

CHAPTER 17

Influence of citizens and stakeholders in shaping adaptation policy – opportunities and barriers

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Introduction

Kalundborg Municipality, located on the western coast of Zealand, Denmark, has together with the Danish Board of Technology (DBT) carried out a comprehensive and path-breaking participatory approach, involving local stakeholders and citizens, to prepare for a municipal Climate Change Adaptation Plan. The participatory effort was part of the EU-INTERREG project 'BaltCICA' on climate adaptation in the Baltic Sea Region running from 2009 to 2012 and included, among other things, a 2-day scenario workshop and a citizens' summit.

After concluding the BaltCICA project, Kalundborg Municipality did continue the work to formulate their municipality adaptation plan, however, at a much lower intensity. But in 2012, the new centre-left government introduced a law, which stated that all Danish municipalities would have to prepare a climate change adaptation plan before the end of 2013. This gave new impetus to the work and Kalundborg followed the same schedule as other municipalities, but was far better prepared for the task.

The law established that adaptation is a matter of municipal planning, and climate change adaptation plans should, henceforth, follow the 12-year municipal planning period and be integrated into the overall municipal plans, either directly, or as an appendix.

In spring 2014, the proposed Climate Change Adaptation Plan for Kalundborg was introduced to the political agenda of the municipal council to be finally adopted. *This timing allowed for a unique opportunity to study whether and how the participatory process influenced the final adaptation plan.* Climate change adaptation processes and participation in Scandinavia has been studied extensively in recent years with many different theoretical and analytical foci (Jonsson *et al.*, 2012;

Glaas *et al.*, 2010; Hjerpe *et al.*, 2014). In this regard, this chapter has a practical focus, presenting experiences and procedural stages more than analyses. The emphasis is on how the municipality has been able to incorporate local views and suggestions into their short- and long-term adaptation planning and policy work (Jonsson *et al.*, 2012). Adaptation actions and the actual implementation of the plan have yet to come.

Participation in planning

The way participation is understood and practiced in any given society is not neutral. Even the term participation itself is not broadly agreed upon and is, therefore, subjected to many different understandings, uses and interpretations. The contextual circumstances regarding participation and involvement in the Danish municipalities are formalized through the regulatory system. The Planning Act of Denmark prescribes municipalities to involve stakeholders and citizens through public hearings, in most facets of the municipal work (Ministry of Environment, 2002). The ratified Aarhus convention furthermore adds to the reinforcement of participatory exercises in the administrative bodies and in political processes (UNECE, 1998). Stakeholders can be more narrowly or broadly defined depending on what one would define as a relevant stake in the future development of the area in question. As André (2013) states, we are strong advocates of a rather broad and inclusive definition, for both practical and principled reasons (Bedsted, 2007). Participation and involvement is also an inherent and embedded part of Danish municipal planning through more informal means. Although open to local interpretation, the Danish democratic and associative tradition prescribes the anticipation of involving affected citizens and stakeholders in planning and policy efforts. This is often the case with long-term planning involving a high degree of uncertainty or risk. The type of planning that goes into climate change adaptation is often of a political nature, although it may seem only technical to the people making them, which is a potential challenge concerning participation (Fung, 2002). Therefore, if adaptation is viewed as a purely technical feat, there are pitfalls for participation, since the regulatory system dictates that political processes are the primary focus of involvement.

Data and method

DBT is currently partner in the European FP7 project, BASE 'Bottom-up Climate Adaptation Strategies towards a Sustainable Europe', and as a part of this DBT is revisiting Kalundborg in order to make a retrospective view at the different participatory aspects of the decision-making process that were carried out and how these managed to make their mark on the final adaptation plan.

Existing data from the BaltCICA project have been used together with the adaptation plan that consists of three elements: the adaptation plan itself, a supplement to the general municipal plan (which is an adapted version of the adaptation plan) and a so-called 'action description', which is a specific list of adaptation measure proposals. This material has been supplemented by focus-group interviews with a broad selection of local politicians, officials,¹ stakeholders and citizens who have been involved in the climate adaptation process. The focus group interviews have in a few cases been supplemented with individual interviews.

The citizens interviewed were selected among those who participated in the citizens' summit in 2011 (see below). This did allow addressing how citizens think that the input from the voting at the summit is reflected in the adaptation plan. The stakeholders were selected among those who took part in the scenario workshops in 2009 (discussed later). They were divided into three focus groups: farmers, environmental nongovernmental organizations (NGOs) and residents including summer house owners. This division was used to focus on the adaptation plan in relation to the interests of specific stakeholder groups.

Case-study location

Kalundborg is a Danish town with 16,000 inhabitants. It is the principal town in the municipality, which has the same name and a total number of inhabitants of almost 50,000. Similar to many other Danish towns, it is located along the shore and evolved centuries ago around the mouth of a river running through the town, making it vulnerable to both storm surges and cloudbursts. Historically, Kalundborg has avoided severe cloudbursts, unlike Copenhagen and elsewhere, but has been more prone to storm surges, which, more frequently, over the years have invoked some damage and coastal erosion.

A second area around Reersø and Tissø, south of the town of Kalundborg, was chosen as site for the scenario workshop. The area is an exemplarily Danish rural area, and there are many more like it along the Danish coastline. It is dominated by farmland and to a lesser extent by conservation areas, smaller villages and summer cottage areas. The summer cottages in the low-lying areas close to Reersø and on the peninsula of Reersø, are expected to be most severely affected by future floods. Altogether, there are about 3000 summer cottages in the area. Equally exposed are some permanent residences, large farmland areas and internationally protected conservation areas with meadows, bogs, streams and lakes. The area around the mouth of the stream called Nedre Halleby is currently almost unregulated and of a delta and lagoon-like character. The infrastructure in the area holds public roads, sewage systems, electrical supply, water

¹'Officials': are here and in the following including technical staffs.

supply and drainage. It holds groundwater supplies for drinking water, and fresh water from Tissø Lake (the source of Nedre Halleby Å) is used for industrial purposes in Kalundborg. The area is somewhat important for tourism in the municipality of Kalundborg and includes several locations of interest with regard to cultural heritage (Bedsted and Gram 2013).

The participatory process

Climate change in the Kalundborg Municipality falls under the responsibility of the Department of Engineering and Environment. We inquired politicians and officials from the department about their motivation for involving the relative small department in such a huge participatory climate project as BaltCICA. They had realized that ‘the weather’ in itself was an imminent issue and it was only a matter of time before they had to address this challenge anyway, and the municipality lacked proper tools to meet the challenges. Some regarded BaltCICA as an opportunity to prepare the staff and to gain knowledge on climate change and insight into GIS modelling and (not the least) to obtain funding for necessary equipment.

Others regarded the huge participatory process as rather scaring; would this create unrealistic expectations among citizens in regard to how much the municipality will be able to help and support citizens that are threatened from climate change? Denmark had just been through a municipal reform; merging municipalities into bigger units, which has created a challenge for local democracy (Agger *et al.*, 2010). Furthermore, some expressed that the citizens’ summit was seen as an opportunity to try out new ways of citizen dialogue and receive concrete and tangible results immediately by voting.

The participatory process can be sketched out as shown in Figure 17.1. Note that the involvement of stakeholders and citizens is carried out *before* the adaptation plan is prepared. This is rather unusual in a Danish context where the normal consultation-procedure is a ‘hearing-phase’ of a proposed plan. As one of the citizens formulated it ‘It was fantastic that we were consulted before they started writing the plan’.

Looking at the scenario workshop in Figure 17.1, the idea was to obtain different visions for the long-term development of the area and proposals from local

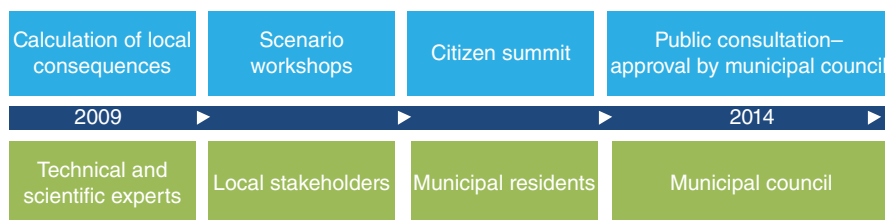


Figure 17.1 Participatory plan development process in Kalundborg. (See insert for color representation of this figure).

stakeholders in regard to affiliated adaptation measures. The views from different stakeholders were discussed and weighed in relation to each other at the scenario workshop, but at the end the workshop resulted in a handful of very different proposals dominated of current interests among the stakeholders. Some of the long-term visions and measures expressed ongoing activities and were meant to protect the current use of the land.

This was the rationale for organizing a subsequent citizens' summit with participants from all over the municipality and with people not necessarily having short-term stakes in specific solutions. Participants were supposed to act as citizens taking into account all the different stakes and considerations, and discuss what would be the best solutions for the municipality as a whole (Agger *et al.*, 2012). They are the ones who pay the municipality taxes and live with the implemented solutions in the future. Henceforth, they were asked to choose between different specific proposals and to point out their views on which direction the municipality should evolve, and what should be the sensible balance between continued protection of current land use and letting nature take its course.

The themes at the citizens' summit clearly show that climate adaptation has to do with *political choices* and not only is a matter of finding the 'right' technical solutions (for a detailed description on the scenario workshop and the citizens' summit and the themes discussed together with the modelling and geological data and climate data used at the Kalundborg process, see Bedsted and Gram, 2013).

Development of the adaptation plan

DBT had ensured a close dialogue with the Kalundborg municipal Committee for Engineering and Environment from the very beginning and throughout the participatory process. After the citizens' summit, DBT prepared an analysis of the possible political implications of the voting results and presented it to the Committee, which took cognizance of these recommendations and asked the city's Department of Engineering and Environment to include these in the adaptation plan. The Department established a small working group to write the adaptation plan (see also Figure 17.1). The chairman of the Committee describes it as 'In this way the whole work-process in the working group became a result of BaltCICA.'

During the writing of the adaptation plan, stakeholders (from the scenario workshop) were not consulted again. The working group was of the opinion that, for example, farmer and environmental organizations 'are awake and will know how to interfere' if they find it relevant. The interviews with the stakeholders confirmed that they did not carry out any lobbyism after the citizens' summit and until the adaptation plan entered into the formal public consultation phase 'hearing'. During this consultation phase some of the organizations submitted response to some points, for example, an environmental NGO objected that the municipality would avoid environmental appraisals of certain points in the plan.

National requirements to the adaptation plan

In connection with the requirement of all municipalities to produce an adaptation plan, the Danish Ministry of Environment set up a number of specific requirements; the adaptation plans would have to take in as well as guidelines for officials to consider. The main mandatory elements are risk mapping and a description of the municipality's efforts to climate change adaptation. Regarding the structure and guidelines the adaptation plan would have to be based on existing municipal plans such as the wastewater and overall municipal plan (running from 2013 to 2024), as these are the principal planning tools. There is a special focus on impacts from water (sea-level rise, cloudburst and groundwater) in the guidelines but there are, as such, no requirements concerning vulnerability to other climate change impacts (heat, health, biodiversity, etc.).

The Climate Change Adaptation plan for Kalundborg includes three different types of maps each with a particular focus: flooding, value and risk (see Figure 17.2). Based on the three maps, 'action areas' of priority in the municipality are selected. The flooding maps show vulnerability to flooding and the value maps show the affected properties but the only variable included in the value map is official property prices. The risk map combines the two to provide an overall picture of the risk associated with climate change. The criteria for selecting 'action areas' were (i) the risk of flooding (due to sea-level rise and cloudburst), (ii) property value, (iii) connection to other municipal plans and projects and (iv) 'special interests' of the municipality (discussed later). In relation to the value maps, the plan specifically mentions results from the citizens' summit, where a majority of the citizens wanted a high degree of involvement from property owners in this aspect of planning. Despite pointing out the specific 'action areas' during the plans' 12-year running time, municipality officials have not made a prioritized list of the areas in the municipality.

Danish municipalities are principally concerned with emergency preparedness and protecting infrastructure and properties for which they are legally and economically responsible. Private owners are by current law responsible for safeguarding their own property in relation to climate change impacts.

Tangible impact of the participatory process in the adaptation plan

The municipal Climate Change Adaptation Plan refers to the participatory process in several places and has a section with the heading 'BaltCICA' describing the process with local scenario workshop and municipal citizens' summit and with link to both voting results and the BaltCICA background material. The plan states that the purpose of the citizens' summit was to get the views on climate adaptation of the citizens and use these results in the further work with adaptation.

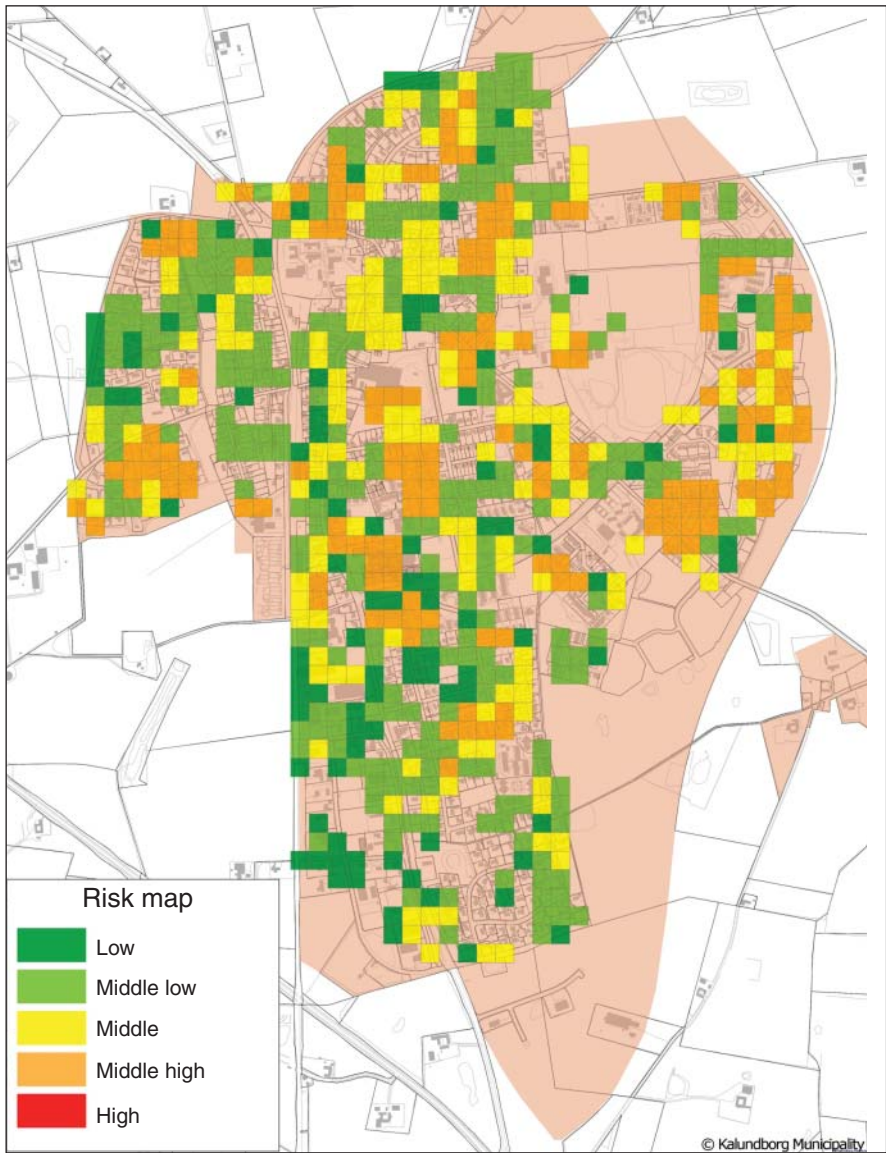


Figure 17.2 Climate risk map of Kalundborg's climate adaptation plan. (Source: Reproduced with permission of Kalundborg Municipality.) (See insert for color representation of this figure).

At the focus-group interviews, we asked stakeholders and citizens to give their assessment of the adaptation plan in relation to the previous participatory process on a scale from 1 to 10 with 10 as the fairest plan reflecting the various inputs from the participatory process. The plan was scored between 5 and 8 with 7 as the average. As stated by one of the house owners, 'it is not perfect but not bad either. The important thing is that now we have a plan'. The main

criticism among stakeholders and citizens seems to be that the adaptation plan is not very specific about *when* the different measures should be implemented. This has to do with financing. The plan is just a plan and nothing will come into being before money is allocated. The considerable focus on climate change created by the participatory process could have the potential to help pushing for the implementation of adaptation measures.

It was emphasized both among officials and politicians in the municipality as well as among the citizens and stakeholders that the thorough participatory process has created a feeling of joint responsibility to meet the challenges of climate change. Adaptation is now on the agenda and the interviewed stakeholders expressed that the process has created a more pragmatic view on the long-term consequences on climate change and that not everything will be protected. A farmer expressed it like this 'We need to let the water be where it wants to be, in the long run we farmers will have to give land to this process – the climate demands that we move'.

In accordance with the recommendations from the citizens' summit, the plan states (which was confirmed in the interviews) that the municipality will work close together with stakeholders and citizens carrying out adaptation measures. The plan often refers directly to voting results from the citizens' summit. One example is the sensitive issue of priority between protection of farmland and the development of wetland nature areas. One way to protect areas from flooding caused by cloudburst or rivers is to allow the water to flood farmland and thus hold up the water before it reaches inhabited areas. Hereby, the municipality can also create more wetland areas and thus improve the natural environment. Such measures are mentioned in the plan and specific farmland areas are pointed out. Here, the plan refers closely to the voting results at the citizens' summit and hereby the municipality uses the participatory process as an opportunity to present these delicate issues. The interviews with officials and politicians confirmed that the participatory process gave the municipality a mandate (and the courage) to be more specific in addressing these kinds of issues.

Controversial issues

A very concrete result of the involvement of citizens and stakeholders as a prelude to the preparation of the adaptation plan is that the plan points out specific summerhouse and nature areas by name, which in the long term will be so threatened that it might be necessary to reconsider the location of the areas. This is especially controversial regarding the summerhouses. In Denmark, old-age pensioners are allowed to live permanently in their summerhouse (under certain conditions) in reality making it to their permanent place of residency. When such properties are pointed out in the plan, they will be almost impossible to sell and they will immediately lose their value, meaning that house owners lose their

savings. Officials and politicians stated that such an official specific designation would never have been carried out in the plan, if the participatory process had not already pointed out the areas. If politicians want to be elected once more, it might be considered as a bad strategy to abolish people's properties. This is often raised as a barrier against using downscaled scenarios in climate adaptation planning. Instead, the municipalities often approve that house owners build climate change adaptation measures and thereby giving people a false expectation that the area will last.

At the citizens' summit, the participants expressed very clearly that they wanted the municipality to point out areas by name that will be abandoned, so that people know the long-term status of their area. Citizens felt that they had a right to know whether they, for example, should continue to invest in their houses or not.

But the adaptation plan does not address how such a process with changing the status of an area from, for example, summerhouses to wetland should be carried out in practice and who should pay. The local politicians passed it to the national state. In the interview, they expressed that such very large-scale projects fall outside the municipality's economic opportunities. As stated by one of the house owners 'The municipality is evasive'. On the other hand, some citizens put forward that small and medium municipalities like Kalundborg will not have the financial power to meet such challenges by themselves. Similarly, regarding nature areas along the coast; it will be a big task for a municipality like Kalundborg to buy up land behind to allow the threatened nature to spread to these as the water rises.

Barriers related to adaptation and the participatory processes

A key challenge with regard to implementing the local adaptation plan is (the lack of) resources. Danish municipalities feel a pressure on their budget from the economic crises, and a national tax freeze leaves the municipalities with very limited room for manoeuvring, when they are to prioritize the resources and huge social challenges that are on the agenda. This is the reason for scepticism among officials, whether the Kalundborg adaptation plan will make a difference even though the plan itself is regarded as satisfactory. Many of the proposed climate adaptation measures will require ongoing funding for many years. To meet this challenge of continuity in the funding, the head of the technical administration suggests multiannual budgets for the adaptation measures. Such proposal means that the municipality could decide *now* to grant, for example, 100,000 € yearly the next 5 years to carry out certain initiatives.

The head author of the adaptation plan pointed out that the institutional memory is, by and large, rooted in the administration and particularly on

the individual level (Storbjörk and Hedrén, 2011). In small and medium size municipalities, changes in personnel and the organizational setup, along with local elections, have inhibited continuity over the years in keeping adaptation on the agenda. When looking for ways of embedding the adaptation agenda in the municipal organization, the head of the technical administration in Kalundborg points to the necessity of internal coordination among administrative bodies and other activities in the municipality.

The economic assessment

As previously discussed, the municipality choose to include only property prices in the economic valuation. Population density, for instance, has not been part of the valuation, which means that an area with big private properties has been valued the same as densely populated areas with small houses even though flooding will affect a higher number of people.

In several places in the adaptation plan the ‘special values’ of the municipality are highlighted. These are among others; nature protection areas, the cultural environment, preserved buildings, strategic infrastructure and important companies, technical installations and official buildings. Nevertheless, as the municipality choose to include only taxable value of property in the calculation of value maps, the special values did only have a minimum of impact on the selected ‘action areas’. It should be observed here that, for example, important EU-preserved nature areas threatened by flooding has not been selected as ‘action areas’ although it is mentioned in the adaptation plan that it should be assessed whether it is possible to place new areas with threatened tidal meadows further inland. Issues regarding which actions should be taken to protect preserved ‘nature against nature’ seem to be a grey area in legislation.

Conclusions

The participatory process *did* in fact succeed to influence the municipal adaptation plan: The process contributed to frame the work of formulating the adaptation plan and the participatory process is explicitly described in the plan, and results from the process are referred to in regard to various issues in the plan. In addition, certain controversial issues are, according to officials and politicians, only brought forward in the plan because the topics have matured through the participatory process. An example of this is the specific areas identified by the plan, in relation to the summer houses, that perhaps cannot be protected in the long term. The plan, furthermore, points to farmland areas

that may be used as temporary water storage to prevent flooding of other areas. In other words, the participatory process has provided the municipality with a legitimate mandate to take up sensitive issues and propose adaptation solutions that might be unpopular among certain stakeholders.

Furthermore, the participatory process succeeded to raise the awareness on climate change not only among stakeholders and citizens but also among officials and politicians. The process created a feeling of joint responsibility regarding precautions and adaptation measures necessary to meet the challenges of climate change.

However, not all recommendations from citizens are reflected in the plan but this has never been the intention. From the very beginning, it was clearly stated and made clear to all participants that input from stakeholders and citizens was to be part of the decision-making process on equal footing with other inputs.

Many factors have influenced the process. But we especially call attention to two issues that were absolutely essential to make the participatory process manage to get such marked influence on the adaptation plan. The first is about timing, that is, the order in which the various elements of the participatory process have replaced each other. Here it is, for example, crucial that stakeholders and citizens were involved before the municipality began to draw up the plan; in other words, they had a real influence on the way the plan was designed.

The second issue is that decision-makers, especially members of the Committee for Engineering and Environment were involved from the very beginning and consulted continuously during the participatory process. For example, the design of the process was discussed, and they were asked to give their input to the questions to be addressed by the citizens at the summit. To provide them with hands-on experience with the process they were, for example, invited as group facilitators at the citizen summit, which enhanced their confidence and ownership to the event as such.

A challenge in small municipalities with limited dedicated staff on each academic field seems to be to ensure that experience, knowledge and skills are maintained and that the guidance and objectives of adaptation are taken into consideration in other departments, which also have a lot of other important plans to consider.

A comprehensive participatory process will require resource, and the one carried out in Kalundborg would never have been implemented without the input from European Union via the BaltCICA project. This was an experience pointed out by both politicians and the head of the technical administration. It is difficult to estimate how much resources have been saved in regard to avoid abortive or futile adaptation projects, or avoid subsequent problems with

disgruntled stakeholders. This barrier of local resources could lead to a discussion of introducing an established procedure in European Union for funding of local participation in climate change adaptation.

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