; Nooteboom, 2002). Trust is thus an important asset in governance networks to facilitate governance processes.

Trust is an asset in governance for various reasons if we look at the literature on trust. The first argument concerns the *reduction of transaction* costs. In a situation where one actor assumes good intentions on the part of the other, the likelihood of unexpected interactions as a consequence of opportunistic behaviour are smaller. Given the complexity of decision-making and interactions in governance networks, this could be a significant advantage. On the other hand, trust can also serve to reduce cost that are connected with contracts because contracts need less details and specifications when trust is present (Hindmoor, 1998; Sako, 1998; Ring and Van de Ven, 1992; Nootenboom, 1998). This could also be an advantage in governance networks, given the costs of complex cooperation processes (Agranoff and McGuire, 2003).
A second argument is that trust increases the probability that *actors will invest their resources*, such as money, knowledge, and so on, in cooperation, thus creating stability in the relationship and providing them with a stronger basis for cooperation (Sako, 1998; Parker and Vaidya, 2001; Nooteboom, 1998; Ring and Van de Ven, 1992; Nooteboom et all., 1996). The complexity of decision-making and the multiplicity of actors require investments in forming and maintaining relations (Agranoff and McGuire, 2003). Trust can stimulate that investment and the effort actors put in those relations.
A third argument in the literature is that trust stimulates *learning and the exchange of information and knowledge*. A similar observation can be made on the importance of learning (Lundvall, 1993). Learning and discovering new things requires knowledge exchange and intensive interaction. These types of knowledge exchange require a minimum amount of trust, since drawing up a contract in such a network is far too costly, especially given the limited means of such companies (compare Graber, 1993; Parker and Vaidya, 2001). Most of the literature on governance and governance networks also emphasizes the importance of learning processes in which actors not only exchange information but also learn from each other the particular new solutions that satisfy their interests (Rein and Schon, 1994; Hajer and Wagenaar, 2003).
A fourth argument is that trust has the ability to *stimulate innovation*. Trust can facilitate

innovation by reducing uncertainty about opportunistic behaviour and making vertical integration less necessary (Parker and Vaidya, 2001). This argument is interesting for governance networks, because empirical research shows that vertical integration is hardly an option in these networks (Koppenjan and Klijn, 2004; Marcussen and Torfing, 2007). That means that trust as a horizontal coordinating mechanism is one of the few options left for innovation.

Thus trust tends to reduce (strategic) uncertainty, enhances the exchange of information and the creation of innovative solutions and solidifies cooperation. We expect te level of trust in governance networks be positively related to outcomes and also to the variety of outcomes. But we also expect that if more stakeholders are involved the level of trust will go up. More stakeholder involvement will create the possibility for more intensive interactions and trust the chance that trust relations are build.

H2: A higher level of trust in governance networks will lead to the achievement of more varied outcomes in governance networks

H3: A higher level of stakeholder involvement in governance networks will lead to a higher level of trust in governance networks

Solutions and trust are fostered by network management
Since cooperation and the coordination of goals and interests, but also the generation of trust do not occur on their own accord in governance networks, it is necessary to steer interactions in policy games within networks. The deliberate attempt to govern processes in networks is called network management (Gage and Mandell, 1990; Kickert et al., 1997; Meier and O'Toole, 2001). Network management aims at initiating and facilitating interaction processes between actors (Friend et al., 1974), creating and changing network arrangements for better coordination (Rogers and Whetten, 1982; Scharpf, 1978) creating new content by exploring new ideas for instance (Koppenjan and Klijn, 2004) and guiding interactions (Gage and Mandell, 1990; Kickert et all., 1997).
The (implicit) assumption in the literature is that a satisfactory outcome is often impossible without network management (Gage and Mandell, 1990; Agranoff and McGuire, 2001; Kickert et all, 1997).

Network management is necessary most importantly because of the complexity of policy making and service delivery since, in order to achieve interesting results, a wide variety of actors and policy levels have to be connected. As Agranoff and McGuire (2003: 123) conclude in their study on how city officials work with other layers of government and organizations to develop their city economics: "From the perspective of the city government, there is not one cluster of linkages to manage but several clusters- some horizontal some vertical, and some that include both within a context of a single project or program".
In comparing two cases in Denmark, Sorensen (2007: 107) concludes that: "The case study of the meta-governance of two networks in Skanderborg suggests that it is an open question whether or not governance networks can become efficient co-producers of public governance. It depends very much on the ability of public authorities to perform

competent meta governance". Other authors, such as Agranoff and McGuire (2003), Edelenbos and Klijn (2006) and Le Gales (2001), have also stressed the importance of network management activities in the achievement of interesting outcomes. Edelenbos and Klijn (2006: 436) concluded after comparing 6 interactive decision-making cases that: "Our findings on these six case studies do, however, provide a good impression of the importance of good process management for the success of interactive decision-making processes.

These findings in case studies are also confirmed by large N studies on network management and outcomes of governance networks although these are not very numourous. Huang and Provan (2007) have shown that network involvement, or network embeddedness, is positively related to social outcomes. Meier and O Toole (2001), in well-known studies on educational districts in Texas, have shown that networking by district managers is positively correlated with the performance of the district.

Thus more active network management strategies leads to more interaction and coordination which fosters both trust and the achievement of satisfactory and broader outcomes. But we also assume that more active network management will enhance the level of trust, since trust has to be build during interactions. Network management probably also has positive influence on stakeholder involvement.

H4: If more network management strategies are employed in governance networks, this will lead to the achievement of more varied outcomes in these governance networks.

H5: If more network management strategies are employed in governance networks, this will lead to the achievement of a higher level of trust in these networks.

Conclusion: the theoretical framework

So now we have a theoretical conceptual framework on governance networks where both stakeholder participation and trust (=independent variable) have a positive influence on outcomes and the diversity of these outcomes (=dependent variable). Network management as independent variable is supposed to influence both stakeholder involvement and trust and outcomes. In the next section we discuss the research design to answer the assumptions and hypotheses we have developed so far.

3. Methodology of the research

The analysis in this article uses data that was collected from a web-based survey between late 2006 and early 2007. The respondents were involved in environmental/spatial projects in the Netherlands. A major challenge with such a survey is that a combined list of all environmental projects does not exist, let alone a list of all individuals involved in such projects. To acquire the e-mail addresses of the people involved in relevant projects, we relied on the database of Habiforum. Habiforum is a knowledge network based in The Netherlands made up of professionals from the spatial domains. It was established in 1999 and incorporates practitioners (from the government, NGOs, water boards, project developers and builders etc), scientists and consultants (most of whom are involved in

environmental projects).[i] More information on the sample and its characteristics can be found in the Appendix. In this section, we discuss whether these projects can be regarded as governance networks, and how the main variables are measured.

The nature of the projects: are they governance networks?
The first question to be answered has to do with the nature of the projects the respondents were involved in. Based on the three characteristics of networks mentioned in the introduction, we can conclude that these projects match the criteria:

- *Many actors involved and frequent contact between them*: the average number of actors whom respondents have contact with is 12. The standard deviation is 4.8, which is high. This is mainly due to the fact that there are some respondents with only a few contacts. However, 90% of the respondents do have regular contact with at least 6 or more actors and 70% with at least 9 or more actors. The frequency of contact is also fairly high.
- *Existence and stability over time*: On average, each project takes more than 10 years to be completed (see Table 1). Most respondents gave projections for this figure, however, and it is widely known that projects often take longer to complete than estimated. This indicates that these networks endure;
- *Complex issues*: Most of the projects involve various environmental functions (see Table 1) which make the decision-making process complex.

Table 1. Characteristics of the projects of the sample (N=337)

Project includes		
Building houses	60.8%	
Building business terrain	30.3%	
Mean number of different activities (maximum 6)	2.98	Includes: houses, business terrain, water development, environmental development and commercial development
Median pass-through time period of the project (time it takes for a project from development to implementation)	10 years	
Average number of contacts of respondent	11,78	All other organisations with whom respondents have contact in the project

Thus, it can be concluded that the environmental projects included in the survey can be seen as governance networks.

Measuring the variables
Table 2 gives a short overview of the measurement of our main variables. While most of these are elaborated after the table, the details of some of the variables are found in the Appendix.

Table 2. Short description of measurement of main variables

Variable	**Nature**	**Conceptualization and measurement**
Trust	Independent variable	Five items, frequently used in literature on trust. Items were summed and dived by 5
Perceived Outcomes	Dependent variable	Nine items. each item that were summed and divided by 9 to construct two scales (see appendix)
Project complexity	Control variable	Number of different activities (housing, road development etc). Ranging from 0-6

Network management strategies (number of strategies used in the project)	Independent variable	16 items measuring managerial activities divided into four subcategories (arranging, process agreements, connecting, exploring content). The 16 items were dichotomized summed to develop a measure of the number of strategies (range 0-16).
Stakeholder involvement	Independent variable	Two items measuring amount of stakeholder involvement.
Phase of project	Control variable	Several types of activities that are performed in the project (see appendix)
Parent organization of respondent	Control variable	Organizational background of respondent (see appendix)
Position in project (managerial position)	Control variable	The position of the respondent in the parent organization's hierarchy (see appendix)
Years of experience	Control variable	Number of years respondent has experience in environmental projects (see appendix)

Conceptualizing and measuring outcomes

As said we developed nine dimensions to measure outcomes. Table 3 provides the items for the nine dimensions..

Table 3. Measurement of variety of outcomes

Type of outcome	**Item**
1. Innovation	Do you think that innovative ideas are developed during the project
2. Integrated solution	Do you think that different environmental functions have been connected sufficiently?
3. Content contribution of stakeholders	Do you think that in general the involved actors have delivered a recognizable contribution to the development of the results?
4. Problem solving capacity	Do you think that the solutions that have been developed really deal with the problems at hand?
5. Robustness	Do you think that the developed solutions are durable solutions for the future?
6. Efficiency	Do you think that - in general - the benefits exceed the costs of the cooperation process?
7. conflict resolution	Do you think that conflicts and differences of opinion have been solved adequately during the project
8. contact frequency	Do you think that the involved actors had frequently contact with each other during the project?

9. support	Do you think that the results from the project can expect the support of the involved actors?

In the survey each item was measured by a five category Likert variable. A reliability analysis showed that the nine items form a strong scale together (Cronbach alpha = 0.87). As we in this paper are measuring the variety in outcomes as dependent variable, we have dichotomized each item measuring whether or not a specific outcome has been achieved. The resulting dichotomized items are added, resulting in a variable ranging from 0 (no achieved outcomes) to 6 (all possible outcomes achieved).

The results show that on average the respondents identify 6.28 outcomes, with a standard deviation of 2.39. Of the respondents, 19.6% perceive all six possible outcomes as achieved and only 3% have the opinion that none of them has been achieved.

Stakeholder involvement

To measure the extent of stakeholder involvement in the projects, two five category Likert items were used.

1. Decision-making processes for this project are accessible for all stakeholders
2. During the decision-making process much responsibility was given to direct involved stakeholders and outsiders.

The two items were highly correlated (cronbach: 0.64) and they were summed and divided by two which gave us a single measure for stakeholder involvement.

Trust

Many authors have used trust as a concept in their research, with many of them coming from a background of business or organizational studies, not public administration. To measure trust within the network, we used five items derived from this literature. One item (benefit of the doubt) is a fairly generic item and refers to the fact that 'giving the benefit of the doubt' is an important characteristic of trust (see Rousseau et al, 1998; Sako 1998). The other four items are frequently mentioned in the literature. This especially holds for these three items: goodwill trust, agreement trust and absence of opportunistic behaviour. Sako's work (1998) is critical in this respect. She distinguishes between contractual trust (will the other party carry out its contractual agreements), competence trust (is the other party capable of doing what it says it will do?) and goodwill trust (will the other party make an open-ended commitment?). However, we do not consider competence trust to be a dimension of trust. Instead, we argue that competence can cause trust but is not part of trust itself. We substitute contractual trust with agreement trust, because, in many of the governance networks we studied, either few formal contractual arrangements were made or projects were in a preliminary phase where contracts had not been signed. Agreements and the way individuals abide by them is a reasonable 'proxy' for contractual trust. According to Sako, goodwill trust is based on the idea on fairness. Goodwill trust and contractual trust can be found as dimensions of trust in the work of many other researchers, although sometimes different terms are used (Lane and Bachman, 1998; Deakin and Michie, 1996; McEvily and Zaheer, 2006).

Sako also notes that the absence of opportunistic behaviour is a requirement for the development of trust. This point has also been made by others. Nooteboom (2002), for instance, calls this trust in loyalty and sees it as a dimension of trust. Other authors argue that trust means that actors do not exploit other actors' vulnerability (Rousseau et al, 1998; Nooteboom, 2002; Deakin and Wilkinson, 1998). Thus, it seems logical to use these three dimensions: goodwill, agreement, and an absence of opportunistic behaviour.
To these three, we added the notion of reliability, which McEvily and Zaheer (2006:88) called "the degree of consistency in intended behaviour and the expectation that an exchange partner can be relied on to fulfil obligations". Trust may be defined as confidence in the reliability of a person or system, regarding a given set of outcomes or events. Five items were chosen to measure trust, as shown in Table 4.

Table 4: Measurement of trust

Measurement	Item
1. Agreement trust	The parties in this project generally live up to the agreements made with each other
2. Benefit of the doubt	The parties in this project give one another the benefit of the doubt
3. Reliability	The parties in this project keep in mind the intentions of the other parties
4. Absence of opportunistic behaviour	Parties do not use the contributions of other actors for their own advantage
5. Goodwill trust	Parties in this project can assume that the intentions of the other parties are good in principle

The Cronbach's alpha of these five items is 0.73, indicating that they can be seen to form a single 'Trust' scale. The items were recoded, added up and divided by 5. Thus, a higher score on this scale implies a higher degree of trust. The mean score on the scale is 3.47 (standard deviation 0.56), implying a moderate degree of trust between the partners.

Issue complexity
The number of environmental aspects present in a project was used as an indicator of issue complexity. Six different aspects were identified and respondents were asked whether these aspects were part of the project: the building of houses, industrial development, commercial development, environmental development, road development and water management (compare table 1). This resulted in a complexity scale ranging from 0 to 6. On average, each project involved 2.98 activities; however, the figure varied significantly as the standard deviation was 1.59.

Network management strategies: number of strategies
Another important variable in our analysis is network management. We constructed 16 items (see appendix) that measured network management activities (and we distinguished 4 types so that we had four items for each type). We first dichotomized the responses to the sixteen items that represent the different strategies used, and then counted the number of strategies that were actually used in the project. The resulting variable ranges from 0 (3.6% of the respondents) to 16 (6.3%), with a mean number of 9.11 strategies used (standard deviation: 4.18).

4. Stakeholder participation, trust management and outcomes in governance networks

To explore the relation between the independent variables network management, trust and stakeholder participation and outcomes we first performed a correlation analysis. We also include an extra variable in this correlation analysis issue complexity. This is because we suppose that issue complexity has impact on both trust and stakeholder involvement.
The results of the correlation analysis are shown in table 5. As we can see strong correlations exists between the three independent variables and outcomes. The relation between stakeholder involvement and trust is the weakest.

Table 5: correlations between trust, stakeholder involvement, network management and outcomes

		Variety outcomes	Issue complexity	stake_involv	Trust	Network management strategies
Variety outcomes	Pearson Correlation	1	.013	.511	.579	.627
	Sig. (2-tailed)		.843	.000	.000	.000
	N	235	235	235	230	216
Issue complexity.	Pearson Correlation	.013	1	-.054	-.112	-.006
	Sig. (2-tailed)	.843		.345	.068	.932
	N	235	318	311	265	224
stake_involv	Pearson Correlation	.511	-.054	1	.404	.589
	Sig. (2-tailed)	.000	.345		.000	.000
	N	235	311	314	266	224
Trust	Pearson Correlation	.579	-.112	.404	1	.505
	Sig. (2-tailed)	.000	.068	.000		.000
	N	230	265	266	266	221
Network management strategies	Pearson Correlation	.627	-.006	.589	.505	1
	Sig. (2-tailed)	.000	.932	.000	.000	
	N	216	224	224	221	224

Network management, stakeholder involvement and achieving varied outcomes
To refine the analysis we firstly performed an regression analysis with the number of network management strategies and stakeholder involvement as independent variable and the achievement of varied outcomes as dependent variable. The results are shown in table 6 below. As we can see we strong relations exist between the two independent variables and outcomes. This confirms hypothesis 1 and 4 which assumed relations between stakeholder involvement and varied outcomes (hypothesis 1) and network management

and outcomes (hypothesis 4). The last relation is very strong. Also interesting is that the explained variance is fairly high (.416!).

Table 6. achieved variety of outcomes and network management and stakeholder involvement

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(Constant)	.774	.834		.928	.354
ontwikkeling	.542	.345	.112	1.570	.118
uitvoering	.456	.407	.076	1.120	.264
beheer	.836	.403	.144	2.076	.039
lokaalp	.157	.541	.030	.290	.772
privaatp	.083	.518	.018	.160	.873
anderp	-.199	.592	-.030	-.337	.737
Experience respondent	.017	.016	.060	1.069	.287
complexity	.042	.089	.025	.466	.642
Stake holder involvement	.579	.181	.215	3.205	.002
Number strategies	.269	.039	.475	6.991	.000

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667(a)	.444	.416	1.80608

We wanted to know how our two independent variables network management and stakeholder involvement are connected with the other independent trust. For that we performed a regression analysis with trust as dependent variable and the number of network management strategies and stakeholder involvement as independent variables. To our surprise (see table 7) stakeholder involvement is not significant related to trust. Network management is, but that is no surprise to us (see Klijn et al 2010). So trust is influenced by network management but not by stakeholder involvement. This confirm our hypothesis 5. But we have to reject hypothesis 3.

Table 7. Regression analysis with trust as dependent variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.594	.226		11.464	.000
	ontwikkeling	.109	.093	.092	1.172	.243
	uitvoering	.038	.109	.026	.352	.725
	beheer	-.081	.107	-.058	-.758	.450
	lokaalp	.343	.139	.271	2.468	.014
	privaatp	.236	.133	.206	1.783	.076
	anderp	.271	.156	.160	1.737	.084
	Experience respondent	.004	.004	.053	.851	.396

	complexity	-.049	.024	-.121	-2.015	.045
	Stake holder involvement	.040	.050	.060	.800	.425
	Number strategies	.061	.010	.445	5.863	.000

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.552(a)	.304	.269	.49258

Varied outcomes explained: the whole model

Now it is time to look at the outcomes of our theoretical model as a whole. The results of the regression analysis are presented in table 8 below. As we can see the explained variance went up to .514 which is quite high. Thus adding trust as an independent variable enhances the total explained variance of the model. All tree variables have effect on outcomes but the effect of trust is the most significant. As we can see the effect of network management strategies on the achieved variety of outcomes has diminished a bit because we added trust as an extra independent variable. The effect of stakeholder involvement only decreases marginally which supports the fact that this variable has no effect on trust. The effect on outcomes is directly.

Table 8 achievement of varied outcomes, trust, management strategies and stakeholder involvement

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-3.204	.996		-3.216	.002
	(phase) development	.365	.318	.075	1.148	.252
	implementation	.383	.375	.063	1.022	.308
	maintenance	.922	.370	.159	2.493	.014
	Local =respondent)	-.312	.501	-.060	-.623	.534
	Private	-.222	.476	-.047	-.466	.642
	other	-.550	.553	-.080	-.996	.321
	Experience respondent	.011	.014	.038	.738	.462
	complexity	.115	.083	.070	1.383	.168
	stake_involv	.512	.170	.188	3.021	.003
	trust	1.529	.240	.376	6.373	.000
	Number of strategies	.175	.038	.308	4.546	.000

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,735[a]	,540	,514	1,65284

a. Predictors: (Constant), strategie, ontwikkeling, aantal verschillende activiteiten - bedrijf, groen, huizen, e.d., anderp, 11.) ... jaar, lokaalp, uitvoering, L59 to L63 alpha 0.73, stake_involv, beheer, privaatp

So as we can see the achievement of varied outcomes in governance network is very strongly correlated to the three variables in our theoretical model: network management strategies, stakeholder involvement and trust.

6. Conclusions

Governance network usually are used in solving wicked problems. That is not very strange since the characteristics of wicked problems is that they involve many actors with various values, goals and perceptions on the problems. Thus we find ourselves in governance networks, networks of more or less interdependent actors attached to problems or resources available to solve these problems.
It is not easy to solve these problems by hierarchical control although elements of hierarchy are almost always present in governance networks. Especially since various actors often emphasize different values, problem definitions and solutions. this means that in governance network the search is really for combining solutions and values thus striving for varied outcomes that satisfy various values advocated by different actors.

We have seen that these varied outcomes are achieved according to our research material when governance networks are characterized by high stakeholder involvement, by high level of trust and intense and many network management. The network management strategies also have positive effect on the level of trust and on the stakeholder involvement.
Thus reaching varied outcomes very much is a matter of agency, active building consolidating and managing the network.

References

Agranoff, (2007), Managing within networks; adding value to public organizations, Washigton D.C: Georgetown University Press

Agranoff, R., M. McGuire, (2001), Big questions in public network management research, Journal of Public administration research and Theory, vol 11 (2001), no. 3: 295-326

Agranoff, R. and M. McGuire (2003) *Collaborative Public Management; new strategies for local governments*, Washington, D.C.: Georgetown University Press.

Bekkers, V., G. Dijkstra, A. Edwards, M. Fenger (2007), Governance and the democratic deficit; assessing the democratic legitimacy of governance practices, Aldershot: Ashgate

Berry, J.M., K.E. Portney & K. Thomson (1993) *The Rebirth of Urban Democracy*, The Brookings Institution, Washington DC.

Cobb, R.W. and C.D. Elder (1972), *Participation in American politics: the dynamics of agenda-building*, Baltimore: Johns Hopkins University Press.

De Jong, M. & J. Edelenbos, 2007, An insider's look into policy transfer in trans-national expert networks. in: *European Planning Studies*, vol.15(5), pp.687-706.

Deakin, S., J. Michie (eds.), (1997), Contract, Co-operation, and competition; studies in economics, management and law, Oxford: Oxford University Press

Deakin, S., F. Wilkinson, (1998), Contract law and the economics of interorganizational trust, in: Lane and Bachman (eds.), 1998

De Jong, M. & J. Edelenbos, 2007, An insider's look into policy transfer in trans-national expert networks. in: *European Planning Studies*, vol.15(5), pp.687-706.

Dryzek, J. S. (2007). Networks and Democratic Ideals: Equality, Freedom, and Communication. *Theories of democratic network governance.* in E. Sørenson and J. Torfing. London, Palgrave.

Edelenbos, J, & E.H. Klijn (2006), Managing stakeholder involvement in decision-making: a comparative analysis of six interactive processes in The Netherlands, Journal of Public Administration Research and Theory, vol. 16 (3): 417-446

Edelenbos, J & E.H. Klijn (2007) Trust in Complex Decision-Making Networks: A Theoretical and Empirical Exploration, in: *Administration and Society*, vol.39(1), pp.25-50**.**

Eeten, M. van, (1999), *Dialogues of the Deaf. Defining New Agendas for Environmental Deadlocks*, Delft: Eburon

Fischer, F. (2003). *Reframing public policy; discursive politics and deliberative practices*, Oxford: Oxford University Press.

Gage, R.W., M.P. Mandell (eds.), (1990), Strategies for managing intergovernmental policies and networks, New York/London: Preager

Goldsmith, S. and W.D. Eggers (2004) *Governing by Network – The New Shape of the Public Sector*, Brookings Institution Press, Washington.

Hajer, M. and Wagenaar, H. (eds.) (2003) *Deliberative policy analysis; understanding governance in the network society*, Cambridge: Cambridge University Press.

Hanf, K.I. and F.W. Scharpf (eds.) (1978) *Interorganizational Policy Making: Limits to Coordination and Central Control,* London: Sage.

Hanf, K.I. and Th.A.J. Toonen (eds.) (1985) *Policy Implementation in Federal and Unitary Systems*, Dordrecht: Nijhoff.

Hindmoor, A., (1998), The importance of being trusted: transaction costs and policy network theory, Public Administation, vol 76, spring (pp. 25-43)

Huang, K., K.G. Provan (2007), Structural embeddedness and organizational social outcomes in a centrally governed mental health service network, Public Management Rieview, vol 9 nr.2: 169-189

Innes, J.E. and D.E. Booher (2003) Collaborative policymaking: governance through dialogue, in: Hajer, M.A. and H. Wagenaar (eds.) *Deliberative policy analysis. Understanding governance in the network society*, Cambridge: Cambridge University Press

Jessop, B., (1998). *The rise of governance and the risk of failure.* Basil Blackwell, Oxford.

Kaufmann, F.X., G. Majone and V. Ostrom (eds.) (1986) *Guidance, Control and Evaluation in the Public Sector: The Bielefeld Interdisciplinary Project*, Berlin: Walter de Gruyter.

Kickert, W.J.M., E.H. Klijn and J.F.M. Koppenjan (eds.) (1997) *Managing complex networks; strategies for the public sector*, London: Sage.

Klijn, E.H., C.K. Skelcher (2007), Democracy and governance networks: compatible or not? Four conjectures and their implications, Public Administration, vol 85, no 3,2007: 1-22

Kooiman, J. (ed.), (1993). *Modern governance: new government-society interactions*. Sage, London.

Koppenjan, J.F.M. and E.H. Klijn, Managing uncertainty in networks, Routledge: Londen

Kramer, R.M., T.R. Tyler (eds.), (1996), Trust in organizatons; frontiers of theory and research, Thousand Oaks: Sage

Lane, C., R. Bachman (eds.), (1998), Trust within and between organizations; conceptual isues and empirical applications, Oxford: Oxford University Press

Laumann, E.O. and D. Knoke (1987) *The Organizational State: Social Choice in National Policy Domains*, Wisconsin: University of Wisconsin Press.

Lewicki, R.J., B.B. Bunker, (1996), Developing and maintaining trust in work relationships, in: Kramer, R.M. en T.R. Tyler (eds.), Trust in organizations; frontiers of theory and research, Thousand Oaks: Sage, (pp. 114-139)

Lowndes, V, L. Pratchet, G. Stoker (2001), Trends in public participation: part 1 local government perspectives, *Public Administration*, 76 (2): 205-222.

Lyons, B, J. Metha, (1997), Private sector business contracts: the text between the lines, in: Deakin/Michie (eds.), (1997) (pp. 43-66)

McEvily, B., A.Zaheer (2006), Does trust still matter? Research on the role of trust in inter-organisational exchange, in: R. Bachman, A. Zaheer (eds.) 2006, Handbook of trust research, Cheltenham: Edward Elgar Publishing

McLaverty, P. (ed.) (2002) *Public Participation and Innovations in Community Governance*, Ashgate: Aldershot

Le Galès, P. 2001. 'Urban governance and policy networks: on the boundedness of policy networks. A French case.' *Public Administration* 79, 1, 167-84.

Mandell, M.P. (ed.), 2001, Getting results trough collaboration, Westport: Quorum Books

Mantel, S.J. (2005, second edition). *Core concepts of project management*. New York: Wiley.

Marcussen, M. & J. Torfing (red.) (2007). *Democratic network governance in Europe*, Cheltenham: Edward Elgar.

Meier, K.J. and L.J. O'Toole (2001) 'Managerial strategies and behaviour in networks: a model with evidence from U.S. public education', in: *Journal of Public Administration and Theory* (11) 3: 271-293.

Meier, K. L.J. O'Toole (2007), Modeling Public Management: empirical analysis of the management-performance nexus *Public Administration Review, 9*(4), 503-527.

Milward H. Brinton, K.G. Provan, (2000), Governing the hollow state, Journal of public Administration Research and Theory, vol 10 no. 2 pp. 359-379

Nooteboom, B. (2002). *Trust: Forms, foundations, functions, failures and figures*. Cheltenhal:Edgar Elgar

Osborne, D. & T. Gaebler (1992). *Reinventing government. How the entrepreneurial spirit is transforming the public sector*, Reading (MA): Addison-Wesley.

O'Toole, L.J. (1988) Strategies for Intergovernmental Management: Implementing Programs in Interorganizational Networks, in: *Journal of Public Administration*, 11 (4): 417-441.

O'Toole, L.J. (1997), Treating networks seriously: practical and research based agendas in public administration, Public Administration Review, 57: 1 (pp. 43-57)

O'Toole, L.J., R.M. Walker, K. Meier, G. Boyne (2007), Networking in comparative context: Public managers in the USA and the UK, Public Management Review, vol 9, nr.3: 401-420

Parker, D., K. Vaidya, (2001), An economic perspective on innovation networks, in O. Jones, S. Conway, F. Steward (eds.), Social interaction and organisatonal change; aston perspectives on innovation networks, London: Imperial College Press

Pierre, J. and B. Guy Peters. 2000. *Governance, Politics and the State*. Basingstoke: Macmillan.

Rein, M. and D.A. Schön (1992) Reframing Policy Discourse, in: F. Fischer and J. Forester (eds.) *The Argumentative Turn in Policy Analysis and Planning*, Durham NC: Duke University Press.

Rhodes, R.A.W. (1988) *Beyond Westminster and Whitehall: The Sub-central Goverments of Britain*, London: Unwin Hyman.

Rhodes, R.A.W. (1997) *Understanding Governance*, Buckingham: Open University Press.

Ring, P.S., A. van der Ven, (1992), Structuring cooperative relations between organizations, Strategic Management Journal, vol 13, 483-498

Rittel, H.J.W. & M.M. Webber (1973). Dilemmas in a general theory of planning, *Policy Sciences, 4*, 155-169.

Rogers, D.L. and D.A. Whetten (eds.) (1982) *Interorganizational Coordination: Theory, Research, and Implementation*, Ames: Iowa State University Press.

Rousseau, D., S.B. Sitkin, R.S. Burt, C. Camerer, (1998), Not so different after all: a cross discipline view of trust, Academy of Management Review, vol. 23 (3): 393-404.

Sako, M., (1998), Does trust improve business performance? In Lane/Bachman (eds.)

Scharpf, F.W. (1978) *Interorganizational Policy Studies: Issues, Concepts and Perspectives*, in: K.I. Hanf and F.W. Scharpf (eds.): 345-370.

Skelcher, C., N. Mathur & M. Smith (2005). The public governance of collaborative spaces: discourse, design and democracy, *Public Administration, 83*(3), 573-596.

Sorenson E., J. Torfing (eds.) (2007), Theories of democratic network governance, Cheltenham: Edward Elgar

Sorensen, E. (2007), Local politicians and administrators as meta governors, in Marcussen and Torfing (2007): 89-108

Süsskind, L. and J. Cruikshank (1987) *Breaking the Impasse. Consensual Approaches to Resolving Public Disputes*. London: BasicBooks

Young, I.M., (2000). *Inclusion and Democracy*. Oxford University Press, Oxford.

Walker, R.M., L.J. O'Toole, K. Meier (2007), It's where you are that matters: the networking behaviour of English local government officers, Public Administration vol. 85, nr.2 :739-756

Williamson, O.E., (1996), The mechanisms of governance, Oxford: Oxford University Press

Appendix: conceptualizing and measuring the variables

This section provides a more detailed description of the survey and conceptualization and measurement of the variables that are used in our analysis.

Population and survey
Table 2 describes the population used for the survey, and the number of respondents who have returned a usable questionnaire.

Table 2. Population and Survey

Number of people on Habiforum List (after removing researchers)	1592
Returned questionnaires	547
Analyzed questionnaires	337

The original list contained 1592 names (after removing university researchers, since the interest was only in practitioners). An e-mail was sent in November 2006, with a (secured) link to a webpage containing the questionnaire. It was known beforehand that this list included many people with only a broad interest in spatial projects and without 'real' involvement in such projects. Therefore, one of the first questions in the questionnaire was about a specific project the respondents were involved in. It was meant to select only those respondents who are really involved in these projects. In total, 547 completed questionnaires were returned. Many of these, however, were incomplete.[ii] In fact, 188 people did not provide any information about a project they were involved in, and quit the survey after the questions about these projects began to be asked. Many of these respondents indicated in an open question that they were in fact not involved in such a project. These respondents were therefore deleted from the database. Another 22 respondents were also removed, because they were missing on most of the variables. This left 337 respondents who answered most of the questions in the questionnaire and indicated that they themselves were involved in environmental projects.
In relation to the number of e-mails sent, the response rate can be estimated to be 21%, although in relation to the number of people who are involved in environmental projects this response can be estimated to be substantially higher. The number of 188 incomplete questionnaires is an indication of the actual population, the following rough estimation of the actual response can be made: Of the 547 returned questionnaires, 188 or 34% are missing. If this same proportion holds for the total sample, then the actual number of people involved in environmental projects is 1056 (.66*1600). If this assumption is true, the actual size of the response is about 33% (347/1056). It is possibly even higher, as people not involved in environmental projects will probably not have bothered to take part in the survey
The above implies that care must be taken in interpreting the data, as: a) the actual population of people involved in environmental projects is unknown and b) it is therefore impossible to find out whether the response is representative of this population. However,

there is reason to believe that this sample provides a reasonable overview of all environmental projects in the Netherlands (see note 2).

Project complexity

In the second hypothesis, project complexity figures as a control variable. An environmental project was considered to be more complex when it dealt with more activities. Six different activities were identified: the building of houses, industry development, commercial development, environmental development, road development and water management (compare with Table 2). Based on the responses, we measured for each project whether one or more of these activities were performed. This resulted in a complexity scale ranging from 0 to 6. According to the mean score, the projects involved 2.98 activities on average, with a broad diversity given a standard deviation of 1.59.

Network management strategies

We constructed 16 items to measure network management straetgies (zie table below). Four types of activities were identified based on the available literature:

- arranging; this includes strategies to organize the interactions in governance networks in temporary organizational structures (first four items)
- exploring content; exploring different views of actors and possible new solutions, and connecting the ideas of different actors (items 4-8)
- connecting; securing contacts between actors, improving relations, etc (items 9-12)
- process agreements; agreements about process rules and methods of interaction between the actors (items 13-16)

Table: items for management strategies

1. The relevant public groups are involved via the organized forms of negotiation and discussion platforms
2. The relevant private groups are involved via the organized forms of negotiation and discussion platforms
3. The relevant civil action groups are involved via the organized forms of negotiation and discussion platforms
4. In every new phase of the project, new parties are sought out and, in this way, new connections are developed.
5. In this project, it has been attempted as much as possible to make different opinions visible and included within the decision making
6. In this project, there has been satisfactory attention on the exchange between different standpoints
7. In the collection of information, the emphasis in this project has been upon the development and establishment of common points of departure and information needs
8. There is satisfactory attention in this project on involving external parties who can bring new ideas and solutions
9. There is satisfactory time devoted to the communication between the different parties
10. The project leaders consult those implementing the project and include them in their decisions. It can be said that decision making occurs collectively
11. The project leaders in this project consider the relationships between parties and persons, what they are based upon, how they have developed and are developing

12. By deadlocks and problems in the project, the management seeks to bring the opposing interests closer together.
13. In the project, explicit agreements are made about the organizational form of cooperation (project groups, steering groups etc.)
14. In the agreements on the project, attention is devoted to (the rules for) managing conflict.
15. In the agreements on this project, room has been consciously built in for deviating from the plan, if this is of advantage.
16. The withdrawal of parties from the project has been made possible to protect their interests if necessary.

Project and respondent characteristics as control variables

The above variables measure the main concepts included in the hypotheses. In order to test these, several control variables were also included, with respect to both characteristics of the respondent as well as to relevant project characteristics.

Phase of the project

The projects the respondents discussed were not all in the same phase. This obviously influences perception on outcomes. For instance, almost by definition there will be fewer outcomes in the first phases of an environmental project. The respondents were not directly asked which phase they were in, but a number of activities were listed (from initiating ideas to implementation of actual maintenance activities) and the phase was deduced based on the level of activities respondents indicated they were involved in . Four different phases were discerned: 1) preparation phase (21%); 2) developmental phase (41%); 3) building phase (17%); 4) maintenance phase (21%).

Parent organization of the respondent

The respondents come from different backgrounds. As it is possible that this background influences the perception of democratic anchorage and/or the outcome perception, this is controlled for in the analysis. Four different background types can be discerned: 1) national civil servants (11%); 2) local civil servants (including counties and water board) (29%); 3) private sector respondents (48%); 4) 'others' (13%). The last group mostly included respondents from stakeholder organizations like environmental groups. In order to incorporate this variable into the analysis, three dummies were included. National civil servants serve as the reference category.

Position in project

The perception of outcomes can depend on the position of the respondent within the project. Given our interest in the effect of managerial strategies, in the analysis a dummy variable is included distinguishing those with a managerial position (28.8%) from those without.

[i] Habiforum has established itself as a fairly important network organization with many members. If we examine the projects that are mentioned by the respondents, than almost all of the well-known environmental projects in The Netherlands are represented (and of course a number that are less well-known), which gives confidence that this is a fairly reasonable sample of the available projects in The Netherlands

[ii] This is a normal situation with internet surveys since a number of people only glance through the questionnaire as they would have done if it was a paper version, and then decide that the survey is not relevant to them, or decide that they do not want to answer it. In this case, the fact that they had to answer the questionnaire for a specific project probably inflated the number of people who only filled in a very limited number of questions