

The impacts and integration of civic initiatives on municipal climate adaptation policy in Rotterdam

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SUMMARY

The impacts of climate change are widely known and more countries have implemented climate adaptation policy. Civic initiatives have become increasingly important in urban planning as citizen's participation has been included in governance strategies. To investigate the impacts of green civic initiatives in adaptation policy the following research question has been formulated:

What impacts do civic initiatives have on climate adaptation policy regarding precipitation, green and heat and whether these impacts are integrated in new municipal policy in the city of Rotterdam?

In this research two case studies in Rotterdam were used, namely Aktiegroep 'Het Oude Westen' and the Essenburgpark. During interviews with the initiatives and the municipality it came to light that there are several challenges that they face in collaboration with each other. The financial situation, the support within the community and the communication with the municipality are the main challenges. Especially communication seems to be a stumbling block. Boundary spanners are used to improve the communication between the different groups.

The research identified that civic initiatives have impact on local policies, especially within their own initiative. However, the impacts of initiatives on municipal policy is limited. Furthermore, it appears to be difficult to implement approaches city wide due to differences in social dimension/social network and differences in demography and local problems.

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1. INTRODUCTION

“Human influence on the climate system is clear, and recent anthropogenic emissions of green-house gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems.” (IPCC, 2015: p2). Cities are not only a source of CO₂-emission but are also vulnerable to the impacts of climate change (Bulkeley, 2013). They have to deal with issues such as sea level rise, extreme weather events, effects on health and effects on water availability (Hunt & Watkiss, 2011). Rotterdam, as a delta city, is particular vulnerable to the effects of climate change (Municipality of Rotterdam, 2013). Adaptation policies have been in place in the Waterplans and the Adaptation Strategy. However, researchers, governmental institutions and market players all come to the same conclusion: we cannot achieve a sustainable economy and better and healthier living environments without the help of citizens (Robinson, 2004). Civic initiatives in sustainability and climate adaptation are fairly new, but they are increasingly important in the changes needed to achieve a sustainable economy and society. This study focuses on green initiatives.

In Rotterdam, over 20 green civic initiatives exist in the west of the city alone. In this research, two case studies will be investigated, namely Aktiegroep ‘Het Oude Westen’. This action group has been working together with the municipality to improve the living environment in the neighbourhood. The second initiative is the Essenburgpark, which originated from three different civic initiatives: the Pluktuin, the Spoortuin and Ieders tuin, which are all green/garden initiatives. The initiative is located at a strip beside the west-side railway.

Civic participation has become increasingly important in the planning and decision-making process. Involving different stakeholders in this process has several benefits including the creation of support among citizens (Mota & Santinha, 2012). It is not clear, however, how much influence citizens have on municipal policy.

1.1 Research problem

The aim of this research is to investigate the impacts of civic initiatives on climate adaptation policy and to what degree these impacts are integrated in current climate policy. This research will focus on green initiatives with multiple functions. Not only green for aesthetics, but also for infiltration of precipitation and reducing of heat stress. Destoning of paved areas has a positive influence on the infiltration of rain water which helps in dealing with downpours. Green is also one of the main measures that reduce the Urban Heat Island effect. Because of these multiple functions green initiatives are the focus of this research.

There is a knowledge gap in the impact of civic initiatives on adaptation policy in academic research. There is also the question whether it is possible to generalise initiatives to other neighbourhoods or even the whole city to make it easier to implement them and stimulate the transition towards a sustainable and climate proof city. Therefore, two case studies in Rotterdam have been chosen to investigate if concepts from these initiatives can be generalised citywide. The city of Rotterdam has been chosen because of the high amount of civic initiatives and their ambitious climate policy.

Therefore, the following research question has been formulated:

What impacts do civic initiatives have on climate adaptation policy regarding precipitation, green and heat and whether these impacts are integrated in new municipal policy in the city of Rotterdam?

Following from the main research question these secondary questions have been formulated:

1. How did climate adaptation policy develop over the last ten years in Rotterdam?
2. Do Aktiegroep ‘Het Oude Westen’ and the Essenburgpark influence climate adaptation policy in

the municipality of Rotterdam?

3. What challenges do the case studies Aktiegroep 'Het Oude Westen' and the Essenburgpark experience?
4. Are the approaches of the investigated case studies relevant or applicable to other parts of the city of Rotterdam

The ten years have been chosen because spatial projects and policy mostly have a long-time frame and because a longer period was not feasible within these restraints.

1.2 Structure

After the introduction, section two will show the theoretical framework including the conceptual model. Here the most important concepts of climate adaptation, civic initiatives, spatial quality and the challenges initiatives face will be explained. Section three contains the methodology. Section four aims to show the results and analysis of the interviews. Section five includes the conclusion and recommendations for further research.

2. THEORETICAL FRAMEWORK

2.1 Civic initiatives

There have been different ways of looking at self-organisation including in sociology, chemistry and spatial planning. Self-organisation can generally be defined as a phenomenon that "includes the spontaneous formation of patterns or structures at a global level out of the interactions between agents at the local level" (Rauws, 2016, p341). If this definition is adapted to civic initiatives, it would mean that civic initiatives (the patterns or structures) would start spontaneously and at the local level. Many studies on civic initiatives in spatial planning define civic initiatives as do-it-yourself: action groups that take action independently from the government (Rauws, 2016). However, this does not mean that there is no coordination or hierarchy. Often these civic initiatives organise themselves with (in)formal agreements on how projects are handled (Rauws, 2016). It is important to mention that civic initiatives are bottom-up processes without the help or coordination of government.

2.2 Government to governance

Civic initiatives are mainly local projects and are therefore mostly in contact with the municipality. Over the last decades municipalities have increasingly involved residents in adaptation and planning projects. The role of the municipality has thereby shifted from an "initiator" and an "orchestrator" to a "facilitator" (Municipality of Rotterdam, 2013). In other words, a shift from government to governance (Dai et al, 2017). New legislation (the Omgevingswet) offers more flexibility to municipalities to increase this type of projects (Dai et al, 2017).



Figure 1 Process from government to governance

In climate adaptation several disciplines come together, mainly water management, spatial planning, nature and the nature and agriculture sector (De Bruin et al, 2009). To be able to come to adaptation policy these sectors and different (government) levels have to work together, as is also mentioned in Adaptation Policy Frameworks for Climate Change by Lim et al (2004). Edelenbos & Teisman argue that key to (water) governance capacity is the governance of multiplicity with the following dimensions:

- Multifunctionality
- Multi-level governance
- Public-private partnership and participation

(Edelenbos & Teisman, 2013)

For the involvement of citizens in urban planning, the last dimension is most important. Public are the governmental organizations, private can be seen as citizens as well as companies and housing corporations.

Sarzynski (2015) uses the concept of 'civic capacity' to explain these forms of partnerships between civil society (non-profit), public sector and private sector. Figure 2 shows the overlapping sectors which create civic capacity. The involvement of multiple sectors corresponds to Putnam's 'bridging capital' concept (1993) where there is contact and collaboration between different groups. However, Stone (2001) warns that this concept of civic capacity is specific to a policy domain and is hard to change from one domain to another. An approach that works in one policy domain does not necessarily also work in another domain.

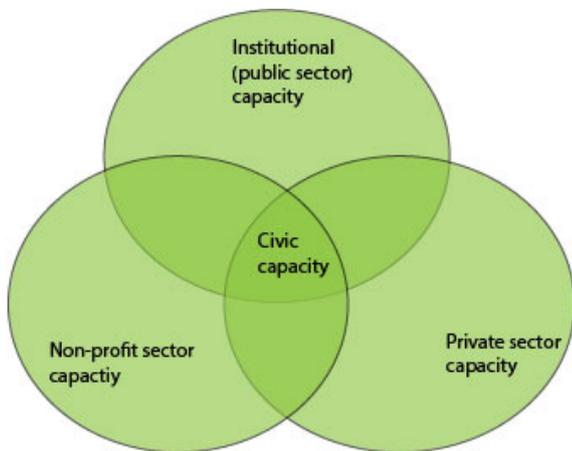


Figure 2 Civic capacity (Sarzynski, 2015)

These recent studies show that involvement of other parties, such as citizens and private parties, becomes more important in governance. It has been made clear that the help of citizens is crucial in the transition to an adaptive city.

2.3 Arguments on civic initiatives

The increasing involvement of citizens in urban planning projects is mostly seen as a positive trend since public support will increase if citizens have influence on the design. However, there are several opinions and arguments on civic initiatives and the way they work. There have been several researches about the impact of citizens and civic initiatives on climate adaptation. Cloutier et al (2018) claims that there is a positive influence with citizens taking action in areas that they find neglected. Sarzynski (2015) used six types of public participation in adaptation in cities to explain the difference in characteristics. This can be seen in table 1.

Table 1 Characteristics of public participation in climate adaptation in cities (Sarzynski, 2015)

| Type | Breadth (who) | Openness (when) | Intensity (how much) | Influence (what) | Goals (why) |
|---|-----------------------------------|---|----------------------|-----------------------|-------------------------------|
| Traditional government-led climate planning | Narrow to moderate | Low (planning only) | Low | Inform & consult | Instrumental |
| Non-governmental planning | Moderate | Low (planning only) | Low to moderate | Inform & consult | Instrumental & intrinsic |
| Inclusive planning | Moderate to broad; government-led | Low (planning only) | Low to moderate | Inform & consult | Instrumental & some intrinsic |
| Partnerships | Moderate | Moderate (decision & implementation) | Moderate to high | Consult & collaborate | Instrumental |
| Non-governmental provision | Broad | Moderate (decision & implementation) | Moderate to high | Empower | Instrumental |
| Co-production | Broad | High (planning, decision, implementation) | Moderate to high | Collaborate & empower | Instrumental & intrinsic |

The table shows the participation ladder. As can be seen, the influence increases with the amount of participation. However, Sarzynski claims that she has found little evidence of civic capacity. This could be due to

the difficulty to obtain meaningful citizen participation since technical knowledge is necessary. Wamsler & Brink (2014) looked at a citizen participation at a more individual level in Sweden. They found little evidence that citizens are actively adapting their own lifestyle to climate change and they see that the influence of citizens on climate adaptation is far from common practice. There are isolated actions, but they often interfere with government rules and plans (Wamsler & Brink, 2014). For instance, connecting a drainage system to the storm water system.

2.3.1 Challenges

The relationship between government and civic initiatives does not always go well. There are challenges on both sides. Napoli and Karaganis (2010) claimed that if governmental transparency standards are not consistently applied, this may influence civic engagement because of conflicting or a lack of information. This adds to the findings by Wamsler & Brink (2014) who claim that citizen participation is low because they feel discouraged by the institutional and legal structures. There is a feeling of mistrust in the government who are seen as to seek to take control rather than support. This feeling of mistrust is also endorsed by Sarzynski (2015) who described this as a result from a case study in Durban about community ecosystem-based adaptation. Another important factor is communication. Public participation is characterized by the presence of conversation between citizens and government based on a two-way information flow (Agostino, 2013). Social media can have a positive influence on that. The relationship between citizens and local government has always been tricky and depends largely on one's individual circumstances (Montalvo, 2009). However, the relationship between citizens and local government has become increasingly more important due to the change from government to governance. Local authorities do not excel in dealing in cross-border issues; they take care of one issue at a time (Edelenbos & Teisman, 2013). For instance, involving citizens in water safety is only something of the last decade. However, with the increasing involvement of citizens in urban planning local governments have to look beyond their boundaries to combine aspects from different sectors.

2.3.2 Boundary spanning

Edelenbos & Teisman (2013) suggest boundary spanning as a way to bring different worlds closer together. "Boundary spanners are specialist in crossing structures and merging (self-) interests into joint interest. They focus on the process of simultaneous up- and downscaling between local, regional, (trans) national levels. If a joint language emerges interconnecting interests, perspectives and meanings, boundary spanning is successful and governance capacity increases." (Edelenbos & Teisman, 2013, p100). According to Cash et al (2006) there are four functions of boundary spanners: convening, collaborating, translating and mediating. Boundary spanners can bring the worlds of citizens and municipality closer together to enhance civic initiatives.

2.4 Spatial quality

Spatial quality is a term broadly used in spatial planning. All alterations in public sphere have influence on spatial quality. Every alteration in spatial planning has the aim to be positive, however in practice that is not always the case. When it comes to civic initiatives, residents participate in the design and construction of a spatial measure. Therefore, it could be that these initiatives and measures have a different spatial quality than top-down measures.

Spatial quality is a hard to define term. It is highly dependent on culture, time period and the kind of space (social, sensory, behavioural etc.) (Rapoport, 1970). The governmental report by Habiforum uses the following interests as part of spatial quality.

- Economical interest
- Social interest
- Ecological interest
- Cultural interest

(Hooimeijer, Kroon & Luttik, 2001)

These four interests defined in spatial quality can also be linked to civic initiatives. Civic initiatives always start with a common goal or view. This goal or view can fit in one or more of these interests of spatial

quality. For instance, a civic initiative can have an ecological interest if it is about nature preservation. Or an economical interest if it is about the construction of solar panels to reduce energy costs. One is able to classify civic initiatives in the same classes as spatial quality has. Because of the restraints of this research the focus will be on ecological interest and then mainly precipitation, green and heat, as mentioned in the main question. These three factors are chosen because of their connection to each other. The multiple functions of green (infiltration of precipitation and reducing of heat stress) makes that these three factors a logical part of climate adaptation.

2.5 Conceptual model

The answering of the sub-questions, together with the analysis of the data, will lead to answering the main question. Figure 3 is the conceptual model, a graphical representation of the main research question. There are several factors influencing spatial adaptation including ecological factors which will be the focus of this research, specifically precipitation, green and heat. These interests are discussed in section 2.4. Cultural, social and economical interests are outside the scope of this research.

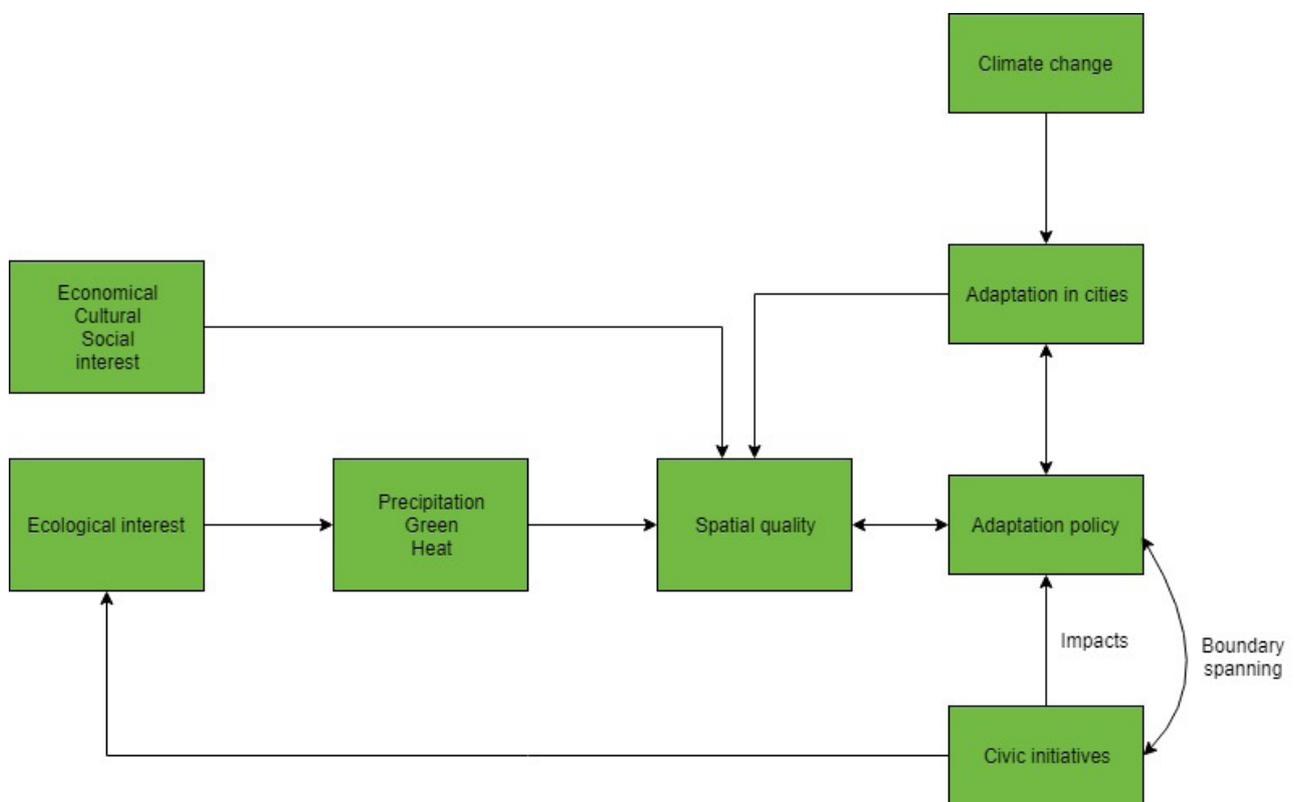


Figure 3 Conceptual model

3. RESEARCH METHOD

This research used a qualitative research method with case studies. Interviews were conducted to answer the research question. These interviews were held with members of the civic initiatives and with employees of the municipality of Rotterdam. A total of six interviews were conducted, three respondents from the municipality and three respondents from the case studies. All interviews were recorded, with permission from the interviewee. To make the respondents completely anonymous they have been randomly numbered from 1 to 6. The length of the interviews was between 30 and 45 minutes and took place in Rotterdam or over the phone. All interviewees were very interested and helpful. There were no problems with confidentiality of the projects they were working on.

After the interviews themselves are finished, they were transcribed and coded to further analyse them. This transcription was sent to the interviewee for approval. Next, there will be started with the process of open coding, where labels will be allocated to text fragments. The next step is axial coding where codes are compared to each other and codes that belong together are put in the same group (Dingemans, 2017).

Secondary data collection will be conducted for the first sub-question. This question will be an analysis of the climate adaptation policy of the last 10 years in Rotterdam. Therefore, several policy documents of the municipality of Rotterdam will be summarized.

This can all be seen in figure 4.

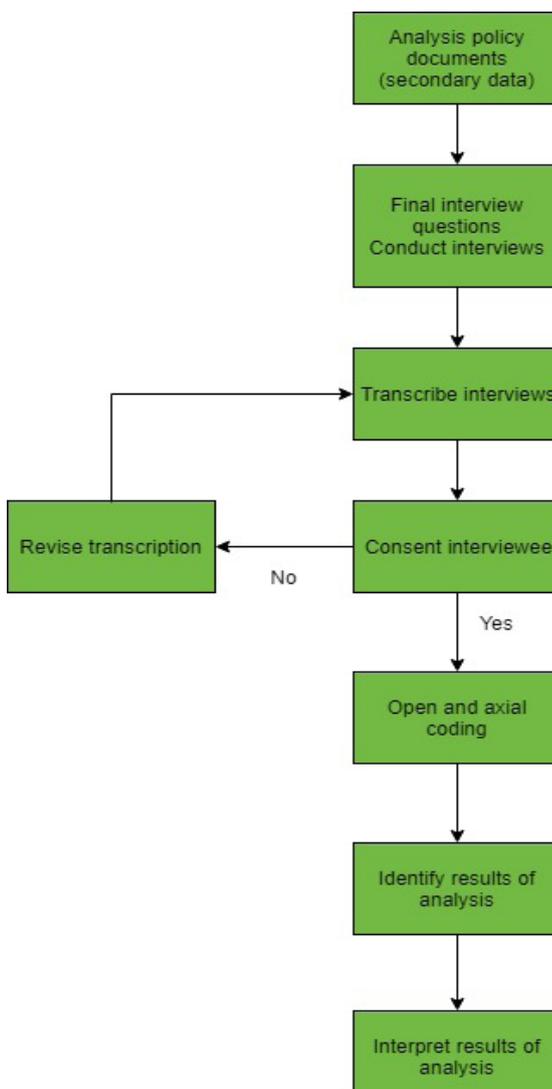


Figure 4 Data analysis scheme

3.1 Quality of data

The two case studies are different in some respects. Aktiegroep 'Het Oude Westen' is an older group, good organised, with several interests (social, green, living quality) in the neighbourhood. The Essenburgpark is a newer initiative, the park opened in March 2019. Their main focus is green. Other subjects, for instance, education and social cohesion are less a priority. Besides the case studies, three employees from the municipality were interviewed as well to form a clear and two-sided picture on how citizens are involved in urban green planning. They hold positions in Water Sensitive Rotterdam and work as neighbourhood networker.

3.2 Case studies

The research will be done with two case studies. Both are situated in the west of Rotterdam at the north side of the Meuse, but in different neighbourhoods.

3.2.1 Aktiegroep 'Het Oude Westen'

The first one is Aktiegroep 'Het Oude Westen'. This action group exists since the seventies of the last century and was founded to prevent the demolition of the neighbourhood het Oude Westen. Since then, the Aktiegroep has been working together with the municipality to improve the living environment in the neighbourhood. The Aktiegroep works as an umbrella over the neighbourhood. They support several big green projects, such as parks and gardens, and many more small ones around the neighbourhood.

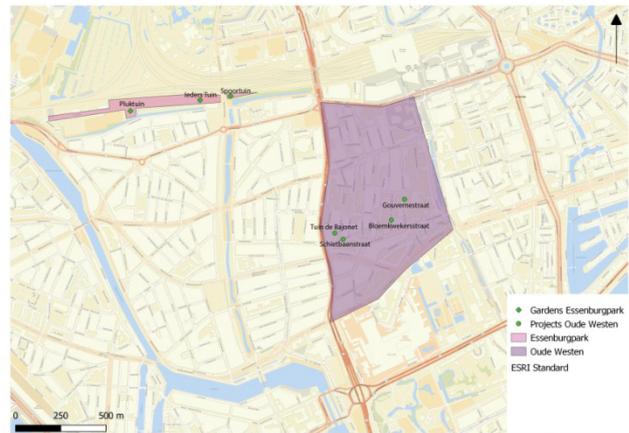


Figure 5 GIS map case studies

3.2.2 Essenburgpark

The second case study is a younger initiative: the Essenburgpark. This initiative originates from three different civic initiatives: the Pluktuin, the Spoortuin and Ieders tuin, which are all green/garden initiatives. The Essenburgpark is located beside the railway. It started with protest against development plans when the land was still owned by the National Railway Company. After plans by residents were made to change it to a park, it was bought by the municipality. It is also part of the Green Connection. This is an ambitious plan to create a green strip throughout the city. At the moment it makes an 8-kilometre walking route through Rotterdam West. Both case studies can be seen in the GIS map figure 5, including example projects.



Figure 6 Essenburgpark (Essenburgpark, 2018)

3.2.3 Water Sensitive Rotterdam

Water Sensitive Rotterdam is not a civic initiative but is an important stakeholder in the communication between citizens and the municipality when it comes to climate adaptation. Water Sensitive Rotterdam is a municipal programme that supports citizens in adaptation projects. They give a boost of knowledge and financial support to projects in the neighbourhoods in Rotterdam. With this they try to stimulate citizens to become more involved in adaptation projects and to bring citizens and professionals together.

4. RESULTS

4.1 Climate adaptation policy Rotterdam

Rotterdam, as a delta city, is particularly vulnerable for climate change. To adapt the city to the effects of climate change, adaptation policy is in place. These policies are described in: Rotterdam Adaptation Strategy, Waterplan 2, the Rotterdam Resilience Strategy and the Rotterdams Weerwoord. This section provides an answer for sub-question 1.

Rotterdam Adaptation Strategy

The Rotterdam Adaptation Strategy (from here referred to as RAS) was released in 2013. The goals of the RAS are for 2025. The RAS specifically names citizens as important stakeholders and describes the process of climate adaptation being both top-down and bottom-up. The report states how the role of the municipality is changing to facilitator and supporter of initiatives in the community. Adaptation measures should be based on integrating urban planning, improving the whole living environment. However, the Rotterdam Adaptation Strategy is just a policy document. There is no implementation agenda linked to the strategy. (Municipality of Rotterdam, 2013).

Waterplan

In the Netherlands every municipality makes a water plan in cooperation with the water board active within the municipal borders. In Rotterdam these are the water boards of Hoogheemraadschap Schieland en de Krimpenerwaard, Waterschap Hollandse Delta and Hoogheemraadschap Delfland. Water plan 2 (2013) contains a vision for the water system, the (future) problems and possible solutions. The water plan includes safety, quantity and quality and waste water (treatment). This Water plan is unique in its way because of the cooperation between water experts and urban designers. (Municipality of Rotterdam et al, 2013)

Rotterdam Resilience Strategy

The Rotterdam Resilience Strategy was launched in 2016 and aims to make the city resilient and ready for challenges. The strategy contains 7 resilience qualities (reflective, resourceful, robust, redundant, flexible, inclusive, integrated), 7 resilience goals (society, energy, port, climate adaptation, infrastructure, network, anchoring resilience) and 68 actions. As can be seen from the resilience goals, resilience is not just climate adaptation but involves all aspects of society. (Municipality of Rotterdam, 2016)

Rotterdams Weerwoord

The Rotterdams Weerwoord can be seen as the successor of the RAS and was released in 2019. The goal of the Rotterdams Weerwoord is a climate-proof Rotterdam in 2025, in agreement with the RAS, and practical measures that translate the needed up-scaling and speed of adaptation citywide. Even more than the Rotterdam Adaptation Strategy, the Rotterdams Weerwoord names citizens as crucial in the development of adaptation measures. To involve citizens as early as possible, the writers of the Rotterdams Weerwoord had contact with three citizen groups. These are Actiegroep Droge Voeten in the Agniesebuurt, a group from the Provenierswijk and citizen organisation InHillegersberg. These organised citizen groups were approached because of their earlier involvement in adaptation or water projects. Rotterdams Weerwoord is very similar to the RAS, but the main difference is the implementation agenda that is linked to it. In the coming years the municipality is going to make an adaptation plan for all 42 neighbourhoods. This will be done together with citizens. (Municipality of Rotterdam, 2019).

“The Rotterdams Weerwoord is very much about talking to people in their own neighbourhood and trying to connect to what people find important”

~ Respondent 5 from the municipality of Rotterdam

4.2 Activities case studies

The two case studies have different activities regarding green projects. The Aktiegroep mainly combines green with social, in courtyards and facade gardens. They focus on making green in places that were paved before to improve the aesthetics of the neighbourhood and increase infiltration. Facade gardens XXL are an invention of the Aktiegroep. These gardens of 2-4 meters deep at the front of a house are made on municipal land, but maintained by the residents (figure 7). Several streets in the neighbourhood contain a facade garden, for instance the Schietbaanstraat and the Bloemkwekersstraat. Woonstad, the main housing corporation in the neighbourhood, has been present in some projects as well, including De Tussentuin and Tuin de Bajonet (figure 8). The latter is not only a communal garden, but also a water storage area through infiltration crates.



Figure 7 Climate-proof street (Sinke, 2019)



Figure 8 Tuin de Bajonet (Platform Binnentuinen, nd)

The Essenburgpark started with three separate initiatives, the Pluktuin, the Spoortuin and Ieders Tuin. These garden initiatives, all adjacent to or near the Essenburgpark, worked together to create the park. The park exists, not only of these three gardens, but also contains an educative garden, a walking path over the old railway dike and a water storage area (figure 10)



Figure 9 Essenburgpark entrance (Sinke, 2019)



Figure 10 Essenburgpark water storage (Sinke, 2019)

4.3 Impact case studies on policy

Both case studies had to work closely together with the municipality in order to achieve the desired success. Both cases had relatively positive experiences with the municipality, with the Essenburgpark the most positive. Respondent 6 from the Essenburgpark explained: "We did not always think along the same lines. But you have to work together. And in the beginning that went with some struggles and differences of opinion. Nevertheless, they are to be solved[...]."¹

4.3.1 *Communication approaches*

The case studies have different approaches of communication with the municipality. Aktiegroep 'Het Oude Westen' has much contact with employees from Water Sensitive Rotterdam. One of the interviewees who works for the programme has intensive contact with the Aktiegroep. Through these contacts, subsidies and help are provided for projects. Furthermore, the Aktiegroep has much contact with the housing corporation Woonstad. In several projects, such as Tuin de Bajonet, Woonstad was the initiator in developing green space. Mostly this was a measure against poor maintenance and nuisance from unwanted audience.

The Essenburgpark has had more direct contact with the municipality. Especially in the beginning, much contact went through the neighbourhood networker in the neighbourhood 'Het Nieuwe Westen'. He connected, also in his capacity of boundary spanner, the different parties.

4.3.2 *Impact challenges on public-private cooperation*

People within the civic initiatives do feel often taken seriously by the municipality, in contrary to Wamsler & Brink (2014) who claim a feeling of mistrust towards the government. However the amount of bureaucracy is a constraint. Second, there is still a feeling of hierarchy. Edelenbos & Teisman (2013) and Wamsler & Brink (2014) describe this as the government seeking to keep control over the decision-making process. It is possible for initiatives to maintain influence over the project. Respondent 6 from the Essenburgpark: "It will never be equal, because they are the professional party, but you have to fight for it. And in the end, it became the plan we had in mind".²

Overall the initiatives feel that the collaboration with the municipality is good and that the challenges they face can be overcome.

4.3.3 *Impact on municipal policy*

These contacts stimulate projects from the case studies to move forward more quickly. From the case studies it appears that the communication and influence on a local scale is very high. Citizens are heard and listened to, although it takes quite some time (the Essenburgpark process cost 3 years). Do Aktiegroep Het Oude Westen and the Essenburgpark influence climate adaptation policy in the municipality of Rotterdam? The answer would be yes and no. They influence the plans on a very local scale, within the boundaries of their own initiative. Within their initiative they have quite some influence, with the Essenburgpark realising 95% of their initial plan. However, when it comes to municipal policy, the influence is much less. The involvement of three citizen groups for the Rotterdams Weerwoord is the only evidence found that citizens have been able to actively give input for citywide policy.

1 Original quote: "We zitten niet altijd op een lijn. Maar je moet samenwerken. En dat gaat in het begin een beetje met strubbelingen en soms ook kleine meningsverschilletjes. Maar goed, die zijn om opgelost te worden[...]"

2 Original quote: "Gelijk zal het niet worden want zij zijn de professionele partij, maar je moet er wel voor vechten. En uiteindelijk is het het plan geworden zoals wij dat voor ogen hadden".

4.4 Challenges

The way citizens are involved in planning and decision-making nowadays is relatively new. As with every new concept there are challenges and problems that need to be overcome. During interviews with members of the case studies, several problems and challenges came to light.

This section answers sub-question 3.

4.4.1 Financial support

One of the main challenges is finding enough financial support. Traditionally, green initiatives do not have a lot of money since they are financially dependent on the municipality or local government. It has been only recently that governmental organisations have become more interested in green spaces in cities and then mainly the health benefits (Gaston, 2010). To stimulate citizen involvement the municipality of Rotterdam has a fund especially for civic and youth initiatives. Here citizens can apply for financial support. This initiative can be anything from a street barbeque to a youth initiative to a facade garden. Citizens can apply for subsidy up to €10.000. However, it is difficult for citizens to apply for subsidy on their own. Aktiegroep Het Oude Westen is officially a foundation which makes it easier to apply and receive a subsidy. Citizens from the neighbourhood often come to the Aktiegroep if they have an idea and they receive help in applying for a subsidy. But sometimes this is not enough. Respondent 1 from the Aktiegroep explained: "You usually have to get several financiers together when it comes to a larger project. If you really want to make a street climate-proof you need money from the water board or the province."³ This has also been the case with the street Doorbraak in Rotterdam. This climate adaptive street is financed by the municipality and the water board. However, applying for the subsidy was difficult, especially because of bureaucracy in the municipality (Daalhof, 2017).

4.4.2 Support within the community

Another main challenge is the support within the community, especially when it comes to maintaining the projects. Most people involved are volunteers and need their own motivation to stay involved. The green projects are dependent on volunteers and motivating enough people is a challenge. In several green projects of the Aktiegroep were problems with people being too involved. In De Tussentuin were people who saw their garden as their property while it was a communal garden. In Tuin de Bajonet volunteers had high expectations that could not be fulfilled causing friction between the volunteers. Managing these tensions between people is fairly difficult and a challenge in itself. In both case studies it became clear that the presence of a professional stimulates the initiative. Both Aktiegroep Het Oude Westen and the Essenburgpark can rely on a landscape architect, who is part of the initiative, to design the projects and communicate with the municipality. Using their expertise, they can speed up the design process.

4.4.3 Communication and trust

The most important issues between (local) government and citizens are communication and trust. When there is no good communication between governmental organisations and citizens the trust between them can be damaged. Respondent 2 from the Aktiegroep explained it as being "2-0 behind" when trust between government and citizens is damaged. A decline in trust can have extensive consequences, including citizens and businesses becoming more risk-averse and delaying innovations (OECD, 2013). In order to succeed as a civic initiative, risk and innovation are essential. To improve communication lines, and thus trust, between citizens and municipality the municipality of Rotterdam has appointed neighbourhood networkers for all neighbourhoods in the city. These neighbourhood networkers spend more than half of their time in the neighbourhood, speaking with (concerned) citizens. This job can be seen as that of a boundary spanner. They are able to see the issues from both sides (Edelenbos & Teisman, 2013). They work for the municipality and are therefore part of the governmental system. However, they move in the world of the citizen and are therefore capable of uniting or bringing the worlds closer together.

"We [boundary spanners] function between two worlds, we stand with one leg in each world. If those worlds are close together, then it is relatively easy. But if those worlds move apart projects become harder. I connect the system [governmental] world with the living [citizens] world and vice versa."

~ Respondent 4 from the municipality of Rotterdam

³ Original quote: "Eigenlijk meestal moet je verschillende financiers bij elkaar zien te krijgen als het om een groter project gaat. Wil je echt een klimaatstraat maken, dan heb je geld nodig via het hoogheemraadschap of de provincie."

Civic initiatives, such as Aktiegroep Het Oude Westen and the Essenburg-park are important in the transition to a more sustainable society. However, bottom-up initiatives or co-creation processes takes time. Investment in the relationships between citizens and government is of crucial importance. During interviews with respondents from the municipality of Rotterdam it came to light that not everyone within the municipality embraces this new way of planning and decision-making yet. Respondent 4 from the municipality sees this as follows: "The municipal organization is very much designed to meet its own system dynamics and less to the living environment of the street or neighbourhood"⁴ Professor Public Administration at the Vrije Universiteit Gabriel van den Brink explains it in an interview. He points out to the gap between the system world of the government and the living world of citizens: "If the system can take its course, everything is fine on paper, but there is still a big difference between what the system world has to offer and what people in the world demand." (Van Bussel, 2013: p34). He sees personal relationships between professionals and citizens as the best way to make a transition (Van Bussel, 2013).

"The municipal organization is very much designed to meet its own system dynamics and less to the living environment of the street or neighbourhood"
 ~ Respondent 4 from the municipality of Rotterdam

In this paper, transition is seen as the transition towards a more sustainable society. Transition management aims to help governmental organisations change towards these new sustainable goals. Respondent 4 from the municipality of Rotterdam explained it by using the school of evolution (slow transition) and the school of revolution (drastic change). He sees the latter as the most successful, in contrary to the municipality. Rotmans, Kemp & Van Asselt (2001) use this same idea of evolution and revolution. This shows once again how positive researchers see the role of bottom-up initiatives.

4.5 Concepts use city wide

When taken all aforementioned challenges in consideration, it appears to be difficult to use concepts from the case studies in citywide policy. Respondent 3 from the municipality and operative in the Oude Westen claims that this is because of the presence of a social network in a neighbourhood: "At some point we found that much of the success of what we do in the Oude Westen is based on a social network that is already there, partly because of the action group. You cannot simply copy this principle [...] to another neighbourhood, because the social dimension there is different or maybe even much less or not at all"⁵. Respondents from the Aktiegroep agreed with this view that an existing social network in a neighbourhood speeds up the process of facilitating civic initiatives. This social network can be strengthened by social media presence. Mota & Santinha (2012) used case studies in Portugal to claim that social media has a positive influence on the decision-making process, since citizens have access to more detailed information and can increase their own social network.

A second reason why it is difficult the use approaches from one neighbourhood city wide is the difference in demography and problems in the neighbourhoods. It has come to light that most green initiatives are located in the north of Rotterdam. Rotterdam south has a lower average disposable income than Rotterdam north, as can be seen in figure 11. The neighbourhoods Charlois and Feijenoord, orange on the map, are located just south of the Meuse and in the lower income class (Municipality of Rotterdam, 2011). Figure 12 shows the amount of crimes in the city (Municipality of Rotterdam, 2018). The city centre and the south neighbourhoods have a higher amount of crimes.. Inhabitants of these neighbourhoods might have problems with paying rent or safety feelings. Measures of climate adaptation seems not to be a priority to them and therefore people might be less inclined to participate in a climate initiative.

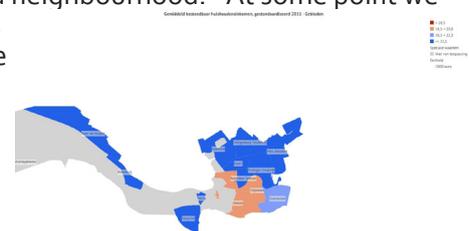


Figure 11 Average disposable income (Municipality of Rotterdam, 2011)

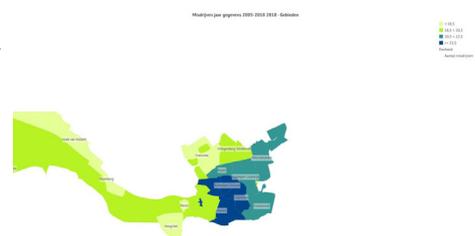


Figure 12 Crimes (Municipality of Rotterdam, 2018)

4 Original quote: "De gemeentelijke organisatie is heel erg ingericht om aan de eigen systeemdynamiek te voldoen en minder aan de leefwereld van de straat of de wijk"

5 Original quote: "We hebben op een gegeven moment geconstateerd dat een groot deel van het succes van wat we doen in het oude westen gebaseerd is op een echte sociale netwerk wat er al is mede door de actiegroep. Dit principe [dat in het oude westen werkt] kun je niet zomaar kopiëren naar een andere wijk. Omdat daar de sociale dimensie anders is of misschien zelfs veel minder of helemaal niet".

5. CONCLUSIE

This study set out to investigate the impacts of civic initiatives on climate adaptation policy and to what degree concepts or approaches of these initiatives can be used in citywide policy. There has been a shift from government to governance, meaning local government is now more of a facilitator than an initiator. This gives room to civic initiatives to play a more important role in the planning and decision-making process. However, on the basis of interviews and literature the study identified challenges that both civic initiatives and municipality face. Most importantly, financial support, support from within the community and communication. The latter also has to do with the gap between the system world and the living world. The municipality of Rotterdam uses boundary spanners to try to close the gap, initiating more personal relationships between government and citizen. Furthermore, it is difficult to manage expectations from citizens. The relationship with the municipality is considered good by the case studies, which ensures that they have influence in local projects. However, there has only been one recent occasion found where citizens had influence in citywide policy. In general, therefore, civic initiatives have impact on local policies and decision-making processes, mainly within their own initiative. However, it seems that the influence of citizens in citywide policy is for the moment limited.

The results of this study indicate that the municipality of Rotterdam is on the right track to involve citizens in climate adaptation projects. Especially with the new policy Rotterdams Weerwoord and the upcoming 42 adaptation plans for every neighbourhood. The question if concepts from initiatives can be used city wide is a discussion point and depends if you advocate for local, customised projects with bottom-up initiatives or top-down projects. If the first, using concepts from local initiatives citywide is not an option because every neighbourhood is different and needs a different approach. If the latter, using concepts or approaches from local initiatives and implementing them elsewhere in the city is the way to go. However, for the moment the municipality of Rotterdam chooses for the more bottom-up projects.

6. LIMITATIONS AND RECOMMENDATIONS

A limitation of this study is the fact that only two case studies have been researched in one city. Rotterdam is known for its ambitious climate policy and therefore it is possible that these findings may not be representative for other parts of the Netherlands or the country in its entirety.

Furthermore, many of the challenges described do not just occur in adaptation projects. They occur in all projects throughout the municipality where citizens and government work together.

This study focused on civic initiatives and their collaboration with local government. Civic initiatives, however, are still a self-organised group. It would be interesting to perform such a research on co-creation projects, where the involvement of citizens is even higher than in civic initiatives.

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APPENDIX 1

The following questions were the basis for the interviews. However, with most interview questions were changed or added, depending on who the interviewee was.

- Could you state your name and the organisation you work for/volunteer?
- What is your role within your organisation?
- How does your work interact with climate adaptation (policy)?
- How many climate adaptation related projects did your organisation do over the last 10 years (estimation)?
- What did those project entail?
- How much contact do you have with the municipality/Aktie Groep 'Het Oude Westen'/Essenburgpark concerning climate adaptation measures?
- How are climate adaptation measures evaluated and with which criteria?
- Are these evaluation used for further or new adaptation policy?
- Are the measures/concepts taken in 'Het Oude Westen' and the Essenburgpark used in other parts of the city?