

*I*ntegrative *S*ystems and the *B*oundary *P*roblem

Studying boundary judgments and their impacts

Space for water in physical planning: Constructing an inhabited retention area and a new river

Version October 6, 2008

Hans Bressers, Simone Hanegraaff and Kris Lulofs

October 2008



CSTM
Institute for Governance Studies
University of Twente
The Netherlands

Table of contents

1. Introduction	5
2. Creating an inhabited retention area: The case of North and South Meene	9
2.1 The issue	9
2.2 Processes and coupling	13
Crises and aftermath	13
Challenges to integrated decision-making	14
Working under pressure: no time to lose	16
2.3 Actors and their motivation, cognitions and resources affecting the process	17
The flood crisis	18
Planning and decision making	19
Construction	22
2.4 Boundary judgments and their impacts	23
Spatial aspects of the domain	24
Sectoral aspects of the domain	24
Temporal aspects of the domain	25
2.5 Layers of contexts	26
Specific inputs	27
Structural context	27
Wider contexts	29
2.6 Receptivity and its impacts	30
2.7 Managing complexity by boundary spanning	31
Grabbing opportunities	32
The scope of integration	32
Channelling demands	32
Costly resources	33
Getting the legal permission	33
3. Building a new river: The Breakthrough	35
3.1 The issue	35
3.2 Processes and coupling	37
Sharing ideas: initial plan development	37
Fear for nature	39
‘Hot land’	40
Detailing and presenting the plan	41
Gold rush	42
Bypassing the physical plan for the first trajectory	43
Nature against nature?	45
From planning to implementation: still issues to be resolved	46

3.3 Actors and their motivation, cognitions and resources affecting the process	47
Initial plan development	47
Detailing and presenting the plan.....	48
Dealing with physical planning in the first part of the trajectory	49
Dealing with physical planning in the second part of the trajectory	51
Getting funds.....	53
3.4 Boundary judgments and their impacts	54
Spatial aspects of the domain	54
Sectoral aspects of the domain.....	55
Temporal aspects of the domain	55
3.5 Layers of contexts	56
Specific inputs	56
Structural context	56
Wider contexts	58
3.6 Receptivity and its impacts	58
3.7 Managing complexity by boundary spanning	59
4. Comparison, convergence and conclusions	62
4.1 Two cases compared	62
4.2 Five intervention points for convergence mechanisms ..	62
Actors and arena's	63
Cognitions	63
Motivation.....	64
Resources	64
4.3 Conclusion: "Do's, don'ts and dilemma's"	65
Do's	65
Don'ts.....	66
Dilemmas	66
References	68

1. Introduction

After long periods during which water management implied working against nature, to ensure 'progress' for mankind, in the last one or two decennia there has been a remarkable paradigm shift. Several European countries, including the Netherlands experienced floods and risky high waters, caused by rivers. Though further improving dikes and embankments has typically been a first response, it has also lead to a reconsideration of the basic underlying principles of water management. In stead of only containing rivers, the new paradigm seeks to make maximum use of opportunities to make nature an ally in the strife to stabilize water levels and prevent floods. In the Netherlands this new paradigm is accompanied by slogans like 'space for rivers', 'living with water' and 'building with nature'. The predicted further increase of irregular rainfalls caused by climate change on the one hand, and the emphasis of the European Water Framework directive on respecting ecology and natural river basins on the other contribute to this paradigm shift in water management.

Working with rather than against nature to ensure human purposes, comes however at a price, which is especially relevant in densely populated countries like the Netherlands. It almost invariably costs a lot of space. Part of the reason behind the creating of 'unnatural' interventions in the past was precisely the 'rationalization' of the use of space. So working with nature also poses new challenges to the field of spatial planning. Spatial planners are as such not unfamiliar with these kinds of challenges. Many see the integration of various spatial claims into productive neighbourhoods and even multiple uses of the same area as their core business. But water managers do not want to come by as the eleventh purpose to be integrated alongside ten previous ones. They want the water system to be the guiding principle, and water rules and policies are backing them in this claim. Of course, realities are more complicated and powers sufficiently balanced to get complicated processes around each project with which the new innovative paradigm is put into reality. This reports deals with two of those processes in order to get deeper insights in the role of boundary spanning in the implementation of innovative policies.

The ISBP research proposal specifies that the cases that are studied (the empirical domain of the study) will need to have the following characteristics:

- at the interface of nature and culture;
- somehow relevant for sustainable development;
- where conflict is likely;
- across spatio-temporal scales.

To the last item we would like to add the cross sectoral dimension, for instance enlarging a certain project from merely one purpose or fitting in one policy scheme to encompassing implementing more, maybe even many, policy schemes or societal purposes. To enable policymaking and implementation across scales, across time perspectives and across sectors requires a lot of boundary spanning work, labelled here sometimes as "administrative coupling".

The case of the origins, planning and implementation of the so-called retention area of *North and South Meene* in the Netherlands – an inhabited area – is an example where all the features mentioned are well represented. This case will be analysed first in this paper. The second case deals with an even bigger intervention, the creation of a 13 kilometres long and 150 to 300 metres wide river bed to reconnect a system of natural brooks with the tributary rivers that ultimately feed into the Netherlands largest fresh water body, the IJssel Lake. This new river crosses a motorway, the Twente Canal, a railway and gas pipelines, and transits planning areas under the control of three local authorities. Not surprisingly it is called *The Breakthrough*.

A case study usually begins by telling the “story” of the developments, followed by one or more analyses guided by specific questions (Dente, Fareri and Ligteringen 1998). The following *leading questions* will serve to guide the analysis of the cases. Each of them is dealt with in a separate subsection:

1. *What is the issue to focus on?*

This is a pre-choice question that is a necessary starting point that cannot be derived from empirical observations. In terms of the ISBP project it could be a/o. linked to a certain (European policy) innovation. The boundaries of the research domain should be sufficiently flexible to enable an open view of the boundary judgments of the actors involved. Nevertheless it is important to sharpen focus on a certain issue before entering the next step.

2. *What processes developed around this focus? Was there any coupling with other issues during these processes, and if so, when and with what?*

Coupling with other issues requires that the boundary judgments of the actors involved move along with this coupling. This is not necessarily the case.

3. *What were the relevant motivations, cognitions and resources of the actors involved? To what extent and how do these factors explain the course and results of the process?*

Here Contextual Interaction Theory (Bressers 2004, 2007a) will provide brief analyses of the processes.

4. *What is the role of boundary judgments in these factors and the process?*

Boundary judgments that differ among actors can cause incoherence and can even be a source of conflict. Boundary judgments can be too narrow for the adequate use of the innovation or so wide that complexity becomes unmanageable and hinders all progress.

5. *What was the interaction with the specific context, the structural context (elements of governance and property and use rights and their degree of coherence) and / or the wider contexts, like the cultural context?*

Here the degree of extent and coherence of the elements of governance will get special attention.

6. *What is the role of the receptivity of actors involved in these factors and the process?*

The role of receptivity in the process as a whole can in principle also refer to the receptivity of the set of actors as a network. In this paper we will however concentrate on one crucial actor, the waterboard.

7. *How did one or more actors manage the incoherencies in boundary judgments or the challenges of coupling across spatio-temporal scales or sectors involved?*

8. *What lessons could be drawn from this experience for other situations?*

This last question reflects the ultimate “how to” nature of the project. In the last chapter of this report this question will be given a provisional answer.

The two case studies that form the heart of this report are dealt with in the next two chapters. In chapter 2, the first of the two case studies, also some explanation of theoretical backgrounds will be given where deemed appropriate or necessary. In chapter 3 this will be minimized. In the last chapter 4 we will conclude the report with a brief comparison and a provisional answer to the last question on “lessons learned”.

The full ‘stories’ of the cases will not be told extensively in this report. They are well documented by Lulofs (2003) and Hanegraaff (2007), although in Dutch. Here we confine ourselves mainly to a re-analysis of these cases from the perspective of boundary judgments, receptivity and boundary spanning with “convergence mechanisms”.

2. Creating an inhabited retention area: The case of North and South Meene

2.1 *The issue*

One of the consequences of the warming up of the climate is the increase of irregularities in rainfall and consequently river levels. Many water projects are attempts to cope with this. Protection against river floods has become more and more difficult. In order to prevent the excessive costs – and sometimes even impossibilities – of continuously strengthening dikes even for very occasional peak levels, while protecting concentrations of people and economic value, a new policy has been developed that attempts to lower top peak river levels by enabling controlled inundation. Of course the innovation here is not that under pressure of a real menace to large urban areas deliberately dikes are broken to release the water elsewhere. The innovation is that this is not pure crisis management or at most an option in an all but hidden disaster plan in the drawer of the mayor, but a policy in which the area is actually physically prepared for that function, including means to protect inhabitants (and their houses and cattle) when the inundation is effectuated. The case analysed here is about an area that has become one of the Netherlands first official and inhabited “retention areas”.

The location is in the east of the Netherlands, part of the sub-catchment area of Rhine-east, as defined for the implementation of the EU Water Framework Directive (see figure 2.1).

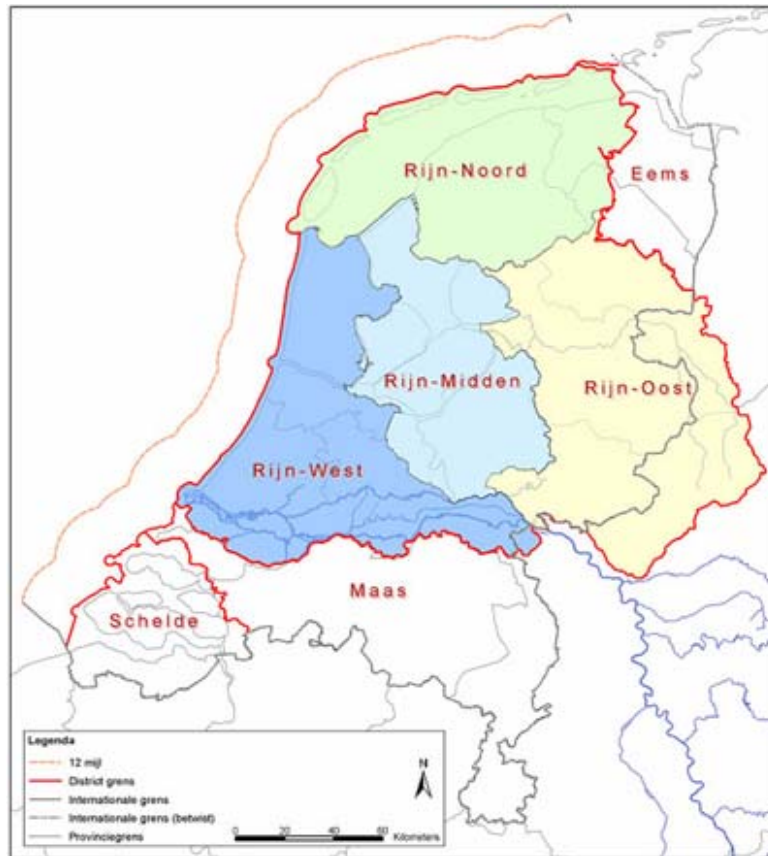


Figure 2.1, The various catchment area's in the Netherlands (on the right, crossing the German border: Rhine–east)

The tributary river that is relevant for this case study, is river Vecht that flows into the IJssel lake in the centre of the Netherlands, just after being merely connected to – not even flowing into – the river IJssel, one of the branches of the Rhine. “The Vecht is a middle size rain river, which originates in Germany. The total length is 167 km, of which 60 km is situated in the Netherlands. The Dutch part of the catchment is used more intensive than the German part. The size of the Dutch part of the catchment is 2400 km², the elevation in the area ranges from 0 to 83m, but the decline of the Vecht itself is just 10m. The average rainfall in the catchment is 730 mm and ranges from 550 mm in dry years to 1100 mm in wet years. 35-40% of the precipitation runs off. The mean run off at the mouth of the Vecht is 50 m³/s, at low water it is only 5 m³/s and under conditions of high water it is about 300 m³/s. Most of the waters in the catchment have been strongly regulated by normalisation and dams. In large parts of the area water inlet from outside the catchment plays an important role for agriculture in the summer.”¹

Figure 2.2 shows the Dutch part of the Vecht area. Water management in the northern part of this area is under the jurisdiction of the waterboard of Velt and Vecht. The case study area is marked with an oval.

¹ See www.euroharp.org, accessed September 13, 2007.

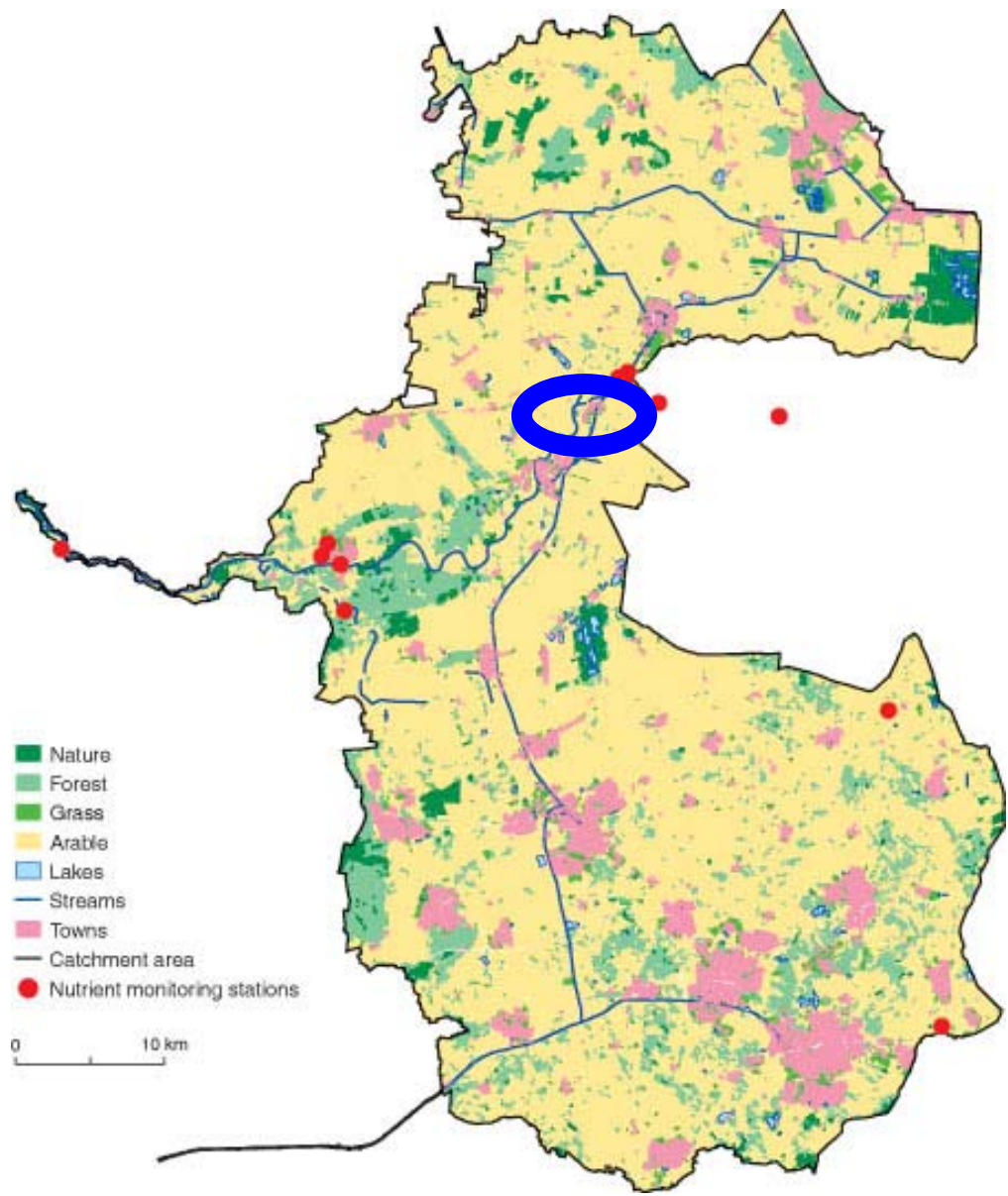


Figure 2.2, Dutch part of the catchment area of river Vecht (source: www.euroharp.org)

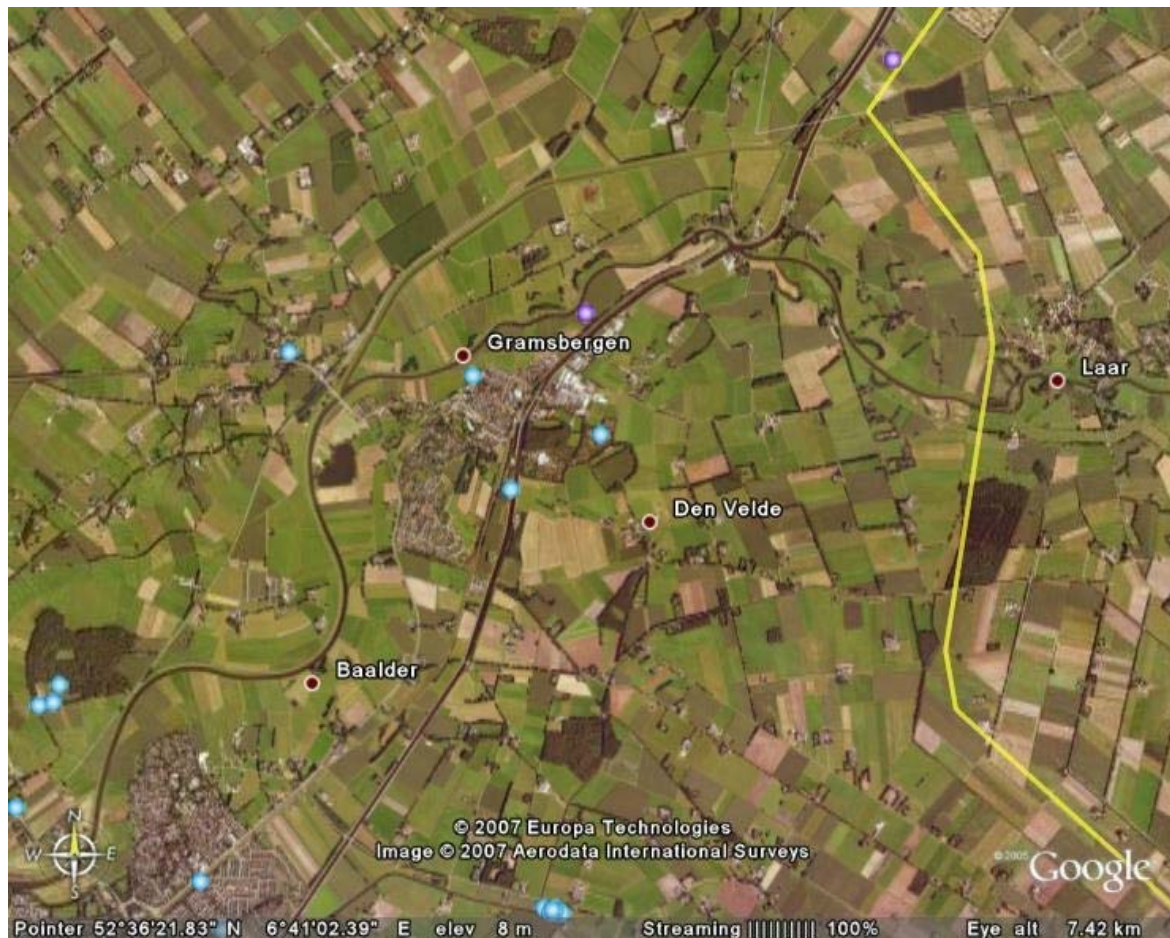


Figure 2.3, The case study area in a Google Earth image (meandering from middle right to lower left is river Vecht, the German-Dutch boundary is in yellow)

The story starts when in October 1998 river Vecht, coming from Germany, was rising to such an extent that four towns were seriously threatened, also because the rising water eroded the stability of protective works. On the basis of emergency authorities given by law and a semi-official and for the public unknown manual on what to do in these kinds of situations (even suggesting this particular area) the decision was taken to prepare the case study area for evacuation and deliberate flooding. The area was closed and controlled by the police and a crane was already installed on top of the dike to take action. Ultimately and by a narrow margin the action could be cancelled.

2.2 Processes and coupling

The flood crisis described above and its immediate aftermath can be seen as the first of the three processes that make up this story. We will briefly describe these processes and discuss which spatio-temporal or sectoral coupling took place that required some form of boundary spanning.

Crises and aftermath

Directly after the flood crisis the inhabitants of the area, mostly farmers, were shocked. While before WWII flooding was not an unusual phenomenon, protective works had been greatly improved afterwards. The well kept dikes around the area proved to be no guarantee at all that their properties were safe. It was completely unknown to the public that in a crisis manual the area was designated to be sacrificed if necessary. Although during the development of the Vechtvisie ('Outlook for river Vecht') (1997) there had been some deliberation on the possibility to equip the area to be a designated retention area, then the decision was made not to do so in the immediate future and only to re-assess this issue after 2002.² While the crisis management was predominantly a matter for the municipality, with necessary legal backing from the province, it were the waterboard and the agricultural association (GTLO) that took the initiative for a public meeting with the inhabitants for consultation about future prospects. The inhabitants demanded that such unprepared crises situations would not occur again and that measures needed to be taken. The waterboard agreed and made an "unconditional promise" that they would equip the area as a retention area with all the facilities needed to prevent damage to buildings and people. Though as a "process" the crisis and the meeting form a brief episode, it is dealt with here because of its crucial importance for the main decision making process to follow. It shows that the next and central process did not start at a "tabula rasa".

a) The *coupling* that takes place here is that the crisis awareness and *safety* concerns of the citizens were linked with the perspective on the possible future creation of a retention area, that previously was as much inspired by the purpose of *nature* development as it was by the water safety issue and part of the "space for water" policy innovation. Both temporal and sectoral boundaries were thus spanned.

² In the Vechtvisie (1997: 55) the use of winter beds is emphasised to accommodate irregular water flows and to provide "space for water". In fact most of the concerns in terms of quantitative water management in the trajectory directly after entering across the German border were minimum flows in dry summers (p. 60). The possibility to create a retention area is however mentioned, including the fact that it is already a designated area for crisis management (p. 78). The idea here was even far more radical: to completely change the function of a substantial part of the area to nature (Anerweerd), and use the area for regular flooding and storage for dry summers (pp. 84-85). Projected timing is very unclear. While one sentence speaks of a 'high priority', also – in a cripple sentence – the document states: "The realisation for this will possibly be realised after 2020".

Challenges to integrated decision-making

In the subsequent planning and decision-making process (the main process in this case), the central arena became the “Sub-area committee Gramsbergen” that was to elaborate the integrated area-oriented policy on the designated “precious cultural landscape” Vecht / Regge for this part. This committee was already working on this task before the flood crisis. What is new is that the development of the retention area became a prioritised and major subject, while previously it was postponed to be reconsidered after 2002. In this committee the municipality, the waterboard, the province and the agricultural association were represented, the last one providing the chair and two members, of which one actually lived in the area. The setting of the “integrated area-oriented policy” scheme deliberately strives for a lot of sectoral policy integration, but also requires that all concrete steps will be taken voluntarily by the partners involved, thereby restricting the acceptability of using formal powers to a large extent. Rather than going into detail on the sometimes cooperative and sometimes turbulent story of this decision making process here, we concentrate on some of the main issues.

In the committee the discussion initially concentrated to a large extent on nature development, arousing the member from the agricultural association that also was an inhabitant, who felt that also the quality of the agricultural infrastructure in the area should be a main concern. He was accused of mixing personal scale interests with the general scale area planning discussion and eventually left the committee. This was however for the agricultural association a signal to take the inhabitant’s interests seriously and it started to make an inventory of the wishes of the inhabitants. This proved important to channel the commotion under the citizens and to mediate between them and the waterboard. The wishes concentrated on the facilities (impact on living conditions, guaranteed dry access) and financial damage compensation (both property value and inundation compensation).

In the meanwhile the purpose of a substantial nature development (which would have brought subsidies for the project as a whole) proved unfeasible, at least in the voluntary context of the area-oriented policy. When the province decided not to accept already fallow grounds as part of the newly to be developed nature, it effectively de-coupled this sectoral purpose. (Salient detail: in the implementation phase, the third of our processes, a farmer offered his area to be sold for nature development after all, making a re-coupling of the purpose feasible at the very end of the process!)

From the European Interreg programme IRMA (Interreg Rhine Meuse Activities) in the meanwhile a very substantial subsidy had been obtained, together with the ‘matching funds’ from the environment ministry ultimately covering approximately half of the expenditure. The programme sponsors projects with an integrated approach. “A permanent improvement in high water policies and protection can only be achieved through integrated action in the fields of water management, spatial planning, economy, nature protection and agriculture as well with physical planning”³. So, it fitted very well with the integrated approach of the area-oriented policy scheme. The main requirement that caused a lot of pressure was that all subsidised

³ See http://www.irma-programme.org/a_about/objectives.htm, accessed September 14, 2007.

activities had to be realised before the end of 2001. This was translated in the process into an extra effort to keep all relationships in the network, both inside and outside of the committee as pleasant as possible, urging the waterboard to achieve consensus with the inhabitants on their wishes and on the necessary land acquisition. Expropriation was furthermore not an option at that time since area-oriented policy is based on voluntariness.

A main issue – that popped up unexpectedly and late in the process – was the necessity to change the municipal zoning plan. This was a clear misjudgement of the waterboard and its advisors (both their own judicial advisor and the consultancy firm that it by then had hired to speed up the process). The representative of the municipality had spoken before about this issue but was not taken very seriously, until in the beginning of 2000 he actually threatened to effectively halt all preparatory activities that had started by then (the enormous time pressure created overlap with the in principle following process of implementation). The waterboard found itself at an awkward moment (remember the high time pressure) in a very dependent position. Lobbied by (representatives of) local inhabitants, the municipal council acted as a defender of the area's inhabitants interests (even while also other parts of their towns would be threatened by flooding), and the province refused to step in and use its powers and influence to speed up the process. Some inhabitants submitted objections that in principle could cause lengthy procedures, likely partly under the guidance of the agricultural association. Shying away⁴ from the option to retreat fully and continue the old situation of a non prepared, but still designated area to be flooded when necessary to protect towns, the waterboard had no alternative than to agree with all demands from the municipality, including some that referred to individual farms and a guarantee to compensate all damages. Only then the municipality cooperated with special regulations that enabled the start of the activities pending the formal approval of the zoning plan⁵. The necessary permits were issued in October 2001, only months before the deadline of the IRMA subsidy. Ultimately also the last remaining formal objections were withdrawn, again likely under the influence of the agricultural association that had the procedures used to exert maximum pressure, but also was aware of the fact that stubborn objections by individual inhabitants / farmers could endanger the whole project that by now was adapted to the wishes of many.

In this process the following *couplings* took place:

b) Inserting the planning of the retention area in the area-oriented policy regarding the “precious cultural landscape” implied a broad sectoral coupling of flood protection with outlook on *physical planning* (strangely enough without attention for formal physical planning), *nature, landscape*, and in principle also the infrastructure for *agriculture*.

⁴ This option would however not only not satisfy the waterboards own purposes, but also break the “unconditional promise” made to the inhabitants at the meeting directly after the crisis.

⁵ This text presents the position of the municipality as a single actor. However, there were considerable differences between the cooperative civil servants, the mayor and aldermen that were especially weary of possible “plan damage” claims, and the members of the council. This differentiation explains why the municipality could change so quickly to active cooperation once the barriers were removed.

- c) Later efforts by the agricultural association to channel the wishes of the inhabitants lead to the issues of *living conditions* for inhabitants (“dikes too close around houses”), and *financial compensation* to enter the scene.
- d) The problems with land acquisition for *nature development* lead to a *de-coupling* of this previously very important aspect (only to be saved coincidentally in the third, implementation, process).
- e) A large European subsidy (from Interreg) provided much finance but also a huge time pressure. So linking *temporal scales* became an overwhelming issue, for the planning, for the next coupling issue, physical zoning planning, but also for the building activities (see the following description of the implementation process).
- f) While physical planning was already included as a perspective in the area-oriented policy scheme, the *formal physical planning* requirements were overlooked until they were forced upon the process, making coupling with those under high pressure unavoidable.

Working under pressure: no time to lose

Under the given time pressure it was no surprise that the actual implementation (specifying and construction) had to start while the planning process was still unfinished. This caused problems as for instance the valuation of property to be sold to the waterboard was regarded as invalid by inhabitants and the agricultural association representing them, as long as the physical measures taken and the resulting living and working conditions were not yet fixed. In practice the waterboard faced a lousy negotiation position. Everybody knew it was under time pressure, expropriation was not feasible, the inhabitants / landowners communicated among each other displaying proudly their negotiation successes – and sometimes exaggerating them - effectively creating a ‘race to the top’ (for them) and confronting the waterboard with ever new demands. In addition – after some confusion about to what extent the agricultural association would also provide advice in individual cases (a branch of the national association does, but for pay) several external advisors were hired by the inhabitants that didn’t ease the negotiations, but boosted the results.

Even when the necessary permissions and land was obtained the activities were not an easy job. On the contrary. Even though ultimately a six months extension was obtained from the IRMA administrators, time pressure was killing, since only from October onwards the real work could start. This severely overstressed the supervising of building capacity, caused several irritations and lead to inefficiencies, like working large scale under very adverse weather conditions. At some point almost all parties involved had the inclination to stop this madness: the inhabitants, the building contractors, the supervising consultancy. However, the guillotine of the subsidy deadline made this impossible. As a matter of fact, though the budget was indeed exceeded as one would expect under these circumstances (half a million on a twelve million budget), this was not really an unusual degree.

Mid 2002, less than four years after the flood crises, the retention area was realised⁶. Actually, now in hindsight the Retention Area North and South

⁶ See http://projecten.nederlandleeftmetwater.nl/html/topic_6_100.htm, accessed September 14, 2007.

Meene case is presented at many a forum as a successful example and is favourably compared with other projects that got really stuck somewhere in their trajectory.

While in this third process no new *couplings* were made, apart from the lucky re-coupling of nature development to the project that we mentioned before, it should be noted that especially the linking of *temporal scales* that stemmed from the Interreg subsidy was a menacing challenge to the process.

2.3 *Actors and their motivation, cognitions and resources affecting the process*

Each process had some sub-processes of interaction between actors on specific issues. In this section an overview is given of these actor-constellations and the interaction that took place is explained from the actor characteristics: the motivation, cognitions and resources of the actors involved. For this purpose a rather informal application of Contextual Interaction Theory will be used – a bit more elaborately for the first process to show the principle of reasoning⁷. The central framework of this theory is visualised in figure 2.4. Policy processes are interaction processes between actors (people, parts of organizations). This includes policy implementation management. Many factors can have an influence on their activities and interactions but only because and in as far as they change relevant characteristics of the involved actors. These characteristics are: their motives (that drive their actions), their cognitions (information held to be true) and their resources (providing capacity and power). Figure 2.4 specifies how these characteristics are formed. For the smooth course of the process it helps when motivations and cognitions are sufficiently coherent: overlapping or complementary. Combined resources of proponents of a certain action need to be sufficient. When there are incoherent motivations it helps when the resource dependency and subjectively attributed powers are on the side of the proponents.

⁷ More details on the reasoning and hypotheses are in Bressers 2004.

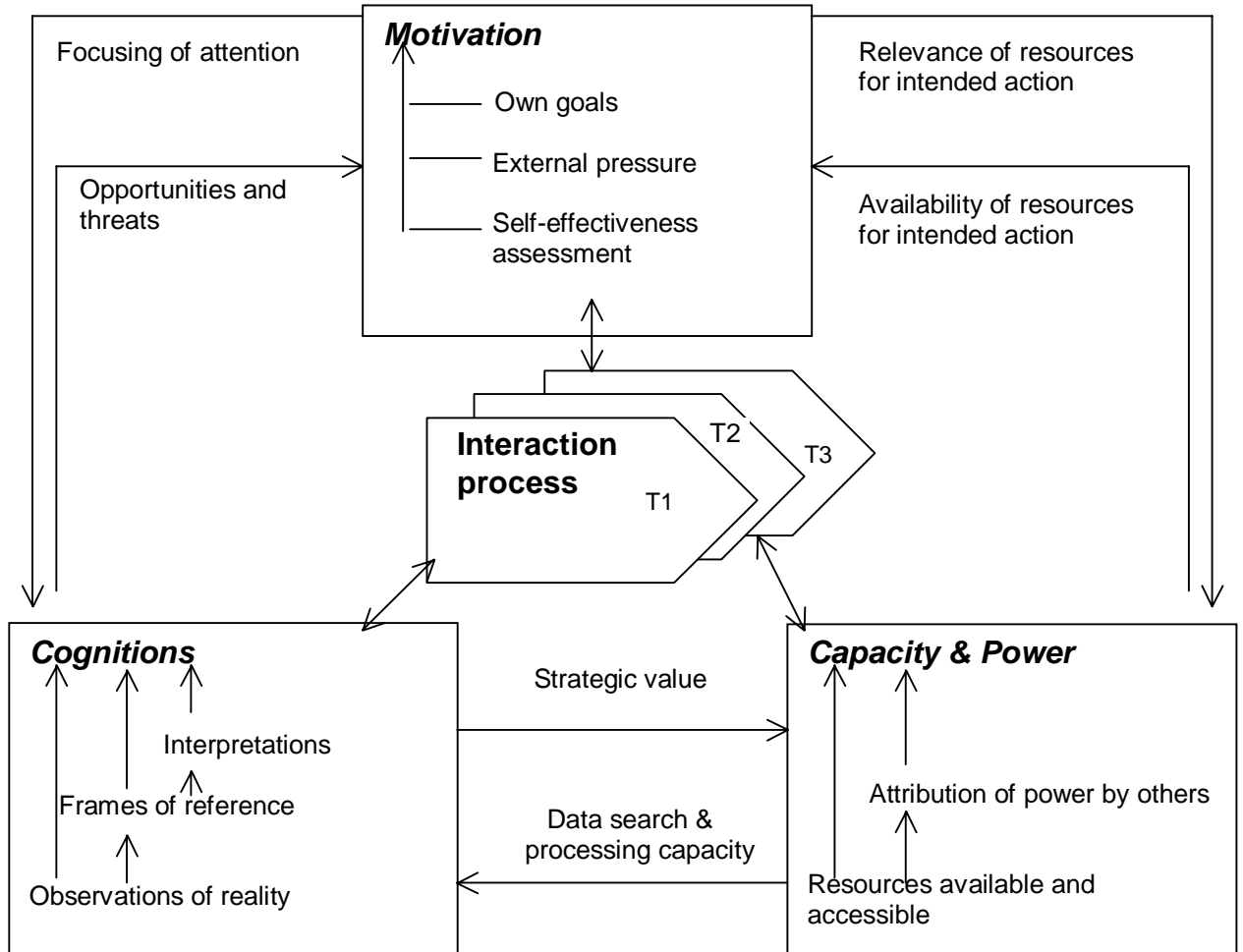


Figure 2.4, Dynamic interaction between the key actor-characteristics that drive social-interaction processes and in turn are reshaped by the process, as used in Contextual Interaction Theory

The flood crisis

During the thrilling days of the flood crisis the inhabitants were negatively motivated for the inundation and evacuation that was suggested by the crisis manual. In fact they were as shocked as they were ignorant before that this could happen (cognitions). However there was nothing they could have done to prevent it when it would be decided (power). The municipality did have enough knowledge (cognitions) and resources (capacity and power) to do so. However there motivation was only positive to follow the manual in this when it would become unavoidable. Luckily this didn't happen. If put through, forced cooperation would have been generally the case (Bressers 2004: 298).

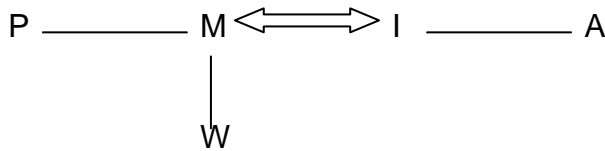


Figure 2.5, Actor constellation flood crisis (*W* waterboard, *I* inhabitants, *P* province, *M* municipality, *A* agricultural association, \longleftrightarrow central interaction)

While in the first sub-process the ‘arena’ was the partially the site itself, the next story was confined in space and time to a crucial meeting in the backroom of a pub, organised by the agricultural association and the waterboard. Here the inhabitants were still shocked by threat of deliberate inundation (and its ‘secret’ policy basis in a manual) and urged measures to protect them and their property when flooded, also fearing for the value of their property now that the status of their area had been revealed. This point was well taken by the waterboard, which regarded protection as their core business (motivation). The concept of what to do was already there in the form of the policy innovation of a well prepared “retention area” (cognitions) and the only resource needed at this stage was decisiveness, which it displayed. While the motivations of the actors involved had different roots, they were pointing in the same direction. Not hampered by false cognitions nor lacking resources, consequently measures were announced to enable controlled inundation and the protection of people and buildings. So there was agreement at the time of the evening (though interpretation of what was said afterwards proofed a bit divergent).

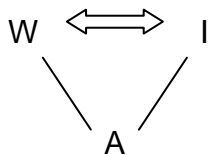


Figure 2.6, Actor constellation follow-up meeting

Planning and decision making

The main stage (arena) for the next process was not so confined in time and place, the so-called sub-area committee Gramsbergen, making the “Area perspective WCL Vecht Regge”. This committee was already active but the preparation of the retention area was now made part of its task.

As the sub-processes are rather integrated we will show the actor constellation in just one figure.

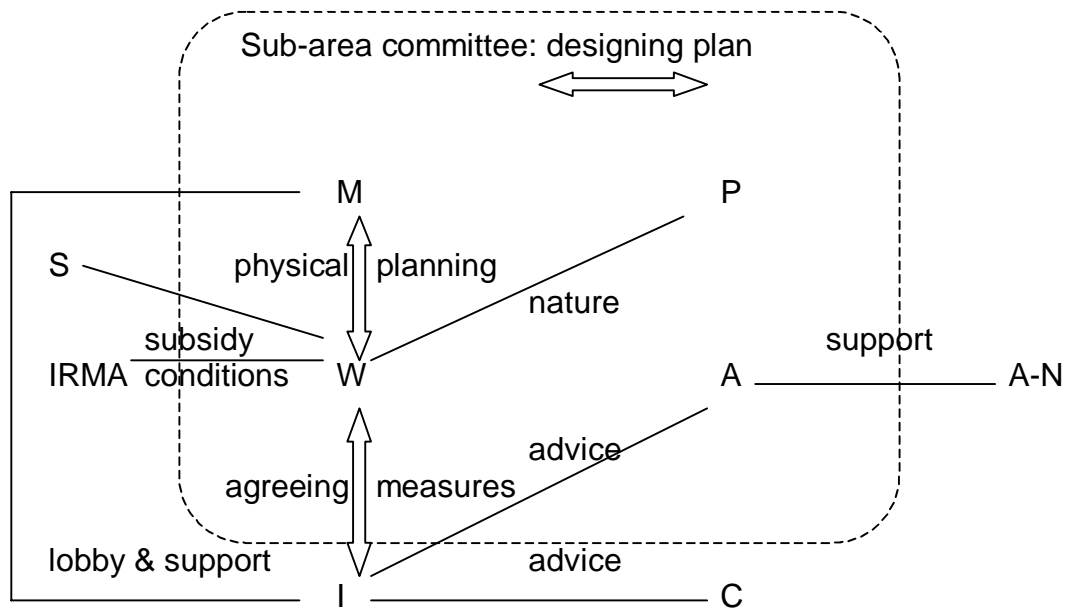


Figure 2.7, Actor constellation planning and decision-making process (new acronyms: A-N national agricultural association, C private consultants, IRMA Interreg programme, S construction supervising consultancy)

Because it fitted better in this overview, in the actor constellation above also the interaction on agreeing measures with individual inhabitants is included, even though this ran through both the planning and the implementation phase. While the main interaction on the design of the plan took place in the slipstream of the developments in the relationship with the inhabitants and later also the physical planning process, it is not separately analysed.

Though not directly in the sub-area committee, in fact the *inhabitants* of the area were central stage most of the time. Only in the beginning their wishes were more or less ignored, a fact that later still had some impact on the degree of trust in the interactions with the waterboard. Their main motivation was initially mainly concentrating on the necessity of measures to protect themselves and their property, but when the fear of the flood had faded, the impact of the measures on living conditions and the compensation for damages became more important. When issues of land acquisition rose later in the process many were very eager to get the most out of it, even with the help of advisors. So in many issues their motivation went quickly from supporting to opposing the proposals of the waterboard, in the sense that they wanted more and more adaptations to their wishes. For them, and thus inevitably for the waterboard too, it became a negotiation game. Their cognitions of the situation and its “opportunities and threads” evolved, as well as their awareness of the resources at their disposal to influence the process. For instance, these were the rules of the area-oriented policy process in which framework the committee worked, urging that all action would be based on

voluntary agreement, strengthening the position of the inhabitants considerably.

Supporting their positions, not only the *individual consultants* that several inhabitants hired later in the process, and the *agricultural association* that inventoried their wishes and brought them into the process – which was helpful – , but also the municipal council acted, and even went as far as demanding solutions that were satisfactory for the inhabitants in individual cases. The *municipality* also in general displayed a motivation that was more representing the wishes of the inhabitants of the area than the need to quickly realise the project to protect the towns that needed this retention area in case of threatening water levels. With this municipalities' stance, the physical zoning plan process thus became a hard nut to crack for the waterboard. Especially since the powers in the zoning process are on the side of the municipality, with in addition ample options for consultation and objection for the inhabitants.

The *province* took a deliberate back stage position, at crucial moments not supporting the waterboard. It kept a strict interpretation of rules on nature development making the inclusion of this objective in the plans virtually impossible⁸. It also initially denied the inclusion of the retention area in the indicative regional physical plan, since it preferred to follow and facilitate agreements of other actors rather than stimulate the municipalities' zoning plan changes (displaying process objectives rather than contents objectives as a source of motivation).

This left the *waterboard* in a rather isolated position, with its motivation to realise the retention area to protect people and property, but also to improve the robustness to more varying water levels of this part of their territory, and – if possible – to realise more nature development. Despite their “public private partnership” with a construction supervising consultancy, enabling them to issue some contracts before the IRMA deadline, they did not get proper advice on the necessity of a change in the municipal zoning plan⁹, making them work under false cognitions. As for their resources their formal powers were not applicable under the integrated area-oriented policy scheme and due to the Interreg subsidy there was a serious lack of the resource ‘time’. Money was available and a very important resources, but still only a restricted amount. There was also the “atomic bomb” fall back option to retreat fully and continue the old situation of a non prepared, but still designated area to be

⁸ Would the province agree with this presentation of its position? Probably not. Their representatives would point to the fact that the retention area indeed was included in the provincial water plan, although not in the region plan. Of course, the province isn't always a single actor, and in this case this shows. For the issue of getting through the zoning plan requirements, the reluctance of the province to fulfill a guiding role is nevertheless the most important position.

⁹ The subject of retention zones being so new, the example of the only known previous site was taken. This was mistaken, since that site was uninhabited and already designated a nature area, a designation that indeed was considered not to be contradicting the retention purpose. The various advisors seem to have taken for granted that one of them must have considered the issue in detail and for the rest agreed with “the others”. But they were all wrong.

flooded when necessary to protect towns. An option that was worse for the inhabitants and in fact an “all lose” option. A further problem with this option was the “unconditional promise” made during the initial meeting with the inhabitants just after the crisis. Nevertheless this lingering option might very well have been a hidden and unacknowledged source of power of the waterboard, for instance to let the municipality realise after a while that, being a co-government, they should be more cooperative, or to let the agricultural association guide the inhabitants with remaining formal objections to withdraw these.

All in all this resulted in a rather “turbulent” process with conflicts between the waterboard and the inhabitants and high time pressure. With power not clearly on its side the waterboard had no other option than to ensure a positive motivation with the inhabitants and municipality by making many concessions. While the first year often found the stalemates predicted by theory in such instances, this flexible line of the waterboard, gradually satisfying the demands by the inhabitants, resulted after 2000 in more constructive processes.

Construction

The construction process moved the “arena” back to the site where it all began. The actor constellation is much simpler at that stage, where the main interactions took place “in the field”.

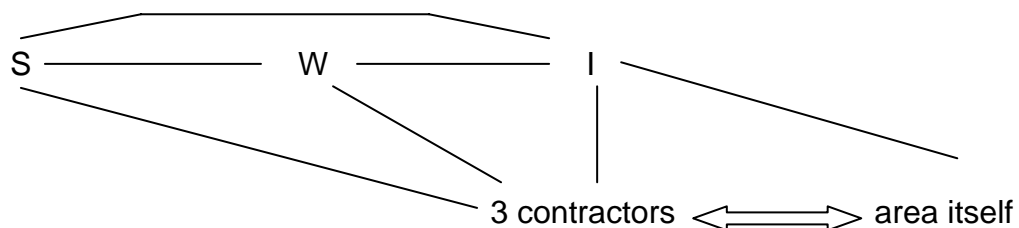


Figure 2.8, Actor constellation construction process

The high time pressure caused the process to speed up, but at the price of a lot of irritation and inefficiencies. This went even to the extent that the motivation of the actors involved all but faded away. The necessity now and then to prevent contractors to postpone their activities and even inhabitants to deny further entrance to their ground were signs of such tension. While at the end the realisation of the project did prove not to be beyond the capacity of the constructors – though at the expense of some extra money resources – they weren’t convinced of that during part of the process.

2.4 Boundary judgments and their impacts

Boundary judgments are definitions of systems and problems that underpin conceptual models. For the purpose of our case study they can be defined as socially constructed definitions of the domain of relevance (in terms of relevant scales, problem and policy sectors and time and change aspects – see figure 2.9). Boundary judgments that differ among actors can cause incoherence and can even be a source of conflict. Boundary judgments that are too narrow for the adequate use of the innovation or so wide that complexity becomes unmanageable and can also stop all progress.

In this section we will wonder what kind of boundary judgments of the actors involved can be observed and how they could have influenced the actor characteristics and the resulting processes. Some relevant boundary spanning was already mentioned as instances of “coupling”. Some of these couplings didn’t really have the character of “boundary disputes” over the relevant domain while there actually wasn’t disagreement about the coupling. But there are more boundary judgments that are recognisable and had an impact on the process.

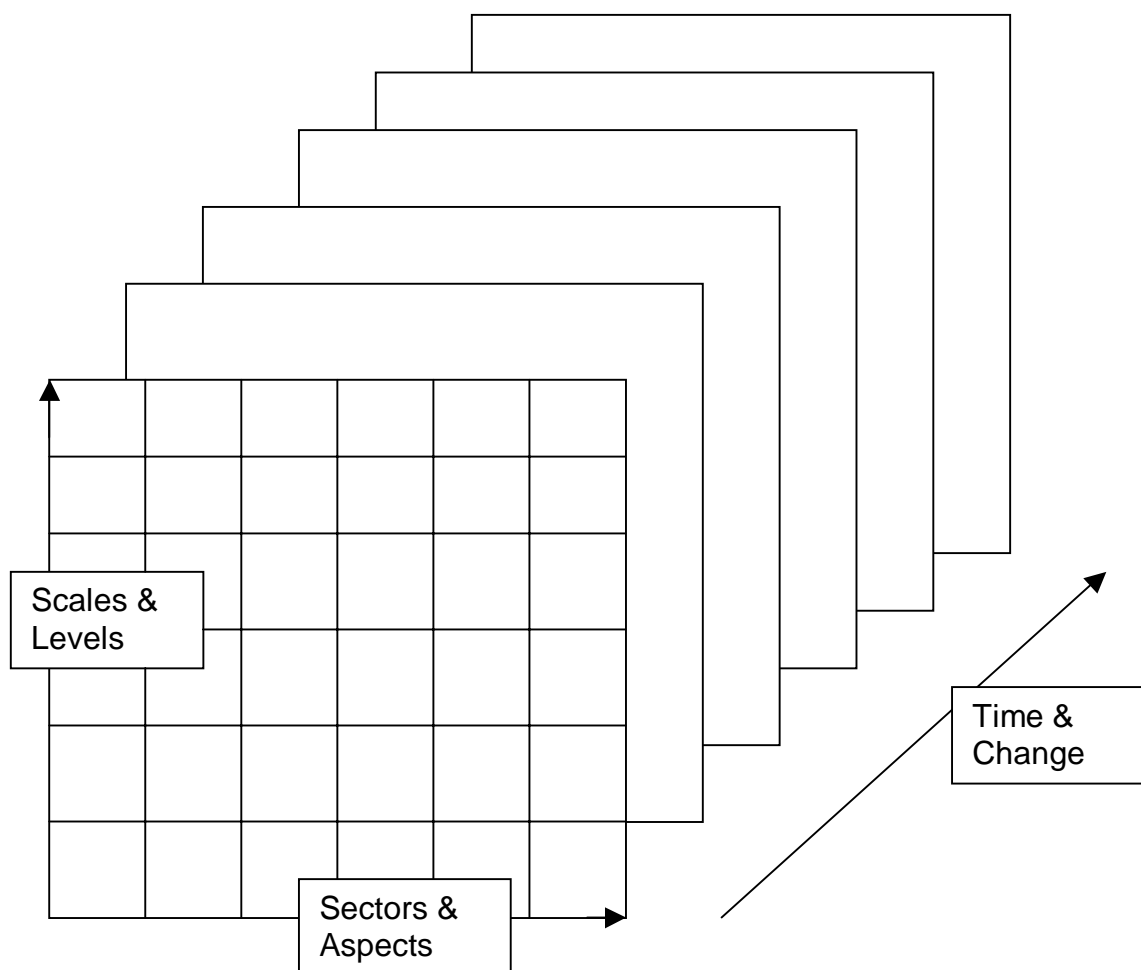


Figure 2.9, Three dimensions that are *relevant* for boundary judgments

Spatial aspects of the domain

A first issue is the degree of seeming self evidence with which the area of north and south Meene is regarded as the only one that is taken into consideration for the realisation of the retention area. While this may be true at the confined level of the municipality / -ies nearby or even the waterboard, it could have been different when the larger Vecht area, including the German part would have been taken into consideration.

Neighbouring waterboards and German authorities are however reluctant to integrate their areas in a more encompassing review of flood lowering possibilities. The new policy programme GGOR – on integrated ground and surface water regimes – that came into effect after this case now demands such a broader spatial view, which also corresponds with the basin approach demanded by the European water framework directive. The problem remains however that the division of responsibilities over various authorities is very different on the other side of the border (and even between German Bundesländer), creating large uncertainties about what the status of agreements actually is and how “hard” they are when the safety of Dutch downstream towns requires action (implying the flooding of German areas). So the waterboard of Velt and Vecht too has problems to “enlarge the domain”, in the sense that it loses some grip on the actions that their responsibility might require.

On the other hand many inhabitants have a quite understandable NIMBY attitude, by which the initial support for the realisation of the retention area waned. Their considerations were often confined to the direct surroundings of one's own dwellings.

Another spatial boundary judgment became obvious when the province did not see it as its task to play an active role in helping to fulfil the physical planning procedure requirements to enable the retention area and wanted to follow and accommodate rather than guide the local level authorities. Of course the waterboard disagreed with that emphasis on the very local scale by a government that could overview the regional scale. In a new policy agreement on national level that was concluded after the case the necessity of an active role of the provinces is reaffirmed.

Sectoral aspects of the domain

Different stakeholders emphasised their own sectoral interest, sometimes even while fully ignoring the others. The Waterboard concentrated on the basis of flood lowering capacity and nature development. The agricultural association assessed the project on its role for improving the agricultural structure. Also recreation and tourism are often part of integrated area-oriented programmes. Many inhabitants felt they and their interests were excluded from initial planning under this policy scheme (could also be regarded a matter of coupling across scales). The inhabitants, and also the municipal city council in support of them, assessed the plans on the basis of value of property, consequences for living conditions and /or financial compensation.

The too narrow initial sectoral boundary judgments also lead to the late recognition of the relevance of the official municipal physical zoning plan and confusion over the legal basis for “planning damage” compensations.

Temporal aspects of the domain

A relevant background here is that the authorities (the WCL committee) initially postponed decision making on peak level protection by a retention area to 2002. Initially this was before the 1998 crisis thus beyond the immediate time horizon that aroused any actor to take action.

The time perspective also played a role while many inhabitants proved to have a short time perspective, losing their support for measures rather quickly after the “almost-disaster”. So during the course of time of the case period the motivation to cooperate was for a while wrongly assessed by the waterboard to be high amongst the inhabitants since they didn’t reckon with such swift erosion.

By far the most compelling time issue was the European Interreg IRMA subsidy regulations that fixed very short temporal requirements – even though these were ultimately relaxed with half a year – conflicting with other procedures’ (and related actors’) time perspectives.

The boundary judgment issues described above can be related to the five (excluding the almost de-coupling of nature issue) couplings that are listed in section 2.2.

1. When the idea of the retention area was coupled to the safety concerns of the inhabitants directly after the flood crisis, the previous time perspective on this project as a subject ‘to be considered some time later’ gave way to a perspective of immediate action. This also increased the closure of the potential spatial area to be considered for retention, to the north and south Meene area.
2. When the idea of the retention area was inserted in the ongoing planning regarding the “precious cultural landscape” coupling it with issues concerning landscape, nature, recreation and infrastructure for agriculture, even this broad collection of actors did explicitly regard the concerns of individual inhabitants “out of scope”, eventually leading to:
3. Later efforts by the agricultural association to channel the wishes of the inhabitants lead to the issues of living conditions for inhabitants (“dikes too close around houses”), and financial compensation to enter the scene. But by then the “domain specification” of many inhabitants had already shrunk in terms of time, place and subject to their immediate individual circumstances (leaving the agricultural association wrestling between its collective action and member support roles).
4. The large European subsidy provided much finance but also a huge time pressure conflicting with other time perspectives.
5. The formal physical planning requirements were overlooked until they were forced upon the process. Clearly they were out of focus in the domain specifications of almost all actors involved.

2.5 Layers of contexts

The inputs into the process and also the characteristics of the actors involved are not isolated. They have a context at several scales that all can have directly an impact on the characteristics of actors in the process. We discern next to the specific (policy) inputs, also the structural context, being the elements of the governance structure and – if relevant – the property and use rights regime. A still wider scale of contexts consists of e.g. the “facts” that can be included into the problem perceptions and the cultural backgrounds of the case, for instance the level of trust and consensus seeking and the way hierarchy is perceived and dealt with generally between the types of actors involved.

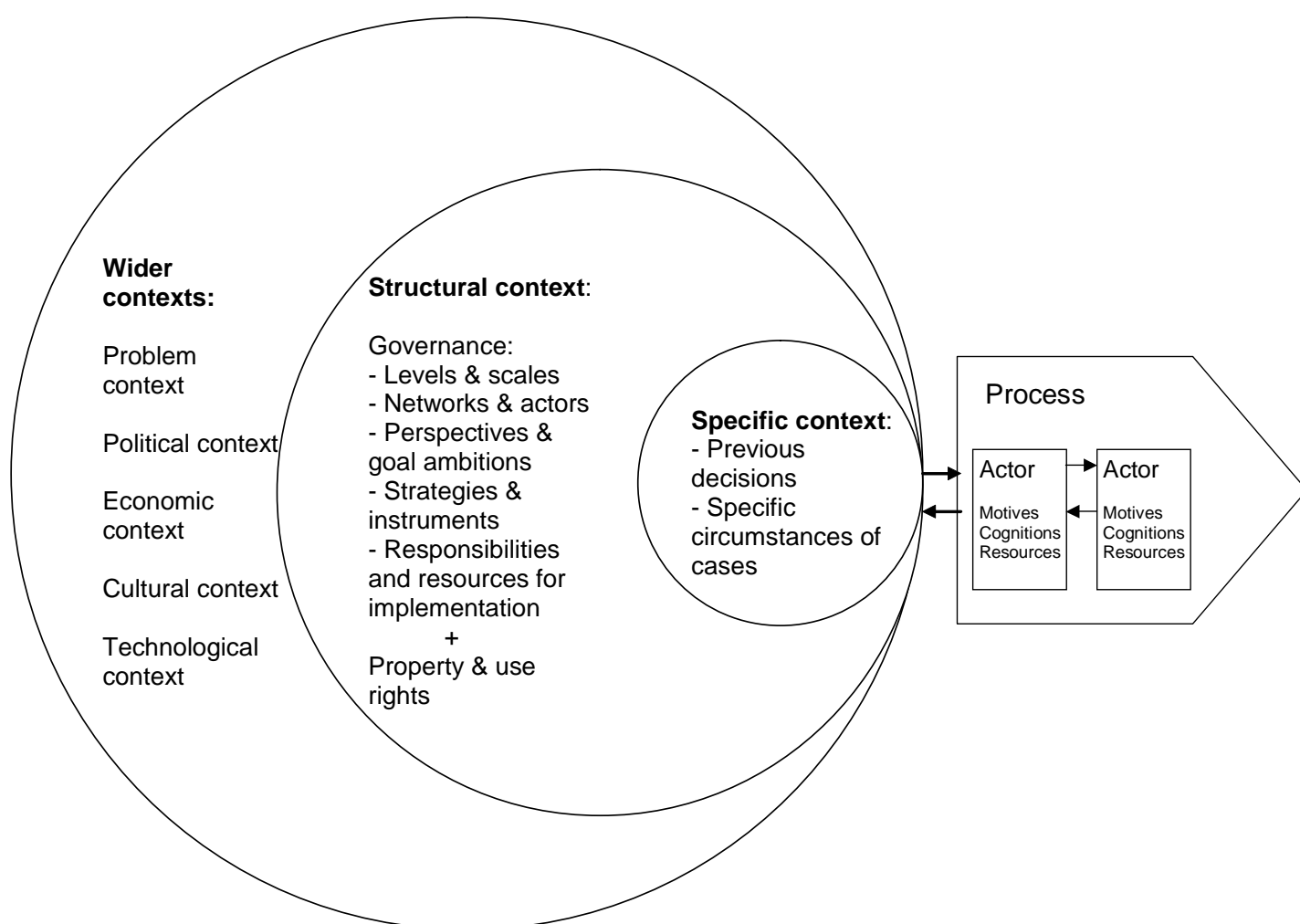


Figure 2.10, Layers of contextual factors

Specific inputs

In this case there were several specific inputs into the process recognisable. These were for instance the policy document Outlook on river Vecht of 1997, the specification of the IRMA Interreg subsidy grant and previous decisions in the area-oriented committee postponing decision making on the retention area until after 2002, etceteras. We chose not to further deal with them here, since they are already mentioned in the descriptions and analyses of the processes.

Structural context

The structural context consists of the elements of public governance and the property and use rights, that are not specifically developed for the processes studied. Innovations often require new combinations of: scales, actors, perspectives, strategies and resources, than the ones that have developed in the past for more conventional purposes (Bressers and Kuks, 2003, 2004). This implies that the extent of relevant elements of governance has to be widened. The real boundary spanning challenge however is not the widening of the extent, but the protection or regaining of the coherence within and between these elements. Is there any development towards more coherence – or restoring coherence – of these elements of governance during the process? Or is the opposite true and was fragmentation the result of the widened domain? And if so, to what degree was this situation a troublesome context for the process? Are there developments going on that might make these contexts more coherent in the future?

The *levels and scales* context shows the kind of spatial boundary issues that were mentioned in the section above. From the very local (dwellings and their surroundings) to the European level (be it in the form of a programme for Rhine and Meuse only) all levels of government were involved, maybe the national level least. It is hard to find any form of coherence here, while even the province did not really take up a guiding role. The river basin approach that is demanded by the European WFD is clearly not fully operational in an integrated fashion.

There was not really a ready *networks and actors* context that was the obvious setting for the processes of this case. For the main process the actor setting of the integrated area-oriented policy scheme was chosen. However, this setting was not really attuned to the realities of the development of an inhabited retention area. The representation of the inhabitants was disputed since a number of issues were regarded as “out of scope” by the other actors, resulting in the leave of the only inhabitant in the committee and a small riot when the first plans were presented. The province was represented at rather low level, not really committing the province to the negotiated results. In as far as this network setting was insufficient, e.g. for the zoning planning and the nature development issues, the enlarged collection of actors was definitively in need of establishing productive relationships over these subjects. Later policy developments include the National Administrative agreement on Water management (Dutch acronym: NBW) (of representatives) of all ministries, provinces, waterboards and municipalities involved. In this agreement and its implementation some progress has been made with structural cooperation between these actors.

The *problem perspectives and goal ambitions* context reflected this. While the collection of actors was not really coherent around this issue of planning a retention area, their perspectives were neither, each actor emphasising other stakes. While the policy scheme “WB21” (Water management for the 21 century) has specified problems and tasks, it did so with a perspective mainly on water quantity management. In the reality of water projects such as the one in our case study this extent of integration is however still not enough. Another issue is that in our ISBP work package description “boundary judgments” were coupled with the main discourses used: expert, market and people (Dryzek 1997). With the issue of water buffering and spatial planning, to which this case belongs, the confrontation was predicted to be between and expert discourse (waterboard) and a people discourse (physical planning). In reality some of this can be observed, but the typecasting is way too general to provide useful insights, for instance for developing productive “convergence mechanisms”. Differences in perspectives that were obvious were between a generic and an individualistic approach to the issues involved. We come back to this when discussing the wider political context.

The *strategies and instruments* context also shows a lack of coherence. The choice for the integrated area-oriented policy even implied that the use of some of the instruments available to promote the realisation of the retention area became hampered. For instance the way in which in physical planning the link with *property and use rights* is made – through the restricted and highly regulated use of expropriation “in the general interest” – became almost “not done”. All coherence rested upon the cooperation of the actors involved, and we have seen this was far from obvious. Later some instruments are developed that should strengthen the role of water management instruments viz. those of other sectors. The so-called “Water test” (Dutch: watertoets) gives the water managers the right to test new plans of other governments against the necessities of the water management in the region. However, this instrument is still more a pinch bar to force to be heard at all, than a device that stimulates all involved into coherent activities (Lulofs a/o. 2004).

Last but not least there is the context of the *responsibilities and resources* for implementation. Again a lack of coherence can be concluded here. The responsibility of realising retention areas that protect towns against flooding is taken up by the waterboards, but this – together with many more projects that stem from the WB21 and EU WFD – is beyond what is regarded as their normal or even acceptable financial capacity (waterboards do have an own taxation scheme in the Netherlands – tariff increases have however to be approved both by their own boards and by the province). Other national financial resources were only found as matching of the European Interreg subsidy. This however had complications of its own, since it was not attuned at all with the procedural requirements of the zoning planning legal rights of municipalities and citizens. Even though partly their own towns were to be protected by the retention area, the municipality for a while did not seem to make itself co-responsible for the realisation of the project.

All in all we conclude that there was no ready structural context for the realisation of this innovation. It had to be extended, even beyond the as such

also integrative area-oriented policy scheme. This resulted in a clear lack of coherence, which often hampered the process. While later policy developments can be read as attempts to organise some coherence of governance for this policy (“space for water”), our estimate is that these are still insufficient to create a new governance structure with both enough extent and coherence.

Wider contexts

The *problem context* is not only given by the process of climate change causing more irregular river levels and an increased risk of flooding. Part of the problem context is also the Dutch population pressure and development. In the 1930s the area involved regularly flooded and everyone was prepared for that.

This is related to the *economical context*. Not only the natural situation changed. Also the manmade environment changed dramatically. While the value of the property has soared and measures of individual preparedness gave way to “more efficient” farming, the vulnerability of the area in economic terms has increased simultaneously.

The *technological context* doesn’t seem to have had a very important impact here. Though the concept of an inhabited and well prepared retention area can be regarded an innovation, the technology for creating one is not really advanced, at least not to the extent that such project would have been unfeasible in the recent past.

A *political context* that is still water management oriented is provided by the general outlook of “space for water”. In this general policy outlook adaptation to the natural water system and taking its functions for flora, fauna, and landscape serious, rather than intervening in the water system for the purpose of optimising narrow economic functions is a major break with the past. Kuks (2004) labels this the sixth phase of Dutch water management since 1814. Actually many concrete water projects can be labelled as “undoing the past” (Huitema and Kuks 2004: 76) since in several cases the situation that existed in the past is restored.

An even more general aspect of the political context is the shift in the sources of legitimacy of the policy process. Scharpf (e.g.1997: 153-155) discerns input-oriented and output-oriented legitimacy. In the past decennia there is a clear tendency that legitimacy with the people and with stakeholders alike is less firmly rooted in the (positive) assessment of the way decisions are taken and more and more dependent on the (positive) assessment of the resulting outcomes. This places more pressure on every policy process and certainly a complex one like the one that we have studied here. It is also a strong incentive for more network oriented ways of policy making in which stakeholders are involved. The problem for this as a device to construct extra legitimacy is however that also this stakeholder orientation has become part of “normal expectations”.

This brings us to the issue of the *cultural context*. The cultural context is of special interest to ISBP. Here we take the concept of culture in a rather simple and straightforward way, inspired by “cultural theory” (Thompson a/o. 1990, Schwarz and Thompson 1990). On the one hand a culture can be defined by the degree of trust and consensus-seeking. On the other hand by the way in which is dealt with matters of hierarchy and the strictness of formal

rules. Generally and comparatively the Netherlands is often regarded as a country with a relative high level of trust and consensus-seeking and a rather relaxed way of dealing with hierarchy and rules. Here some differences with the more legalistic German culture can be recognised, that indeed surface when water management needs to be coordinated across the border (Lulofs and Coenen 2007). Of course the general characterisation of the Netherlands does not preclude differences between sectors or actors, that can surface during processes as the one studied here. One of the issues occurred when the province was regarded as a spoilsport when it held firmly to a strict interpretation of the standards for “new” nature, instead of “working this out” with the waterboard. Another was when the network-cooperation oriented committee crushed into the more legalistic culture of the Dutch zoning plan requirements.

As this section shows, the contexts of the processes were not always helpful for dealing with a lot of issues requiring “boundary spanning” activities. These activities in turn require a central actor like the waterboard to be open to the complexity of the situation and able to deal with this complexity.

2.6 Receptivity and its impacts

Receptivity is the ability of an actor to associate and exploit new knowledge around existing knowledge, activities and objectives (Jeffrey and Seaton 2003/4). While it is connected to the cognitive aspect of human behaviour in this formulation one can imagine that “adaptive implementation” also and likewise requires that motivations remain flexible enough to incorporate new ones that might serve the interests or ideals of actors and to be able to creatively combine resources in new ways to support intended actions (compare figure 2.4). The role of receptivity in the process as a whole can in principle also refer to the receptivity of the set of actors as a network. Here we will however concentrate on one crucial actor, the waterboard.

Lulofs (2003) assessed that the waterboard showed “flexibility, creativeness and perseverance” in this process. In general for assessing the receptivity of the waterboard the distinction can be made between preview, overview and responsiveness (each next one has been done better). This corresponds with the observation that in the first year there were often stalemates. After 2000 the process continued more constructive. Was this partially an impact of change in receptivity?

A lack of preview was observed on the degree of support of the population (that had been waning after the initial crisis), the profit maximizing orientation of the landowners, and the unavoidable zoning planning procedures. Lulofs (2003) speaks of a lack of “institutionalised analytical capacity”.

During the process the waterboard merged with another one into the new waterboard of Velt and Vecht. This merge enabled the waterboard to introduce fresh people into difficult negotiations. The same merge gave the

organisation a large number of yet unsettled internal roles and made the situation “fluid”. As stipulated in the ISBP proposal this had both positive and negative sides. On the one side indeed new people with open minds of themselves and not affected by the confrontations in the first year, could enter the scene. But also the internally different opinions on the seriousness of the zoning plan difficulties and consequently the tardy response of the waterboard in general could have been aggravated by this circumstance. As a matter of fact, also another main actor experienced a merge. But the merge of the municipality of Gramsbergen into the larger municipality of Hardenberg had hardly any effect since the same civil servant kept this portfolio. It even decreased the chance that the new council would take up old positions of the Gramsbergen council on defending individual inhabitant’s interests.

Another issue here is the framework contract between the waterboard and Arcadis, that was concluded to ensure that an order for part of the work could be given early on, responding to the pressure of the European deadline. This contract left vagaries regarding roles, tasks and responsibilities, and was not in all respects complete. It added to the ‘fluidity’ of the organisation, and certainly not only in a productive way.

An interesting observation is that the process was not only influenced by the characteristics of this central actor, but that process experiences have also been influencing the characteristics of actors (compare figure 2.4). The process produced:

- more information on the realisation of inhabitant retention areas, as this was a real path breaking experience;
- more experience with the various roles of actors in area-oriented policy scheme implementation of retention areas.

Such lessons can be helpful for future projects. In the next section we will concentrate on the lessons we can extract from the perspectives of this study.

2.7 *Managing complexity by boundary spanning*

Managing complexity requires boundary spanning across sectors, scales and time perspectives. This coupling can specifically regard the boundary judgements – as a precondition for fruitful cooperation – which is the core of interest of the ISBP project, but also the wider and practical boundary spanning that is required to make the project run. Often the division between the two is not very clear, while creating fruitful cooperation across boundaries can also be one of the best methods to gradually integrate the boundary judgments of the actors involved. The relationship between (restricted or divergent) boundary judgments of the actors involved affecting the cooperation in the process, thus can be also reversed in as far as reasonably successful interaction and cooperation can help boundary judgments to “open up”.

Grabbing opportunities

While the idea of a retention area in the case study district was not new and even had made it to some white papers, this was not really known to the inhabitants. And even if some would have read the texts there was so much indistinctness about what and when that it would have probably not be regarded as an issue with much saliency. During the flood crisis this changed. In the immediate aftermath the agricultural association organised a meeting with the inhabitants and the waterboard. This can be regarded as a new arena to enable convergence, although a onetime one. While undoubtedly the minds of the inhabitants opened up to include “inundation preparedness” in their domain, this was probably more a “window of opportunity” (Kingdon 1995, Zahariadis 1999) created by the own experience of the flood crisis itself than a product of the evening. Apart from cognitions also their motivation was affected at that time – but that was only to last to some degree. The firm stance of the waterboard chairman supporting the measures even to the degree of making an unconditional promise was a motivational response to the observed flood crisis too. Nevertheless this can be viewed as an exemplary occasion of the coupling of the three Kingdon streams (problem perception, existing ideas on measures and political support), placing the realisation of the “retention area” high on the agenda.

The scope of integration

When the idea of the retention area was inserted in the ongoing planning regarding the “precious cultural landscape” it was not only accepted by the other actors in the committee, but also coupled with issues concerning landscape, nature, recreation and infrastructure for agriculture. This can be regarded as coupling through the selection of an appropriate arena. However, this broad collection of actors did explicitly regard the concerns of individual inhabitants “out of scope”. The resulting first version of the plan came as a shock to many inhabitants that saw their living conditions threatened. This fell back on the waterboard more than upon other actors involved in the committee, while it had taken a central role in this network, getting its way with the actors present, but not with the excluded actors. The inhabitants regarded the strategy of the waterboard in this first year (1999) as one of “dictate”, certainly not as dialogue. Such re-framing of the process and its main actor created a negative filter of mistrust that was extremely hard to falsify later on for the waterboard. The negative effect of this hampered succeeding phases.

Channelling demands

The agricultural association made an inventory of demands from inhabitants / farmers. This is an example that a “report” could change the cognitions of the actors involved in the committee. It enabled a more structured dealing with these issues. Maybe it was for that reason that the elaboration could be postponed to the implementation phase (there following “normal procedures”). The coupling across subjects and scales with the individual inhabitants in that phase was to a large extent done by and could be labelled as the “positive use of external pressure with resources”. This proved a strong and sometimes only practicable “convergence mechanism” in practice: buy them out and pay the ransom. One could say that all others serve to prevent this to be the only option left. Of course it is far from the sophisticated idea of enlarging and

converging the domain specifications of the actors involved in order to enable them to cooperate. In fact, after the initial flood crisis there had been actually a decline of such coherence, general interest issues giving way to individual interests with the inhabitants. Private consultants entered the scene as new actors, but without a “boundary spanning” attitude. Rather than with process objectives, they entered even with firm contents objectives, magnifying those of their clients. An example of a late conversion to another motivation, was when selling land for nature proved to be an attractive option for one of the inhabitants after all, making nature development feasible just before closing time.

Costly resources

Spanning the boundaries between the very different timescales of the important Interreg subsidy scheme, and that of the tasks of getting agreements with individual inhabitants, legal permissions (see under) and building the works was very difficult. Were there “convergence mechanisms” used? Convincing the subsidy managers that they should give half a year leeway, was certainly one. Another was the introduction of new actors. Not one building contractor, but three, and also a coordinating consultancy to guard the day to day building process. Nevertheless also these actors had to be motivated over and over again to keep trying to bridge the temporal scales.

Getting the legal permission

The zoning plan was a hard nut to crack, especially since it was largely unforeseen that it was a serious issue to deal with. The representative of the municipality had to force the boundary judgments of the other actors, especially the waterboard, open in the hard way, by a straightforward threat to actually block the further process. Here we saw a potential “boundary spanning actor” that did not want to play this part, the province that wanted to facilitate agreements among the other actors, not to organise them. But there was also an actor that had a double role. On the one hand the agricultural association acted as an interest group that promoted the interests of the inhabitants (all farmers) and stimulated them to make good use of their legal rights to object and appeal. This could have been very disruptive and could have easily caused the failure of the whole process in light of the rather individualistic attitude that by then many inhabitants held. However, when a majority of the inhabitants had reached an agreement with the waterboard, it became a threat to these and the association alike that a very small number of more stubborn farmers would block any progress and even could provide an excuse for the waterboard to call the whole project off. At this stage most likely the association became a broker and stimulated the last remaining appeals to be withdrawn.

3. Building a new river: The Breakthrough

3.1 *The issue*

On 1 July 2004 the construction of a new stream, 13 km in length in the Dutch Province of Overijssel commenced. This was a long-cherished dream of the water board of Regge & Dinkel: the stream would help prevent flooding and droughts and would contribute to maintaining and even improving water quality in the system of streams in the countryside, which the new stream would separate from the urban system.

The stream crosses a motorway, the Twente Canal, a railway and gas pipelines, and transits planning areas under the control of three local authorities: Almelo, Wierden and Tubbergen. The plans of the three authorities initially considered the area crossed by the Breakthrough as agricultural land and nature reserve; at that time it was mainly in private hands. The area also contained a railway line, property of ProRail (the railway infrastructure company), a few country roads, and two main roads, the A35 and the N74, managed by the Ministry of Public Works (Rijkswaterstaat).

The land was originally agricultural or was in private hands, but project developers were active. Constructing the stream thus necessitated changes to the Provincial and Local Authority plans, the operational plans of the railway management company and the natural gas authority (Gas Unie), the project developers' plans, and those of the land's owners. Moreover, the Waterboard would neither be able nor willing to bear the €40 million cost of the project. Obviously, therefore, a lot of boundary spanning was involved before the waterboard of Regge & Dinkel could build the Breakthrough, which is why the project is such an excellent case study for the present research.



Figure 3.1, Area of the Waterboard of Regge and Dinkel (= Twente region); case study area marked with an oval (source: www.wrd.nl)



Figure 3.2, Location of the Breakthrough (source: Arcadis, 1999)

As early as the 1980s the province of Overijssel and the water board of Regge & Dinkel both agreed that something should be done about the situation in which relatively clean water from a system of streams in the countryside was mixed with relatively polluted water in the urban system in the densely populated Twente region¹⁰. They went public with their ideas in 1992, in a strategic document in which the waterboard also announced a number of projects that would allow the concept to be implemented. The idea of separating country from urban water *by constructing a new stream* could be recognized in this document, but was not set out as a concrete project. In fact, the waterboard had not yet investigated whether the construction of a new stream would be feasible. In 1993 the waterboard commissioned a number of students at Wageningen University to conduct a multidisciplinary, exploratory study of the construction of a stream, 13 km long and 25 m wide, in an area to the south of the city of Almelo, which the Province of Overijssel had allocated as an ecological highway. At the time, a national land utilisation project was also underway, aimed at the more efficient reallocation of land and countering droughts. Since these plans could readily be united with the construction of a new stream, and because both the ecological and hydrological conditions appeared favourable, the students concluded that the construction of the stream was not only technically feasible; it was also a viable policy option. The outcome of their study led to further research into options whereby the idea of digging a new stream could be worked out in practice.

Section 3.2 tells the story of the Breakthrough – the case description – after which the case is analysed according to the method set out in Chapter 2.

3.2 Processes and coupling

Sharing ideas: initial plan development

By 1997 the Waterboard was sufficiently well-aware of the technical feasibility and went public with a plan to construct a new stream in a document entitled Reggevisie. This document named the conservation of relatively clean country water quality and countering drought as the most important reasons for digging the Breakthrough.

Simultaneously with this publication, the waterboard initiated government links by inviting leading government figures – upon whom the waterboard deemed itself dependent – to come together in a governmental steering committee for joint consideration of the plan for the Breakthrough. The invitation was accepted by aldermen from the local authorities of Tubbergen, Wierden, Almelo and Borne, and representatives of the province of Overijssel and the local Agricultural and Market Gardeners' Organisation (GLTO, hereafter "agricultural association"). In the meetings that followed it

¹⁰ The Twente region is 1350 square kilometers and has 600.000 inhabitants, more than half of them concentrated in three almost adjacent cities, leaving also room for quiet rural areas.

turned out that they all agreed that the Breakthrough was both necessary and useful. Thanks to the support for the abstract idea of separating country from urban water by means of a waterway, the steering committee was almost immediately able to go on to consider how the Waterboard could implement its plan. Before this 'how?' question got onto the agenda, though, the province of Overijssel emphasised that any actions would be assessed within the overall context of the Overijssel Nature and Countryside Policy Plan (in Dutch: Beleidsplan Natuur en Landschap Overijssel), dating from 1992. This made it clear that the province's cooperation was conditional on the Breakthrough functioning as an ecological highway. The nature and landscape plan in fact indicated that the area where the Breakthrough was planned was a potential site for the location of the National Ecological Network. This condition had consequences for the design: if the Breakthrough was to function as an ecological highway, the Waterboard would have to add 25 metres of greensward to both banks in country areas. As much as 75 metres extra would have to be reserved on both banks in areas where the stream bordered urban functions and infrastructure.

This involved a major expansion of the land area needed, well beyond the 25 metre wide stream that the waterboard had been discussing up to then. It was obvious to the members of the steering committee that only so could the Breakthrough be useful for both purposes, both of which they supported. Subsequent negotiations on the route to be adopted (there were still four options under consideration) were thus all based on the wider, dual-function version.

The participants also had other ideas about the way the space in the area planned for the Breakthrough should be used, and they also entered into the discussions. For example, the local authorities of the three major cities Almelo, Enschede and Hengelo were toying with the idea of locating a regional business park in the Almelo sector of the planned Breakthrough area. The alderman from Wierden proposed ideas from the Land Reallocation Committee (which he chaired), involving a project for Enter village, intended to lead to improved land allocation and fewer drought problems for agriculture in the area. The province proposed that the Breakthrough should be included in the land reallocation project, which would mean that, when the time came, the province could use (legal) instruments and funding from the reallocation project for the construction of the Breakthrough. Under the Land Reallocation Act in force at the time, funding from this source could only be used for strictly formulated land reallocation objectives, and not for such matters as the implementation of the National Ecological Network or a new waterway. The province was aware, though, that the Ministry of Agriculture, Nature and Fishery (Landbouw Natuur en Visserij: LNV) was considering amendments to its land reallocation policy, which, it was presumed, would relax restrictions on the use of funding from this source, in the sense that it *would* then be available for creating the National Ecological Network. In order to be able to profit from this funding from the land reallocation policy, the Land Reallocation Committee, which the Wierden alderman chaired, could not present the land reallocation project to the provincial government before the national government had passed its amendment to the Land Reallocation Act. This

implied that the land reallocation project would be delayed, since it had been in preparation for years, it was now nearly complete, and would be ready for implementation in a far shorter time-frame than central government needed for its amendments. Nevertheless, the Governmental Steering Committee speedily agreed to link the Breakthrough to the land reallocation project.

In this way the Steering Committee gathered together ideas about the area's development, which had been developed disparately prior to that time. These exchanges also afforded an insight into the background to the criteria that each participant proposed for assessing the four alternative routes. These were worked out by an external consultancy, leading in 1999 to the report 'Country Water through the Urban Belt' (Landelijk water door de Stedenband). The multicriteria analyses performed for this report showed a preference for a route that followed existing waterways as far as possible. Only the agricultural association was against this, since it objected to the extra crossing of the agricultural area that this plan involved.

In this first phase already a number of *couplings* took place with extra objectives. While the initial goal was a) to *separate relatively clean rural water from more polluted urban water*, b) *preventing droughts* was quickly added by the water board itself. These were both still water policy goals (quality and quantity respectively), but the province added a major goal from another policy field: nature protection, demanding that c) the project area would serve as an *ecological highway*, with great consequences for the contents of the project, especially its *spatial* characteristics. From – predominantly - agricultural policy d) the contribution of the project to *land reallocation*, improving among others the agricultural infrastructure was put forward, also shifting the *temporal* aspects of the project. Thus the project evolved very quickly into a complex multi-purpose enterprise. At the background another issue was already visible, though as yet only as a possible competitor for space: the plan for a regional business park.

Fear for nature

Complaints were also voiced in Enter village, in the Wierden local authority area, when the province of Overijssel, the Waterboard and the Wierden alderman pressed for a link with the land reallocation project under development there. They had no problem with a link between the waterway and the land reallocation project as such, but the link with the ecological highway was a cause for concern, since the rules for a nature reserve might then become applicable, which might hamper their agricultural practices¹¹. The forceful suggestion that the project should be presented only after the Land Reallocation Act had been amended also encountered great resistance, since this would involve yet another delay. Be that as it may, the Land Reallocation Committee itself was convinced that the Breakthrough would be a valuable addition to the land reallocation project. True, it would take longer, but the water budget would improve the situation for the landowners, while a beautiful nature reserve would also be created. This was why the committee

¹¹ The core phrase expressing their fear was: "If a rare butterfly picks this ecological area to settle down, we'll get all the restrictions of the EU and Dutch habitat policies on our back!"

members also took a great deal of trouble to convince their constituencies. Besides this, the chairman also had to take pains to convince his own constituency, the Wierden local council, of which he was an alderman. He had to fight his corner a number of times, as several farmers expressed their displeasure directly to a number of individual councillors who then, of course, started putting critical questions to the alderman.

As the amendment of the Land Reallocation Act neared its completion, the Land Reallocation Committee succeeded in recruiting support for the Steering Committee's preferred route. Finally, the Land Reallocation Committee was able to offer its land reallocation plan to the province of Overijssel, including the preferred route for the Breakthrough.

In this phase not a new project goal was added or removed, but in another way a necessary coupling was prepared: with the local physical planning of the municipality of Wierden. While an important part of the course of the stream was decided upon, the story on the physical planning of the municipality of Wierden does not end here. It will be resumed later, but first we'll explain a more or less simultaneous developing part of the story.

'Hot land'

The land reallocation plan afforded clarity about the location, width, detailed planning and funding of the first part of the route in Wierden. There was, however, maximum uncertainty about the next part of the route that might border the Regional Business Park, about which the local authorities of Almelo, Enschede and Hengelo were in consultation. The only certainty the Province could offer was that, *if* the business park were to be sited to the south of Almelo and *if* the Breakthrough were to border the business park, then the stream would have to be widened yet further there. To get some clarity about whether the business park would in fact be located there, the province initiated an Environmental Impact Statement (EIS). This involved obligatory publication of the initiating memorandum, which meant that the landowners in the province's and the local authority's preferred area for the business park realised they were sitting on 'hot' land. Land prices in the area thus rose considerably, including the land needed for the Breakthrough. Speculation about the business park thus resulted in greater estimated costs for the Breakthrough. Those landowners who might have to vacate their property or who would be imposed a view over a business park were benefited by the clear information on the business park's location. The land area needed, including that needed for the Breakthrough, would increase if the business park were to lie adjacent to the Breakthrough, so land acquisition could not start soon enough.

It could have taken years to pass through all the stages needed for an Environmental Impact Statement, but there was urgent need for a speedy resolution of the matter. The provincial government, which was involved in and benefited from both projects, therefore considered ways to accelerate the process. In 2000 the province divided the Environmental Impact Statement procedure into two. This meant that an advisory committee would first work on a location impact statement. As soon as this process generated one likely

location, this would be opened to public consultation, leading to greater clarity. Only then would the Environmental Impact Statement be prepared for the actual detailed planning of the site.

Again, this story does not end here and will be resumed later. However, already in this phase the position of the province made clear that the project could be coupled to an additional function, namely e) creating a *buffer zone for the business park* separating it from residential and other zoning. Herewith in fact *the spatial scale* of the domain of the project was increased.

Detailing and presenting the plan

While the preparations and actual drafting of the Environmental Impact Statement were in progress, another investigation of the Breakthrough started. After the route had been chosen, the next logical step was to look at possible detailed planning. To that end, in late 1999 the Governmental Steering Committee once again formulated a number of objectives that the planned stream would have to fulfil. The objectives derived from a number of disciplines: water, ecology, agriculture, landscape, leisure, and management. The detailed plan resulting from this investigation was presented to the public in November 2000 in three very crowded information evenings. There were four differences between the plans as presented and the first sketch of the Breakthrough, presented by the waterboard just after publication of Reggevisie in 1998. First of all, the communication method was different. The first public announcement was literally a presentation and was actually very one-sided. In its 2000 presentation the waterboard explicitly left room for questions both during and after the presentation. The attendees were glad to make full use of the opportunity and some of the proposals were actually used by the waterboard in its detailed plans for the Breakthrough. For example, they scrapped the water retention areas drawn on the plans. Sadly, not all the questions put by the audience received a response. The waterboard was not in a position, for instance, to answer the many questions related to the possible Business Park. A second difference between the first presentation and the three later ones in 2000 was that in 2000 the Breakthrough was presented explicitly as a waterway that would also function as an ecological highway. This was related to the third difference: the size of the Breakthrough. The stream was originally presented as being 25 metres wide, but had now been expanded to 75 metres, while it could even be as wide as 175 metres along the tentative boundary with the Business Park. A fourth difference was that the waterboard presented the Breakthrough as a way to prevent flooding. The emphasis was no longer on improving water quality. The waterboard expected some marketing advantage from this changed accent since in 1998 it was found that the water system was inadequate to cope with heavy rainfall, which had led to serious problems. This was still readily recalled by most residents, who would therefore more easily understand and subscribe to the need for the Breakthrough.

Moreover, central government had launched a national campaign to persuade people that water needed more space as a result of climate change and similar issues, which could also help recruit support for the Breakthrough. This national campaign started in response to the new motto introduced by the

Committee for Water Management in the 21st Century in its advisory note, which suggested that a policy of integrated water management should be replaced or supplemented by the concept of adaptive water management, meaning that water should be given more space, to include its dynamic aspects.

In this part of the process – on the more detailed planning and presentation of the project – some new objectives were added to the existing ones. In the assignment to develop the plan also f) *landscape and recreation* were mentioned. Next to that in the domain of water purposes g) *flood prevention* was now emphasized. Even though the means of creating retention areas was quickly removed from the plan, the river with its wide natural banks would create a lot of storage and discharge capacity. Interestingly, the water quality issue of separating rural and urban waters was now less emphasised, while of course it was still included and – given the EU Water Framework directive – probably even more important than ever.

Gold rush

The attention to new types of water management was also manifest at the European level, and the Breakthrough's project leader discovered to his delight that this attention also formed part of the European subsidy programme Interreg 3b, which is intended to encourage projects that would lead to more space for water. The project leader was correct in his appraisal that the Breakthrough would be eligible for a grant under this programme. The most important requirement for participating in the programme was that the Waterboard should have at least two foreign partners. The project leader rapidly found Dutch partners: the colleague waterboards of Groot Salland and Velt & Vecht, and the National Countryside Service. In search of foreign partners he visited an exhibition in Rotterdam in 2001, where he was successful. With them he submitted a funding request, which was granted, and so there came a decisive moment. Accepting this grant meant that the ground would actually have to be broken, and very soon, to start construction of the Breakthrough: the funds would only be paid out after concrete results had been achieved within a set period of time. This meant that the funding process had actually overtaken the legal and practical processes that the waterboard was pursuing to make the Breakthrough a reality. The practicalities involved a public tendering process that could in fact only get under way after the legal procedures had been complied with to make the Breakthrough possible. The legal aspects meant at least that the Waterboard had to acquire title to the land needed for the Breakthrough, while the local authorities and the provincial government would have to amend their planning, which involved long, drawn out procedures. If the residents were to avail themselves of all avenues of appeal open to them, then the period within which concrete results could be achieved in order to gain the grant funding might be very short indeed.

In brief: accepting the grant would bring with it exciting times, which in the worst case would lead to immense costs, but to a vast financial injection if all turned out well. Another advantage could be that the construction of the first

part of the route might call forth such enthusiasm that other funding options would suddenly open up.

While the waterboard was wrestling on the horns of this dilemma, the Governmental Steering Committee was successful in reaching a cost allocation. The Steering Committee formalised these agreements in the form of a Declaration of Intent in December 2001, in which they also formally affirmed their support for the Breakthrough. Partly thanks to this government support, now set down in black and white in the Declaration of Intent, and because the grant appeared to be a real possibility, there was a general increase of confidence in the Breakthrough's feasibility. The waterboard therefore resolved to take the risk associated with accepting the grant.

The grant demanded a great amount of administration and also meant that the project would have to get underway very soon, so the Breakthrough project leader was rechristened 'grant coordinator'. The actual development of the Breakthrough was put in the hands of a new project leader, who until then had had only been peripherally involved with research into the technical and substantive aspects. The waterboard also asked someone from the National Countryside Service (Dienst Landelijk Gebied: DLG) to steer the process and to act as a neutral, independent party. By coincidence, one member of the Countryside Service staff had acted as tutor to the students who had published the first report on the Breakthrough in 1994. This person thus seemed eminently suitable and rapidly joined as process manager. The new project leader, the process manager and a person from the province of Overijssel now made up the steering committee. Even though the Breakthrough's go-ahead could not yet be guaranteed, they nevertheless started to acquire the land in 2002. As agreed with the provincial government, they were able to access the funds available for land reallocation and reconstruction. There was, however, a maximum price per hectare for the land that the Countryside Service could buy with this money.

Speculation about the Business Park had led some land prices to climb above this maximum. In late June 2002 the Waterboard's Management Board extended a credit of €8,200,000 so that this land could be acquired. Additional funds were secured from the national program to increase flood prevention and storage capacity in the perspective of climate change (the National Intergovernmental Covenant on Water), reemphasizing flood control as one of the purposes of the project.

This part of the process did not lead to extra purposes for the project. Having typical EU demands like recreational opportunities included in the no less than seven purposes we mentioned already, this was also hardly conceivable.

Bypassing the physical plan for the first trajectory

We left the scene at Wierden at the moment that the trajectory was proposed. But that was not the end of this story. Between 2002 and 2005 a number of enquiries had been held by both internal and external experts to detail the main outlines of the plan and test their feasibility, both technical and

substantive, and to answer the questions raised by interested parties and ultimately to gain their support.

While various inquiries were in progress into the substantive issues surrounding the Breakthrough, an external consultancy was asked to prepare a draft zoning plan for the area surrounding the stream. The waterboard's intention here was to save time and expense for the four local authorities, which would have to amend their zoning plans to make the Breakthrough legally feasible, and to maintain the pace of the process, which the waterboard itself needed as there was no time available to attend to all the zoning law procedures before starting work on the first part of the Breakthrough's route: the grant was time-limited. The waterboard therefore asked the Wierden local authority, in whose area they wanted to start excavating, to use such legal options as were available to depart from the current zoning plan. Thanks to the alderman's involvement and enthusiasm, the council agreed to this proposal in September 2003. The waterboard's draft resolution, the draft zoning plan, and the petition of 25 September to 24 October 2003 to depart from the then current zoning plan in Wierden were opened to public inspection that same month. In the meantime, the waterboard organised an information evening, attended by 150 interested parties. Their reactions were set down in a memorandum which, with responses, was later distributed to the attendees. It was clear from the memorandum that the waterboard was genuinely open to reactions: some of them had actually resulted in changes to the plans.

The reactions had other consequences, too. Many of them revealed a real need to be involved in the process, which led to an intensification of the communication. The waterboard had a logo designed for the Breakthrough, to be printed on all the illustrated newsletters. They also planned notice boards, they launched a website, they visited the most directly involved landowners in their homes, and they held information evenings and published articles in the daily press and magazines. There was a risk that journalists would perceive minor irregularities in the process as major blunders, so the communication strategy also meant that every journalist would be referred to the same spokesperson, they would keep their distance if it didn't work out, and the press would be invited in case of successes.

Support for the Breakthrough increased steadily in the local council of Wierden where the first part of the Breakthrough was planned, especially when the waterboard promised that all instances of possible planning blight would be compensated at the waterboard's cost. When the time came for the council to pass the final resolution, however, the alderman who had always been closely involved with the Breakthrough actually had to confess that this agreement was not permitted by law. He was able to convince the council that central government was preparing to scrap the right to compensation for planning blight, so no risk was involved. This was accepted by the council and it was thanks to the subsequent resolution that the first part of the route could start. When, on 19 February 2004, the time came for the waterboard's general council to decide on detailed planning and changes to water management, the

most serious legal hurdles had in fact been crossed, and the spade went into the ground for the first part of the route in July 2004.

Nature against nature?

While the legal impediments to the first part of the route were past history, many hurdles still had to be crossed for the parts of the route passing through the other local authorities. It was especially the residents in the central part of the route who voiced their concerns. This area lay originally in the Borne area, but had since been reassigned to Almelo. It is also the area where the projected regional business park would be situated somewhere. The media lent extra force to their protest by inflating the negative picture that the landowners had sketched.

The entire population of the region, including politicians, were thus able to enjoy the conspiracy theories and tales of dishonest government dealing. The media were also invited when the farmers involved organised an information meeting in one of their farmyards, to which they invited Almelo councillors, members of the provincial council, and even a member of Dutch parliament, to present their alternative to the Breakthrough.

Where the stream passed through their area, their alternative reduced its width to the original 25 metres. The farmers did in fact support this original 25-m width. They agreed that water needed more space to carry off rainwater. What actually annoyed them were the nature reserves on both banks of the Breakthrough, which they planned to scrap over a 3-km length. Besides the extra area, which would come from agricultural land, many farmers still feared that the nature reserves would impede their farming practices and any possible expansion, since they would be governed by environmental legislation. To meet the requirement for nature reserves shown in the Breakthrough plans, they had cooperated with Het Krikkenhaar, a nature group, to propose an exchange. The nature reserves alongside the Breakthrough would be substituted by a new nature reserve to be developed on land in the Krikkenhaar area. They realised that this would mean the disappearance of the ecological highway function, but they assumed that the Waterboard had only incorporated that to gain access to EU funding. When the process manager told them that the extra width was also necessary for engineering and water management reasons, they merely voiced their disbelief, as they did when they were told that they would receive generous compensation.

Of course, while the process manager stoutly maintained that changes to the plans like those proposed were impossible, other invitees did seem to appreciate the alternative. The agricultural association, residents' associations and even one of the political parties lent their support to the alternative plan. Some of the councillors and members of the provincial council stated they would study the alternative plan before deciding on amendments to the zoning plan that would make the Breakthrough with its ecological zones legally possible. The alternative plan thus posed a threat, in that the necessary zoning support might not be gained in one of the local authorities, even

though work on the first part of the route had already been going on for six months, and the ecological highway function was demanded by the province right from the start of the development of the concept.

The alternative, coupled with the farmers' continuing protests voiced directly to local politicians, led to conflict in the Almelo council and delayed the resolution on the Breakthrough within the council's territory.

Ultimately, in January 2005, they resolved to go ahead, after the waterboard had agreed to a regulation whereby agricultural use would be allowed for seven years in areas ultimately destined to become nature reserves. This gave them seven years to reach an agreement with the landowners. Also, part of the residents came to understand that the wide nature area would be an ideal buffer against the future extension towards their properties of a development that was even more threatening to them, the creation of a regional business park. Things did not completely quieten down after this decision. Some farmers attempted to get their way through the courts, but without success.

From planning to implementation: still issues to be resolved

After the die was finally cast in Almelo, it seemed that, despite all the research, there were still surprises in store. Unexpectedly, the bulldozers had encountered glacial boulders. Further research, a search for suitable earth moving equipment and a new round of tendering involved a delay of several months. Another delay was caused by the absence of a permit from the Ministry of Public Works. Even though the contractor's clock was ticking, the Ministry followed the time-consuming, formal permit procedure, to the immense annoyance of the Breakthrough Steering Committee. Later, however, the Ministry performed a sterling service for the waterboard. Part of the Breakthrough was to cross motorway, which was not especially beneficial to nature, of course. It turned out, though, that the Ministry still had some funding available for an ecological pass way and was prepared to spend it on the Breakthrough.

Negotiations proceeded apace on the subsequent parts of the route in 2006 and 2007. Almelo, for instance, had also planned a new housing estate near one part of the route, which meant that the gas and electricity providers would have to move existing underground supply lines. The parties with plans for the area through which the Breakthrough was to run collaborated, by agreeing a common timetable for their activities. The gas and electricity suppliers would do their work first, after which the ground would be excavated for the Breakthrough so that the local authority would be able to use the soil to raise the ground level of the new housing and industrial estates.

Those parts of the route that had already been dug attracted a lot of attention as nature increasingly became established there. This increased the support from more and more of the residents, who made their positive views known to the waterboard. This support was a shot in the arm, one of a kind that is sorely needed in the years to follow as the Breakthrough is shaped to become a reality.

3.3 Actors and their motivation, cognitions and resources affecting the process

As the case description shows, in the interaction processes surrounding the Breakthrough a number of objectives from more policy programmes than water management alone, became interlinked. This section presents an analysis of these interaction processes. Two of them are composed of two processes described above, while these pairs follow each other but stretch chronologically over a longer period and are therefore described in two parts in section 3.2. Like in Chapter 2 where the analytical framework is explained, the analysis is conducted at three levels. The processes are first explained in this section by considering the three characteristics of the parties involved that are central Contextual Interaction Theory: motivation, cognitions and resources. Thereafter the analysis goes on to deal with boundary judgments as part of the cognitions involved, in 3.4. Next in 3.5 the influence of the layers of contexts is studied: both the structural context of the governance structure and the wider contexts.

Policy processes are viewed in Contextual Interaction Theory as interaction processes between actors (people, parts of organizations). Many factors can have an influence on their activities and interactions but only because and in as far as they change relevant characteristics of the involved actors. These characteristics are: their motives (that drive their actions), their cognitions (information held to be true) and their resources (providing capacity and power). Figure 2.4 in section 2.3 specified how these characteristics are formed.

Initial plan development

The interactions between the waterboard and the provincial government that led to the Breakthrough being linked to the provincial planning and zoning policy, the National Ecological Network policy and the land reallocation policy together form a first interaction process to be analysed.

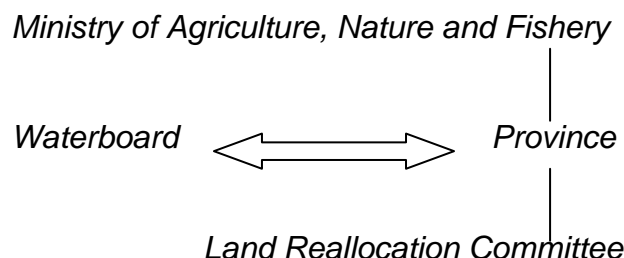


Figure 3.1, Actor constellation initial plan development on the Breakthrough

Linking the Breakthrough to the provincial zoning and planning policy can be understood in terms of the characteristics (motivation, cognitions, resources – see figure 2.4) of the *Waterboard* and the *Provincial Government*. There was

a clear congruence between the objectives of the provincial zoning and planning policy and that of the waterboard, which were both served by constructing the Breakthrough.

Provincial policy in fact aimed to maintain and improve nature by linking natural areas, while the waterboard concentrated on linking relatively natural wet infrastructure. These objectives were very much in accord with one another¹². The cognitions were also in accord, which, together with the overlapping motivations, explains how the Waterboard could easily link the Breakthrough to the area plan when they were in talks with the province in the Governmental Steering Committee.

In terms of resources, even when the waterboard would not have particularly liked the provincial objectives, the critical dependence of the *Waterboard* on the *Provincial Government* actually offered the latter the opportunity to increase its influence by cooperating in linking the Breakthrough to the local planning. In fact linking the National Ecological Network policy with the Breakthrough was done in the expectation that this would increase efficiency. The provincial government was also motivated by financial considerations when the Breakthrough was given a place in a land reallocation project for an area through which the Breakthrough would pass, while they linked the timetable for this reallocation project to the timetable for the amendment of (national) land reallocation policy. This had to be done, since funding from the planning policy could only be used for the Breakthrough if the project were to be undertaken under the amended land reallocation policy.

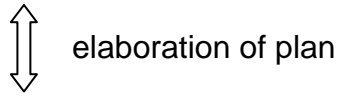
Detailing and presenting the plan

In this process it is especially the triple presentation of the new more detailed plans to the public that deserves attention. It is clear that this was done differently than the first initial presentation. The actors are the Steering Committee that guided the elaboration of the plans, the Waterboard that not only took a strong role in the detailing but also in the presentation and the audience that responded generally with constructive remarks in this phase.

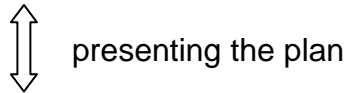
¹² An objective is in accord – or ‘congruent’ - with another objective when the realization of the first objective makes the realization of the second easier. It is not necessary that they are identical. Likewise, objectives are conflicting when realization of the one makes realization of the other more difficult and independent when realization of the one doesn’t influence the difficulty of realizing the other.

The actor constellation was:

Steering Committee



Waterboard



Public: audience of presentations

Figure 3.2, Actor constellation presentation elaborated plan on the Breakthrough

It seems that the waterboard had a genuine motivation to discuss the plans in a rather open way with the audience and that the audiences also perceived this to be the case (cognitions). In fact, this could be a well-understood self-interest on the side of the waterboard, as a method that it had learned worked better than a strict develop-announce-defend strategy. However the adaptations made following the meetings also support the idea that the openness was more that just tactics. At the background the considerable power for the people to hinder the progress of the project with the resource of legal objections might nevertheless play an important role.

Dealing with physical planning in the first part of the trajectory

The third interaction process analysed is that by which the Breakthrough linked up with the Wierden local authority's spatial planning policy. It is described above in section 3.2 under the headings of "*Fear for nature*" and later "*Bypassing the physical plan for the first trajectory*". It can be understood in terms of the characteristics of the *alderman*, *local council*, and *landowners*, in the local authority's area, with the *Waterboard's* characteristics included as backgrounds.

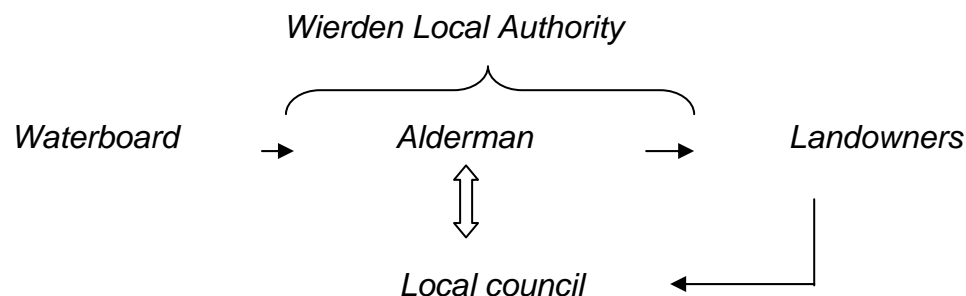


Figure 3.3, Actor constellation physical planning in the first part of the trajectory in the Breakthrough case

The *alderman* responsible for planning exerted the most positive influence on the link between the Breakthrough and planning policy in Wierden. His

positive influence can be understood first of all in terms of his motivations. The goals of the water policy that the Breakthrough would fulfil partly matched those of the alderman's planning policy: countering drought. The nature goals associated with the Breakthrough also fitted in with the alderman's planning goals. His support for the Breakthrough also linked up with the alderman's desire for good external relations with other tiers of government. The motivation here stemmed in part from his own goals, as well as from the realisation that Wierden local authority often depended on, and would continue to depend on other levels of government, including the waterboard.

Moreover, the alderman shared with the waterboard the view (cognitions) that the Breakthrough in fact would counter drought in Wierden, while he appreciated that his function and personal character were resources he could use to link the Breakthrough to the Wierden planning policy (self-effectiveness assessment). The match between his goals and cognition with those of the waterboard, and his position as resource, explain the support offered by the alderman.

Landowners Given the favourable configuration of motivation, cognition and resource position, the alderman's cooperation was understandable, but was in itself not sufficient to forge the link between the Breakthrough and the Wierden planning policy. This needed both the local council and to some degree also the landowners. The landowners were initially against the Breakthrough which, given their characteristics as actors, can be explained as follows. They were in principle in favour of a link between planning and water policy by means of an amendment to the zoning plans. The water policy goals matched their own, which clarifies their motives for supporting that part of the plan. Nevertheless, most of the landowners were on balance against a link between the Breakthrough and 'their' zoning plan, due to the other policy that linked with the Breakthrough.

In their perception (interpretation of reality - cognitions), the link with the National Ecological Network would bring with it restrictions on their business practices, while most of them regarded their agricultural businesses as a serious resource, which most of them wanted to expand. In this regard, their cognitions differed from the waterboard's, which saw no reason to fear any such restrictions.

The link between the Breakthrough and the Enter village land reallocation project was not a problem for the landowners as such, but linking the timetable for this project to amendments in parliament certainly affected their motivation adversely, since it meant postponing the land reallocation project's implementation. The risk of regulation and postponement of the land reallocation weighed particularly heavily with the landowners because they perceived that the provincial government could also site the ecological highway elsewhere, where it would pose no threat to their farming.

So both the motivation and the cognitions of the landowners differed greatly from those of the waterboard, which offered little chance that the landowners would easily cooperate in the linkage.

There was little chance that they would cooperate, either, due to the unequal distribution of resources between the landowners and the waterboard. The waterboard had no resources to compel cooperation, since a condition of the cooperation with Wierden was that the Breakthrough would be

incorporated into the land reallocation project, provided the landowners agreed voluntarily. The landowners, however, did have a resource available by which they could make the waterboard keep its distance. By expressing their dissatisfaction directly to the local councillors and the media, they exerted an adverse influence on the motivation of the local councillors. It was not electorally favourable for them to support the linkage, while their cooperation was indispensable. It was they, after all, who would have to approve the change to the local zoning plan. They utilised this resource right up to the point when the alderman succeeded in persuading the landowners that it was also in their interest to link the local zoning plan to the Breakthrough.

Councillors The local councillors were initially less enthusiastic than the alderman, thanks to the adverse influence of the landowners, which affected their motivation to work on linking the Breakthrough with local zoning policy. Their objections dissipated when agreement was reached with the landowners, who ceased to express their resistance to the councillors. Nevertheless, this was not enough to motivate the councillors, since two objections to the link remained. It was in fact inherent to the link with planning policy via the local zoning plan that planning blight compensation would have to be paid. The costs involved would legally have to be born by the local authority. The second objection was the cost of changing the zoning plan. In the councillors' view, the council was unjustified in tapping its own resources for a project that in fact served the interests of other tiers of government. The Waterboard agreed to bear these feared costs itself.

That changed the councillors' perceptions about of linking the Breakthrough to 'their' zoning plans. They expected no further adverse consequences for the Wierden local authority, which offered them sufficient motivation to agree.

Dealing with physical planning in the second part of the trajectory

The fourth process analysed is composed of the interactions by which the Breakthrough was linked to the Almelo local authority's zoning policy, including the Regional Business Park and the building of a new residential area. This process has been described above in section 3.2 under the headings '*Hot land*' and "*Nature against nature*". The link between the Breakthrough and the Almelo zoning policy was forged again mainly via interaction of the *alderman* with the *council* and the *landowners* with the *Waterboard* at the background.

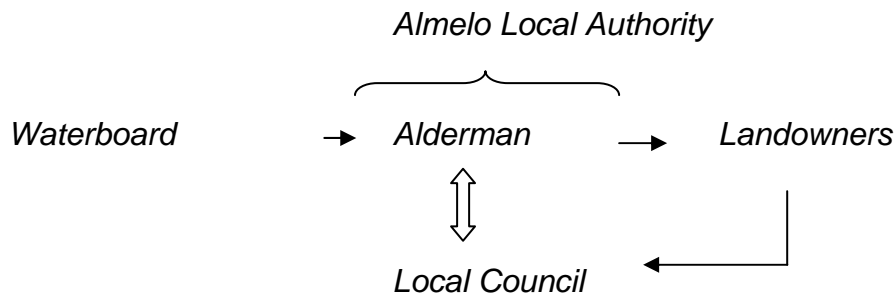


Figure 3.4, Actor constellation in round three of the Breakthrough case

The Almelo *alderman's* interest in this case was only tepid at best, because of his cognitions: he did not initially acknowledge that Almelo had anything to gain from the Breakthrough, presented as it was as a solution to nature and water budget problems, while the Almelo alderman saw himself as responsible for urban issues. Nor was he entirely successful in picking up the signal that the waterboard expected him to recruit support for the Breakthrough from his constituency.

The high water levels in 1998 increased the perception of risk and did affect the alderman's interpretation of what the project could achieve positively, so when the *Provincial Government* tied the Breakthrough's construction to the establishment of a Regional Business Park in Almelo, the alderman's motivation rose to the point where he cooperated on the Breakthrough. The increase of motivation continued when it turned out that sand released by excavating the Breakthrough could be used for building a housing estate. Thanks to a link between the Breakthrough and the zoning plan, they would be able to save money.

The *agricultural landowners* in Almelo were not at first sufficiently motivated by the link between the Breakthrough and the zoning plan to offer their support. Just like their peers in Wierden, they too were wary of the regulations under the National Ecological Network. They also assumed that they would suffer from over-irrigation, a point on which their cognition differed from that of the waterboard. When the waterboard sought intensive contact with these landowners, suspicion declined about the research that formed the input to the waterboard's cognitions. Some landowners even became motivated by the Breakthrough when it turned out that the Regional Business Park would be built quite near them. In comparison to the alternative scenario, in which only the Regional Business Park would be built, which would destroy their view (and maybe even could threaten to swallow their lands in the future), the alternative with the Breakthrough acting as a buffer was suddenly a relative improvement. Another positive cognitive change influencing their motivation was that they acknowledged the waterboard's openness in linking their individual interests to the Breakthrough. For example, an extra bridge was added to the Breakthrough to preserve an existing footpath.

The *Local Council* was in these circumstances quite hesitant and postponed the decision until there was sufficient relaxation of the objections of at least

part of the residents / landowners. Clearly it had the legal *resources* to force a decision but was not *motivated* to do so at all before this point.

Getting funds

The next process, and the last one to be analysed, comprises the interactions between the *project leader* and the *Waterboard Council*, *project leaders* of foreign water authorities and the *bureau* managing the European Interreg subsidy, which linked the Breakthrough to the European grant. It was described above in section 3.2 under the heading “*Gold rush*”.

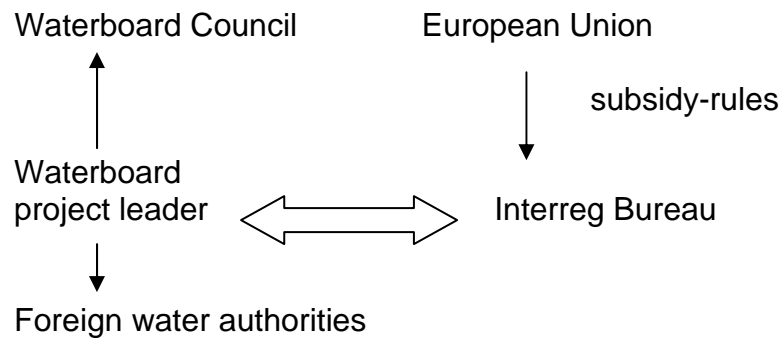


Figure 3.5, Actor constellation surrounding round four in the Breakthrough case

The *project leader's* characteristics play an important role here. He had an intrinsic motivation and interest in the world of subsidies, which focused his cognition: it made him very receptive to information on the subject. His self-confidence and experience formed a significant resource, which helped him forge links. He was bold enough to apply for grant funding, even when it was uncertain whether the *Regge & Dinkel Council* would offer the necessary support if and when the grant was actually made available. The *Regge & Dinkel Council* was uncertain since they had the perception that the Breakthrough might not be financially feasible, which hindered them from offering their total support to the project. These doubts disappeared when the *Regge & Dinkel Council* became aware that grant funding had already been obtained. This changed the perception about financial feasibility and thus also the motivation to cooperate on the link with the grant by making resources (credit) available for the Breakthrough.

The motivation for two *foreign water authorities* to link into the project stemmed from the perception that the funding they needed to achieve their goals would reduce thanks to the grant, combined with the knowledge that the grant was conditional on cooperation and knowledge-sharing between water authorities from different countries.

3.4 Boundary judgments and their impacts

Boundary judgments are definitions of systems and problems that underpin conceptual models. For the purpose of our case study they can be defined as socially constructed definitions of the domain of relevance (in terms of relevant scales, problem and policy sectors and time and change aspects – see figure 2.9). Boundary judgments that differ among actors can cause incoherence and can even be a source of conflict. Boundary judgments that are too narrow for the adequate use of the innovation or so wide that complexity becomes unmanageable and can also stop all progress.

In this section we will wonder what kind of boundary judgments of the actors involved can be observed and how they could have influenced the actor characteristics and the resulting processes. Some relevant boundary spanning was already mentioned as instances of “coupling”. The project combines the water policy goals of 1) separating rural and urban water by re-coupling a natural creek system to the main stream of the region, 2) drought prevention, and 3) flood protection and the goals from other policy fields of 4) ecological highway (nature), 5) land reallocation (agriculture), 6) buffer zone (industry), and 7) landscape and recreation. Some of these couplings didn’t really have the character of “boundary disputes” over the relevant domain while there actually wasn’t disagreement about the coupling. But there are more boundary judgments that are recognisable and had an impact on the process. Like in section 2.4 we discern spatial, sectoral and temporal aspects of the domain.

Spatial aspects of the domain

In this case we have seen that the area where the options for the trajectory of the new river were searched rather quickly shirked to only one trajectory. At that time this happened without much debate. It was the product of a multi-criteria analysis, thus the kind of decision that most of the actors considered suited for rational (analytical) decision making, not a complex or wicked problem. To some degree it’s the nature of water itself, in combination with the wish to create something ‘natural’ that seem to dictate the route. On the other hand, even the trajectory chosen has to pass (under) a major shipping canal. Clearly this decision of the majority of actors conflicted with the preference of the agricultural association. But one can doubt whether this can be labeled a ‘boundary judgment’ conflict, or whether it was not just a matter of conflicting interests. Nevertheless there were different boundary domain perceptions involved. Most farmers concentrated on what the project would imply for their own lands, while the waterboard’s perspective of linking a creek system to the east of the area to the main river to the west of the area implies a lot larger area considered as the relevant spatial domain.

Somewhat later the spatial domain of the project was greatly expanded in a way by the coupling to the Ecological Highway structure that ultimately links nature areas in large parts of the country or even Europe. This was a domain specification that was clearly not understood when opponents wanted to take the natural banks of some part of the project and “compensate” this by offering to create nature elsewhere. Initially even some provincial councilors

were lured into regarding this as possibly a fair deal, while it completely “missed the point”.

At the same stage and place another development lead to a significant extension of the spatial domain deemed relevant by the population. This was the regional business park for which the Breakthrough would provide a strong and wide buffer zone. This extension greatly helped to relax the objections.

Sectoral aspects of the domain

As listed above, several policy sectors ultimately contributed purposes to the project, apart from the water quality and two sided water quantity goals. In the course of the case story the emphasis between these three shifted now and then, but none was excluded. While the included water goals were almost non-contested, like the addition of landscape and recreation, and the function as a buffer zone for industry was even welcomed as soon as recognized as part of the ‘sectoral domain’ of the project, nature and agriculture (land reallocation) were less generally accepted.

At first one sees a very smooth addition of nature purposes to the water project, when the waterboard and the province wholeheartedly welcomed each other’s sectors in the project. They regarded this clearly as a win-win option for which it was not difficult to open up one’s minds. But the relation with the sector of agriculture became stressed by this addition. This was only reinforced by the coupling of the project to land reallocation (a sector rooted in agricultural infrastructure improvement policies). In fact this tension can also be viewed as a boundary judgment conflict in which the farmers held the wider definition of the domain. Because, it were they who included all European and national habitat protection rules into the relevant domain, as interlinked with the inclusion of the “ecological highway” – an inclusion contested by the Waterboard.

Temporal aspects of the domain

The coherence of the different time frames of the sectors and procedures involved was also in this case a serious problem. Inclusion of land reallocation could only provide new resources for the project when a change of the law was awaited even though this hampered the progress. The long time horizon of the EIS procedure was successfully made more coherent with the project’s development by splitting the assessment in two.

Like in the North South Meene case the requirements of the European subsidy (in this case the JAF program) were highly complicating the time management of the project. Demands to realize concrete action in the short run are actually conflicting with the lengthy procedures of spatial planning. When successful, one can say in hindsight that such pressures have speeded up the process. But they also create great risks for the project, because when a deadline is not met, the completion of the project might become hardly unaffordable, while it is too far ahead to be stopped either, beyond the subjective ‘point of no return’.

An interesting spatio-temporal issue in this regard is also the split of the project in different phases, of which in this study two have been dealt with (a third one is also essential for the project, a planned fourth one is a side arm). The point here is not that the actual building of the waterway is split into phases, but that also the project is starting to be actually realized on one spot

while the development of ideas, resources and permissions still continues for another part of the trajectory. This might seem a risky style, yet the project managers have learned that it's the only way to realize such projects. It is impossible to wait for all foundations to be laid, before actually starting. This strategy is not only used on the level of phases (stretches of the trajectory) but also on the more detailed level of plots of land that can be easily obtained because a farmer wants to retire and welcomes the nature development adjacent to his farm house. This creates plots of examples that are used later to convince neighboring farmers that the results are worthwhile and present this development as inevitable and even already happening.

While it is clear from this description that boundary issues are abundant, all in all one could also state that in this case waterboard, province and most municipalities have shown a sufficient degree of openness towards each others domain specifications to enable progress in the project.

3.5 Layers of contexts

The inputs into the process and also the characteristics of the actors involved are not isolated. They have a context at several scales that all can have directly an impact on the process (see figure 2.10 in section 2.5).

Specific inputs

The specific inputs for this process, both previous decisions and policy documents and the specific social-geographical circumstances of the area have been dealt with in the description of the process in section 3.1 and 3.2.

Structural context

The structural context consists of the elements of public governance and the property and use rights, that are not specifically developed for the processes studied. Innovations often require new combinations of: scales, actors, perspectives, strategies and resources, than the ones that have developed in the past for more conventional purposes (Bressers and Kuks, 2003, 2004). This implies that the extent of relevant elements of governance has to be widened. The real boundary spanning challenge however is not the widening of the extent, but the protection or regaining of the coherence within and between these elements. To what degree was the degree of governance coherence a troublesome context for the process?

The *levels and scales* context shows all levels involved, from the European (directives, subsidies), the national (policies, finance), the provincial (e.g. main actor for nature development), the regional waterboard, the local (e.g. physical planning), groups of citizen and farmers, up and including individuals (e.g. land owners). While the European and national levels were not directly active as actors in the process, their policies are inspiring much of the action and they have been contacted as sources of finance. A national 'administrative agreement on water management' between the relevant state, provincial, waterboard and local authorities has created some degree of clarity at least for the water quantity issues involved. The Province took quite an active role to use the potential of the project as nature development and to accommodate (buffer, in fact) the planned regional business park. The

coupling of the development of the business park to the project also created an extra motivation supporting the project with the municipality of Almelo. More complicated was the relation between the national and local level when to add financial resources it was decided to link the project to the land reallocation scheme. While the national law governing such land reallocation projects was about to be changed in such a way that contributions to the project were made possible, it effectually led to postponing the already agreed upon land reallocation project (to the regret and thus de-motivation of local farmers). A third issue here was the relation between the European and national level (nature policies) and the group and local levels, when citizens, farmers and even council members proposed to interrupt the wide natural river banks for some miles and proposed alternative nature development elsewhere. Though initiated from an interest (motivational) perspective, this clearly also had a cognitive side, since it was also rooting in a misunderstanding of the whole point of creating an ecological highway infrastructure.

There was no ready *networks and actors* context from which just a regional subgroup could be tapped and activated for this project. The initiator was clearly the waterboard. The addition to the project by the province, using the project for the ecological highway network, made both the area and the budget much larger, giving in principle the province, not the waterboard the role of prime actor. Nevertheless the waterboard kept playing that role in practice, maintaining and sometimes creating relations with all necessary governmental and non governmental organisations and groups. The province however at key moments stood actively aside to further the progress of the project. In the part of the trajectory where the larger municipality of Almelo was a key player because of its physical planning powers, the 'rural' orientation of the project (land, nature, creeks) did not fit well with the urban aspirations of the city, causing some disinterest. Later the inclusion of a large part of a rural municipality into the urban municipality of Almelo made the extended municipality opening up to the 'rural' issues at stake.

With this already the next governance context is touched, that of the relevant *problem perceptions and goal ambitions*. To start with a positive issue: the vision of integrated water management, in which quantity and quality issues but also nature protection finds a place and openness towards other issues is part of the vision, has been accepted among most actors and has certainly helped to merge problem perceptions, leading to quickly joint boundary judgments in the cognitions of waterboard and province (see above). The 'easy' coupling of nature development with the initial water project can serve as an example of this. Nevertheless local authorities have often problem perceptions of their own that might or might not be reconcilable with those of integrated water management. Among groups and individuals (and sometimes their local councillors) such inclusive views are often lacking. The waterboard as project manager has sometimes responded by its "marketing strategy". For instance when the high waters of 1998 were creating high awareness of this risk among the public, the purpose of the project – one of several – to mitigate such risks was quickly placed in the spotlights.

The *strategies and instruments* context shows a lot of incoherence, especially in connection to the *responsibilities and resources for implementation* context. A project like the Breakthrough has to rely on many

instruments that are designed for purposes that represent only part of its own array of goals. Clearly this is the case with the dependency on the local authority's cooperation to acquire rights under the zoning plan to dig the Breakthrough. Having to satisfy the requirements, time schedules, and preferences of implementing actors simultaneously resembles for the project manager playing a simultaneous chess game in which one not only has to win all, but even all at approximately the same time. The best hope one can have under such circumstances is that the web of resources dependencies is sufficiently mutual to give all involved a stake. The institutional distribution of responsibilities, resources and instruments explains the interdependence that arose between the provincial government and the Waterboard in the implementation of national government policy. Framed within the problem perspective that the quality of nature was ascribed to water quality, the province was partly dependent on the efforts of the waterboard, which was responsible for water goals. This is however far from always true, creating great risks for the project. Thus, project managers of such project are urged to become masters of "adaptive implementation". Much of this adaptive action could well be labelled "boundary spanning".

Wider contexts

From the 1970s on, increasing prosperity led to a paradox, in that nature and its relation to water received greater attention, while the simultaneous demand for space increased, bringing with it disruptions and threats to nature. Increased prosperity in the 1990s led to even greater demand for housing and industrial areas. The demand encouraged developers to become active in the land market, thus driving land prices up. The water rose to flood levels in 1995 and 1998. This caused all levels, from the EU down to the individual, to realise that increasing demand for space, coupled with the subsequent building and use of that space, was increasing the risk of flooding.

3.6 Receptivity and its impacts

Receptivity is the ability of an actor to associate and exploit new knowledge around existing knowledge, activities and objectives (Jeffrey and Seaton 2003/4). While it is connected to the cognitive aspect of human behaviour in this formulation one can imagine that "adaptive implementation" also and likewise requires that motivations remain flexible enough to incorporate new ones that might serve the interests or ideals of actors and to be able to creatively combine resources in new ways to support intended actions (compare figure 2.4 in section 2.6). The role of receptivity in the process as a whole can in principle also refer to the receptivity of the set of actors as a network. Here we will however concentrate on one crucial actor, the waterboard.

The waterboard of Regge and Dinkel that is the government organisation that is relevant here has developed an interesting "corporate identity" in this respect. It claims to work under the self developed approach of "contextual water management" (Kuks 2005). This approach is rooted in the acknowledgement that water is part of the physical environment that fulfils

many more functions and serves corresponding interests than water issues alone and in the acknowledgement that it is impossible to attain the water goals and standards by action on its own. The cooperation of others is unavoidable and should thus be placed first and foremost in the water management strategy. A starting point, not a selling tactic. This involves an orientation on what values the water might have or can get in the perspectives of those other actors and trying to realise these potential values. It also involved continuous interaction with the actors in the context, whether or not there is a concrete issue at stake at the moment. Searching for (proxies to) win-win solutions is an important practice. This implies that water goals are not uniformly applicable, but that they should be differentiated depending on the context, also the social context. Of course there remain legal and policy frameworks that guide the effort, but they should and often do provide leeway. Accepted is that the outcomes thus become uncertain, in the sense that they cannot be “planned” on beforehand – as is the usual engineering approach – and even that they will likely be “sub-optimal” when viewed solely from a water system perspective. Interaction with other parties only makes sense when you know the frameworks and whether there is some leeway. Often the frameworks that are given do give leeway, but also need further specification to become practicable.

Generally the tactical and operational levels need more attention. This urges deliberate choices of styles (from authoritative to participatory), which often result in a more interactive approach to policy implementation, implying among others to:

- involve different levels and actors from the start,
- try to involve issues and actors that can become bottlenecks at later stages already from the start, learning while doing,
- produce showcases where and when possible even while elsewhere still in a negotiation phase.

Such style needs an own organization made ‘fit’ for this kind of flexible and relation-oriented style. In a sense it needs promoting cultural changes:

- to be prepared to go beyond water system functional thinking,
- to have the guts to start an open implementation process without knowing what it will produce in the end,
- to accept the flexibility and uncertainty for the program or pace of progress,
- to be able to shift from one style to another when the context demand a different approach.

While such an announced approach is of course not simply identical with the day to day practice of the waterboard officials, it is not hard to recognize much of this spirit in the way the waterboard has been and is handling the Breakthrough case, especially in the later years.

3.7 *Managing complexity by boundary spanning*

Managing complexity requires boundary spanning across sectors, scales and time perspectives. This coupling can specifically regard the boundary judgements – as a precondition for fruitful cooperation – which is the core of interest of the ISBP project, but also the wider and practical boundary

spanning that is required to make the project run. Often the division between the two is not very clear, while creating fruitful cooperation across boundaries can also be one of the best methods to gradually integrate the boundary judgments of the actors involved. The relationship between (restricted or divergent) boundary judgments of the actors involved affecting the cooperation in the process, thus can also be reversed in as far as reasonably successful interaction and cooperation can help boundary judgments to “open up”.

In many respects this case shows very quick adaptations of actors to wider boundary judgments of others (see sector 3.4). The waterboard started off in this sphere by seeking the involvement of various parties directly from the start. The provincial initiative to link the project with nature development was welcomed as a chance and not as a threat by the waterboard. They were however not the only actors that mattered ...

There are only two issues where boundary judgments really clashed. The first one is the role of agriculture vs. nature development in the project, with all kinds of spatial consequences. The other consists of the different time frames of the various sectoral rules, like EU subsidies and physical planning procedures. In fact these merged in practice into one, since the time pressures from the EU subsidy regulations were most threatened by the tension between farmers and the nature development ambition of the project that was a condition sine qua non for the province and became a dear goal for the waterboard.

During the initial plan development phase the spatial boundaries of the new river area were on the one hand narrowed down very quickly to the trajectory chosen and on the other hand widened enormously by making it part of the national ecological highway structure. This openness of the waterboard and the province for each others sectoral interests and their spatial consequences was however not followed by the farmers and agricultural interest groups. The inclusion of agricultural interests in the project is unavoidable since most of the land owners that will have to cooperate one way or another are farmers. Therefore it was not a strange idea to link the project to the land reallocation scheme concerning the same area. The project was however also linked to the creating of the national ecological highway structure, not only with a different spatial scale of consideration, but also with potentially conflicting rules and values. The waterboard responded with a whole array of strategies (see also section 4.2).

New actors and arenas were used:

- hiring an independent chair with own interesting network connections,
- appointing a singular spokesman to deal with the press, keeping away from failure, and inviting press at successes
- using the land reallocation steering committee as a platform,
- making as much as possible use of ally's, like the province in some cases and local aldermen in others, avoiding to be central in every game.

Some can be labeled creating new cognitions and trust by open communication and exchange:

- quite open and also very active communication to the inhabitants, including home visits,
- actually using as much of their proposals as could be fitted in,
- showing off with small realized plots to gain support and momentum.

Others are a bit more manipulative, or should we say steering communication, that is directed somewhat closer to influencing motivation, be it still with predominantly communication:

- marketing the project on the basis of the purposes closest at the heart of the inhabitants in a certain place and time,
- playing down the risks of habitat protection rules applying to the area sooner or later.

The last category consists of facilitating and compromising, were the waterboard really transfers resources to make the project more attractive to (potential) critics;

- commissioning an external consultancy to prepare a draft zoning plan for a municipality,
- promising to take some risks on board that were frightening opponents, like planning blights,
- at an essential moment: compromising to let agriculture continue for the first seven years.

In these ways gradually much of the opposition was overcome.

4. Comparison, convergence and conclusions

4.1 *Two cases compared*

In this report two cases are being studied in some detail. Though in many respects their problematic is comparable, they were not completely simultaneous in time. The North and South Meene case was mostly evolving in the period of 1998 – 2002, while the bigger and even more complex Breakthrough case started only a bit later, but is mostly evolving from 2000 onwards and to a large extent is still continuing at the moment this report is written (2008), while the planning aims at completion in 2014.

This has some relevant implications for the structural (governance) context of these processes. The quantitative water task overview of WB21, the National Administrative Agreement on Water Management (between all relevant authorities) and the fully felt pressure of the requirements of the European Water Framework directive and the national and European ecological highway policies were not yet present or influential in the North and South Meene case, while they certainly are in the Breakthrough case. In many respects North and South Meene was a pioneer project in its sort. All in all, the structural governance context has improved.

A second difference is that the waterboard of Regge and Dinkel in the later case was much better prepared to face the complexity – and even to look for it when these sectors, actors and rules seem to be unavoidable sometime in the process anyhow – than the waterboard in the North and South Meene case that more or less stumbled into it (no wonder, pioneers as they were). The inclusion of more purposes into the water management initiated Breakthrough project, even to the extent that formally it is now as much a nature development as a water project, was met with a very adaptive attitude.

4.2 *Five intervention points for convergence mechanisms*

Such adaptive attitude needs a strategy for the convergence of the views of the actors involved. To realise better conditions for boundary spanning in the process various intervention points can be recognised (Bressers 2007b). In figure 4.1 the various intervention points where convergence mechanisms could work are shown.

Arena:

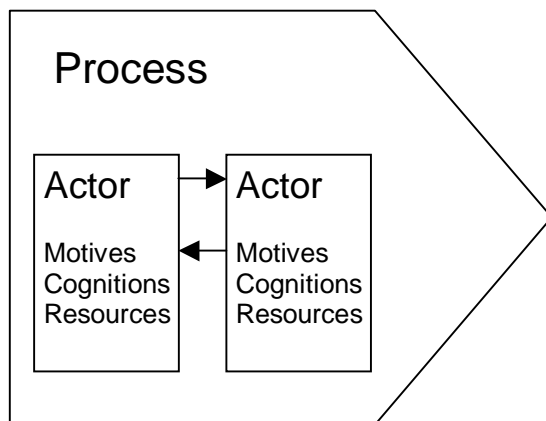


Figure 4.1, Process model with the arena, the actors and their characteristics used in Contextual Interaction Theory shown as possible intervention points for convergence mechanisms

Actors and arena's

New actors can enter the scene, creating other network relations. For instance “policy brokers” (Sabatier and Jenkins-Smith 1999), for which boundary spanning is core business. Or media actors that expose the issue to a wider public or NGO's. Also *new arena's*, meeting points with specific characteristics, can help bridging boundary judgments and wider issues. These can consist for instance of all kinds of organised meetings, associations or committees. These serve to create dialogues that enable changes. In our cases examples are the multi-actor steering committees that were installed, the search for an adequate setting (integrated area-oriented policy in the North and South Meene case or – partially – land reallocation in the Breakthrough case), and the appointment of an independent project manager in the Breakthrough case.

Cognitions

While boundary judgments are considered part of *actor's cognitions*, influencing these cognitions can involve the use of documents and reports (studies with new or gathered information, or white papers with policy positions), of which the visibility can be multiplied by media attention. We saw that for instance in the Breakthrough case were the media voiced “conspiracy theories and tales of dishonest government dealing”. Furthermore, as cognitions of actors are influenced through the filtering process by which observations are processed, stories, analogies, one-liners etceteras that change these reference frames can be important. Of course also own learning processes based on own experiences can influence actor's cognitions, like when the flood crisis occurred in the North and South Meene case. Such experiences can also be deliberately furthered by job training and collegial information exchanges, like we did in workshops at waterboards¹³.

¹³ In February 2008 we held a workshop at the waterboard of Regge and Dinkel (with also representatives of a neighboring waterboard) discussing with project managers, elected

Motivation

Own learning is also dependent on *motivation*, think of the concept of selective perception. Both the positive or negative direction and the saliency of motivations are important here. Sometimes motivations can also be seen as “intervention points” themselves. For instance when new and for that reason yet uncomfortable goals are in fact in correspondence with actor’s interests or when it is a matter of coping with external pressures (e.g. by “constraining mechanisms”, Dinica 2007). In fact much of the sectoral boundary spanning in both cases is such a mix of discovery of corresponding interests and recognition of mutual dependency. This brings us to the last point of action for convergence mechanisms.

Resources

Such pressures are dependent on *resources*, which therefore become an intervention point of their own too. The position of the actor in terms of power depends on its image of strength in the network, on crucial moments confirmed – or not – by its position in mutual resource dependencies with other actors. The pressure needs not to be negative. Having enough of the resource “money” can also for instance open the option to change the motivation of other actors by compensation, like the promises of the waterboard in both cases to compensate planning blights. Resources like skilled people, equipment and money can affect cognitions more directly by the learning capacity of actors and thus their receptivity, the ability of an actor to associate and exploit new knowledge around existing knowledge, activities and objectives. For influencing other actors’ cognitions, relevant resources are the centrality and respect and trust the coordinating actor has in the network.

administrators and civil servants more than a dozen “dilemma’s” when dealing with this kind of multi-purpose complex water projects and the actors involved. These were:

External:

- starting talks with an early draft **or** with a full fledged plan
- starting realization of works when and where possible **or** waiting for the full scale plan to be agreed
- making agreements with others informal and flexible **or** formal and fixed
- consulting with others in one to one contacts **or** in network meetings
- striving for keeping the project under own direction **or** have others pull the chart
- declaring to strive for “win-win” solutions, creating cooperation, **or** too high expectations and thus disappointments
- working it out together with the “partners” with much flexibility and exchange options **or** standing firm for the water goals (& how about support from your own organization for interesting compromises?)

Internal:

- giving a generous mandate to the project manager **or** accountable targets
- using one person as ambassador (for clarity and uniformity) **or** using multiple people (for effectiveness)
- standing as elected officials behind the project manager for support **or** actively interfering
- coordination between parts of the own organization in an informal, direct and flexible way **or** with agreed upon procedures and reporting requirements
- responding to the actual developments in the case situation **or** keep heading in a straight line for the long term purpose
- capturing the luring prospects of coupling extra project goals (with resources, actors and rules involved) **or** being restrictive because of the human and financial capacity of the organization given the risks taken.

Hiring an independent project manager that comes from another organization that is trusted by the opponents (Breakthrough) makes this circle round again.

4.3 Conclusion: “Do’s, don’ts and dilemma’s”

The points of action for convergence mechanisms show the way, but not the action. To conclude the analyses on the two cases presented above we derive some practical lessons that can be drawn while managing such multiple purpose water management cases of high complexity.

Do’s

Do formulate agreements and / or regulations on the national level that form institutions that smoothen rather than hamper convergence. Since boundary spanning is often a matter of coordination without hierarchy such institutions could be framework regulations or agreements between representatives of actors that belong to the usual suspects of the type of processes involved. In this case the structural governance context was assessed as that there was no ready structural context for the realisation of this innovation and that the extended one that followed the spanning of sectors and scales was incoherent. In the Netherlands a broad “administrative agreement” on responsibilities and resources for implementation (NBW), agreed upon task overviews (WB21), and new procedures (GGOR, Water test) were introduced after most of the story of this case had already developed. They provide a somewhat improved context to new projects, like the Breakthrough compared to North and South Meene cases.

Do formulate an agreement on regional level in which all actors – both administrative and private – agree to cooperate under “normal societal and administrative conditions”. This goes beyond the idea of an administrative agreement between government actors, which has been practiced in the Netherlands the last years. Of course there is an issue whether the tensions that would prevent smooth cooperation would not also hamper the possibility of concluding such an accord on joint style issues.

Do pay early attention to implementation matters. Given the complexity of the matter good preparation is very important. Next to the hydrological water system aspects also issues like the legitimacy and support under the inhabitants and land owners, the possibilities to acquire land and possible zoning planning barriers were issues that were not well previewed in the North and South Meene case. In the Breakthrough case exchange with critics was sought much more early, especially when the project ideas got more detailed.

Do prepare your organisation for this boundary spanning task. It urges other very different capabilities compared to a ‘planning and producing’ mode. A high level of receptivity, including analytical capacity, is needed. This is not only a matter of preview, but also of capacity for learning while doing. “Corporate identities” like “contextual water management” might help to give individual waterboard officers a common perspective.

Do allow for careful assessment of the wishes of actors that are too manifold to be all involved in the process. While it gives these wishes more weight in the process, the greater advantage is that those wishes are channelled into more general purposes and that extreme wishes by extreme

representatives are recognized as such. Likewise value the potential of strong representing organisations to not only transfer demands, but also to mitigate and compromise on behalf of their members.

Do keep external communication early in the process, active, open and honest, without implying that it should not be well-organized at the same time. If you can, let already realized parts of the project speak for themselves. This implies:

Do start to realize parts of the project when you can when the risk that the rest will be made impossible after all is manageable. (This was actually discussed with practitioners as a dilemma, but they all agreed that a quick start with uncertainties involved was the preferred option. In the Breakthrough case we saw that it can indeed create momentum, while the EU subsidy forced hurry in the North and South Meene in this respects also worked out quite well, creating the atmosphere with the remaining critics that this was going to be realized one way or another).

Do keep the purposes that cannot be realised on the agenda. Circumstances develop, and what cannot be realised now might meet better conditions further in the process.

Don'ts

Don't make very substantial promises in the heat of the debate, without having consulted the organisation's experts on their feasibility, like happened in the beginning of the North and South Meene case. In an era of "output based legitimacy" this might be very dangerous.

Don't forget when involved in a congenial and consultative process that there might be issues that need to involve other sectors with actors with very different orientations towards rules and hierarchy.

Don't try to do everything alone, when there are ally's that will do the job (almost) as good as you. When there is a complex setup of authorities and responsibilities, try to be a team player that leave room for the others to 'score'. (And do show solidarity with your ally's, like in the Breakthrough case when a waterboard official found himself in a position to defend the value of the ecological highway component of the project.)

Don't leave out and frustrate actors that you will definitively need later.

Dilemmas

Many do's and don'ts are a bit ambiguous. For they represent not a "the more so, the better" kind of modus. Therefore it is both realistic and useful to complement them with dilemma's that have to be considered by central actors in boundary spanning processes.

(1) Boundary spanning enables actions that would not have been possible when each actor would have remained to operate in its own domain. So-called "win-win situations" do actually occur. But, the strife for such can also raise expectations making real achievements as unsatisfactory to many actors as would have been the case otherwise. In this case we have seen some of this when the unconditional promise of the waterboard chairman in the North and South Meene case raised expectations that were not fulfilled by the first plan for the area and even led to distrust.

(2) Adaptive implementation is a requirement for fruitful cooperation across boundaries, but when not carefully guarded the "finding our way

together” approach may lead to outcomes that in hindsight do absolutely not match with the essential purposes or even responsibilities of actors involved. Co-production and flexibility than become “drifting” and a lack of perseverance. In the North and South Meene case this point could be illustrated by the disappearance of nature development from the plans, while in the beginning (and even more in previous white papers where the idea of a retention area was drawn from!) this seemed to be one of the essentials of the project.

(3) Related but different is the issue that agreements – involving compromises – reached in cooperation with other actors can be hard to defend in each actor’s own organisation. In the North and South Meene case the extra costs of compromising with the inhabitants were met with great scepticism by the council of the waterboard. The governing board even feared a political crisis that ultimately could be averted. Fearing that the neglect of zoning plan requirements would be indefensible in his own organisation, the representative of the municipality got to his intervention.

(4) Interacting with other actors in an informal and one to one way can be much faster and more productive than working with larger and more formalized decision making structures. But the risk can be that the partner has not understood what was agreed in the same way, or that multiple one to one sessions among different partners create chaos, or that gossip on third parties rather than productive agreements get to fuel the informal contacts. Furthermore, when money is committed the basis should be firm. In the North and South Meene case the forced hurry and open end contracts were fuelling a lot of unrest later on.

(5) Sharing responsibilities not only implies that the credits for success are to be shared, but more importantly that the clarity of responsibilities can be blurred, while at the same time actors engage in new dependencies. In the North and South Meene case the waterboard was tempted to conclude rather early in the process a contract with a consultancy to plan and guide the building process. This was partially done to be able to satisfy subsidy requirements. But when difficulties arose it showed that there was a lot unclear about the division of responsibilities. In the Breakthrough case in terms of area and money it has become more a nature development than a water project. Nevertheless the waterboard is by far the most active, compared to the province.

(6) Sharing resources gives a similar picture. It fits the idea of joint boundary spanning processes, but might lead to high transaction costs and path dependencies, that even can be misused for strategic behaviour and blackmail when the process turns to flow in a less congenial river bed, especially when the dependency is not really mutual. In the North and South Meene case it was mentioned as one of the reasons not to try very hard to involve German locations in the location choice for retention areas. Would the German authorities really agree about their task when the water burbles the dikes? Or would they interpret the situation differently, leaving the waterboard powerless? Another example is that time requirements caused the need to have more operations in parallel, negotiating, planning and building at the same time and adjusting those to one another. While in principle this is an interesting option, it also caused problems for the controllability of the process.

References

- Bressers, Hans & Stefan Kuks (2003), What does "Governance" mean? From conception to elaboration, in: Hans Th.A. Bressers & Walter A. Rosenbaum (Eds.), *Achieving Sustainable Development: The Challenge of Governance Across Social Scales*, Westport and London: Praeger, pp. 65-88.
- Bressers, Hans (2004), Implementing sustainable development: how to know what works, where, when and how, in: William M. Lafferty (Ed.), *Governance for sustainable development: The challenge of adapting form to function*, Cheltenham, Northampton MA: Edward Elgar, pp. 284-318.
- Bressers, Hans and Stefan Kuks (Eds.) (2004), *Integrated governance and water basin management*, Dordrecht, Boston, London: Kluwer Academic Publishers.
- Bressers, Hans (2007a), *Contextual Interaction Theory and the issue of boundary definition: Governance and the motivation, cognitions and resources of actors*, report ISBP, Enschede: CSTM, <http://www.tigress.ac/isbp/pubs.html>
- Bressers, Hans (2007b), *Elaboration of convergence: convergence of boundary judgments and convergence mechanisms*, report ISBP, Enschede: CSTM, <http://www.tigress.ac/isbp/pubs.html>
- Dente, Bruno, Paolo Fareri and Josee Ligteringen (1998), A theoretical framework for case study analysis, in: Dente, Fareri & Ligteringen (Eds.), *The waste and the backyard*, Dordrecht: Kluwer Academic Publishers, pp. 197-223.
- Dinica, Valentina, *Elaboration on convergence mechanisms: How does convergence happen?*, report ISBP, Enschede: CSTM, <http://www.tigress.ac/isbp/pubs.html>
- Dryzek, John (1997), *The politics of the earth: Environmental discourses*, Oxford: Oxford University Press.
- Huitema, Dave, and Stefan Kuks (2004), Harboring water in a crowded European delta, in: Hans Bressers and Stefan Kuks (Eds.) (2004), *Integrated governance and water basin management*, Dordrecht, Boston, London: Kluwer Academic Publishers, pp. 59-98.
- Jeffrey, P., and R.A.F. Seaton (2003/4), A conceptual model of 'receptivity' applied to the design and deployment of water policy mechanisms, in: *Environmental Sciences*, 2003/2004, Vol. 1, No. 3, pp. 277-300.
- Kingdon, J. (1995), *Agendas, alternatives and public policies*, New York: Harper Collins (1st ed. 1984).
- Kuks, Stefan (2004), The evolution of the water regime in the Netherlands, in: Ingrid Kissling and Stefan Kuks (Eds.), *The evolution of national water regimes in Europe*, Dordrecht: Kluwer Academic Publishers, pp. 87-142.
- Kuks, Stefan (2005), *Contextueel waterbeheer* (Contextual water management), key note at the strategy conference of the Dutch association of provincial governments IPO and BOAG Water, Ellecom, June 16, 2005.
- Lulofs, Kris (2003), *Evaluatie realisatie retentiegebieden Noord en Zuid Meene* (Evaluation realisation retention areas north and south Meene), Report to the Waterboard of Velt and Vecht, Enschede: CSTM.

Lulofs, Kris, Frans Coenen and Stefan Kuks (2004), *Positionering planfiguren 'Water in de Stad'*. (Position of various plans for the "water in the city" programme) Report for the Ministry of Transport, Public Works and Water Management, Enschede: CSTM.

Lulofs, Kris, and Frans Coenen (2007), Cross border cooperation in the Vecht river basin on water quality, in: Joris Verwijmeren, Joris en Mark Wiering (Eds.) *Many rivers to cross, cross border co-operation in river management*, Delft: Eburon.

Sabatier, Paul A., and Hank C. Jenkins-Smith (1999), The advocacy coalition framework: an assessment, in: Sabatier (Ed.), *Theories of the policy process*, Boulder: Westview Press, pp. 117-168.

Scharpf, Frits (1997), *Games real actors play: Actor-centered institutionalism in policy research*, Boulder, Colorado: Westview Press.

Schwarz, Michiel, and Michael Thompson (1990), *Divided we stand: Redefining politics, technology and social choice*, New York etc.: Harvester Wheatsheaf.

Thompson, Michael, Richard Ellis and Aron Wildavsky (1990), *Cultural Theory*: Boulder, Colorado: Westview Press.

Vechtvisie (Outlook on river Vecht) (1997), report of the working group Vechtvisie, prepared by Arcadis.

Zahariadis, N. (1999), Ambiguity, time, and multiple streams, in: P. Sabatier (Ed.), *Theories of the policy process*, Boulder: Westview, pp. 73-93.