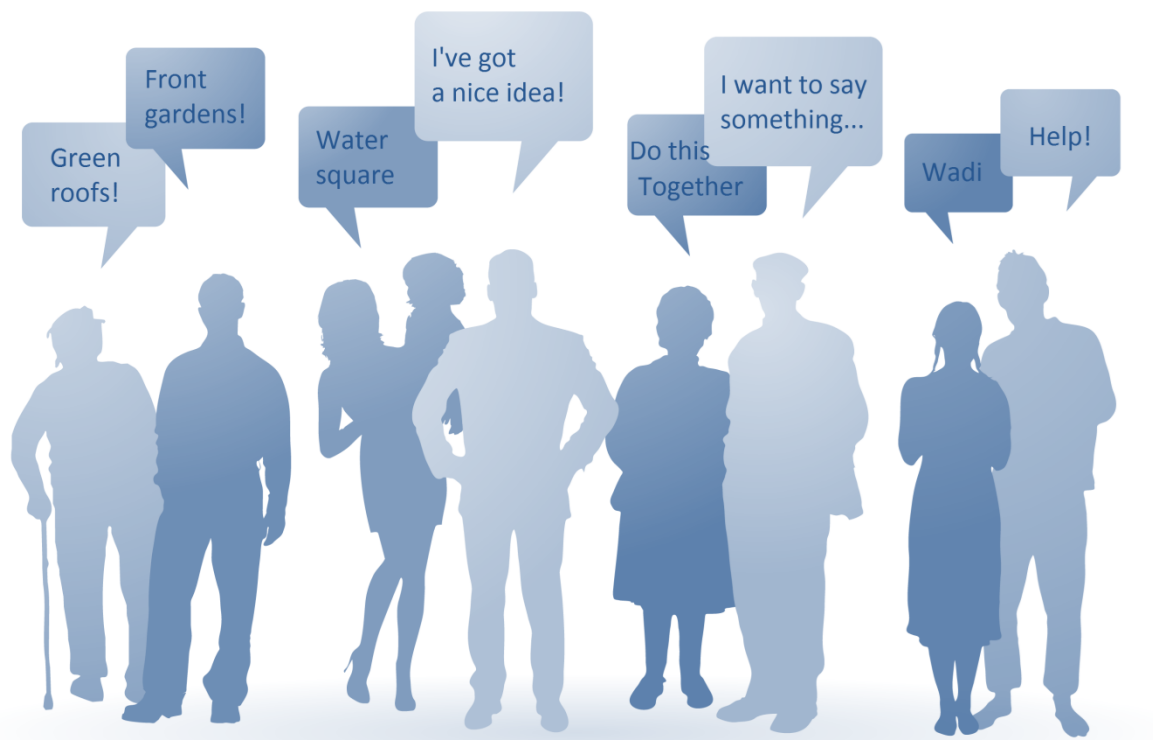


# Public participation in the planning arena

The extent of public participation as part of planning in cities trying to  
increase the rainwater retention capacity



Bachelor Thesis

Ruben Keizer – s2741555

University of Groningen

Spatial Planning and Design

12-June-2017



## Colophon

**Title:** Public Participation in the Planning Arena

**Subtitle:** The extent of public participation as part of planning in cities trying to increase the rainwater retention capacity

**Author:** Ruben Keizer  
S2741555

**Degree:** Technische Planologie/Spatial Planning and Design  
Faculty of Spatial Sciences  
University of Groningen

**Supervisor:** Harald Höckner

**Version:** Second draft

**Contact:** [r.keizer.4@student.rug.nl](mailto:r.keizer.4@student.rug.nl)  
+31611989650

## Abstract

Dealing with climate change is one of the biggest challenges for cities in the coming years, probably even for decades and cities have to cope with heavy rainfall, floods, droughts and heat (Restemeyer et al. 2015). These weather events will have a great impact on cities and citizens. Cities are already experiencing difficulties to collect all the rainwater. In order to withstand floods, in this case flooding after sustained heavy rain, cities embraced the concept of resilience. According to Restemeyer et al. (2015) resilience consists out of three characteristics, robustness, adaptability and transformability. The transformability aspect in cities can be interpreted as the capacity of cities to make the shift from “fighting the water” to “living with the water” (Restemeyer et al. 2015). In the case of rainwater retention this means that cities, since sewer systems cannot drain all the rainwater any longer (fighting), have to come up with other solutions like gardens, green roofs and water squares (living). However, the space in cities is for the most part private space, so you have to cooperate with the owners of the private space –citizens. Restemeyer et al. (2015) emphasize this, resilience in flood management “becomes a societal task that calls for cross-disciplinary collaboration and as well as the willingness of citizens to actively participate” (Restemeyer et al. 2015, p. 47), or public participation. Lot of research has already been done about the willingness of citizens to participate, public participation, but most of the times it is only focused on theory and not especially about practice. The planning profession is in need of renewal where its practitioners will play a bigger role in spatial planning (Berman, 2016). Therefore, this research gives an insight how this is done by cities and how this approach connects to theory. This research, based on the cities of Rotterdam, Amsterdam and The Hague, gives an answer on the research question; In what way is public participation part of planning regarding the increase of the rainwater retention capacity? It connects theory and practice regarding public participation and reveals how to interpret and incorporate public participation in planning regarding the increase of the rainwater retention capacity. Semi-structured interviews with experts were held to gather data in order to give an answer on the research question. The analysis of the data resulted in some interesting findings. Public participation is not limited to citizens, as individuals, only but is also about social groups, communities and so called intermediaries. Besides that, public participation is not only about the redistribution of power, governments should adjust (especially in the water sector) their method of working and thinking in order that all parties involved are equal and that is not as easy as giving power to the people. Furthermore, public participation occurs in different levels. In opposition to the participation ladder of Arnstein (1969) and Berman (2016), the levels of participation do not follow up each other. The level of participation depends on the context and sometimes a lower level of participation is more useful. Furthermore, building up social capital is crucial, gaining trust, decreasing distance and creating shared norms and values are key to create strong ties to stimulate the citizens to participate. When citizens participate it contributes to the increase of the rainwater retention capacity but also to other things such as social cohesion, safety and health.

# Index

- 1. Introduction..... 1
  - 1.1 Research background and context..... 1
  - 1.2 Research objective..... 1
  - 1.3 Research questions..... 2
  - 1.4 Structure..... 2
- 2. Theoretical framework.....3
  - 2.1 Resilience..... 3
  - 2.2 Participation..... 3
  - 2.3 Social capital..... 5
  - 2.4 Deliberation and implementation ..... 6
  - 2.5 Conceptual model..... 7
- 3. Methodology..... 8
  - 3.1 Research method..... 8
  - 3.2 Literature research..... 8
  - 3.3 Case study..... 9
  - 3.4 Case description..... 9
  - 3.5 Expert interviews..... 10
  - 3.6 Data analyzing..... 11
  - 3.7 Ethical considerations..... 11
- 4. Results.....
  - 4.1 Participation.....
  - 4.2 Social capital.....
  - 4.3 Deliberation.....
  - 4.4 Incorporation.....
- 5. Conclusions.....
  - 5.1 Discussion.....
  - 5.2 Conclusions.....
  - 5.3 Policy recommendations.....
- References .....



# 1. Introduction

## Research background and context

Our climate is changing, rising sea levels, prolonged periods of precipitation and more intense rainfall contribute to an increase of future flood risk according to Restemeyer et al. (2015). Besides that, continuous urbanization contributes to an increased vulnerability of cities towards flooding (Restemeyer et al. 2015). Nowadays, many policy makers and organizations in cities use resilience as a paradigm or concept, according to de Bruijn et al. (2017), in order to withstand or adapt to a flood event. According to Restemeyer et al. (2015) this resilience concept consists out of three main elements, robustness, adaptability and transformability. Previous policies only focused on the robustness element or resistance, that means that a city has to be strong enough to withstand a flood event according to Restemeyer et al. (2015). But in order to be flood resilient, “a city needs more than robustness” and “being strong is not enough” (Restemeyer et al. 2015, p. 47.). De Bruijn et al. (2017) emphasize this, they argue that current policies are bound to fail in the future. Cities have to become adaptive and transformable as well. Transformability as an approach that is making flood risk management a societal task with cross-disciplinary collaborations and participating citizens in order to shift towards a ‘living with the water’ approach. For instance, the municipality of Rotterdam (2016) sees rainwater not as a problem or a threat but recognized it as a valuable raw material that should be locally utilized as much as possible. However, a local focus in order to increase the rainwater retention capacity means that the focus probably lies on neighbourhoods, streets or even individual houses. In the latter case this means private space, indeed the majority of a city is private space. Consequently it is most likely that citizens will be involved in planning in order to increase the rainwater retention capacity, citizens become participating citizens. Public participation is necessary, citizens are given more responsibility in flood risk management. Especially when it is about increasing the rainwater retention because the raindrops do not belong to anyone, rain falls on both public and private ground, this means that citizens and municipalities/organizations have to work together to tackle the problem. This brings up the question how public participation is incorporated in policies regarding the increase of the rainwater retention capacity. Does public participation in practice corresponds with public participation as described in theory. Therefore, the theoretical relevance of this topic can be found in the fact that there is a lot of research already been done about public participation, but most of the times it is only discussed in theory and not discussed how public participation is put into practice.

## Research objective

The objective of this research is to illustrate how public participation is implemented in the field of planning regarding the increase of the rainwater retention capacity. Therefore, this research will give an insight how public participation as a part of planning is been put into practice by cities and how this approach connects to theory that is available.

In the end this research will, based on the cities of Rotterdam, Amsterdam and The Hague, connect theory and practice regarding public participation. In the end an overview and recommendations are given as an manual for other cities how they have to interpret and incorporate public participation in planning regarding the increase of the rainwater retention capacity or for other purposes .

### Research questions

The main research question of this research is: *In what way is public participation part of planning in cities<sup>1</sup> regarding the increase of the rainwater retention capacity?*

Besides this question other sub-questions arise and will also be answered:

- 1. To what degree have citizens of cities the possibility to participate in planning?*
- 2. How are the relationships between the cities and citizens?*
- 3. How do cities create an supportive environment for public participation in planning?*
- 4. To what extent leads public participation to positive interventions and solutions?*

### Structure

In the theoretical framework chapter the theory about public participation is discussed. The theory discusses the definition of public participation and the different levels of participation. Furthermore the theory discusses the importance of social capital in participation and how this social capital can be build up in order to create relationships between the cities and citizens. Then, the theory discusses how cities have to create an supportive environment for public participation and if public participation will lead to positive interventions and solutions. After that the methodology chapter explains how a relationship between the research question with the data and theory is established. Next the data is discussed in the context of the theory in the results chapter. The main insights as a result of the gathered data are discussed in the conclusion. Furthermore some policy recommendations regarding public participation are made.

---

<sup>1</sup>With the word 'cities', the responsible planners within municipalities and/or members of organizations like Water Sensitive Rotterdam and Rainproof Amsterdam are mend, depending on the case.

## 2. Theoretical framework

### Resilience

Our climate is changing; cities are vulnerable to climate change, for example inundation of delta areas, air pollution and floods (Larsen & Gunnarson-Östling, 2009) but also heavy weather events like heavy rainfall and droughts (Restemeyer et al. 2015). Besides that, continuous urbanization means that a greater amount of the world's population will live in cities that are the most vulnerable to extreme weather events (Restemeyer et al. 2015). Therefore, cities do not only have to be resistant but also have to be resilient. Restemeyer et al. (2015) describes resilience as a combination of robustness, adaptability and transformability. A city has to be strong (robustness) and it has to be adaptive but a city must also be capable to transform towards new strategies and approaches. The focus in this research lays on the transformability aspect in cities and can be interpreted as the capacity of cities to make the shift from “fighting the water” to “living with the water” (Restemeyer et al. 2015). In the case of rainwater retention this means that cities, since sewer systems cannot drain all the rainwater any longer (fighting), have to come up with other solutions like gardens, green roofs and water squares (living). However, the space in cities is for the most part private space, so you have to cooperate with the owners of the private space – citizens. Restemeyer et al. (2015) emphasize this, resilience in flood management “becomes a societal task that calls for cross-disciplinary collaboration and as well as the willingness of citizens to actively participate” (Restemeyer et al. 2015, p. 47), or public participation.

### Participation

Many researchers argue for public participation as part of the planning process or as Berman (2016) describes, public participation in the planning arena. For example Mubita et al. (2017) argue that participation needs to be part in strategies of development. Participation means different things to different people in different settings, therefore a lot of definitions exist. For example, the World Bank (1994, in Mubita et al. 2017, p.241) defines participation as “a process through which stakeholders influence and share control over development initiatives, decisions and resources which affect them” and the IIED (1994, in Mubita et al. 2017, p.241) defines participation as “empowering people to mobilize their own capacities, be social actors, rather than passive subjects, manage the resources, make decisions, and control the activities that affect their lives. Despite all different definitions, there seems to be a common idea of what public participation is about and that is people's involvement. However, the most used definition of participation was given by Arnstein (1969, in Mubita et al. 2017), it is about the concept of power and the ability to influence decisions, Arnstein came up with the following definition: “participation is about redistribution of power in which the have-nots of our society who are presently excluded from the political and economic processes are given power to have control and influence over matters that affect their lives” (1969, in Mubita et al. 2017, p. 242). The different definitions of participation were compared with what exactly is understood by public participation in practice regarding the increase of the retention capacity in order to make public participation clearer.



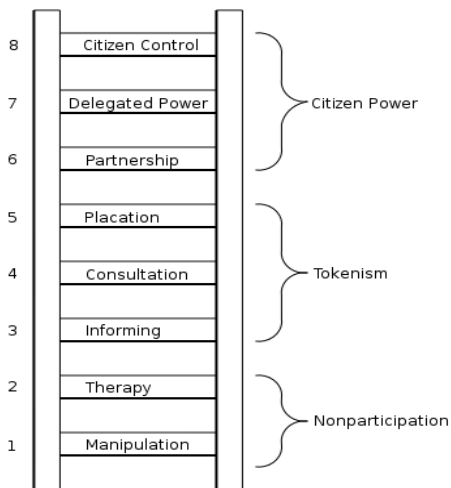


Figure 1: Arnstein's ladder of participation (Arnstein, 1969)

Arnstein (1969, in Mubita et al. 2017) developed the ladder of participation, see figure 1. The ladder shows how much power citizens have in each rung. The higher citizens move on the ladder, the more power citizens have. In 'Citizen Control', rung eight, citizens have maximal power to influence development. In 'manipulation', rung one, citizens are deceived with nonparticipation and the development is influenced and determined by the power holders. The ladder of participation is one way to categorize participation of citizens, but Berman (2016) argued that there is a relation between the level of citizen control over public participation in spatial planning (Arnstein, 1969) and the ability of participation methods to gain and incorporate local knowledge (see table 1).

Berman (2016) distinguishes unilateral-, improved unilateral-, network-, radical and collaborative participation as methods. Within a unilateral participation process, the community is fully controlled by the jurisdiction and has no power at all (Berman, 2016) this matches the first two rungs of Arnstein's ladder of participation (1969) because manipulation and therapy do not enable people to participate but enable power holders to use or to not use participants. In fact, nonparticipation will not lead to incorporation of knowledge and solutions in the planning deliverables according to Berman (2016). When looked at participation regarding the increase of the rainwater retention capacity, this should also be the case. After that, the following three rungs according to Arnstein (1969), informing, consultation and placation, suggest that citizens may hear and be heard, but they still lack the power to make sure that their knowledge and solutions will be incorporated in planning deliverables. Berman (2016) argues that it prevents public participation in the incorporation stage. In the case of participation in order to increase the rainwater retention capacity it would mean that these stages of participation do not contribute to increase the retention capacity. So far, these rungs and methods do not meet the definition of participation as a way of redistributing power to the citizens. Therefore, a look at the topmost rungs (6,7 and 8) is necessary. The partnership rung, according to Arnstein (1969) enables citizens to negotiate and engage with the power holders. But whereas Arnstein (1969) calls the possibility of negotiating and engaging a partnership, Berman (2016) emphasizes the need of a network among these partnerships, network participation. In these lay-professional networks, citizens can urge the incorporation of knowledge and solutions in planning deliverables. But the jurisdictions holds control over the planning process, this isn't the case in the radical- and collaborative participation methods according to Berman (2016). Berman (2016) argues that citizens have the power to run the participation process and citizens are leaving the city with minimal power (radical method) and citizens have the power to fully control the extraction and incorporation process (collaborative method).

Arnstein's (1969) rungs of delegated power and citizen control also argue that citizens obtain decision-making power and that they control the participation process. At these rungs of the ladder of citizen participation and the participation methods, power is in fact redistributed. Berman (2016) argues that we must favor those participation methods that delegate more power to the citizens, because the higher the level of citizen control, the better the incorporation of knowledge and solutions into planning deliverables. The more power is given to citizens the more solutions regarding the increase of the rainwater retention capacity will be developed. Therefore, the ladder of participation, according to Arnstein (1969) and Berman (2016), was used for categorization in order to find out if those stages of participation do exist in practice. Besides that, each different level of participation has its own consequences according to Berman (2016): nonparticipation will not lead to incorporation of knowledge and solutions in planning, with tokenism there is still a lack of power to make sure that knowledge and solutions of citizens will be incorporated in planning deliverables and with a higher level of citizen control, better incorporation of knowledge and solutions into planning deliverables is accomplished. The consequences, derived from the ladder of participation (Arnstein, 1969 and Berman, 2016), were compared with practice in order to find out if these consequences in public participation regarding the increase of the rainwater retention capacity also exist. In the end, the case of the increase of the rainwater retention capacity gave insight if the concept of the ladder of participation according to Arnstein (1969) and Berman (2016) corresponds with practice.

Rung number	Arnstein's Ladder of Citizen Participation (Arnstein, 1969)		Berman's Ladder of Participatory Methods (Berman, 2016)
	Levels of citizen control over planning		Participation methods ranked by their abilities to expose local knowledge and incorporate it into planning deliverables
1	Manipulation	Nonparticipation	Unilateral participation
2	Therapy		
3	Informing	Tokenism	Improved unilateral participation
4	Consultation		
5	Placation		
6	Partnership	Citizen power	Network participation
7	Delegated power		Radical participation
8	Citizen control		Collaborative participation

Table 1: Ladders of participation (Arnstein, 1969 & Berman, 2017)

### Social capital

To delegate (a part of) the power to the citizens, Berman (2016) and Arnstein (1969) emphasize the need of strong base of partnership and networks towards a higher level of citizen control and incorporation of knowledge and solutions (see table 1). The answer to a strong base of partnership and networks is social capital. According to Lin (2001, in Aldrich & Meyer) social capital is as a network of relationships, defined as resources embedded in one's social network and those resources can be accessed through ties in the networks.

Whereas Lin (2001, in Aldrich & Meyer) argues that social capital is based on the ties in those networks of relationships, Shao et al. (2016) argue that social capital is a resource capable of producing other resources. So, in practice, Shao et al. (2016) argue that ties between the community and the public and private actors in the planning process is crucial, you have to involve citizens into the planning process. This means that, in order to increase the rainwater retention capacity, ties have to exist between the citizens of Rotterdam, Amsterdam, The Hague and those in power. Whereas Shao et al. (2016) argue that only the tie between community (citizens) and the power holders (public and private) is crucial, Aldrich and Meyer (2015) argue also for the importance of ties between citizens and communities themselves. Aldrich and Meyer (2015) separate social capital in three main types: bonding, bridging and linking; bonding as connections among individuals, bridging as connections among social groups and linking as connections between citizens and those in power. The stronger the ties (higher amount of social capital) the greater the levels of trust and shared norms between citizens and power holders and therefore (Aldrich & Meyer, 2015) a greater development of planning knowledge according to Berman (2016). In the end, networks, norms, and trust facilitate action and cooperation according to Putnam (1993, in Aldrich & Meyer, 2015). Berman (2016) argues that a significant amount of time has to be invested in developing good relationships with the community to create the right atmosphere and conditions for launching participation projects. According to Mubita et al. (2017) participation offers locals an opportunity from being passive dependants to being active participants. The theory of Aldrich and Meyer (2015), bonding, bridging and linking, is used to distinguish the different connections within the cities in order to emphasize the importance of social capital in public participation. Besides that, the theory of Aldrich and Meyer (2015) is used to investigate if those connections lead to shared norms and a greater level of trust and therefore a greater development of planning deliverables in order to increase the rainwater retention capacity.

### Deliberation and incorporation

But when strong ties exist and there are shared norms and increased trust as result of different tools, according to Mosse (2001, in Mubita et al. 2017), the challenge is to organize and change the bureaucratic, centralized and administrative structures to include participation in decision-making. The locals must be given power to govern their own projects. Whereas Mubita et al. (2017) argue for a complete redistribution of power, Bai et al. (2010) argue for both top-down approaches as bottom-up approaches, because there are too much institutional challenges to give all power to the citizens. Citizens, therefore, have to get the fourth chair at the negotiation table, according to Janssen-Janssen & van der Veen (2017). Developers, public parties, NGO's (chair 1-3) and local citizens on the fourth chair, it will allow substantial public participation.

In the end, it is all about creating an supportive environment: “The civil society arena has become a sphere wherein citizens can independently and freely meet, discuss environmental problems, exchange information, and work together for environmental justice” (Berman, 2016 p. 191). Therefore, this research gives an insight which approach, complete redistribution or top-down + bottom-up, the cities of Rotterdam, Amsterdam and The Hague use to create an supportive environment for public participation.

When power is redistributed and strong ties exist, participation leads to successful projects that are more valid, less costly and more timely and useful according to Mubita et al. (2017). Besides that, Bai et al. (2010) argue that effective public participation can improve public policy formation, reduce conflicts and encourage local action. But the outcome of participatory processes depend on the contributions by participants, because it is extremely difficult for people to think ‘outside the box’ according to Larsen & Gunnarsson-Östling (2009). Besides that, Larsen & Gunnarsson-Östling (2009) also argue that it depend on how the participation processes are facilitated, will knowledge and solution actually be incorporated in planning deliverables? Incorporation success according to Berman (2017) depends on the ability to obtain public economic resources (social capital) and on the ability to advance and intervene in the mediation process. Incorporation heavily depend on the way power, capital and knowledge are used. Herein lies a big challenge for cities to make public participation a success. The benefits, as argued by Bai et al. (2010) and Mubita et al. (2017), are researched in order to find out if these benefits do exist in practice regarding solutions that increase the rainwater retention capacity.

### Conceptual model

The conceptual model is a visual representation of the research. It clarifies the different concepts, factors and relationships.

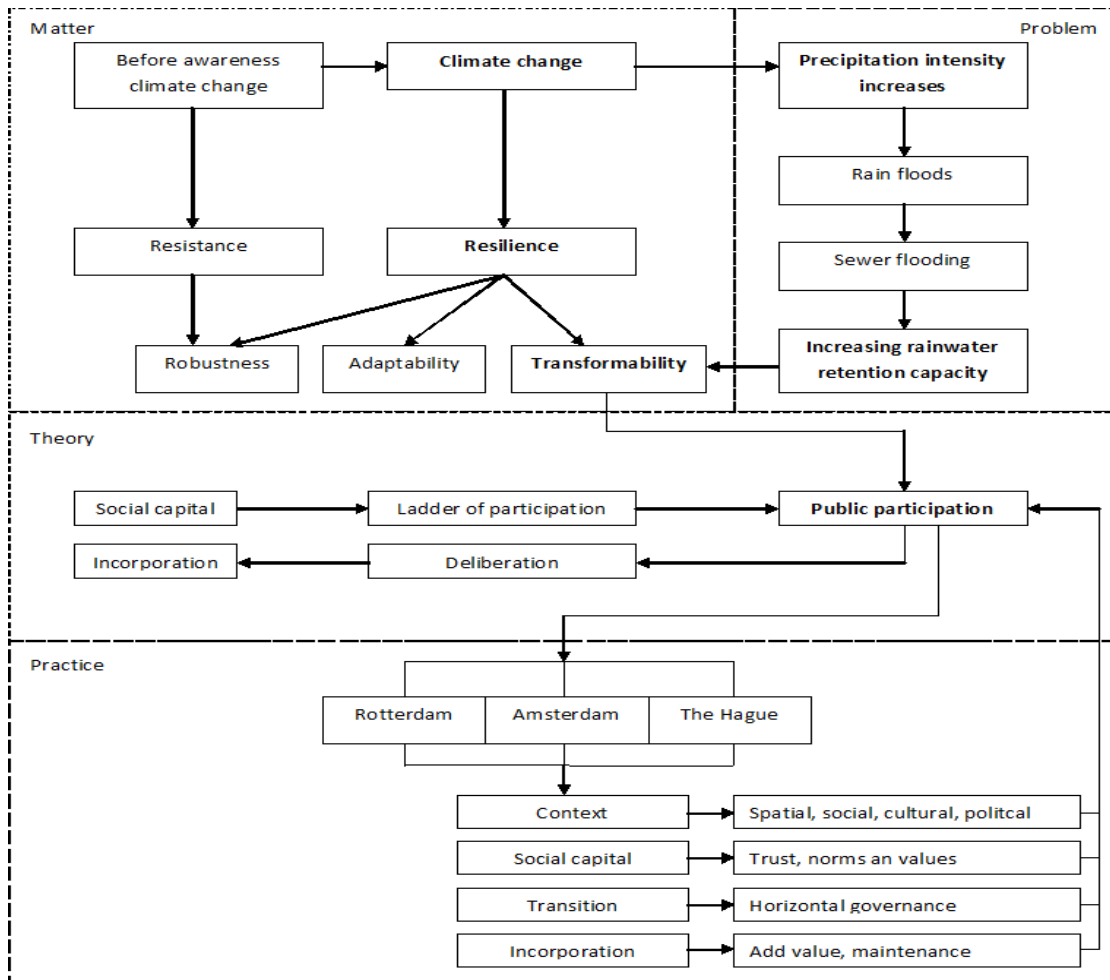


Figure 2: Conceptual model of public participation regarding the rainwater retention capacity

One of the consequences of climate change is that the precipitation intensity increases. This problem requires a resilience approach instead of a resistance approach. One of the characteristics of resilience is transformability, living with water instead of fighting against it. Then it becomes a societal task to solve the problem what results in citizens participating. The stronger the base of social capital, the more citizens are willing to participate according to the theory. This results in different levels of participation for citizens to contribute to the goal of increasing the rainwater retention capacity. Furthermore, theory suggest that public participation requires a supportive environment, a redistribution of power, in order to incorporate planning solutions and initiatives. The conceptual model is tested by researching the different factors, derived from theory, that influence public participation. This means that in the cases of Rotterdam, Amsterdam and The Hague, is researched whether social capital is important, different levels of participation exist, a supportive environment is created and if this supportive environment and participation leads to incorporation.

### 3. Methodology

In this chapter the research method is discussed that is used to answer the main research question: *In what way is public participation part of planning in cities regarding the increase of the rainwater retention capacity?* The chapter explains how theory and data were connected.

#### Research method

The research method has a qualitative purpose and is based on qualitative methods, because these qualitative techniques emphasize quality, depth, richness and understanding, instead of the statistical representativeness and scientific rigour (Clifford, 2010). Because the goal of the research is not to acquire information about the characteristics, behaviors and attitudes of a population to a sample of individuals (Clifford et al. 2010), surveys are not being used. The goal is to give insight in how cities lay down policies regarding public participation. Therefore, qualitative data is gathered. Partly describing, based on literature and partly exploring, by a case study with expert interviews. Therefore, the following research methods are used to answer the main research question and the sub questions:

- Literature research
- Case study
- Expert interviews (semi-structured)

#### Literature research

In order to understand what other researchers already have done in the area of public participation, literature research is necessary. In the theoretical framework, scientific researchers describe earlier researches of public participation. The purpose of this theoretical framework is to compare and discuss the scientific researches to generate a basic knowledge on public participation, besides that a literature research helps to generalize the information received what will lead to better conclusions according to Lakatos (1972). The theory helped to answer questions like, does the theory of the participation ladder from Arnstein (1969) and Berman (2016) apply in practice? Is social capital that important and do we see redistribution of power in practice? In the end, this helps to legitimate arguments (Blaxter, 2006 in Clifford, 2010) formulated in the results in the study of public participation regarding the rainwater retention capacity.

#### Case studies

A case study is an approach that can be used to examine contemporary real-life situations and to see how public participation is applied in those situations. It is important to describe the advantages of a case study in this particular research. A case study can be described as an interest in individual cases (Johansson, 2003). Furthermore, a case study is useful to answer how- and why-questions about contemporary phenomena, specific to time and space (Yin, 2004).

This research aims to find an answer to the how-question in the case of Resilient Rotterdam, The Hague and Rainproof Amsterdam. Rotterdam and The Hague are aiming to become resilient cities and Amsterdam aims to be a rainproof city all, in cooperation with citizens. But how do the cities of Rotterdam, Amsterdam and The Hague include public participation in the planning arena in order to achieve this? This how-question is answered by experts in semi-structured interviews. First, a short description of the cases gives an insight in the goals and approaches of the different cities.

## Case description

### 1. Rotterdam

In the city of Rotterdam, the movement “Water Sensitive Rotterdam” is aiming to realise adaptive measures with the citizens and combining it with the physical and social improvements of the neighbourhoods (WSR, 2017). Scaling-up individual projects within the city is, according to Rotterdam (2016), the next step to become a resilient city and a city which can handle the consequences of climate change. The WSR movement develops measures to prepare Rotterdam for the consequences of climate change. For example, heavy rainfall and extreme heat and droughts. The goal is to make citizens aware of the urgency of climate change and to ensure that citizens, organisations and companies will work together towards an adaptive society. Three sub-objectives according to the municipality of Rotterdam (2016) are: 1. A lot of smaller applicable projects by citizens and companies with the principle “many small ones make a big one” 2. A few eye catchers, to improve the image of the city of Rotterdam and 3. Effective extensive projects in the background. Besides that, all the plans and projects have to contribute to the liveability and the social cohesion of the city. According to the municipality of Rotterdam (2016) the program scores high on resilience-values like flexibility, ingenuity, participation and inclusiveness. Rotterdam clearly makes a link with social capital, both in development (participation and inclusive) as in realisation (citizens profit from the added value). Rotterdam is capable to mix governance, both top-down as bottom-up initiatives. That makes the city of Rotterdam a good case to investigate.

### 2. Amsterdam

The city of Amsterdam has the Rainproof program. The goal of the program is to make Amsterdam rainproof in order to withstand the increasing number of downpours (Rainproof, 2017). Besides that, the program wants to use ‘free’ rainwater for other purposes. To reach the goal the program is working together with all the citizens of Amsterdam. The collaboration should lead to penetrable pavement, green roofs and wall gardens: a lot of solutions to prevent damage and simultaneously create a better-looking city. Citizens can participate in this program, on the online platform all ideas, initiatives and information comes together and the program will help to incorporate those ideas and initiatives into planning.

According to Rainproof (2017) the strength of the program is the strong network of different organisations and citizens. The ties between the program and the citizens and the possibility to participate makes the city of Amsterdam a good case to investigate.

### 3. The Hague

The city of The Hague presents itself as an resilient city. Resilient The Hague (2017) will use the strategy of resilient cities to innovate, create new opportunities and solutions, build capacity in order to deal with climate change and heavy rainfall. Because current water retention might not be able to cope with the effects of future climate change. In their approach they argue for the incorporation of public participation or 'many seats at the table' (Resilient The Hague, 2017). According to Resilient the Hague (2017) too little citizens were involved in decision-making and therefore engaged communities, bottom-up projects and a strong social network should reinforce the ability to improve the community and require processes that encourage civic engagement in planning. Therefore, the city of The Hague is also a good case to investigate.

#### Expert interviews

To find answers on the how-question in the cases of Rotterdam, Amsterdam and The Hague and to gather qualitative data, five semi-structured interviews with experts were held. According to Clifford et al. (2010) a semi-structured interview is a verbal interchange where one person, the interviewer attempts to get information from another person by asking questions. Although a list of predetermined questions is made (appendix), a semi-structured interview offered the chance to explore which issues need further attention because they are important or too little exposed (Clifford et al. 2010). Besides that, the list of predetermined questions helped to ask the right questions in the right order based on the conceptual model presented before. Four semi-structured interviews were held face-to-face, according to Clifford et al. (2010) face-to-face interviews often results in more meaningful answers because vague responses were clarified and hidden meanings were revealed. Furthermore, one semi-structured interview was held by phone because both parties were not able to find sufficient time for travelling and meeting each other, according to Clifford et al. (2010) a telephone interview provides a solution because it is more efficient time-wise. Besides that, the semi-structured interviews were held with experts, because expert interviews offer an effective mean of quickly obtaining results, and good results because the interviewer and the interviewee share a certain degree of knowledge and interest that increases the level of motivation of the expert to participate in an interview (Bogner et al. 2009). A short overview of the interviewed experts is given to illustrate the degree of knowledge each participant possess regarding rainwater retention.



## 1. Rotterdam

Three members of Water Sensitive Rotterdam were interviewed: John Jacobs , Andre Rodenburg and Leander Ernst. John Jacobs is the founder of Water Sensitive Rotterdam, a movement which is aiming to make Rotterdam climate adaptive with all the parties who are active in the city of Rotterdam. Andre Rodenburg is the connector of Water Sensitive Rotterdam and works with the principle “alleen ga je harder, samen kom je verder” (WSR, 2017). Besides his enormous network, he possesses the ability to connect different stakeholders with each other and make strong ties. Leander Ernst is teacher and researcher at the Rotterdam university of applied sciences and he focuses on the transitions in the water sector under which participation.

## 2. Amsterdam

A member of Rainproof Amsterdam is interviewed: Irene Poortinga. Irene Poortinga is community manager at Rainproof Amsterdam, an organization which is trying to make Amsterdam rainproof. Irene Poortinga is busy with making citizens aware of the rainwater problem and makes them aware of what they can do by themselves. Besides that, Irene Poortinga works on several projects with the citizens of Amsterdam.

## 3. The Hague

A member of the municipality of The Hague is interviewed: Marcel Wijermans. Marcel Wijermans is a senior urban planner at the city of The Hague. Marcel Wijermans is busy with several projects in the city and developed the ‘Ruimte voor de Stad’ agenda, in which the consequences of climate change are tackled by strengthen the city’s green- and water structures.

The participants share a certain amount of knowledge about participation, social capital, deliberation and incorporation. There is no doubt that the participants are experts in their working field regarding the rainwater retention capacity.

### Data analyzing

The interviews are transcribed (appendix) and codes were assigned. The coding helps to evaluate and organize the data in such way to understand the meanings of the expert interviews. The codes help to identify categories and patterns in the answers of interviewees (Clifford et al. 2010). The process of coding helps to make new connections in the gathered data and according to Clifford et al. (2010) codes contribute to come up with more rigorous conclusions. First, predetermined codes were assigned by following the open coding approach. According to Clifford et al. (2010) this is the first stage of the coding process. The interviews were read through thoroughly and anything of interest was coded, this was done to open up the text and to organize it. The predetermined codes that were assigned were, participation, social capital, deliberation and incorporation that derived from the theory.

This structure is then used during the entire thesis in order to be consistent and in order to organize the thesis. After that, within the existing codes, codes were assigned by following the axial coding approach. This approach can be part of the open coding process and according to Clifford et al. it is “coding along an ‘axis’ or theme” (2010, p. 528). Each category (codes) was followed for a while in order to focus on the different ways the participants thought about each theme. This helped to make already connections between the participants or to see already the differences between the participants in order to come up with preliminary conclusions.

### **Ethical considerations**

According to Mitchell and Draper (1982, in Clifford et al. 2010) it is important to behave ethically. Consequently, you have to act in accordance with notions of right and wrong. Furthermore, Clifford et al. (2010) argue that you have to consider carefully the ethical significance of the actions you make and in which context they have a meaning. By doing this, you explain that you are fully responsible for all actions regarding this research. This was done by not being offensive, sexist and rude. Besides that, the interviewees were treated with respect, and consideration was given to their rights.

In order to protect the rights of the interviewees, acting ethically is necessary (Clifford et al. 2010). This is done by asking the participants for permission for recording the conversations, asking permission for transcribing the interviews and asking permission for using their quotes in the research. Besides that, a copy of the transcript was send to each participant in order to give them the opportunity to look if everything is recorded correctly and the meaning of their quotes are interpreted correctly.

## 4. Results

In this section the results of the interviews are discussed in the context of the theory. The logical order of the chapter, in subsections, is based on the sub questions. Just like the theoretical framework and the conceptual, because they are also based on those sub questions; participation, social capital, deliberation and incorporation. Each sub question and subject is discussed separately and a connection with the theory is made.

### Participation

In this subsection the definition of public participation will be discussed, it isn't that simple to define public participation. Furthermore the different kinds of participation will be discussed, the context is crucial to determine which level of participation, according to the ladders of participation of Arnstein (1969) and Berman (2017), is best.

What is public participation? Researcher argue for public participation as part of the planning process or as Berman (2016) describes, public participation in the planning arena. But before you can argue for public participation as a part of planning you need to know what public participation is, how is it described in practice. Therefore the concept can be split in two different parts or words, public and participation. Who is "the public"? Is that always citizens, who is the target group? According to Poortinga (Appendix E, 2017), the public is more or less intermediaries that have to be influenced. Like gardeners, housing corporations and insurance companies, because they have a direct influence on citizens and makes it easier to look at the city and how we can incorporate solutions that increase the rainwater retention capacity. Participation via those intermediaries. Jacobs (Appendix A, 2017) agrees, participation is not only about citizens but also about a lot of other parties. Ambassadors like the water boards or housing corporations are also important in participation.

And what is participation? The most used definition was given by Arnstein (1969, in Mubita et al. 2017), in short it's about the redistribution of power in which the have-nots of our society are given power to have control and influence over matters that affect their lives. According to Ernst (Appendix C, 2017) it is not only about the redistribution of power but it is more of a adjustment of the method of working (a transition, that will be discussed later on). But when you talk about power, you talk about carrying out tasks. Governments as on organizations set rules and procedures and those rules and procedures result in a method of working to accomplish those task. But participation, according to Arnstein (1969, in Mubita et al. 2017), is about the have-nots of our society thus in this case citizens. But citizens are a different kind of 'organizations', they haven't set rules and procedures that result in a method of working. It becomes a problem when those two different organizations have to work together, because they are different. Especially in spatial planning the method of working differs, because of the length of decision-making processes.

In spatial planning the decision-making process normally takes quite a lot of time, but the focus of a street, regarding rainwater retention capacity, is much shorter because it becomes a problem at the moment citizens are confronted with it. The timeframe is different, governments are facing with a whole different dynamic compared with the dynamic of citizens. Thus, redistribution doesn't cover the whole concept of participation, it is happening but it is about the consequences of it en those are quite big. Thus redistribution of power is not the core of participation. A more egalitarian position between the different parties in the city, that's what it is about, according to Wijermans (Appendix D, 2017). An egalitarian position in which the power of the different organizations remains at the different organizations but those different organizations complement each other in order to increase the rainwater retention capacity. But participation is also a vague term, participation in practice is most of the times reasoned from one side, according to Poortinga (Appendix E, 2017). Most of the times the municipality states that they want to accomplish something and then they participate with the citizens. But if that's always the case you won't achieve your goal. Participation has also to be reasoned from the other side, from citizens (the have-nots) towards a municipality. If citizens want something then the municipality can have a look how their goals regarding the increase of the rainwater retention capacity can be combined with an initiative.

Besides different interpretations of the concept of public participation, different levels of participations occur in Arnstein's (1968) and Berman's (2017) ladders of participation. In practice there are also different levels of participation existing. But it is not that easy to distinguish the different levels of participation and to say if that's fake or real participation. Different levels of participation can exist in a process because participation is a continuous process between government and citizens. Besides that it is depending on what your aiming for, according to Jacobs (Appendix A, 2017) provision of information (informing in the ladder of Arnstein) is also participation but that is not how he wants it to be. Stimulate citizens to the max to come up with initiatives is better, in order to do that you need to give space to the citizens to develop their own plans and ideas (delegated power in the ladder of Arnstein). But Wijermans (Appendix D, 2017) argues that participation is not only about initiatives, like green roofs or community gardens! A reaction on a development or a plan is also a form of participation, or taking part in a discussion and debates (how to deal with heavy rainfall) also. Initiatives are nice because they are concrete, you see something change physically. It is important that citizens can actually see change and progression but there are also cases that a concrete project is not the answer. Discussions deliver compromises and solutions for the city and that is also nice.

Participation is a short, project related concept while the actual interaction between citizens and their environment is a continuous process according to Ernst (Appendix C, 2017). Participation is only a step in the process in increasing the rainwater retention capacity. After that, it is more about social cohesion and the connection with your street and neighborhood. So context is key to decide which level of participation is best. Furthermore, Ernst (Appendix C, 2017) argues that humans make the place and that place and its needs are always different and so is the level of participation. The context is linked with social capital that will be discussed next.

### Social capital

In this subsection the importance of social capital in practice will be discussed. The answer to a strong base of partnership and networks, that are necessary in participation, is social capital. According to Lin (2001, in Aldrich & Meyer) social capital is as a network of relationships, defined as resources embedded in one's social network and those resources can be accessed through ties in the networks. In practice, Shao et al. (2016) argue that ties between the community and the public and private actors in the planning process is crucial, you have to involve citizens into the planning process. Besides that Aldrich and Meyer (2015) argue also for the importance of ties between citizens and communities themselves. But is this also the case in practice? Is social capital that important in the process of participation? And which ties between which different parties do exist and how were those ties made, in other words how can social capital be built up?

Aldrich and Meyer (2015) separated three main types of social capital, they argued for connections among individuals, connections among social groups and connections between citizens and those in power. How does this work out in practice? A strong relationship between the community and public actors is necessary according to Ernst (Appendix C, 2017), "because for a lot of people, the municipality is still that big tower, far away, that looks over the city and who is taking measures that aren't always positive for citizens." Wijermans (Appendix D, 2017) emphasizes that a municipality should deploy itself as one of the citizens to decrease the distance between each other. However decreasing distance and creating ties between citizens, public and private actors and power holders is difficult. According to Ernst (Appendix C, 2017), you keep a big fragmentation in the city, when we talk about citizens then about whom are we talking? The 'citizen' does not exist, there are countless individuals and subcultures. Besides that, Ernst (Appendix C, 2017) and Poortinga (Appendix E) both argue that you also have to deal with different neighborhoods. In those neighborhoods some people are more likely to join the participation process than others. To get cohesion is the most difficult thing there is, the focus should therefore lie on streets and neighborhoods with the same social, economical and spatial structures argues Ernst (Appendix C, 2017). The context of a place or a neighborhood is formed by its norms and values. Those norms and values are depending on the social, economic background of a place. When we talk about a participation society, the challenge is to get those people, with no needs for participation, involved.

Therefore, you have to invest in the whole process. You have to bind with existing structures and neighborhood initiatives, it's an illusion that there is one public and one method how to approach them. And if you bind and minimize the distance you will create trust and a greater level of shared norms and values, norms, values and trust are the things, according to Putnam (1993, in Aldrich en Meyer, 2015) and Aldrich & Meyer (2015), that will facilitate action and cooperation. Poortinga (Appendix E, 2017) emphasizes this, when trust is created then things will derive and you don't have to take a lot of effort. Also Rodenburg (Appendix B, 2017) agrees people have to get a positive affinity with the municipality and when trust exists, people want to join the conversation about their own environment. But how is this done? Attention and recognition is important, from the moment you start the conversations onwards you have to offer continuity according to Rodenburg (Appendix B, 2017). When you forsake, trust in the municipality declines and citizens become cynical towards the municipality and therefore no action and cooperation is facilitated.

Besides the urge for building up social capital to make ties and decrease distance between citizens and public actors, Jacobs (Appendix A, 2017) argues that you have to built ties with the communities because citizens are not concerned with climate change and sustainability. You have to address citizens on their shared interests, norms and values. If you can take them with you on that according Jacobs (Appendix A, 2017), you can do beautiful things and then you can seduce them to join in the designing process of the public space in order to increase the rainwater capacity. So also bind with the existing structures and neighborhood initiatives like Ernst (Appendix C, 2017) and Poortinga (Appendix E 2017) argued for. In those communities you make sure that people can find each other and can find the right people to help them with their initiatives. That means also that you have to bind with other parties in those communities, for instance action groups, housing corporations, social groups and other associations and clubs. That's, according to Jacobs (Appendix A, 2017), the way to make people aware of the problem regarding rainwater and they will eventually participate, but there isn't always room to build up those communities. It is very important to be honest and to gain trust like Ernst and Poortinga mentioned. According to Jacobs (Appendix A, 2017), you can't create expectations which you cannot live up to, then all trust is gone. So, building up social capital costs a lot of time and energy according to Jacobs (Appendix A, 2017), but eventually all those communities will contribute to the increase of the rainwater capacity of streets and neighborhoods. Berman (2016) already said this, you have to invest a significant amount of time in developing good relationships with the community to create the right atmosphere and conditions for launching participation projects.

But when strong ties exist and there are shared norms and increased trust as result of different tools, according to Mosse (2001, in Mubita et al. 2017), the challenge is to organize and change the bureaucratic, centralized and administrative structures to include participation in decision-making. This challenge became a transition in the method of thinking and working by municipalities, that will be discussed next.

## Deliberation

We saw earlier that participation is not only about the redistribution (deliberation) of power but is, according to Ernst (Appendix C, 2017), more of an adjustment of the method of working (transition). The challenge was to organize and change the bureaucratic, centralized and administrative structures to include participation in decision-making (Mosse, 2001, in Mubita et al, 2017). In the theoretical framework different approaches were discussed. Mubita et al. (2017) argue for a complete redistribution of power, but Bai et al. (2010) argue for both top-down approaches as bottom-up approaches because there are too many institutional challenges to give all the power to the citizens. In this subsection we will have a look on how municipalities create a supportive environment. So, what is the answer for the challenge? Which method of working and thinking should municipalities use regarding participation?

Participation is a result of the financial crisis, according to Wijermans (Appendix D, 2017). Developments came to a standstill and that gave the citizens and businessmen a chance to develop initiatives themselves. Furthermore, the crisis is over so Wijermans (Appendix D, 2017) argues that the number of bottom-up initiatives will decline as a result of that. Also Rodenburg (Appendix B, 2017) calls the participation society into question, are there no limitations? But the transition is already been set up in different ways. First of all the working and thinking method of a municipality should be flexible according to Poortinga (Appendix E, 2017). Each neighborhood is different and asks for a different approach, so more personal and local is the key in participation. Therein should a municipality let go of the position as a client, participation is together. Poortinga (Appendix E, 2017) argues that for such an approach sufficient capacity is needed to start the conversation with citizens, the need for enough time and space to look what's going on in a neighborhood and which topics should be taken into account. Only then is a municipality flexible enough to develop a different and correct approach for a neighborhood. Ernst (Appendix C, 2017) also argues for a flexible role for municipalities. Municipalities should connect with local circumstances. A shift is already existing, a shift from governments towards citizens and smaller organizations. According to Ernst (Appendix C, 2017), those citizens and smaller organizations can be seen as smaller systems that co-exist beside the bigger systems (governments) and both systems have to fit in local circumstances. Why? Because of several reasons, first of all the bigger systems are 'in edge', not flexible at all and they cannot adjust to local circumstances. Secondly, rules are set by municipalities and those rules apply for a bigger area and are perhaps not suitable for local circumstances in that area. You have to go to local customization if you talk about those smaller systems. Besides that, when you talk about sustainability and climate proof you talk about building-, street- and neighbourhood level that's the domain of the citizen, so automatically you end up with participation. Are we then talking about a shift from a top-down approach towards a bottom up approach like Mubita et al. (2017) argued for, a complete redistribution of power? No.

Why? Streets and neighbourhoods can be seen as individual social units, but for the moment you only work with an bottom-up approach you will get friction inside the government and for the moment you only work with a top-down approach you will get friction in the streets and neighbourhoods according to Ernst (Appendix C, 2017). Therefore all parties should be equal or egalitarian. That's not a shift from a top-down approach towards a bottom-up approach, but a shift from vertical government towards horizontal government. Wijermans (Appendix D, 2017) emphasizes this, a municipality should work as a network structure in an egalitarian position. A municipality as a part of the entirety and not just above it as a government. Rodenburg (Appendix B, 2017) puts it as a continuous conversation not in a pyramid structure but also in a network structure. In a pyramid structure, municipalities search for intermediate forms, but according to Rodenburg (Appendix B, 2017) with every step you take will lose date, nuance. The shift from a vertical government towards a horizontal government corresponds with the 'fourth chair concept' from Janssen-Janssen & van der Veen (2017). Each party at the table is equal and communicates on an egalitarian position.

How should this been done? According to Ernst (Appendix C, 2017) municipalities are busy with changing the rules regarding participation and they think about it what could be the best way to involve participation in planning. But changing those rules will cost a lot of time according to Wijermans (Appendix D, 2017). Therefore, top-down approaches are still being used also because people find it nice (Rodenburg, Appendix B, 2017). Different approaches on parallel pathways that coexist with the same destination but with different routes to get there, a joint quest. But municipalities are working integral now, the municipality as a catalyst. They moved from old school, pigeonholing (everybody focuses on its own task and in the end nothing changed) to other processes and procedures (Jacobs, Appendix A, 2017). Internal change, no longer is the municipality programming and projecting things that should happen in neighbourhoods but the people themselves are doing that. And the fact that youngsters nowadays are more capable to connect with people and build up networks helps to make the shift from a pyramid structure towards a network structure, according to Jacobs (Appendix A, 2017). And adjustments are made in procedures, for example municipalities are not allowed to invest in private space, that's infringing government support. So municipalities become creative, funds for the sewage are now also used for green roofs and water squares because those solutions will have a positive impact on the sewage (Jacobs, Appendix A, 2017). That's a whole new way of working. A creative way of using funds, Rodenburg (Appendix B, 2017) sees this as an example to adjust the method of working by municipalities. Municipalities should stretch the boundaries between public and private space in order to organize and change the bureaucratic, centralized and administrative structures.



In the end, a shift is already going on and it's becoming a process of releasing. The transition will take more than 10/20 years, but there are already some things changed in planning regarding participation. Public participation has already contributed to the increase of the rainwater capacity. But is the incorporation of participation always successful and what are the advantages and disadvantages of public participation regarding the increase of the rainwater capacity? That will be discussed next.

### Incorporation

Mubita et al. (2017) argue that when power is redistributed and strong ties exist, participation leads to successful projects that are more valid, less costly and more timely and useful. Besides that, Bai et al. (2010) argue that effective public participation can improve public policy formation, reduce conflicts and encourage local action. Is this the case? Is it always successful when citizens participate? Are the planning deliverables regarding the increase of the rainwater capacity as a result of participation successful or is participation on itself successful?

Public participation isn't always successful, according to Ernst (Appendix C, 2017) it is successful if you see it as a task, or a tool but if you judge it on its content then it isn't always successful. Because public participation will not always lead to a situation that's wished regarding climate adaptation. Furthermore, Rodenburg (Appendix B, 2017) argues that participation isn't always successful because you will always need a framework and rules to control initiatives. Wijermans (Appendix D, 2017) emphasizes this because incorporation is due to those rules and frameworks not always in sight, sometimes a initiative is just bad, does not fit in current policies or isn't financial achievable. Therefore, participation doesn't always lead to successful projects. Like Ernst (Appendix C, 2017) mentioned, it sometimes doesn't lead to a situation that's wished regarding climate adaptation and the increase of the rainwater capacity. But climate adaptation and the increase of the rainwater capacity does not always have to be the main goal of public participation argues Wijermans (Appendix D, 2017). Always design in such a way that it will contribute also to other problems, add value. Besides that, those designs don't have to be big ones, smaller projects are even better and more successful according to Ernst (Appendix C, 2017). Green roofs, inner gardens, front gardens water squares they all contribute to the increase of the rainwater retention capacity. But according to Jacobs (Appendix A, 2017) they also add value in other ways. A more attractive, better and safer city. Better air quality and therefore an increase in public health and more green in the environment increases the feeling of safety. Furthermore, it contributes to social cohesion.

But one thing is too little exposed according to Rodenburg (Appendix B, 2017), Ernst (Appendix C, 2017) and Poortinga (Appendix E, 2017); the user- and management stage. It's most of the time not a part of participation anymore but participation is successful for the moment that the project will contribute to its goal and if the people are satisfied with it, so maintenance is more important for the succeeding of a project.

## 5. Conclusion

The results are discussed and the main insights as a result of the gathered data and discussion are summarized once again in the conclusion. Furthermore some policy recommendations regarding public participation are made.

### Conclusion

To which degree have citizens of cities the opportunity to participate in planning? In order to answer this question we already saw that in practice different meanings of public and participation exist. Therefore, public participation is a 'vague' concept. For instance, who is the public? In theory the 'public' part of public participation is too little exposed because all definitions are concerned with the 'participation' part of public participation. In practice the public does not only consist of citizens. Public participation in order to increase the rainwater retention capacity is not only about citizens and their environment. It is also possible that social groups, water boards, gardeners, housing corporations and insurance companies somehow participate in order to increase the rainwater retention capacity. Even a municipality itself can participate. Furthermore, participation is not only about the redistribution of power. It's more a adjustment of the method of working. But the focus of a street, regarding rainwater retention capacity, is much shorter because it becomes a problem at the moment the problem occurs. The timeframe is different, governments are facing with a whole different dynamic compared with the dynamic of citizens. Thus, redistribution doesn't cover the whole concept of participation and power cannot that easily be delegated to citizens. So far we can conclude that public participation in increasing the rainwater retention capacity is about an adjustment of the method of working that contains a broad range of different parties involved. Furthermore, in practice an ladder of participation does not exist. The level of participation depends on the context. Different levels of participation can exist in a process because participation is a continuous process between government and citizens and you have to look continuously what level of participation fits best. In order to increase the rainwater retention capacity it is sometimes better to only give information. Or a reaction on a development, taking part in discussions and debates, joining design studios are also levels of participation that contribute to the goal. Initiatives are nice because they are concrete but compromises and solutions are also useful for a city in order to become rainproof.

In order to create strong relationships between a city and its citizens, building up social capital is crucial. A strong base of partnership and networks is necessary in participation. It is concluded that bonding, bridging and linking is crucial in order to build up social capital. Strong connections among individuals, strong connections among social groups and strong connections between citizens and those in power are crucial. Gain trust, decreasing distance, develop shared norms and values and then people are more willingly to participate and help to increase the rainwater retention capacity. So called communities are the answer in the challenge to build up social capital. When strong ties exist people will participate and will contribute to the goal of increasing the rainwater retention capacity.

In order to create an supportive environment for public participation in planning a transition in the method of working and thinking is ongoing. This transition can be summarized as follows:

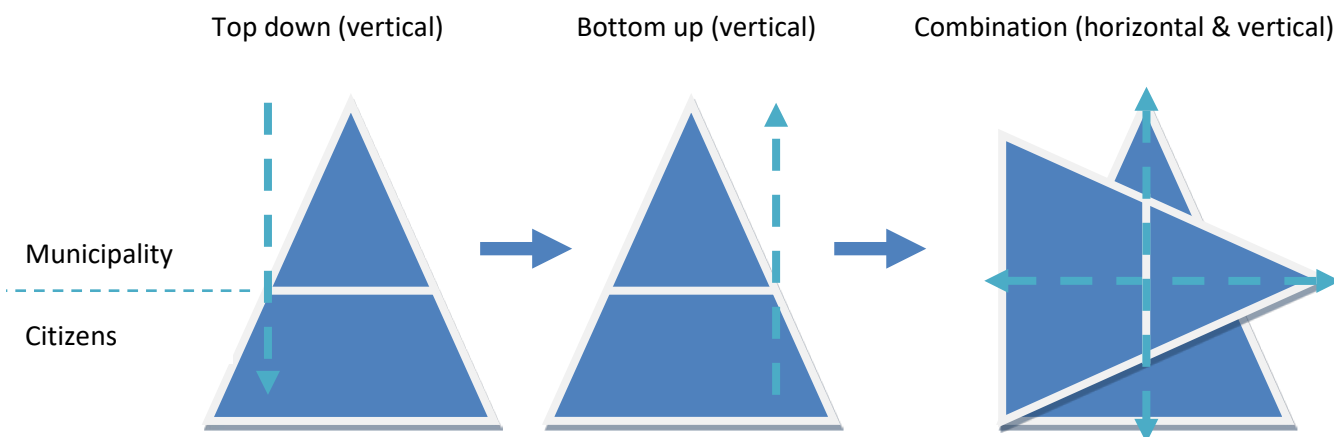


Figure 3: Transition in the method of working regarding participation (Keizer, 2017)

All parties should be equal or egalitarian. That's not a shift from a top-down approach towards a bottom-up approach, but a shift from vertical government towards a mixed vertical-horizontal government.

Public participation does not always lead to positive interventions and solutions. Besides that climate adaption and the increase of the rainwater capacity does not always have to be the main goal of public participation. Always design in such a way that it will contribute also to other problems, add value. Green roofs, inner gardens, front gardens water squares they all contribute to the increase of the rainwater retention capacity. They also add value in other ways. A more attractive, better and safer city. Better air quality and therefore an increase in public health and more green in the environment increases the feeling of safety. Furthermore, it contributes to social cohesion.

### Policy recommendations

Once again, our climate is changing; cities are vulnerable to climate change, for example inundation of delta areas, air pollution and floods (Larsen & Gunnarson-Östling, 2009) but also heavy weather events like heavy rainfall and droughts (Restemeyer et al. 2015). Besides that, continuous urbanization tells us that a greater amount of the world's population will live in those cities that are the most vulnerable to these extreme weather events (Restemeyer et al. 2015). Therefore, cities do not only have to be resistant but also have to be resilient. Transformability is an important aspect in resilience, transform towards new strategies and approaches and public participation is one of those new approaches. The shift from 'fighting the water' to 'living with the water' (Restemeyer et al. 2015) also counts for the increase of the rainwater retention capacity. And to move towards a "living with the water" approach, Restemeyer et al. (2015) argue for a cross-disciplinary collaboration and call to enlarge the willingness of including citizens to participate. Therefore the following recommendations for policies are made:

- Public participation is not limited to citizens only. Therefore municipalities shouldn't only focus on citizens that are willing to participate. Also take a look at so called intermediaries!
- Public participation is not only about the redistribution of power, therefore a municipality should not aim to delegate all power to citizens. They have to find the right way to combine public participation with the goals set.
- Public participation occurs in different level. In opposition to the participation ladder, the levels of participation do not follow up each other. The level of participation depends on the context. Therefore municipalities shouldn't always aim for 'citizen power', sometimes a lower level (tokenism or nonparticipation) fits better.
- Municipalities should invest time and energy in bonding, bridging and linking in order to build up social capital. So trust, decreasing distance and shared values and norms are key to create strong ties to stimulate the public to participate.
- Municipalities should adjust their way of working and thinking in such a way that all parties at the table, regarding the increase of the rainwater retention capacity, are equal (see figure 3).
- Municipalities should connect their goals set with citizen initiatives in order to increase the rainwater retention capacity but also to add value to the environment.

## References

- Amsterdam Rainproof (2017). *Het verhaal*. Geraadpleegd op 15-5-2017 via <https://www.rainproof.nl/het-verhaal>. Amsterdam: Rainproof Amsterdam
- Aldrich, D.P. & Meyer, M.A. (2015). Social Capital and Community Resilience. *American Behavioral Scientist*, 59(2), 254-269
- Arnstein, S.R. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of planners*, 35(4), 216-224
- Bai, X., McAllister, R.J.R., Beaty, R.M. & Taylor, B. (2010). Urban policy and governance in a global environment: complex systems scale mismatches and public participation. *Current opinion in Environmental Sustainability*, 2, 129-135
- Bailey, M. T. (1992). Do physicists use case studies? Thoughts on public administration research. *Public Administration Review*, 52(1), 47-54.
- Berman, T. (2016). Public Participation: Between Theory and Practice. In T. Berman (Red.), *Public Participation as a Tool for Integrating Local Knowledge into Spatial Planning* (pp. 175-198). New York: Springer International Publishing
- Bogner, A., Littig, B. & Menz, W. (2009). *Introduction: Expert Interviews – An Introduction to a New Methodological Debate*. Palgrave Macmillan: UK
- Clifford, N., French, S. & Valentine, G. (2010). *Key Methods in Geography*. SAGE: London
- De Bruijn, K., Buurman, J., Mens, M. Dahm, R. & Klijn, F. (2017). Resilience in practice: Five principles to enable societies to cope with extreme weather events. *Environmental Science & Policy*, 70, 21-30
- Gemeente Rotterdam (2015). *Nieuw watertegel draagt bij aan droge voeten*. Geraadpleegd op 30-3-2017 via <http://persberichtenrotterdam.nl/bericht/1048/Nieuwe-watertegel-draagt-bij-aan-droge-voeten>. Rotterdam: Gemeente Rotterdam
- Gemeente Rotterdam (2016). *Rotterdam Resilience Strategy: Klaar voor de 21<sup>e</sup> eeuw*. Rotterdam: Veenman+
- Gemeente Rotterdam (2017). *Project Management Bureau*. Geraadpleegd op 30-3-2017 via <http://www.rotterdam.nl/projectmanagementbureau>. Rotterdam: Gemeente Rotterdam
- Janssen-Janssen, L.B. & van der Veen, M. (2017). Contracting communities: Conceptualizing Community Benefits Agreements to improve citizen involvement in urban development projects. *Environment and Planning A*, 49(1), 205-225
- Johansson, R. (2003). *Case Study Methodology*. Geraadpleegd op 27-3-2017 via [http://www.psyking.net/HTMLobj-3839/Case\\_Study\\_Methodology- Rolf\\_Johansson\\_ver\\_2.pdf](http://www.psyking.net/HTMLobj-3839/Case_Study_Methodology- Rolf_Johansson_ver_2.pdf). Royal Institute of Technology: Stockholm

Lakatos, I. (1972). Falsification and the Methodology of Scientific Research Programmes. In I. Lakatos (Red.), *Can Theories be Refuted?* (pp 205-259). Dordrecht: Springer.

Larsen, K. & Gunnarson-Östling, U. (2009). Climate change scenarios and citizen-participation: mitigation and adaption perspectives in constructing sustainable futures. *Habitat International*, 33, 260-266

Leefbaar Rotterdam (2017). *Leefbaar Rotterdam*. Geraadpleegd op 30-3-2017 via <http://www.leefbaarrotterdam.nl/index.php/lr/>. Rotterdam: Leefbaar Rotterdam

Mubita, A., Libati, M. & Mulonda, M. (2017). The Importance and Limitations of Participation in Development Projects and Programmes. *European Scientific Journal*, 13(5), 238-251

Resilient The Hague (2017). *Agenda Setting Workshop*. The Hague: Municipality of The Hague

Restemeyer, B., Woltjer, J. & van den Brink, M. (2015). A strategy-based framework for assessing the flood resilience of cities – A Hamburg case study. *Planning Theory & Practice*, 16(1), 45-62.

Rotterdam Climate Proof (2013). *Rotterdamse adaptatiestrategie: themarapport stadsklimaat*. Rotterdam: Gemeente Rotterdam

Rotterdam Climate Initiative (2011). *Investing in Sustainable Growth*. Rotterdam: Rotterdam Office for Sustainability and Climate Changes

Schelfaut, K., Pannemans, B., van der Craats, I., Krywkow, J., Mysiak, J. & Cools, J. (2011). Bringing flood resilience into practice: the FREEMAN project. *Environmental Science & Policy*, 14, 825-833

Shao, Y., Osamu, S. & Xu, J. (2016). Capital Building for Urban Resilience: the Case of Reconstruction Planning of Kesenuma City, Miyagi Prefecture, Japan. *Procedia Environmental Sciences*, 36, 122-129

WSR (2017). *Water Sensitive Rotterdam*. Geraadpleegd op 30-3-2017 via <http://www.watersensitiverotterdam.nl/>. Rotterdam: Water Sensitive Rotterdam

Yin, R.K. (2004). *The Case Study Anthology*. 1e Editie. SAGE: London