ERSA-Conference 2005, Amsterdam, 23 – 27 August

Public participation in flood control areas: approaches to 'sustainable' communication strategies.

Paper no. 157, theme P.

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Public participation in flood control areas: approaches to 'sustainable' communication strategies.

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1. Abstract

Global warming causes heavy rainfall and rising sea levels. These climate effects prove to be a strong motivation for looking differently at issues of water management and safety in estuaries. For decades, the only answer to hazardous situations (e.g. flooding by increased river discharges or by incoming storm water) was to strengthens dikes and dams. This led to damage in the natural water system, a declining biodiversity and destruction of the unique estuary and river landscapes. Nowadays, different approaches are more frequently implemented, with creating more space for the rivers as a guiding principle. Instead of stemming and rapid discharge, water is contained in estuary and catchment areas. The alternative approach to water management contributes to a more sustainable development of the estuary, protecting the natural and ecological values. However, estuaries are often densely populated areas, accommodating several (conflicting) spatial and economical functions, such as residential areas, ports and harbors, industrial zones, farming and recreational facilities. Creating more space for water management (i.e. retention areas, flood planes and wash lands) leaves less space available for other spatial developments. As a consequence, stakeholders will be affected in their interests; e.g. cities cannot grow unrestrained and farming will have to be downsized. Concepts as 'multiple land use' and 'societal cost – benefit evaluation' come to mind to characterize the challenge for transforming the designated areas into more sustainable, multi-functional retention basins.

Governmental agencies are often acting as project executives in these transformations. They are faced with various stakeholders who are all trying to defend or strengthen their

specific interests. A vital question is how to communicate with these stakeholders in the different stages of the transformation process. What communication strategy applies to what situation? And equally important, if a communication strategy is developed, how should it be instrumented? What will the message be, how are the target groups identified and addresses, which mediums should be applied? And, more important, what kind of public participation is required to enable cooperation and avoid opposition to the transformation process?
In general, four basic communication strategies can be identified: co-knowing, co-thinking, co-working and co-deciding. Each of these strategies apply to different situations, following the cultural and historic context in the area, the established relationship between the 'governor and the governed', and of course, the preferred style of governance.

In a research assignment from four governmental agencies in The Netherlands, the UK and Belgium – the Interreg IIIB-project Flood control Management in Estuaries / FRaME[1] – we have evaluated the applied communication strategies in various flood control areas in the EU. For this assignment, an evaluative framework was developed. The evaluation shows the suitability of the applied communication strategy in each of the reviewed areas. Moreover, lessons are drawn on the question in what situation, which type of communication strategy is most suitable. Also, the review gives examples of good practice and inspiration for 'sustainable' communication efforts in future transformation processes.

Key words: flood control areas, sustainable water management, communication strategy, public participation.

[1] Partially funded by the EU.

2. Cases reviewed: Flood control projects in the Humber estuary, the Rems river basin, the Scheldt estuary and along the Bergsche Maas (Overdiepse Polder)

This section contains a selection of the cases that we have reviewed to illustrate the different histories and conditions that are of influence on the subsequent communicative and participatory approaches.

HUMBER ESTUARY

The Humber estuary is situated in the UK and one of the principal estuaries of the North Sea. The estuary is of importance to birds and wildlife and is of national importance for the UK's economy because of industry, maritime trade, commerce and the country's largest port complex. The Humber has a catchment area of 24,472 km^2, and drains more than one fifth of England's land area. Nearly 90,000 ha of land around the estuary lies below the level of the highest tides, at risk of flooding during extreme tidal events. Over 300,000 people live on the flood plain.

In 1996, the British Environment Agency (EA) has initiated a flood defence strategy with a *long-term plan*, based on an understanding of the estuary's behaviour and using this knowledge to draw a plan for sustainable management of the estuary looking after nature, protecting people and property. The initial long-term plan was published in September 2000, after a comprehensive and innovative programme of estuary process and environmental studies. The aim of the plan is to provide justified and affordable defences that will reduce the risk of flooding that was at the same time compatible with natural estuary processes, taking into account future changes in the natural and cultural environment. The second objective is to ensure that all proposals for development of the estuary are technically feasible, economically viable, environmentally appropriate and socially acceptable.

As the river banks are not high enough to provide an adequate standard of defence, bank raising is needed. However, maintaining the heightened banks on their present alignment would result in the loss of European designated habitat as a result of coastal squeeze as sea levels rise. Therefore, compensation is required under the EU Habitats Regulations by setting back a proportion of the defences creating new habitat. In the upper estuary,

without designated habitats, setting defences back to create tidal wash lands is also valuable for delaying the bank-raising that otherwise would be needed.

Communication strategy

In 1996, the 'Framework for Action' was drawn up by the EA, containing the sustainable ambitions of the project. There was no explicit communication strategy but it was acknowledged that it would affect many parties in society. Nevertheless, the communication approach can be characterized as flexible and organic, growing along the project. There is a clear distinction in the communicative approach between strategic level, long term perspective regarding the larger estuary area, and site level. The overall approach to the project can be qualified as pragmatic, within a consistent long term framework. Initially, a mass marketing approach was used but gradually replaced by a stronger focus on individual stakeholders, mainly land owners and farmers. The choice for a sustainable approach indicates the need for communication with the public, resulting in a need for a strategy that is 'supported by the local community'[2]. Furthermore, during the development of several proposals, the involvement of consulted parties in the identification of potential environmental impacts and their mitigation was crucial for the EA. The active participation of consulted parties has therefore been sought throughout the project and their views have played a major role in all stages of decision-making. To give an example, in June 1996, during the initial phase of the project, a Consultation Document was sent to 62 individuals representing 45 organisations with interests within the estuary. These included statutory and non-statutory agencies, governmental and non-governmental organisations, industry, commerce and the general public. Several organisations provided information on the estuary held by themselves or other bodies, and many gave details of their structures and other interests in the vicinity of specific reaches. The *Humber Estuary Shoreline Management Plan - Planning for the Rising Tides* - was published in September 2000. The plan is based on extensive investigations and modelling of the physical and ecological processes of the Humber and much consultation with local authorities,

[2] This could refer to People (in the sustainable unity of People, Planet, Profit).

navigation interests, industry, agriculture, wildlife and heritage organisations and the rural community.

INTEGRATED FLOOD PROTECTION ALONG THE REMS

The German river Rems is a tributary river of the *Neckar* near the city of Stuttgart in the south of Germany. The Rems has a catchment area of 580 km² with a length of 80 km and is flowing through a very densely populated area with a lot of industry. As a result of river bed corrections during the last decades where dikes were constructed in the river's natural floodplains, the Rems is squeezed into an unnatural riverbed.

In 1990, heavy rainfall caused a severe flooding, reinforced by the downsized and shortened riverbed. The catchment area of the Rems became a top priority in flood protection efforts. In 1993, 21 local communities together with Bundesland Baden-Württemberg decided to found a planning association. Its aim was to formulate a common plan for the catchment area of the Rems, containing flood defence measures in combination with the landscape conservation and ecological restoration of the hydrological system. A contract under public law about the common handling and the financial aspects of the flood defence measures was signed by the members of the planning association.

The planning association defined a flood defence strategy for the Rems with two main components a) flood defence measures and b) landscape conservation and ecological restoration. An integrated flood area study was carried out as to guarantee that the flood defence strategy was not only oriented towards land use by residents, but also guarded the ecological value of the Rems. In 1995, the planning association set up an ecologically verified flood defence strategy and in 1996, an ecological water development strategy for the entire 80 km. length of the river Rems was made.

Need for communication

The communication process can be divided into three main stages that at some times ran parallel in time.

Communication with the municipal councils when founding the planning association.

In 1992, the municipal councils were informed about the planning association through the report „Integrated examination of the river area Rems – project description“, including the targets of the planning association. Because of the urgent need of flood protection, the planning association strived for an integrated concept of flood protection and prevention of damage by flooding. One of the proposed solutions was to stop developing the river foreland and preserve it for flood retention.

In 1998, the planning association was followed up by the Water Board Rems in order to realize the planning. At the beginning not every municipality was interested to participate in the water association as this included financial commitment. Representatives of the planning association (the chairman, technical manager, officials of the Bundesland Baden-Württemberg) had to convince the municipalities by organizing information meetings. Except for one, all municipalities in the Rems valley have joined the water association.

Extensive discussion about the planning with all target groups

The entire project included eight retention areas with consequences to the land use so it was presented to the general public and in particular to farmers, private landowners and private environmental organisations. The planning association stood open to all their comments and suggestions and conducted an intensive dialog with the farmers and the landowners. The problems and concerns they had seen, had to be worked out clearly, making use of experts opinions on, for example on the topic of long term consequences for farming, environmental risks or ground water.

Participation of citizens in relation to the legal procedures to establish the plan

The administrative procedures requested approval from the general public. This was done by displaying the application documents (planning, expert opinions and explanation of the retention areas) in spring 2000, for four weeks in the town hall of every involved municipality. Afterwards, a public hearing took place for every planned retention area. During the hearings, all objections could be presented and were processed by the

administrative body for admission (Landratsamt) who formulated the decision to go ahead with the plan.
The objections of the landowners have resulted in a delay of time of one to two years until the legal force of the procedure. In 2003, there were still negotiations with individual landowners.

In short, this communication strategy bears specific efforts for creating awareness / drawing attention to the project and its purpose. There is a strong desire for / willingness to treat target groups in a fair and correct way. There is a strong focus on 'the hard interests', such as agricultural, economical and ecological interests. Remarkably ecological interests are perceived as 'hard interests'.

SCHELDT ESTUARY: THE RENEWAL OF THE SIGMAPLAN

The river Scheldt rises in France and flows across Belgium towards the North Sea. The tidal influence of the sea is characteristic for the Scheldt basin as tidal influence is noticed 160 km. upstream in Gent. That is in a normal situation, but the tide is not always as predictable as the Flemings would like it to be. The tidal influence has caused severe flooding in the past when a combination of a storm and high tide led to an additional water level of three meters. In January 1976, a heavy storm caused a flood in the village of Ruisbroek. Almost 900 houses were damaged by the water and over 2000 hectares of farming land was drowned. Citizens of the harmed villages reacted furious and blamed the politicians for neglecting the maintenance of the dikes. This led to the preparation of the so called Sigmaplan that aimed at the protection of the Scheldt basin against flooding.
The current Sigmaplan is being renewed by the Flemish Community as it became outdated for several reasons. First, the originally planned works were not finished so the risks for flooding are still too high. Second, in twenty five years the understanding of flood protection has developed and one is not convinced that the solutions of 1977 are still the best ones, especially when looking at the costs and benefits. Third, the physical circumstances have altered due to the climate change and the expected rise of the sea

level and the increased chances of severe storms. Finally, over the last decade various studies have been conducted on the subject of safety, ecology and the environment of the Scheldt estuary. However, a systematic and sound consideration of those study results was never made. The new Sigmaplan aims to fill in that gap by looking for sustainable and acceptable solutions to guarantee the safety in the Scheldt basin.

The new plan gives space to a more differentiated approach and the idea that there can be controlled flooding in areas where little damage could be done as long as urban areas are well protected. In the summer of 2002, the Flemish Government was informed that giving space to the river is a highly (cost) effective way of increasing the safety level in the Scheldt area and that the ministry of public works would start research on potential flooding areas.

The question of cost effectiveness is the most crucial point in the discussions as the construction of flood plains are recognized as a cost efficient option for controlling flood hazards, but no one is eager to cooperate in building them on their property / territory. These flood plains are clearly looked upon as 'NIMBY-issues'.

Need for communication

There are a number of motives for communicating about the renewal of the Sigmaplan but the strongest incentive is the legal obligation to communicate. The procedures require that the general public at least is informed about the intentions of the ministry of the Flemish Community, but also gives the opportunity to react to the intended plans. Besides, the ministry should communicate to the European Community for the Scheldt basin is part of the Natura 2000 network and is subject to the Birds and Habitat directive. Apart from legally forced communication there are more strategic reasons for communicating with other parties.

The flood control strategy of the Scheldt has shifted from rigid flood control towards a *space for the river* philosophy, resulting in a study of 181 potential flooding areas. It is not expected that all of these areas will be used for flood control measures but a number of them probably will be. This could affect the people that are living in these areas because their living environment and land use can change dramatically. The ministry has realized that communicating with them is important for the acceptance of possible future plans.

The communication is not just limited to potential flooding areas, but is also directed towards local authorities along the Scheldt that are somehow affected by the new Sigmaplan. Their cooperation is needed for the realization of the possible infrastructural works that have to be carried out by the Flemish authority. Besides, the local authorities can provide information to the project team about local circumstances and generate ideas about solutions for flood protection. In spite of this, the project team encounters difficulties with the authority of Kruibeke as the mayor refused to accept the plans for controlled flooding that originate from the first Sigmaplan. This requires additional communication activities in the Kruibeke area such as a newsletter and presentations to the local residents. Besides they have hired a governmental agency[3] study office to interview all landowners and farmers in the potential flooding areas in order to get an accurate picture of the land use and investigate the willingness amongst land owners to sell their properties.

In short, only recently more communication efforts are carried out, supporting the bringing up to date of the Sigmaplan. The Belgian / Flemish governance culture seem to allow only limited participation and communication with non-governmental stakeholders. The initial communication efforts are on other governmental stakeholders.

MIRROR PROJECT OVERDIEPSE POLDER

The Overdiepse Polder is located south of the Bergsche Maas river in the Dutch province of Noord-Brabant, east of the municipality of Geertruidenberg. The embanked surface area is about 550 hectare, while the adjacent river foreland covers 180 hectare. Seventeen farmers live and work in the polder that is part of the Dutch lower river delta. The area is facing the risks of the rising sea level and increasing amounts of water flowing through the rivers. If no solutions were found to these problems, the level of the river Bergsche Maas could periodically rise more than 60cm above the safety standards and would therefore exceed the capacity of the local embankments. In other words, the river needs more space.

[3] Vlaamse Landmaatschappij.

To tackle these problems, the Dutch Ministry of Transport, Public Works and Water Management set up procedures to investigate potential solutions, a process that would yield a Principal Spatial Planning Decision (PKB).

There are three major options for dealing with the river's high water. The first is *water storage*: water could be temporarily stored in the Overdiepse Polder. However, this option would only solve a small part of the actual problem. The second option is '*go with the flow'*: the river bed could be broadened by opening the Overdiepse Polder at the upstream and downstream ends, adding the polder to the main river flow. The last option is trusting the *embankments*: reliance could be placed on the recently heightened embankments, which should provide enough protection against flooding. However, an investigation is required to determine whether embankments could be raised along the rest of the river.

The project started in 2001 with a planning study, Space for the River[4] that had to result in a so-called Principal Spatial Planning Decision[5] (PKB) in 2004. The PKB will decide on short-term measures (until 2015) and spatial reservations will be made for the longer term (after 2025). Spatial measures are preferred over technical solutions, and measures such as the enlargement of embankments will only be implemented if other alternatives prove to be unfeasible.

Communication strategy

The decision to use the polder as part of the riverbed has serious consequences for the local community as a small group of people will bear the consequences of guaranteeing the safety of a much larger group of people living in the vicinity of the river. It should be emphasised that any emergency inundation is only likely to occur once or twice in a lifetime.

The local community took the initiative to issue a research project with a representing organisation (ZLTO[6]) to explore the consequences of the governmental plans to transform the polder in a water retention area. The provincial authority responded to this initiative by bringing local authorities, residents and farmers together to seek a

[4] Ruimte voor de Rivier.
[5] Planologische kernbeslissing (PKB).
[6] Zuidelijke Land- en Tuinbouw Organisatie – Southern Agricultural Organisation, which represents the farmers in the southern part of The Netherlands.

sustainable solution that allows room for the development of the polder, including water retention through the construction of flood plains.

The project had begun with an exploration of the facts and figures relating to the local water situation. These details were needed to settle the ongoing discussions on the nature of current flood risks in the Polder and in the area nearby the river. Only once it had become evident that there was a serious safety problem along this stretch of the Bergsche Maas and was a decision taken to implement the participatory component of the project. The latter decision was taken by the steering group for the lower delta area, the formal decision making body in the Principal Spatial Planning Decision. The second part of the exploratory phase consisted of a programme of interviews involving each and every household in the Polder. These interviews were to cover the future of farming in the Polder and the operational consequences for farms of flooding. The results from this survey provided input for working sessions, which in turn led to the formulation of the preferred alternative.

At the outset of the Government-led spatial planning procedures, the local community formed an alliance with the purpose of reacting quickly to Government plans. The provincial authority responded to this initiative by bringing local authorities, residents and other stakeholders together in an attempt to seek a sustainable solution that also allowed room for the future development of the Polder. One of the most remarkable results of this process was that local people were able to put forward far-reaching solutions. They accepted the need for spatial changes in their environment because they understood the problem (relevant data was made available to them and was discussed with them). The initiative therefore was a practical experiment on the multiple use of space - a process of direct democracy in which the general public is involved in decisions on the future of the environment they live in. The process of the Overdiepse Polder provides important lessons for future work to be done in the entire Dutch river delta.

3. Explanation of the processes in the cases reviewed by some theories on organizing communication and participation

Communication in FCA´s is all about organizing the involvement of actors (target groups) that are (potentially) affected by the intended or executed project, policy or programme. We distinguish four basic strategies for organizing target group involvement: co-knowing, co-thinking, co-working and co-deciding.

The criteria for choosing the (most) appropriate strategy in any given situation can be derived from theories on stakeholder or actor-analysis. Roughly there are three approaches for implementing an actor-analysis:

1. by identifying interests (content or substance oriented);
2. by identifying relations (power or influence oriented);
3. by identifying types of involvement.

Ad 1.

Actors (target groups) exist to represent certain interests. They try to incorporate their interests in the substance or content of the intended or executed project (or policy) as much as possible. In spatial projects (infrastructure, water management, spatial planning) their interests can be generally surfaced by analysing the spatial functions in the project area. What spatial functions are currently present in the area? Which of those functions will be affected by the intended or executed project (or policy)? By means of the spatial functions it is easy to identify the ‘attached actors’ (target groups) that are likely to become involved in the project in one way or another.

Ad 2.

All actors (target groups) will want to establish some kind of relationship with the intended or executed project (or policy). In general this relation is based on the (amount of) influence or power they can exercise to steer the project in a direction favourable to their interests. The influence or power can be identified by analysing the (type of) resources the actors (target groups) have available to steer the project in the desired direction. Roughly, the types of resources are funding (money), authority (law and legislation), organizational capacity and expertise and information (cf. Hood, 1976).

These are rather obvious types of resources. Less obvious types such as influencing public opinion, mobilising (political) opposition and/or creating media attention are often overlooked. Nonetheless, these are powerful resources too.

Some actors will be able to apply several types of resources. These actors can establish strong relations with the intended or executed project (or policy). They will play a vital role in the project organization and the communication process. It is elf-evident that a project team will want to commit them to the project as much as possible because it can bring additional resources to the project.

Ad 3.

From the previous categories we can derive a third way of analysing actors: by their potential involvement in the project. Actors are likely to demand some kind of involvement in the project that affects their interests and with which they can establish a relationship.

A productive way of organising the involvement is based on the question: ‘what can these actors contribute to the project’? What are they going to do? What roles can be expected of them, based on the substantial (interests) and relational (resources) analysis? A typology of expected roles to characterize the potential involvement of the actors (target groups) is: co-knowing, co-thinking, co-working and co-deciding. As a consequence, the actors who will have to be involved in the project can be characterized as co-knowers, co-thinkers, co-workers and co-deciders.

Co-knowers are actors who have no active role in the intended or executed project (or policy) but will have to be kept informed about its progress and results. Their interests are not directly affected and their resources cannot productively influence the project.

Co-thinkers are actors who have an active role in the project that is limited to the deliverance of necessary knowledge and information. Their interests are only remotely affected and their resources are limited to information.

Co-workers are actors who are effectively contributing to the project by supplying resources and carrying out significant tasks in the development and implementation of the project, such as information gathering, making spatial designs, selling or giving up land

and/or altering their daily activities. Their interests are seriously affected and they dispose of productive resources.

Co-deciders are actors who will make (formal) decisions about the project. In most situations this will be public administration representatives and ultimately, democratically elected politicians. They have no direct interests but are entitled to dispose of and allocate (all) vital resources.

Identifying and selecting the appropriate strategy is not a linear, straightforward activity that can solely be based on the previous discusses actor-analysis. If there is one thing we can learn from the reviewed case studies in the previous section of this paper, it is that identifying and selecting the appropriate strategy is also dependent on the following 'criteria'.

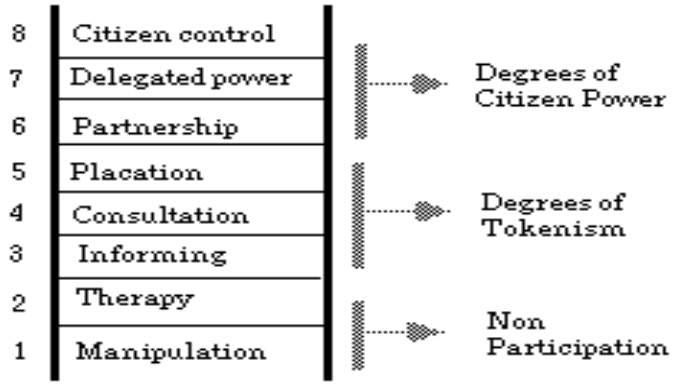
1. (Personal) preference of the public administrative representative(s) or politician(s) who is responsible for the managing the project (and the process of policy making and implementation). If the actor-analysis leads to a certain communication strategy but the managing public executive does not feel comfortable with that strategy, then this could lead to an unworkable situation. Strategy and leadership must be in line, for the managing executive will be addressed by those who are affected by the project and the communication strategy. The managing executive is likely to be 'personified' by the project and the communication strategy. As a consequence, personal style of the managing executive and the applied communication strategy must not differ too much.
2. cultural differences can limit the choice in communication strategies. The chosen strategy should reflect the culture of the project area and the way governance is executed in that area (or country). Moreover the actors (target groups) in that project area are accustomed to be governed in a certain way (style). Choosing a communication strategy that is not recognizable to the actors, can lead to miscommunication and overall confusion. However this observation does not dismiss the managing executive and the project team to try to chose a (new) strategy (or refine an existing one) that meets the requirements of actor involvement, derived from the actor-analysis. The culture of governance can still be aimed at co-knowing but the actor-analysis can indicate that some

actors (target groups) are ready to embark on more intensive strategy, such as co-thinking or even co-knowing.

3. resources and expertise should be available to materialize and implement the identified and selected communication strategy. If these are not available (e.g. a limited budget that is exceeded by the expectations) then this should be communicated to the actors (target groups). Perhaps some of them are willing to contribute. At the least everyone knows that the resources for communication are limited and tied to restrictions.
4. the physical and hydrological context of the flood control project should be characterized in advance (next to the actor-analysis), as a basis for establishing a communication strategy.

Theories on organising actor-involvement: Arnstein's ladder of citizen participation

Sherry Arnstein (1969) proposed a well-known theory for identifying and characterizing strategies for organizing citizen participation and in involvement in policy making processes. The figure below shows Arnestein's ladder.



Arnstein argues that with each step up the ladder, the level of the participation from citizens involved increases. Arnstein focuses exclusively on strategies for citizen participation but it is easy to accept that the proposed strategies are also applicable to projects with participation of a wider variety of actors and not just citizens. Participation and communication is all about the relation between initiating, governing actors (mostly governmental agencies) and governed actors (such as residents, businesses, nature conservation organizations, farmers, recreational organizations, etc), within the development and implementation of FCA-projects. The relation between governing and

governed actors is explicated in the organization of the involvement of those actors in developing and implementing FCA-projects. A higher level of involvement (participation) sets different requirements the accompanying communication strategy. An increased level of involvement (participation) should lead to more intense and more interactive communication efforts.
Each of the identified strategies (steps of the ladder) are discussed in the section below.

Non-participative strategies

1. 'Manipulation' and **2. '**Therapy'. The aim of these non-participative strategies is to enlighten or educate the participating actors. The proposed plan is perceived as the best project alternative and the aim of participation is to achieve public support by public relations and/or mass media approaches. There is no involvement of actors (target groups) in the process because these strategies are top-down, one sided and not aimed at generating some kind of response.

Symbolic strategies (degrees of tokenism)

3. Informing. A most important first step to legitimate participation but too frequently the emphasis is on a 'one way flow of information'. A channel for feedback, facilitating two sided communication, is not included in this strategy. However, at least an effort is made to involve the actors, by creating awareness for the project and making information accessible to them.

4. Consultation. This is a legitimate step up in the level of involvement. Consultation takes place by issuing attitude surveys, information meetings and public enquiries. But as Arnstein argues, too often this strategy is perceived as 'a window dressing ritual'. The outcomes of consultation are not (fully) translated into the project plan.

5. Placation. It allows actors to give advice on a proposed plan (project alternative) but retains for power holders the right to judge the legitimacy or feasibility of the advice. This strategy is often materialized by co-option of selected actors onto advisory committees, for objectives of acceptance, support and mediation (in conflict situations).

Participative strategies (degrees of citizen power)

6. Partnership. Power is in fact redistributed through negotiation between governed (participating) actors and governing actors (power holders). Planning and decision-making responsibilities are shared e.g. through joint committees and working groups. Governing and governed actors co-produce a project plan and co-work in its implementation.

7. Delegated power. Participating (governed) actors hold a clear majority of seats on committees with delegated powers to make decisions. Participating actors now have the power to assure accountability of the project to them by incorporating their interests in the project.

8. Citizen Control. The governed actors handle the entire process of planning, policy making, implementing and managing a project with no intermediaries between it and the source of funds and decision-making powers. The governed actors are governing themselves with no interference by traditional governing actors, such as governmental agencies.

The strategies of participation can help organize the involvement of actors in FCA-projects. Arnstein´s ladder of citizen participation clusters participatory and communication strategies into three categories: non-participation, symbolic participation and strategic participation. For a comparison with our four basic communication strategies, only symbolic and strategic participation are relevant. Symbolic participation is implemented through three strategies: informing, consultation and placation. Strategic participation is considered to be real participation, including the strategies co-producing, delegated power and self-governance.

Our four basic communication strategies	**Arnstein´s strategies of participation**
Co-knowing	Informing
Co-thinking	Consultation Placation
Co-working	Partnership (Co-producing)
Co-deciding	Delegated power Citizen control (self-governance)

4. Reflection: Some thoughts on organizing sustainable stakeholder participation in a network society

The type of policy challenges that we have discussed in this paper, all take place in a pluriform context of multiple and volatile stakeholders each with their own ideas, interests and assumptions. None of these is able to take effective unilateral action as all stakeholders are interdependent being in possession of resources such as knowledge, land, money and legal say. Nevertheless, many of the administrative agencies that are in charge of complex policy decisions, choose to approach these issues merely as being technical problems that require technical solutions, typically resulting in a *decide-announce-defend* strategy (Laws, 2004). Although well intentioned, this strategy can easily polarize opinions and generate resistance from affected parties. In spite of that, the cases that we have presented in this paper show that there is a promising approach leaving space for societal complexity and thus the involvement of all interdependent parties by using hybrid and/or multiple communication strategies.

Reflection of the reviewed cases

Choosing or selecting a hybrid communication strategy can be a way of accommodating different requirements for communication within one project. The case studies reviewed that hybrid communication strategies can meet different communicative objectives. Most cases have hybrid communication strategies, based on the levels of abstraction (strategic level and site level) to which the communication has to apply.

The ultimate approach to a tailor made communication strategy is to translate the findings of the context and actor-analysis into a multiple strategy: different strategies aimed at and tailored to different (types of) target groups and evolving from one stage of the policy process to the next. For achieving this, an extensive actor-analysis is implemented at the start of a project. Based on that, a provisional division of each actor into the four generic types of actors is made. This division follows the categorization of actors by involvement (see section 3): co-knowers, co-thinkers, co-workers and co-deciders. This division is kept up to date as the project / process evolves: an actor who is categorized as ´co-knower´ in the first stage, can evolve to ´co-thinker´ in the next. And the other way around. As a consequence, in each stage of the policy process the involvement of the

actors (target groups) can differ. However, in applying this approach, we should be aware of a serious pitfall: how can we communicate the change in involvement (different role) of an actor in the next stage of the policy process? An actor who is accustomed to being addressed and involved as 'co-thinker' will experience the new role of co-knower as a degradation. And the other way around: an actor that has been involved as 'co-thinkers' perhaps cannot make a step up to 'co-worker', simply because of the lack of capacity or expertise. This pitfall is often seen in (Dutch) open planning processes: in the initial stages, many actors are asked to contribute to the process, but when the process advances, their level of involvement (role) is becoming less and less active; other actors are taking over the process, mostly the public administrations.

The reviewed cases show little evidence of such multiple strategies. The cases show mainly the application of hybrid strategies. The case with much attention to communication by "intensive strategies" – Mirrorproject Overdiepse Polder – was carried out in a small project area, with a limited and stable number of actors. In the other cases, the focus on communication was limited because the technical, financial and political feasibility of the project seemed to be the main objective. Involving stakeholders was more or less perceived as 'unavoidable', and therefore less "intensive strategies" were deployed.

General thoughts on organizing sustainable stakeholder participation

Based on the observation that stakeholders involved tend to move from technical to more participatory FCA-processes, we present some general thoughts on how to organize stakeholder participation in a complex network society.

A complex problem requires a strategy or vision that is able to deal with the societal complexity that comes with it. We believe that the idea of sustainability could be very helpful for these policy challenges, for the concept is widening the scope of policies and strategies by relating social needs, economic goals and environmental protection.

Initially, the concept of *sustainable development* was developed by the Brundtland commission in 1987 to stimulate economic growth without depleting natural resources for future generations. In their report *Our Common Future* the authors have suggested that equity, growth and environmental maintenance are simultaneously possible, provided

technological and social change. This broader vision on where to search for possible solutions to complex environmental problems, could well be applied in the context of flood risk management as it does justice to societal complexity and is incorporating diverging interests.

The three elements of sustainable development are usually presented as three corners of a triangle or referred to as the *triple p* model as shown below. A sustainable strategy is aiming for a balance between its three points of view that could only be accomplished by **interaction** between the parties that represent each of the corners of the triangle. Therefore, next to the People, Profit, Planet concept, we introduce a forth P of Process (or Participation if you will) which is enabling the transmission of visions, wishes and knowledge between all stakeholders. The question remains how to set up a process that incorporates the principles of a sustainable strategy.

Since a process is about people interacting, a strategy directed towards a sustainable policy would begin with analyzing the parties that are involved in the issue. The target group method that is explained in section 3 could well be used to perform a thorough analysis as it includes experts, policy makers, citizens and decision makers. Once the parties are identified, they could be approached to assess their willingness to participate in a joint policy making process. In the US this practice is more common than in Europe and known as a *convening assessment*. Essentially, the assessment consists of interviews with parties involved to hear their opinion on the issue and how they wish to contribute to it. Key benefit of this procedure is that it enables a wide variety of parties to jointly start a process instead of entering at a given point when choices already have been made or an entire project is forced to start all over again. The remaining question is who should initiate such a process?

There is no evidence for determining who is an obvious party to initiate a sustainable policy strategy. Some cases that we have studied show that local culture and institutions determine who is a legitimate party, mostly a government agency. Nevertheless, in other cases we have seen that an independent process manager being a party without any stake, could bring together even diametrical aligned stakeholders, involving them in a ´mediating´ kind of process, thus achieving broadly accepted objectives and actions.

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