

SUMMER IN THE CITY: SUN, SWIMMING – AND SLEEPLESS NIGHTS?

UNDERSTANDING NUISANCE PROBLEMS IN RELATION TO CITIZEN REPORTING ON NUISANCE EXPERIENCES AND INTERVENTIONS IN THE CONTEXT OF URBAN SUMMER RECREATION IN GREEN-BLUE OPEN SPACES IN AMSTERDAM-EAST



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ABSTRACT

Over the last decade, summer recreation in urban green-blue open spaces has become increasingly popular in Amsterdam, but so has the amount of reported nuisance because of summer recreation. In this thesis, the nuisance that has been reported by citizens during the summer recreation season from 2020 has been analysed by coding the reports in Atlas.TI, and using a survey from the Municipality of Amsterdam as a verification. There are two locations where large amounts of nuisance reports have been filed, the Bogortuin and Park Somerlust, and several smaller locations with quay walls in the Oostelijk Havengebied and on the Amstel river. The content on the individual nuisance experience in the reports has been separated in observations, providing the nuisance causes, and evaluations, providing the nuisance impact. Recreation in it self is not problematic per se, but the presence of large groups of youngsters and recreation during the evening hours and at night is. This impacts local residents because of noise nuisance, especially at night, and pollution of waste and public urination. The character of summer recreation nuisance can be classified as both physical and social nuisance that is experienced during the evening hours, on weekend days and when it's dry and warm. Implemented interventions have been evaluated and together with proposed interventions been analysed with the prevention pyramid. The measures that deal with the physical nuisance, temporary public toilets and an increase of waste capacity are in general reviewed positively. One successful intervention on social nuisance is the anchoring ban with a buoy line in the water to prevent noise nuisance from boats. None of the measures has been designed in an integrated way, using all the levels of the pyramid.

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INTRODUCTION

With its red bricks, green trees and blue canals the Amsterdam UNESCO heritage city centre is a feast for the eye. But up until a century ago, this was quite a different story for the nose: Amsterdam was also known as ‘a beauty with a foul breath’. Although once upon a time the water of the Amstel river was of drinking water quality, as the city grew the quality diminished severely. For centuries those now so famous canals were used as an open air sewage system, additionally used to dump waste and offal (Abrahamse, 2006).

In addition, the flow rate of the rivers in the city was very low, increasing the rotting smells, unhealthy damps and plagues - especially during summers. As a result, affluent citizens build themselves summer residencies outside the city. One still existing example is the house Frankendael in the Watergraafsmeer (Figure I1) - once one of fifty country houses in the polder of Watergraafsmeer, today it is the only one that has survived in the area that was annexed in 1921 and became a suburb of Amsterdam (Schmidt, 2017). But it also promoted a gardening culture among the less rich citizens - recreation was something that took place outside the city (Abrahamse, 2006).

In 1870, the first sewage pipes were installed to improve public health. But it was not until 1920 that the first water treatment plant was put into operation, and it took until 1985 to connect all canal houses to the sewage system. In 2017, at last all houseboats were obligated to connect to the sewer system, finally ending the use of the canals as an open air sewage (Amsterdam Rainproof, 2018). The quality of the water in the canals has greatly improved – even the current Dutch queen participated in the Amsterdam City Swim in 2012 (RTL Nieuws, 2012).

So while swimming in the canals was a serious health hazard in 1920, just a century later it is something that has become a common practice. On a sunny day in Amsterdam people swim in the open water, barbeque in city parks and picnic on green strips of grass – there are even traffic jams from pleasure boats on the canals.

On the city level, urban green-blue open spaces add to the urban liveability by providing near-by, accessible and free opportunities to enjoy summer days. On a more local scale, some new challenges emerge. With the rise in popularity of summer recreation within the city over the last few years, complaints about noise, littering and air pollution started to reach the newspapers and even courtrooms.

A negative side effect of the increase of summer recreation within the city is that neighbours can experience nuisance. This thesis researches nuisance problems in Amsterdam-east due to summer recreation in urban green-blue open spaces, by analysing citizen reports on nuisance experiences and interventions.

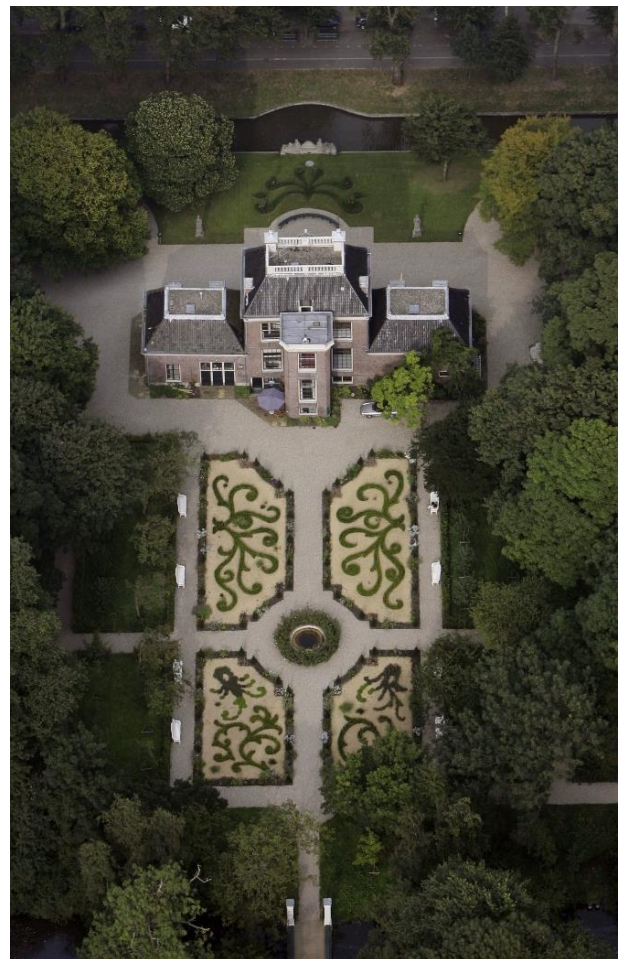


Figure I1: A picture of the house and gardens of Frankendael (Huize Frankendael, n.d.).

SOCIETAL AND METROPOLITAN CONTEXT

Under the looming threat of climate change, many Dutch cities have started to improve their green-blue infrastructures to become more resilient to the predicted increase of heat and water stress events. When the quality of urban green-blue infrastructures is improved, the city becomes a more and more attractive place for outdoor recreation. In addition, plans are being made for a sustainable energy transition (Ministerie van Economische Zaken en Klimaat, 2019), and to build one million houses over the next ten years (NEPROM, 2021).

By expanding the total urban area and at the same time implementing urban-green blue infrastructures to deal with climate change adaptation, it can be expected that the amount of potentially suitable locations for urban summer recreation will increase as well. As urban development plans for the next decade are currently being made, now is the time to research nuisance problems due to summer recreation in urban green-blue open spaces, so urban summer recreation locations can be successfully and sustainably integrated throughout cities.

This is not only relevant from the perspective of the Amsterdam Metropole or even only the Netherlands. Providing opportunities for recreation within the urban fabric of metropolises fits with an urbanist movement which advocates to organise the urban fabric of metropolitan areas in such a way that all services are in close proximity to all citizens by slow modalities such as walking and cycling and thus reducing the need for car mobility.

Two important European thinkers in the field of New Urbanism are Jan Gehl and Carlos Moreno. Gehl has focused on the human dimension in urban development; to create lively, safe, sustainable and healthy cities, urban design should be based on the pace of walking (Gehl, 2010). Moreno et al. (2021) identify six essential urban functions that contribute to a high quality of life, which should be accessible within 15 minutes by foot or by bike: living, working, commerce, healthcare, education and entertainment.

The core principle of these ideas is that reducing car mobility in cities leads to a more healthy population, both in air quality as well as through encouraging more active lifestyles. Such a foot- and bike mobility based city is a compact, dense city where functions are mixed and where public space is a lively, intensively used place. Through their physical composition, these cities are liveable, healthy and inclusive by design (Balletto et al., 2021).

Currently, the 15-minute city theory of Carlos Morena has ambitiously been taken on by Paris mayor Ann Hidalgo. Similar developments have started in Milan, and also outside of Europe in Portland and Melbourne (Pozoukidou & Chatziyiannaki, 2021). In Barcelona experiments are taking place with setting up Superblocks where traffic is greatly reduced between the blocks and social and economic activities between buildings are promoted (Mueller et al., 2020). Closer to home, Utrecht is even trying to become a 10-minute city (Gemeente Utrecht, 2021).

Although the 15-minute concept is not explicitly mentioned in development plans from the municipality of Amsterdam, elements of the New Urbanist movement do come back. Amsterdam wants to become a compact, accessible, complete, green and sustainable city (Gemeente Amsterdam, 2017). With improved urban green-blue open spaces such as parks and waterfronts, the city provides near-by and accessible locations to enjoy summer days and offers opportunities for local summer recreation. This fits in the New Urbanist ideology of a dense and function-mixed city.

Summer recreation in the urban context poses new challenges about the use and design of public spaces, for although measures for a walkable, greener and more resilient city are being made to improve urban liveability, the opposite might become true when a location becomes so popular for recreation that a problematic amount of nuisance is experienced by people who live in the surrounding neighbourhood. This thesis focusses on the

nuisance experience the specific context, but it relates to the overarching discussion about the limitations of dense and function-mixed cities, that can be useful for other metropolises and topics as well.

SCIENTIFIC CONTEXT

In the Netherlands, outdoor recreation activities previously almost exclusively took place either in rural or natural landscapes or in designated recreation areas (Woestenburg et al., 2009). Therefore little is known about recreation within the urban context. Research on recreation started in the 1960's as the use of recreation areas increased after the second world war, kicking off with Wagars (1964) research on recreation carrying capacity, which he defined "*the level of recreational use an area can withstand while providing a sustained quality of recreation*".

This carrying capacity is originally based on the natural carrying capacity of ecosystems, as biology and park management was the background of most the people working in natural parks. First, the focus of recreation carrying capacity did lie on bio-physical capacities such as the ability of trails to withstand the physical pressure of walking people. But soon the influence of crowdedness on the experience of the visitors was included and the focus became on 'social carrying capacity', producing frameworks on how to address the pressure both of recreation on visitor experiences as well as on the natural landscapes (McCool et al., 2007).

With the rise of mass tourism in the second half of the 20th century, the field of tourism carrying capacity emerged as well. In the last few years, four books on overtourism have been published (Dodds & Butler, 2019; Milano et al., 2019; Pechlaner et al., 2019; Séraphin et al., 2020). Both overtourism and carrying capacity are based on the principle that there is a limit to what extent a system is able to be resilient to the pressure that is exerted by visitors. In the case of tourism, that is not only physical capacities such as hotel beds, but more importantly the impact visitors have on the physical infrastructure of the city and the host population; that is to say the local inhabitants of the city

When this carrying capacity has been surpassed, nuisance arises. Nuisance is a topic that is well studied in certain topics, such as loiterers (K. Leidelmeijer et al., 2010; Van Gemert, 2002), or noise (Broër, 2008; Kroesen et al., 2008; Ouis, 2001; Poll et al., 2016), or drugs (Garretsen et al., 1995). Regarding urban recreation, Nilsson et al. (2007) studied the nuisance experience from road-traffic noise annoyance in urban parks. However, this research focusses on the recreants themselves and not on nuisance as a result of recreation.

There are few studies that research the nuisance experience of inhabitants in relation to recreation. In the Netherlands, outdoor recreation activities previously took place either in rural or natural landscapes or in designated recreation areas – only recently cities became recreation landscapes as well (Woestenburg et al., 2009). In Southern-Europe, this has been more common and some research has been done on 'movidas', or public night life, in Mediterranean cities (Asensio et al., 2018; Gallo et al., 2018; Ottoz et al., 2018).

CONTEXT OF COVID-19

This thesis analysis the summer recreation nuisance of the season of 2020. This season has a very special context: it started during the early months of the COVID-19 pandemic. Mid March, the whole world closed down and people needed to stay home as much as possible. In the Netherlands, an intelligent lockdown was instituted; shops were opened with a maximum capacity, but leisure services were closed and people needed to work from home as much as possible.

Because of the small mobility radius that people were supposed to have, there was a lot of being outdoors closer to home; walks around the block and the rediscovering neighbourhood opportunities for recreation. In Sweden, even a 291% increase of activity in green space has been measured during the lockdown in Oslo (Venter et al., 2020). In Amsterdam, public health safety measures became soon necessary in recreation

hotspots to ensure sufficient distance between recreants - for example by providing designated seating circles 1,5 meter apart from each other on grass courts, or by establishing a maximum capacity of demarcated areas.

The context of COVID-19 offers two opportunities for this thesis. In the first place, there are reports filed on the violation of the lockdown restrictions that also contain information about summer recreation. Secondly, the interventions that have been implemented in popular summer recreation locations might have been motivated from a public health perspective, but are similar to measures that can also be used to reduce nuisance, and therefore give extra insight in how these measures can help to prevent future nuisance problems.

RESEARCH QUESTIONS

This thesis combines research on summer recreation within the urban context and on nuisance experiences by local people by analysing nuisance reports filed by residents with the municipality. Working at this intersection of recreation and nuisance adds knowledge about what recreation takes place in cities, and what interventions can be taken when nuisance arises while urban functions such as housing and leisure clash. The main question that will be answered in this thesis is:

How can we better understand nuisance problems in relation to citizen reporting on nuisance experiences and interventions in the context summer recreation in urban green-blue open spaces in Amsterdam East?

To answer this question, four sub questions have been formulated:

- RQ1: At what locations is nuisance experience experienced?
- RQ2: What do citizens report on individual observations and evaluations of nuisance causes?
- RQ3: What characteristics does summer recreation nuisance has according to the nuisance classification categories?
- RQ4: How do citizens evaluate the implemented interventions and what are other proposed interventions?

In the next chapter, the theoretical framework discusses views on nuisance in society, the individual nuisance experience, nuisance experience classifications, the prevention pyramid, and combines these theories in one conceptual framework that connects all the sub questions together. This is followed by the methodology, that describes the research area, the used datasets, how the data has been prepared for analysis, and per sub question how the research question has been answered. In the results chapter is structured according to the sub questions. Lastly, a summary of these answers and an answer to the main question is provided in the conclusion.

CONCEPTUAL FRAMEWORK

Everyone living in a more or less urban setting is probably familiar with irritations that can arise due to the behaviour of fellow citizens, for example caused by littering, dog poo, graffiti, broken windows, incivility, or loiterers. These are nuisance experiences. As a most general definition, nuisance describes both undesired behaviour as well as the physical decay of public space (Centraal Bureau Statistiek, 2020), often caused by behaviour that in itself is not or only slightly penal, but is rather irritating (van Lanen, 2013; RMO, 2004 in Leidelmeijer et al., 2010).

In Dutch the word ‘overlast’ describes an annoyance or irritation (hinder) that has reached a level where it is no longer tolerable or ignorable (Neuerburg & Verfaillie, 1988). In French, the word ‘incivilité’ is used, relating to uncivil behaviour (Gayet-Viaud, 2017), whereas in English annoyance, nuisance and anti-social behaviour are all applicable (Elke Devroe, 2012). Literally, a nuisance is the source of an annoyance; a thing, person, or circumstance that makes one feel annoyed. As nuisance is most consistent with the Dutch word overlast, this term will be used throughout the thesis.

Some types of nuisance are more studied than others. For example, environmental noise is a well explored topic. In this context, nuisance is defined by the World Health Organisation as:

“A feeling of discomfort which is related to adverse influencing of an individual or a group by any substances or circumstances. Annoyance expresses itself e. g. by malaise, fear, threat, trouble, uncertainty restricted liberty, experience, excitability or defencelessness.” (World Health Organisation, 2011)

As nuisance because of noise can cause stress, it can have an adverse effect on health and reduce the amount of healthy years lived. So although sometimes annoyance can be just that – annoying, sometimes it can become problematic for a society as well as it negatively influences quality of life.

Not all kinds of nuisance are comparable. As there are so many potential causes for nuisance, there is no unambiguous demarcation of what does and what does not fit within the definition (Van Malderen, 2007). That does also mean that when nuisance is researched, it is very important to operationalise the general concept into a specific and narrow problem definition with a clear demarcation of the scope of the problem. In this way, best practices to deal with the case specific challenges can be identified (De Wree & Van Malderen, 2008).

This chapter describes a conceptual framework. First, an overview is provided about the views on nuisance in society. Then, the nuisance experience is examined from the perspective of the individual. Thirdly, different ways to classify nuisance are discussed, followed by a fourth section on interventions. Finally, the nuisance experience, classifications and interventions are combined into one model that is used for this thesis to study nuisance experiences and interventions in relation to summer recreation in urban green-blue open spaces.

VIEWS ON NUISANCE IN SOCIETY

That there is no consensus on an exhaustive definition of nuisance, is not only due to the many potential causes of nuisance, but also because of the subjective nature of the concept. Rather than an objective truth, nuisance is a perceived reality. It is different for everyone: as an interactive and subjective experience, nuisance is defined by the people involved. This individual perception is influenced by the prevailing discourse in society – bound to time and place, tolerance levels can differ between historical and social-cultural settings, but also between societies and individuals (Devroe & Ponsaers, 2003; Pleysier & Deklerck, 2006; Van Malderen, 2007).

Pleysier & Deklerck (2006) summarize the essence of nuisance as a tension between freedom and safety: on the one hand individual citizens that have the freedom and right to behave as they desire, and on the other hand the society where the freedom of others and general liveability has to be protected from the behaviour of those same individuals. Legislation protects citizens from each other, but nuisance disturbances are not always

legal violations. When a citizen feels their wellbeing is being jeopardized because of the behaviour of others, that is the moment when nuisance arises.

As one can imagine, nuisance is something of all times. During the 1990's in western-Europe, increasing risk awareness and reduced risk tolerance levels formed the start of the 'risk society'. As first described by Beck in (1992), people became less willing to experience risks, and tolerance levels for nuisances did reduce as well. Behaviour that previously was not punishable but at most a hindrance or an incivility, now is more often a case for law enforcement (Devroe, 2012; Koemans, 2011; Pleysier & Deklerck, 2006).

According to Koemans (2011), the prevailing political view on nuisance is that the population demands a more stringent and repressive approach. This is supported by five main motivations. In the first place, interventions are necessary because existing measures are not sufficiently effective to deal with what is seen as 'new' problems. Secondly, the amount of nuisance is on the rise – or at least the amount of reported problems is. Thirdly, this is a challenge that must be dealt with because it threatens the quality of life of citizens, especially in bigger cities.

In the fourth place, there is a strong belief in the broken window theory, which in short states that when small disturbances are not dealt with, it will lead to more criminality in the neighbourhood. And finally, by tackling nuisance problems, economic and social decline of neighbourhoods can be reversed. These last two motivations are especially related to the behaviour of youngsters (K. Leidelmeijer et al., 2010; Van Gemert, 2002). Interventions are designed both to prevent youngsters – mostly men – from slipping into criminal behaviour, as well as to protect society against those same young men (Crawford, 2009).

As a result of this political view, nuisance has become more prevalent in criminology and justice: there are more laws on these topics, and more possibilities for prosecution. In the Netherlands, Belgium and the United Kingdom laws, respectively the Algemene Plaatselijke Verordening, the Gemeentelijke Administratieve Sancties and the Anti-Social Behaviour Order have been implemented. Although differences between the countries exist, all laws accommodate the broadness of the nuisance concept by providing a legal framework that allows municipalities a large degree of freedom to define and act upon nuisance (Devroe & Ponsaers, 2003).

The key argument that supports the idea that there is an increase in the prevalence of nuisance, is the assumption that nuisance can adequately be measured by counting the amount of nuisance reports or through annual surveys where citizens self report how much nuisance they have experienced that year. However, what is measured this way is the perceived reality. The increase of can therefore be caused by an actual increase in potential nuisance causing phenomena, an increase in the perception, or a change in meaning given by the individual or by society in general (Smeets & Moors, 2010).

This is problematic because when there is more attention for nuisance in policy and in the media, this can lead to an increase in experience levels, although the cause hasn't changed at all (Broër, 2008). This can cause a shifting baseline: then the perception of criminality and victimhood are higher than the actual numbers, and a perception gap occurs (Smeets & Moors, 2010). This may lead to a misallocation of public means, as too much time and money is spend on prevention.

Another critique is that by focusing on relieving the nuisance experience, governments have 'institutionalized inability to deal constructively with social problems' – for example, by fining homeless people for sleeping on the streets, instead of dealing with a housing crisis (Verfaillie et al., 2007). Another example would be that in the case of loitering youth, youth workers are send out to address the youngsters on their (nuisance causing) behaviour, but that does not take away that there is no other suitable space for these kids to go.

So when one wants do develop interventions for nuisance problems, it is important to identify *what* is causing the nuisance and *how* this affects the person experiencing nuisance. Only then proportional and targeted

interventions can be implemented, so that there is no misuse of public means. The ‘what’ and ‘how’ are parts of the individual nuisance experience, which is explained in the next section.

INDIVIDUAL NUISANCE EXPERIENCE

The subjectivity of nuisance is no reason to dismiss the severity of nuisance problems, for ‘if men define situations as real, they are real in their consequences’ (Thomas & Thomas 1928; cited in Pleysier & Deklerck, 2006). A more in-depth look into this subjective experience provides insight in what the problem is according to the person experiencing the nuisance, and why it disturbs them. This experience process has been described by Eysink Smeets and Moors (2010) as a four stage model consisting of a cause, an observation, an evaluation and an action (Figure T1).

The first step in the model is the cause. In theory, this can be anything; a type of behaviour, a situation, or a physical state of something. Secondly, there needs to be an observation. A parallel can be made with the philosophical question “If a tree falls in a forest and no one is around to hear it, does it make a sound?”. In the case of nuisance, as long as there is no observer, there is no nuisance. A concrete observation is made directly by an individual. But it can also be a more general and indirect observation, for example through media or second-hand via other people.

The third step in the model is the evaluation of the observation. The observation is compared with a reference frame, and can have a positive, neutral or negative outcome. When there is a negative deviation from the reference frame, this causes a stress reaction and the observer experiences nuisance. Often, the observation and the evaluation follow each other up in seconds, and it is not always possible to differentiate between the observation and the evaluation.

The evaluation can differ per person, situation and time, as the severity of the stress response depends not only on the severity of the experienced nuisance, but also on individual coping skills that can reduce the stress reaction. Personal factors that can influence the evaluation are perception thresholds, a confirmation bias, habituation, and personal characteristics and cultural differences. How well a person is able to respond to the stress, also impacts future experiences.

The stress reaction can furthermore be influenced by situational factors, such as the extend to which the person experiencing nuisance is familiar with the cause, the relationship with the nuisance causer and their approachability, and the perceived degree of evil intent; the level of voluntarily exposure, the experienced amount of influence or control, whether the exposure to the nuisance cause is avoidable and predictable, and the degree of distraction.

The final level in the model is the effect that the nuisance experience has on the individual. It might prone one to act upon the cause, for example by addressing the cause, by mitigating the effects or to file a nuisance report at the municipality. It can also impact ones believe on the effect of the acting; whether or not it is successful, and if it will likely be the same in future situations. Finally, it can also lead to an adjustment of the assessment framework.

Together, these four steps describe how an individual experiences nuisance. It is useful to differentiate between the actual cause, the observation of the cause which is already through the lens of the observer, the value that is then

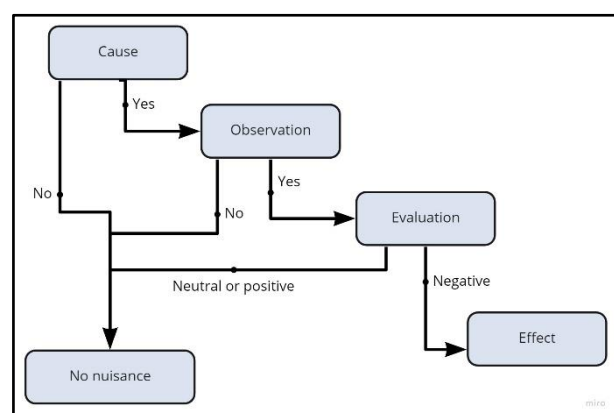


Figure T1: Flowchart of the individual nuisance experience process. To experience nuisance, there needs to be a cause, an observation, and a negative evaluation (Eysink Smeets and Moors, 2010)

given to the observed cause, and how this evaluation can effect the person experiencing nuisance and incite action.

CLASSIFYING NUISANCE

Using the phase model from the individual experience process in the previous section, insights can be gained in what causes the nuisance and how this is experienced. To narrow down case specific nuisance problems, one could just look at the causes. But to compare different causes, it can be helpful to have more tools. In this section, six classifications are described that can be used to differentiate potential nuisance causes; whether the nuisance is public or private, physical or social, legal or illegal, causes direct or indirect victimhood, has typical time and frequency characteristics and whether it is more objective or more subjective.

PUBLIC – PRIVATE

A first distinguishment that can be made between different nuisance causes is whether they are public or private. If nuisance is caused by a family member, a flat mate, or a neighbour, the conflict has a private nature and should be resolved by the parties them selves. More often, nuisance often has a public nature, as the interaction between the source of the annoyance and the individual that experiences nuisance are situated in (semi) public space (Devroe, 2012; Devroe & Ponsaers, 2003; Gemert, 2002).

Nuisance originating from public space can also be experienced as an infringement of the private sphere. In that case, the public and the private dimensions meet, but as the cause is located in public space, it is still a form of public nuisance (Breeuwsma, 2001). In laws concerning nuisance, Devroe identifies three elements that make it inherently public: the cause of the nuisance is located in public space, there is a citizen involved that experiences nuisance, and finally, there is an authority involved that can address the issue (2008).

PHYSICAL – SOCIAL

The most often used classifications for nuisance are social and physical nuisance. Skogan (2012) first made the distinction between physical and social disorders in 1990. In the first category fits nuisance that is the noticeable negative result of behaviour on the physical condition of the public space. Examples are loitering, vandalism, graffiti, noise annoyance, and public urination. In Dutch, we would call this 'verloedering'. It is not one event, but the ongoing condition of deterioration of the neighbourhood.

Social disorder relates to nuisance from behaviour itself, or specific behaviour of and interactions between individuals that cause annoyance. Examples are neighbour quarrels, nightlife noise, and also drunkenness, insults and threats. The focus lies on the direct interaction between the people involved, and the appropriateness of the behaviour in the social context. Because of the focus on the interaction, social disorders are more or less episodic events.

In the Netherlands, nuisance levels are monitored by the Safety Monitor (Veiligheidsmonitor) of the Central Bureau of Statistics (CBS). It measures nuisance levels through surveys among 65.000 Dutch people, and establish scores on neighbourhood level. A main distinction is made based on the physical / social classification as well, with the addition of nuisance because of traffic and restaurants and cafés (Centraal Bureau Statistiek, 2020).

LEGAL - ILLEGAL

As nuisance can be de the result of a broad behavioural spectrum, its spans both actions that are criminal and legitimate behaviour. Laws that have been designed to deal with nuisance allow municipalities a great deal of freedom to define what is nuisance. Behaviour that falls into this category has a low punitive character that is

often handled with a fine (Devroe & Ponsaers, 2003). Some forms of nuisance are covered in criminal law, for example violence, theft, insults and threats (Devroe, 2012).

But nuisance is more than just the behaviour that municipalities define as annoying and criminal behaviour (Van Malderen, 2007). There is also a lot of behaviour that is not punitive at all and can cause nuisance; it is for example, each's right to stay and linger in public space. Nevertheless, if youngsters hang around in public space, this is often perceived as a nuisance (Devroe, 2008).

DIRECT – INDIRECT VICTIMHOOD

Some nuisance phenomena are directed personally towards people – for example verbal aggression, sexual intimidation, threats, theft and physical aggression. These cases of harassment have a direct victim, and they are also often legally punishable forms of nuisance. But there are also nuisance phenomena where there isn't one direct victim that can be identified, and there is a more diffuse victimization among a community, or even the community itself can be a victim. Behaviour causing indirect victimhood can involve public drunkenness, open use of illegal drugs, unintentionally having to witness fights, vandalism, or loitering. As there is no targeted victim, the victimhood is indirect (Van Malderen, 2007; Vermeulen et al., 2006).

TIME & FREQUENCY

Potential nuisance causing phenomena do not always immediately cause nuisance – an incidental single quiet sunbather or swimmer is unlikely to stress out anyone to such an extent their nuisance threshold is exceeded. The nuisance experience is influenced by the accumulation of the volume and frequency of its causes (van Lanen, 2013). As the nuisance experience can be impacted by its predictability (Smeets & Moors, 2010), it is also important to see whether there is a pattern in the exposure, for example in time of the day, during the week, or even the season. For example, the sirens of the recycling truck driving backwards might be very annoying, but if you know that it is only there two times a week for a few minutes, you can cope very well.

SUBJECTIVE – OBJECTIVE

As nuisance in itself is a subjective experience, it might be odd to state that some types of nuisance are more objective than others. It is, however, a distinction that is made both in practice and in theory. Some nuisance observations are more measurable, and therefore the cause can be more objectively established.

Let's take chewing gum on the sidewalk as an example. When a citizen files a report that the sidewalk in a certain area is very stained with chewing gum, they might count 5 pieces of chewing gum per square meter. The municipality might have a different standard, and only comes into action when there are more than 10 pieces of chewing gum per square meter. Although there is a difference in the evaluation – after which threshold does the sidewalk need to be cleaned – there is a more objective and countable observation (Ministerie van Veiligheid en Justitie, 2012).

INTERVENTIONS

Once a narrow problem definition has been formulated and the nuisance causes have been identified and classified, interventions can be developed to reduce or prevent future nuisance from happening. These interventions can be classified as well, using the intervention pyramid from Pleyzier and DeKlerck (2006). This model describes four levels of interventions (Figure T2). Every higher level in the pyramid needs to be supported by interventions in the lower levels. These levels will be explained using public urination as an example.

The highest level of the pyramid is formed by curative measures. These measures have as a goal to prevent repeating nuisance from happening by laws that allow the police and law enforcers to act upon legal violations,

and by restoring the situation to its previous status. With regards to public urination, the law is provided in the Algemene Plaatselijke Verordening (APV) that states that public urination is forbidden within the build environment and can be punished with a €140,- fine. The restoring can be done by cleaning the area.

One step lower on the pyramid ladder are specific preventive measures. The focus of this level is the question what can be done about the problem from a techno-preventive and surveillance perspective. It is often a quick and temporary reaction to a perceived increase in risk. The goal is to alert people on the regulations and by supervision prevent them from causing nuisance. In our example, this would for example mean signs with warnings about the fine that can be received, and stewards that keep an eye on the situation so it becomes less attractive for people to violate the rules.

The next level are general prevention measures. It concerns measures that must immediately prevent, reduce or limit problems. These are often physical interventions that redesign public space, and pro-actively prevent situations by changing the situation, also called situational prevention. This can be done through zoning, by creating barriers, or by providing certain facilities – for example, by facilitating clean and accessible public toilets, it can be prevented that people prefer to choose public urination.

The last intervention level is fundamental prevention. These interventions do not directly relate to the problem, but are oriented to improve the general quality of life of the environment and as a side effect also prevent nuisance situations from coming into existence. These interventions are integrated policies that deal with problems for the whole community. This level also needs to connect to an underlying layer – the society and its social, political and ecological dimensions

One example would be to have youth centres, so that young loiterers have a place to go where there is some guidance. The main goal could be to prevent school-dropouts and kids slipping off into criminal careers, but a side effect would be that there is less nuisance from loitering youth. In the case of public urination, the Maag Lever Darm Stichting lobbies to have a public accessible toilet every 500 meters in busy pedestrian areas (Maag Lever Darm Stichting, 2021). Another fundamental preventive measure would that there is a policy by the municipality on providing public toilets during the summer season in all parks and green-blue open spaces.

To successfully prevent nuisance from happening, the different levels of the pyramid need to form one integrated system. In the case of public urination, this means that all interventions described above are implemented; there is a fine for violating the APV, in the problem areas there is a form of supervision so that if people are about to violate the law, they can be redirected to the public toilets. These toilets need to be there, and be accessible and clean. Finally, there need to be sufficient toilets in the surrounding area and that those toilets are provided for by policy.

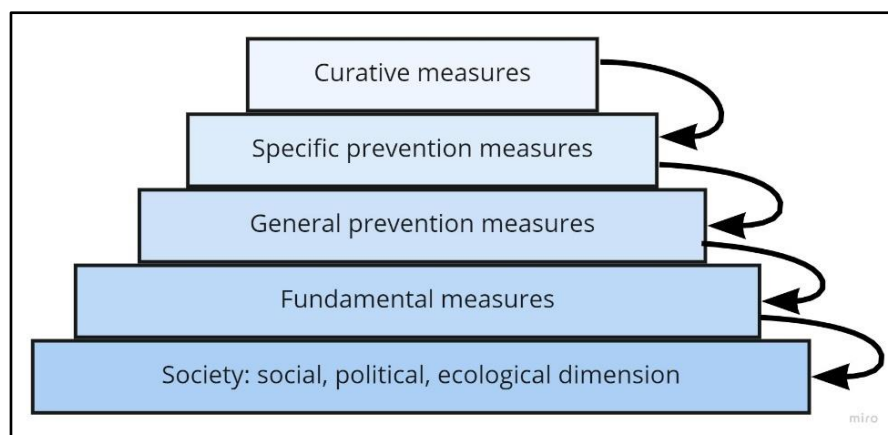


Figure 2: The prevention pyramid of Pleysier and Deklerck (...). Every higher step on the pyramid needs to be supported by the underlying levels.

CONCEPTUAL MODEL

So far, we have seen that there is not one exhaustive definition of nuisance because there are many different kinds of nuisance. As it is a subjective experience, which can be described in a four stage process: a cause, followed by an observation, evaluation, and an impact. For the purpose of researching nuisance problems and developing interventions, it is important to build a narrow and case specific problem definition.

To gain insight in the causes of nuisance, six classifications have been described: whether the nuisance is public or private, physical or social, legal or illegal, causes direct or indirect victimhood, has typical time and frequency characteristics and whether it is more objective or more subjective. Finally, the four levels of the prevention pyramid provide a framework for interventions that prevent future nuisance from happening.

The elements of the theoretical framework that have been described in this chapter, can be integrated into one conceptual model (Figure T3). The spine of this model is formed by the nuisance experience process. For this thesis project, the nuisance complaint reports filed with the municipality have been analysed. That means that the person that filed the report already went through the individual experience process, and concluded (at least) with one action; to file a report about the nuisance towards the municipality.

Not all steps of the experience process are visible in the reports; the cause itself can not directly be measured, but can only be determined through analysing the observations. Some information might be provided about coping methods as individual action is described, but there is little information about the personal and situation context. However, if someone files a complaint, that most likely means that the nuisance is past their individual coping skills, and they feel they need help from the municipality solving the problem.

Depending on how elaborate the content of the complaint is, it can tell us something about what the individual observed, and how they evaluated it. As these parts of the experience process have been analysed, they together describe the causes and effects of the nuisance so that these can be classified. But the reports can also contain information about interventions; either an evaluation of interventions that have already been implemented by the municipality, or a proposal for a new intervention.

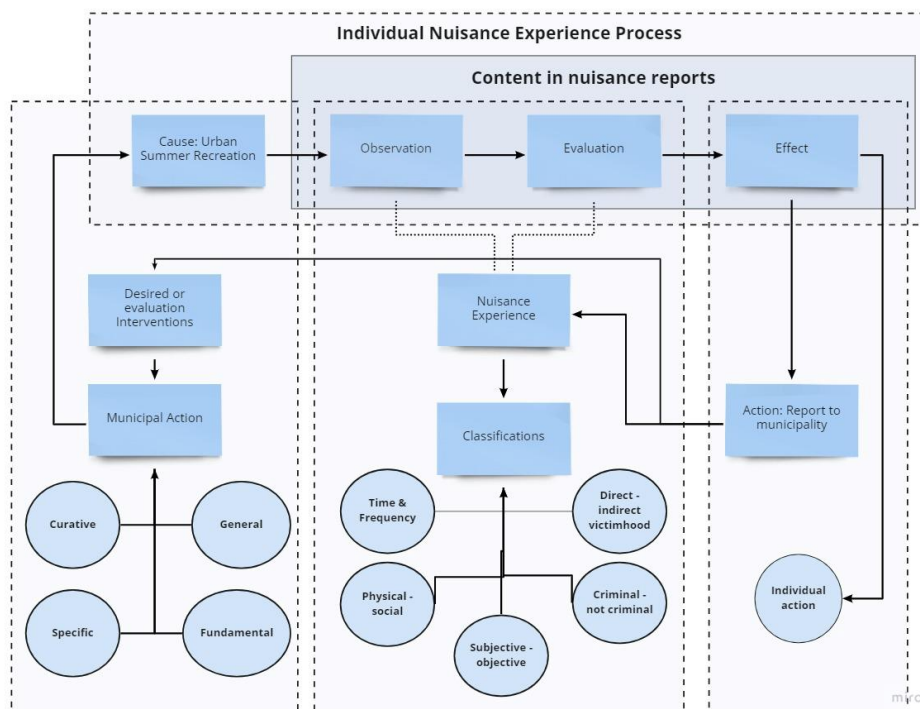


Figure T3: The conceptual model connects the separate theories described in this chapter

METHODOLOGY

This chapter provides a short description of why Amsterdam-east has been chosen as a research area. Then, a description of the citizen reports is provided and the category and spatial selection of those reports for the content analysis is explained. This is followed by an elaboration of the content analysis in Atlas.ti, and the chapter concludes with an operationalisation of each of the sub questions.

AMSTERDAM-EAST

Regarding urban green, the municipality has stated its ambitions to invest in improving the quality of public green in 2017 (Plan Amsterdam, 2017), and published a new Green Vision for 2050 in the summer of 2020 (Gemeente Amsterdam, 2020). One of the Green Vision's ambitions is that all city dwellers should live within ten minutes walking distance from a green public space and fifteen minutes cycling distance from a larger green area.

Another planning document is the new and obligatory structure vision, that is in the process of being formulated as well. Earlier, the municipality of Amsterdam has stated ambitions resembling the idea of a dense and mixed city: 72.000 new homes are already to be realised before 2025, but a hypothetical sketch has been made for a total 275.000 new homes within the existing urban perimeters. Mixing different functions – living, working, leisure – into the same neighbourhoods can help to keep the mobility pressure on the urban fabric acceptable (Gemeente Amsterdam, 2017).

With the rise in popularity of urban summer recreation over the last few years, complaints about noise, littering and air pollution started to reach the newspapers. As a reaction, the municipality prohibited barbecuing in certain parks in 2017 and implemented a local law in 2019 that restricts the number of passengers on a boat to thirteen people, and prohibits amplified music on boats in the inner city. However, there is no integrated policy yet on summer recreation in urban green-blue open spaces.

Within Amsterdam, this thesis focusses especially on Amsterdam-east. In the first place, because the locations that frequent the media (see Introduction), were often located in Amsterdam-east. Secondly, because there was an opportunity for a thesis internship guided by the civil servant, Irene Moes, that is responsible for summer recreation in Amsterdam-east. This thesis also provided access to the data about nuisance reports.

There are three zones in Amsterdam-east where summer recreation takes place most. First, there is the Oostelijk Havengebied, with the Bogortuin and several piers. Secondly, there is the east-sided quay wall of the Amstel river, bordering the East city district from the South. Thirdly, there is two locations on IJburg.

SIGNAAL INFORMATIEVOORZIENING AMSTERDAM & RESIDENTS SURVEY

For the analysis of the recreation nuisance experience and the evaluation and identification of potential interventions, nuisances complaints filed through the Signaal Informatievoorziening Amsterdam (SIA) have been analysed. The SIA is a system in which citizens can contact the municipality to file a report about complaints or nuisances in public space. For example, when something is broken or needs to be cleaned up, or when law enforcement needs to take action.

When filing the report, the system registers the text written by the citizen, the location of where action needs to be taken and the timing of the event. Optionally, photos can be added as well. Citizens can choose to leave behind some personal data if they want to be contacted about a follow up. When the report has been filed, the SIA algorithm 'reads' the report, and categorises it to send it to the right municipal department.

As an intern for the Municipality of Amsterdam, I had access to the data directly in SIA. However, this system was not suitable for any form of analysis. Instead, the department of research information and statistics (OIS)

designed a Tableau dashboard, which is a business intelligence software program. In this dashboard, small analyses can be made to get quick insights.

In the tableau dashboard, several filters can be applied (Table M1). Since the summer recreation season officially starts on April 1st and ends on September 30th, these months have been selected. When selected for the district Amsterdam-East, this results in 18.265 reports for 2019 and 24.613 reports for 2020. From the dashboard, I retrieved per report the following data; a report registration number, the longitude and latitude of the location, the address, the neighbourhood, the date and time of when the report was filed, the time of the nuisance (if this was different from the time the report was filed), the main and subcategory, and the explanation of the nuisance.

Table M1: Possible filters that can be used to make a selection from the SIA data in the tableau dashboard.

Filters	Options
Year	2017/2018/2019/2020
Month	Every month
District	Centrum, Nieuw-West, Noord, Oost, West, Westpoort, Zuid, Zuidoost, Verwijfout
Neighbourhood – larger scale (Wijk)	Amsterdam-East: 15 options
Neighbourhood – smaller scale (Buurt)	Amsterdam-East: 74 options
Main category	12 options
Sub category	120 options

One of the critiques of working with nuisance reports, is that the selection can be biased. This is because the reports are only filed by the people who *do* experience nuisance, and the whole population that isn't bothered by the cause of the nuisance to the extent that they experience nuisance is left out. In addition, the reports are anonymous, so even when there are many reports, there might be a very small group of people that is very active in filing the nuisance reports.

To verify the outcomes of the analysis, the results have been compared with the outcomes of a survey that the municipality did about summer recreation nuisance among citizens in three areas of interest, that overlap with the areas of interest of this thesis. On the one hand, the survey has been used to review if there are additional categories of nuisances that did not come forward from the analysis of the SIA-data. On the other hand, the survey has been used to collect ideas from residents about potential solutions.

DATA PREPARATION

As the reports have been analysed by hand, the total of 42878 reports over 2019 and 2020 was too much for the scope of the thesis. Because of the different situations due to COVID-19, only 2020 has been analysed. Still, far not all reports would be relevant to the study. Therefore, before the content analysis took place, the amount of SIA reports was further reduced in two steps. First, a selection has been made based on the relevance of the generated categories of the SIA-algorithm, and secondly, a selection has been made based on geographical proximity to urban green-blue open spaces.

SELECTION: CONTENT RELEVANCE

A selection of relevant SIA-categories has been made using the categorisations made by the SIA algorithm. Because there is no category called 'Summer Recreation', I went through the first 25 reports of each category and subcategory. The question that needed to be answered was: could this (sub) category contain relevant information about summer recreation? As there was no clear definition of summer recreation yet during this process as that is part of the study, the selection has been made generously. An overview of all and the used categories is provided in appendix A. This resulted in a selection of 7.250 reports for 2020.

SELECTION: SPATIAL PROXIMITY

From the density map that has been created with the SIA-reports that were selected on potentially relevant categories, it becomes clear that there is already some clustering around water bodies and green areas (Figure M1), but that there are also still quite some areas that are not relevant for the scope of the thesis. The spatial selection of the reports is based on their location in urban green-blue open spaces. There are three elements to this demarcation: urban - this one speaks for itself - , green-blue, and open space.

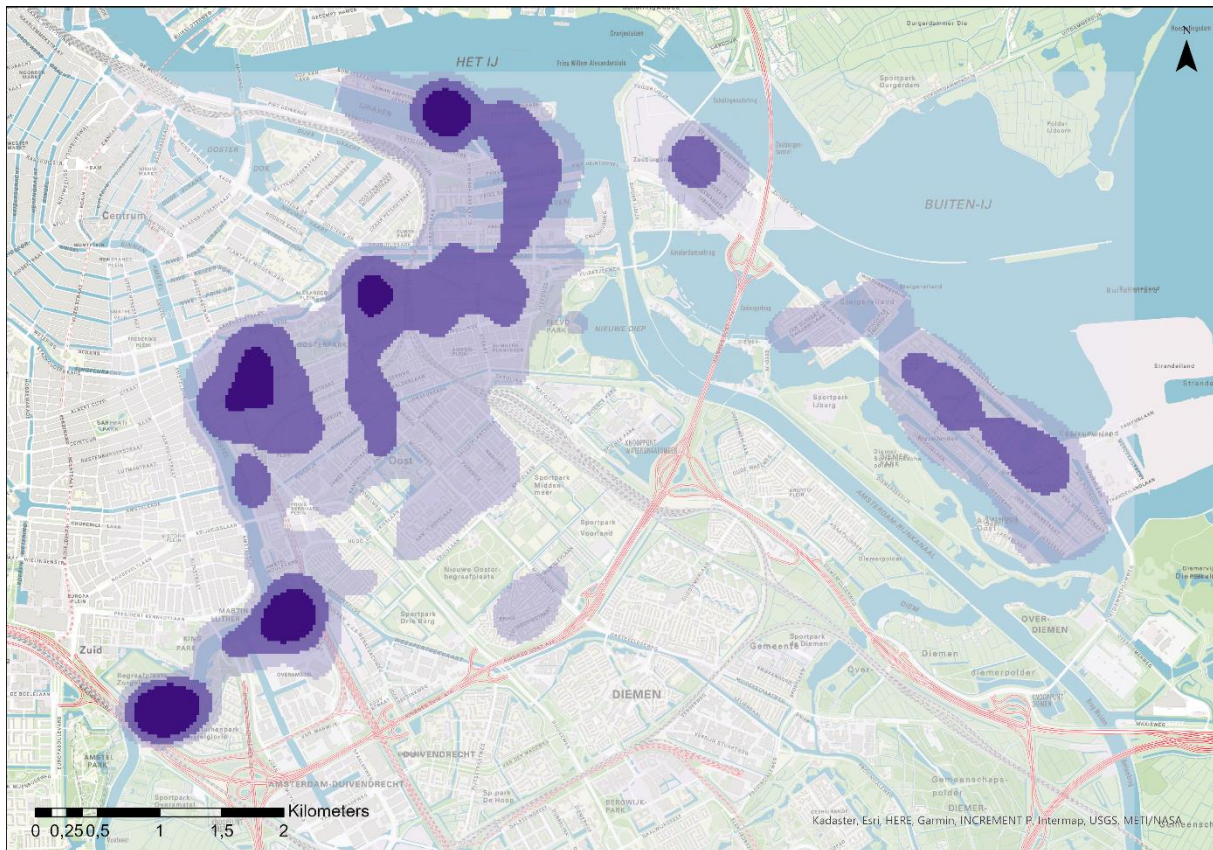


Figure M1: A density map of the SIA-reports after the first selection based on the potential content relevance

Both green and blue infrastructures in cities are natural elements. Green infrastructures are for example parks, and blue infrastructures are water elements. Both can be designed with a specific purpose in mind, for example; climate change adaptation infrastructures that provide shadow and rain water storage, for biodiversity, or for aesthetic purpose. Green-blue infrastructures are the intersection of natural land and water infrastructures, such as quay walls, piers, or water stairs.

Open space is a sub category of public space. Public space has several definitions, it can for example be openly accessible space, or space that is owned by public bodies. What defines open space is that there is no designated use for the space. For example, a parking spot is public space, but has a very clear goal: to park a car. This is similar for roads and side walks. Open spaces are for example, squares, lawns in parks, or beaches. Citizens can give their own meaning and use to such a space.

Because of the combination of these three definitions, parks, green-blue infrastructures outside the city, or areas that have a specific function for recreation such as the swimming beaches near IJburg, for example, swimming pools) are not included.

The amount of reports has further been reduced selecting the areas where there was a high density of reports and access to water. In figure M2, a hand-drawn selection around these locations of interest is shown. This

selection is also based on the areas of interest for the internship at the municipality. Based on these locations a selection of the SIA-data has been made using the clip tool, resulting in 1365 unique reports to analyse in Atlas.ti.

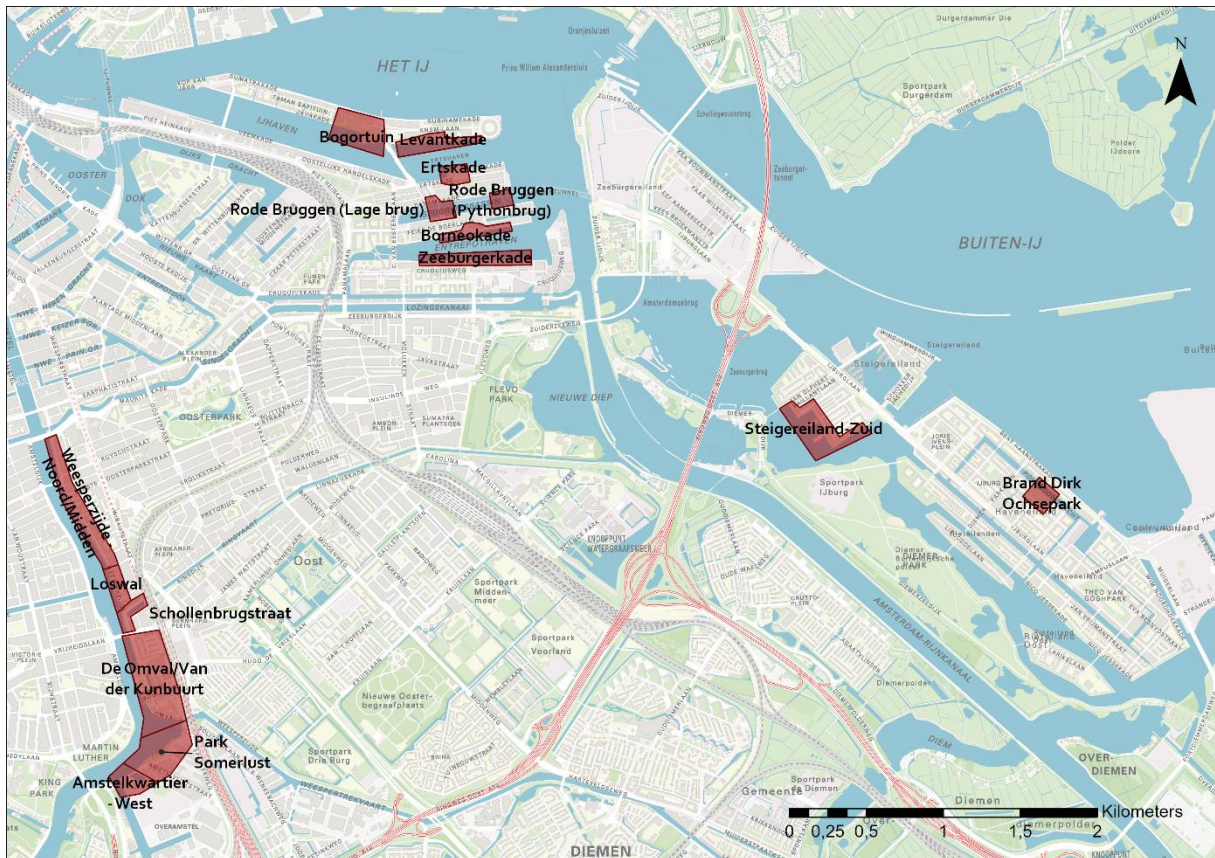


Figure M1: In red are the location polygons that have been used to make a spatial selection of the SIA-data.

ANALYSIS METHODS

In the introduction, four subquestions have been stated. In this section is explained how the subquestions have been operationalised.

LOCATIONS

To analyse the physical locations, the amount of reports per location have been plotted on a map proportionally. For one location, the Bogortuin, the physical composition has been analysed by a site visit and a visualisation of the physical components that are present in the Bogortuin has been made.

CODING THE REPORTS

To code the reports in Atlas.ti, a preliminary code list has been created by going through ca. 50 reports of different locations. Using this list as a basis, all reports have been coded by hand, creating additional codes along the way. One report, or document in Atlas.ti, can contain multiple codes, so in total there can be more reported forms of nuisance than there are nuisance reports. For example, the report SIA-543141: *“Loud young people in Somerlust park cause nuisance with amplified music”*, has been coded with both ‘Group(s) of young people’ and ‘Noise from land’.

After coding all reports, some more general categories could be formed by merging similar codes. The main code groups contain information on report background details, the occurrence of groups, the nuisance

experience, interventions, and incidents. If codes did have less than 10 quotes, they have been coded as incidents. The complete code list can be found in Appendix B.

Some codes have been excluded afterwards because they don't fit within the scope of the research. For example, nuisance of restaurants and cafés does not originate from open public space, so these reports have been dismissed. In addition, nuisance because of pleasure boating that is passing along has not been taken into account. The main reason for this, is that the nuisance is not bound to the green-blue open spaces, and because there is already policy implemented to reduce the amount of nuisance from boats, such as a passenger limit of 13 people and a ban on amplified music in the city centre.

NUISANCE OBSERVATIONS AND EVALUATIONS

There are two research questions about the information that citizens report on their nuisance experience in the context of summer recreation in urban green-blue open spaces in Amsterdam East: to identify the causes and impacts of summer recreation nuisance, and to characterize these nuisance experiences into the different nuisance classifications provided in the theory.

To answer the first question, the codes containing information on the nuisance experience have been split up in observations and evaluations. To find out how the evaluations relate to the observations, a co-occurrence table has been made in Atlas.ti. The observations describe situations like “there is...”, “people are...”, “I see...” followed by an objective statement about behaviour or a situation. For example, “There are four boats anchored in the water in front of Park Somerlust”.

The evaluations are a bit less obvious. As there is no hard definition of when sound becomes noise – this is an individual threshold and has therefore been coded as subjective. This is also clear for the code ‘impact on the liveability’. Pollution is often described as ‘there is a lot of litter’. Although one could objectively state that there is litter, it is subjective *how much* is a lot. As it is often combined with statements that like ‘it is smelly’, these have been coded as subjective as well. This is similar for public urination; one could objectively count the amount of people ‘doing it’ in the bushes, but it is the evaluations like ‘it is gross’ that makes it subjective.

CLASSIFYING THE EXPERIENCED NUISANCE

For the second question, the character of the experienced nuisance – both the observations and the evaluation – is analysed based on the literature on nuisance classifications. Because summer recreation takes place in public space, this classification has been dismissed. The other categories have been operationalised by formulating the following questions:

- **Physical – social:**
 - o Is the result of the behaviour causing the nuisance physical or social?
- **Criminal conduct:**
 - o Is the behaviour causing the nuisance legal?
- **Direct – indirect victimhood:**
 - o Is the behaviour causing the nuisance aimed directly at a person or group?
- **Time & frequency:**
 - o When is the nuisance experienced, during the day, the week, and the year?
- **Subjective – objective**
 - o Is the result of the nuisance measurable by any form of counting?

INTERVENTIONS

The analysis on the interventions is based on a review of the implemented measures that the municipality took during the summer of 2020. An overview of the implemented measures has been composed through a

site visit with the internship supervisor. The evaluations of these interventions have been collected from the contents of the reports and the survey, and if available they are supported by data on the amount of reported nuisance experiences. The list with interventions is further complemented with potential interventions that come from the reports and the survey as well.

After all the implemented and desired interventions have further been analysed by classifying them into the four levels of preventive interventions from Pleysier & DeKlerck (2006). The following questions have been used:

- **Curative:**
 - o Does the measure take place after the damage has been done?
 - o Does the measure deal with 'repairs' or 'punishment'?
- **Specific prevention:**
 - o Does the measure communicate the rules regarding specific problems in any form?
 - o Is the measure any form of supervision or surveillance?
- **General prevention:**
 - o Does the measure deal with site-specific prevention through spatial or physical design changes?
- **Fundamental prevention:**
 - o Is it a policy?
 - o Does the measure deal with community/city wide problems?
 - o Is it not specifically about this problem, but can have a positive side effect on the problem?

RESULTS

To answer the main research question, how can we better understand nuisance problems in relation to citizen reporting on nuisance experiences and interventions in the context summer recreation in urban green-blue open spaces in Amsterdam East, four sub questions are answered in this chapter. First, the locations that have been used in the selection are discussed to see where nuisance problems are taking place. Then, the nuisance experience is defined with the observations and evaluations from the reports on nuisance causes. Thirdly, the summer recreation nuisance is characterized using the nuisance classifications. Finally, an overview of the evaluated and proposed interventions is provided, structured by the four preventive intervention levels.

LOCATIONS

The nuisance locations that have been analysed can be grouped in three zones: the Oostelijk Havengebied, the Amstel river Area, and IJburg. The amount of reports analysed per location have been plotted with proportionally sized dots on a map (Figure R1).

There are some locations where there are little nuisance reports, for example on IJburg, the Amstel-Kwartierwest, the Schollenbrugstraat, the Zeeburgerkade and the Python and Panama bridge. Here some nuisance is experienced and reported, but in all these locations there are less than 50 reports. In the middle category, which contains three quays in the Oostelijk Havengebied - the Levantkade, the Ertskade, the Borneokade – and the Weesperzijde Loswal and De Omval, the amount of nuisance reports ranges between 75-100 reports per location.

There are two locations that are clearly larger than the others: the Bogortuin and Park Somerlust. In these areas respectively 287 and 328 nuisance reports have been filed during the summer recreation season of 2020. In physical composition, the largest nuisance reporting locations do also look the most alike; they are quite young neighbourhoods, that have been constructed respectively since the 1990's and since the 2010's (Gemeente Amsterdam, n.d.-a), and there is a relatively large amount of owner-occupied houses (Gemeente Amsterdam, n.d.-b). As an example, the Bogortuin has been further elaborated on.

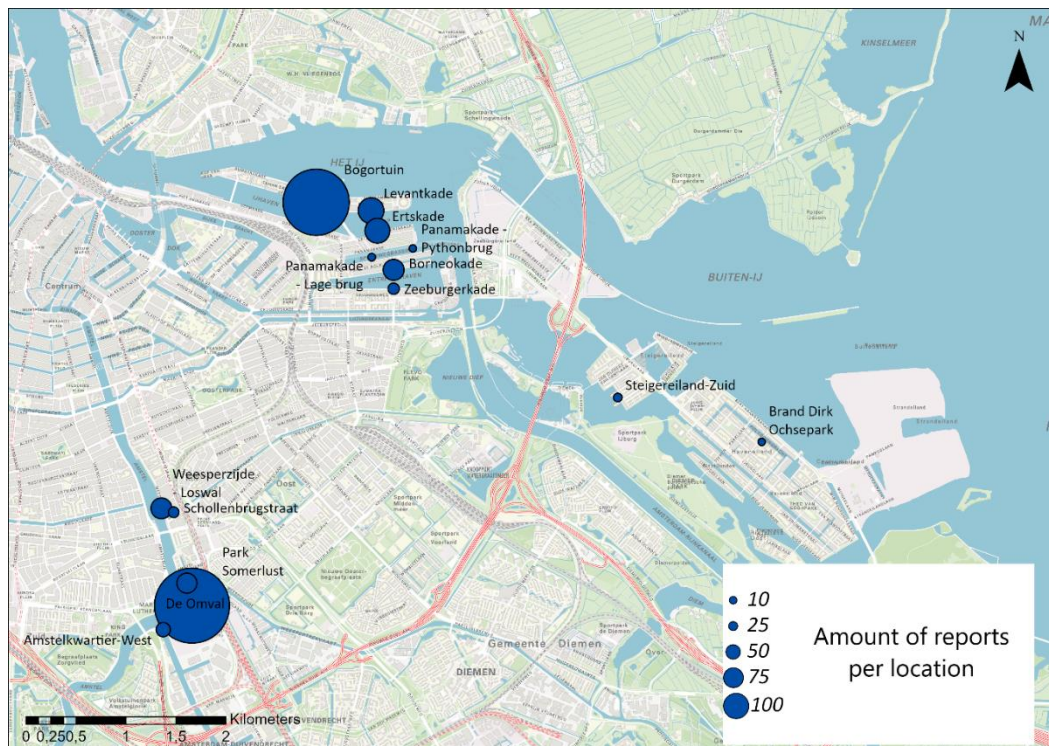


Figure R1: The amount of reports per location have been plotted proportionally.

BOGORTUIN

The entrance of the neighbourhood for pedestrians and cyclists is guided by a double row of trees, that separate the waterfront with the footpath from the back of the garden with the bike lane (Figure R2-1). In the back part, there is also a day care facility and a play area for young children (Figure R2-2). Between the bike path and the double row of trees there is a baseball court (Figure R2-3).

In the part of the garden that is near the water side, there is a footpath with benches and fixed trash bins in front of the double tree row (Figure R2-4). Between this path and the water there is a large lawn, this is the location where most of the summer recreation takes place (Figure R2-5). Here, the waterside is a hard quay wall, with regular safety ladders that are often used to climb in/out of the water (Figure R2-6). A bit further away from the quay wall in the water, there are some mooring posts (Figure R2-7).

The quay wall is interrupted by a parking garage that is covered with grass and bordering the water with a 'waterstoep' (water stairs) - this is not supposed to be an access to the water for swimming, but as a pretty landscaping feature (Figure R2-8). The Bogortuin is orientated on the southwest, which makes it a very suitable for recreation, as there is sun on the lawn and above the parking garage until very late.



Figure R2: An overview of the physical composition of the Bogortuin. Pictures made by author, 3D model: 3d.amsterdam.nl

NUISANCE EXPERIENCES

The nuisance experiences that have been stated in the reports have been analysed in two ways. This chapter shows the different phenomena that causes and impacts of summer recreation nuisance and the relationships between those causes and impacts. A complete table of the analysis with per code the count and the observation/evaluation status can be found in Appendix C.

OBSERVATIONS

From the observations in the 1365 analysed nuisance reports, a picture can be build about what causes summer recreation nuisances according to the reporters. In total, there are 866 separate descriptions of types of behaviour or situations. The observations describe recreation itself as lingering in public space: to sit, sunbathe, relax, hang out or lounge, listen to music, to have a picnic, or drinks. However, only a small part of the observations are about recreation on its own (Figure R3).

When recreation takes place on land – on quays walls and green areas besides water – it can go accompanied with barbecuing or open fires, or by sports and games such as football and basketball, and there are observations of alcohol and substance use. There are also observations about actions in or around water: some nuisance is caused by swimming and water sports such as canoeing and stand-up-paddling, and there is a separate category for jumping of bridges, which is mostly done by youngsters.

Although this research does not focus on pleasure boating, some observations about boats do come forward from the reports. First, boats and other objects use the quay walls of the study areas as docking locations for example to pick up people or to provide for a (public) sanitary pit stop. Second, there are reports about boats going faster than appropriate, causing dangerous situations for swimmers and others on the water. Finally, the largest fraction of the observations in the report are about boats that were moored or anchored in the water within the study locations.

Besides a description of actions or situations that cause nuisance, the reports also give indications for ‘when’ and ‘who’. One of the bigger category of observations that comes forward from the reports is that recreation is problematic at night times: reporters state that it already past a certain time, often after 2200 o’clock or after midnight, and there are still people outside recreating. Regarding the ‘who’ part, in 24.1% of the observations mention the presence of groups. In 17.9% of the observations, they even specifically describe groups of young people, ranging from school kids to teenagers to students.

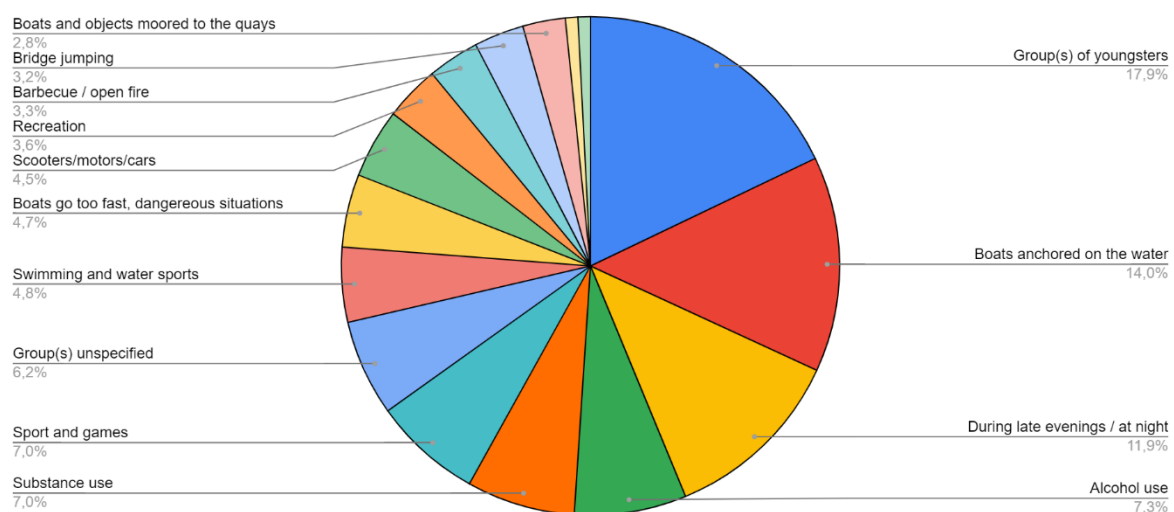


Figure R3: The percentage of reported types of experienced nuisance. Without label are bike parking (yellow) and dealers (green).

EVALUATION

Whether the threshold to experience nuisance is exceeded, depends on how an individual evaluates their observations. It is these evaluations in the reports that provide insight in why and how summer recreation is experienced as nuisance. The evaluations from the reports can be grouped in three main categories: noise nuisance, pollution, and general decline of the liveability.

With 571 reports, the largest amount of evaluations are about noise nuisance. The reports on noise describe both amplified music and people being loud by screaming, shouting or singing as sources of the problems. This behaviour comes both from people recreating on land as well as from boats that are anchored or moored in the study areas.

Pollution is in the first place about a lack of waste capacity. This has the effect that the bins are full and flowing over, and people place their waste next to the bins. People also leave litter lying around on the grass. The trash lying around and besides the bins attracts vermin; rats and seagulls tear bags and waste apart and spread litter, which is often reinforced by the wind that blows waste in the open water. Another separate type of pollution that is described in the reports is public urination, defecation and vomiting.

SIA-520676: The Bogorttuin on Java Island is a waste mountain. Yesterday the weather was nice, until late at night there were recreants. This morning during a walk I see what this has brought the residents: a large mess of glass and plastic bottles, cans and crisp bags. It's outrageous.

Finally, the reports on liveability are very personal evaluations of the situations. The descriptions show that the people who report nuisance feel that they that the atmosphere is like it would be in a recreation facility or like a festival, with parties and crowds. Some reports show that people find the hustle and bustle in itself annoying or restless. Other impacts on the quality of life that are described in the reports are feeling unsafe due to the presence of large groups of (drunk) people or dealers, and the disturbance of night rest and a lack of sleep.

SIA-534317: Constant noise from yelling and blaring [...] This goes on all day long. When the weather is good, sitting on the balcony is no longer an option for us due to the persistent nuisance causing behavior of mainly drunk recreants. As if we always live near a festival site when the weather is nice. Residents in this neighborhood are not taken into account at all. It can even be heard inside our house these days. Let the enforcers take action against these mostly drunk people.

SIA-614622: In recent years, the area in and around the Weesperhaven has turned into an 'amusement park' that causes nuisance to residents. There is (often in groups) water sports (supping, canoeing, rowing, swimming) having a drink, eating and celebrating. Besides boat rental from Mokumboot, there is now also a lot of commercial activity on the other side of the Ringvaart. One group follows another. Large sloops sail to and fro with ever-changing guests. The (water) fun is accompanied by yelling, also at night. The pizzeria Pizza Heart (Schollenbrugstr 8-9) provides pizzas to the visitors of this 'amusement park' and the empty pizza boxes and other litter are regularly left behind. Public toilets also pollute the quays. At the pizzeria there is also a coming and going of noisy pizza mopeds and noisy terrace visitors. In addition to the nuisance for many years, there is now also concern regarding corona. The 1.5 m distance is not respected. The increased crowds also lead to parking problems for residents.

In some of the reports, both the observation and the evaluation are described. A co-occurrence table has been generated to provide insight in how the actions and situations described in the observations relate to the evaluations, and for every code the co-occurring codes have been noted (Appendix C).

As there are 321 descriptions of noise annoyance on land, noise relates to most of the observations. When the noise annoyance is caused by people recreating on land, it correlates most strongly with nightly nuisance and groups of youngsters, but also with alcohol and substance use, and sports.

NUISANCE VERIFICATION - SURVEYS

To verify the observations and evaluations that came out of the analysis of the reports, a comparison with the survey has been made. In general, there is quite some overlap between the experienced nuisance in the reports and in the survey. There are two observations that differentiate: in the reports, nuisance because of bike parking, blocking entryways and side walks, and drugs dealers, often in the temporary toilets, are both only mentioned seven times, so they were originally coded as incidents. However, in the survey these codes come forward respectively 28 and 17 times on a total of 198 reported types of experienced nuisances.

BOZ-R0ceae4f0: "With regard to bicycles, it is not necessarily about traffic, but about the quantities of bicycles that are parked up to the street. I can hardly get by myself by car, I can no longer reach my own bicycle. But worse: an ambulance would no longer be able to get through."

As an additional question in the survey among people living in the Bogortuin, Weesperzijde and Somerlust was asked how summer recreation impacts their living situation. From the 451 coded open answers, 12% of the respondents stated that summer recreation does not have a negative impact on their living situation – there are even people for whom it makes their environment more attractive. That means that 88% of the respondents do experience a negative impact in various ways (Table R1) – sometimes even to the extent that they consider moving to another place.

Table R1: One question from the survey inquired the impact that summer recreation has on the living situation of the respondents. The codings of the open answers can be categorised in evaluations of the environment, impact on the living situation, coping behaviour and respondents with a neutral or positive attitude towards summer recreation.

Evaluation environment	Count	Impact on living situation	Count	Coping behaviour	Count	Neutral / Positive	Count
Pollution and/or degradation of public space	51	Trouble sleeping	61	No longer making use of public space (too crowded)	50	Little or no impact through recreation	25
It's unsafe	28	Motivation to move houses	23	Keeping the windows closed, no use of the balcony	48	Positive	8
Unliveable	21	Children can't play outside	12	No more sitting outside	19	Daytime is okay	5
Unpleasant atmosphere	18	Sound nuisance	9	Not at home in nice weather	10		
Passage is blocked	16	Not feeling at home in your own neighbourhood	7	Avoid: walking/cycling	9		
Bicycle parking	13	Problems with working from home	4				
Poorer air quality	6	Can not walk the dog here (safely) anymore	3				

DIFFERENT TYPES OF NUISANCE

In the selection of reports, two other types of reports that overlap with the reports on summer recreation have been found; reports on loiterers or youth nuisance, and reports on people that violated the gathering restrictions because of the COVID pandemic.

It is difficult distinguishing between loitering youth and summer recreation nuisances, as people use the term 'youngster' for anyone between roughly 13 and 30. Sometimes it becomes really clear in the report, as people more elaborately describe the situation or use the word 'hangjongeren'. This code often co-occurs in combination with substance use (smoking weed/hash, laughing gas), scooters nuisance, leaving rubbish behind, nightly nuisance, and sports - which causes a lot of noise because of the bouncing balls against the sports cages. The clearest way to make a distinction is that the report on loitering youth nuisance often refers to the same group of people returning to the same locations on a regular basis, while the people involved in recreation vary.

The SIA-reports on the COVID-19 gathering restrictions mostly have been filed in the spring, when the restrictions were at their heaviest. However, there are also reports filed later in August. In these reports the mentioning of COVID weighs more heavily as a motivation for law enforcement than nuisance so it is used to direct extra attention of law enforcement resources. In general, reports on COVID-19 gatherings co-occur with groups, crowdedness, and sometimes provide a description of recreation

CLASSIFICATION OF NUISANCE EXPERIENCES

To get some more insight on the nuisance problem, the experiences that have been described have been classified according to the five classifications provided in the theoretical framework. In Appendix D a full table with the classification of every type of nuisance can be found.

PHYSICAL – SOCIAL

In general, there is quite a clear distinction between social and physical sources of nuisance. The majority of recreation nuisance is social nuisance, because of noise annoyance: shouting, singing, music, and sports. Other forms of social nuisance are the stress experienced because of the atmosphere and crowdedness, and feeling unsafe when addressing nuisance issues with recreants.

The physical nuisance usually follows the social nuisances a bit later: trash and pollution is the biggest physical category. From the survey came forward that people also experience accessibility problems because of parked bikes, this is also a physical nuisance.

There was one exception where it was difficult to distinguish the physical-social character: public urination. Both the act and the result can be nuisances: the act is a social nuisance as it is unfit behaviour, whereas the product is a physical one – smell and pollution.

DIRECT – INDIRECT VICTIMHOOD

The answer to the question if the source of the summer recreation nuisance is directly aimed at the people who experience the nuisance is a clear no: the causes of summer recreation nuisance are not directly aimed at the individuals that experience the nuisance – there is no direct victim.

There are two exceptions: sometimes when people address others, for example because they are very noisy, and they get a (verbally) aggressive reaction, that reaction has direct victims. The other case relates to the driving fast and causing dangerous situations on the water. In this case, it depends on the person reporting; is that the one who is in the dangerous situation, then there is a direct aim towards the victim, or is it observed by someone that is stressed out by this behaviour and decides to make a report about it.

CRIMINAL CONDUCT

The behaviour that is central to summer recreation (as described in 'experience – observation': being in a public place, relaxing, sunbathing, picnicking, etc) is *not* illegal, even if it's noisy or late at night. But behaviour accompanying this might be: public urination is forbidden in the build environment, drugs are illegal depending on the Algemene Plaatselijke Verordening (APV). In Amsterdam, it is not allowed to possess or use hard drugs in

public, but soft drugs are allowed. Dealing substances is, of course, always illegal. Public alcohol use can be illegal depending in the APV as well, but in all locations in this research, public alcohol consumption is allowed.

There is a difference between official swimming locations – these have opening hours, sometimes lifeguards, and frequent water quality checks. There are also places where it is forbidden to swim, such as harbours, because safety reasons as there is a lot of transportation over water which causes dangerous situations. Bridge jumping has been forbidden for similar reasons. There are also locations where swimming is tolerated but not strictly legal, sometimes in Dutch called ‘Wildzwemlocaties’. None of the locations in the study is an official swimming locations, so strictly speaking swimming is illegal in all of them.

Noise annoyance is a complicated one: noisy machines are mentioned in the APV, however, the question is whether transportable music carriers are noisy machines. In addition, law enforcement has to prove the source of the music/noise that causes nuisance. That is quite complicated when the problem is not one soundbox but the aggregation of noise of a lot of people with soundboxes (direct communication)

TIME & FREQUENCY

There are clear patterns in the timing and the frequency of when the nuisance complaints have been filed. First in time: most complaint reports are filed during the afternoon and evening hours. These are the social nuisance complaints, describing noise nuisance and the presence of groups. Reports about pollution are filed in the morning, reporting the aftermath of the previous day. After 2300 o’clock, the municipal law enforcers retire for the day, and the police takes over. In areas where there is a lot of nuisance, this is also communicated to the complainers; they know they have to call the police later on the evening / at night. This explains why there are little reports filed in the middle of the night (Figure R4).]

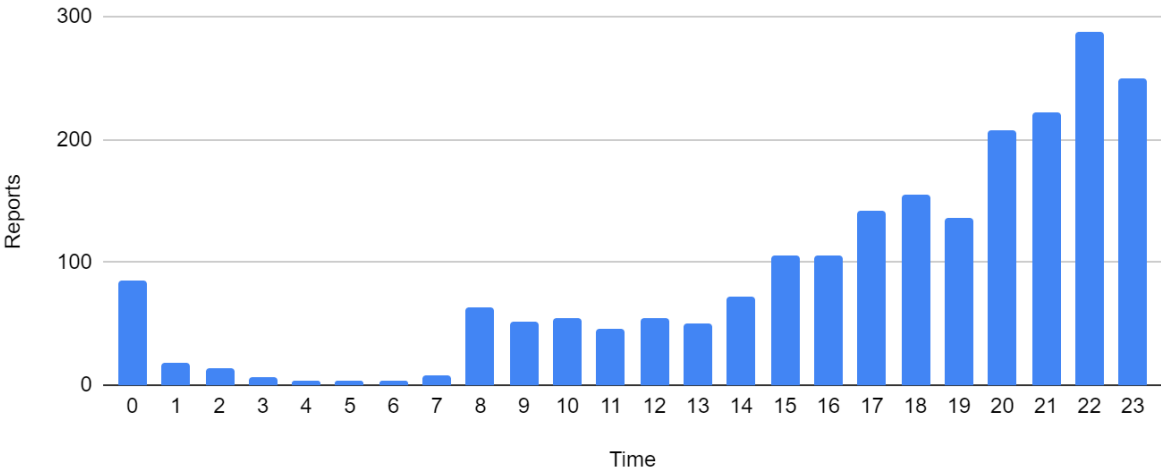


Figure R4: The amount of reports filed per hour

With regards to the frequency patterns , these are influenced by the day of the week, school vacations and national holidays. As can be seen in figure R5 – the amount of nuisance reports is higher on Thursdays, Fridays and Saturdays. It is likely that on these days more nuisance is experienced because on Fridays and Saturdays follows a weekend-day. The same counts for some Thursdays in spring, that are part of bank holiday weekends. Although the perspective of the recreant has not been taken into account during the research, one can imagine that it is nice to have a day off after drinking and partying until late.

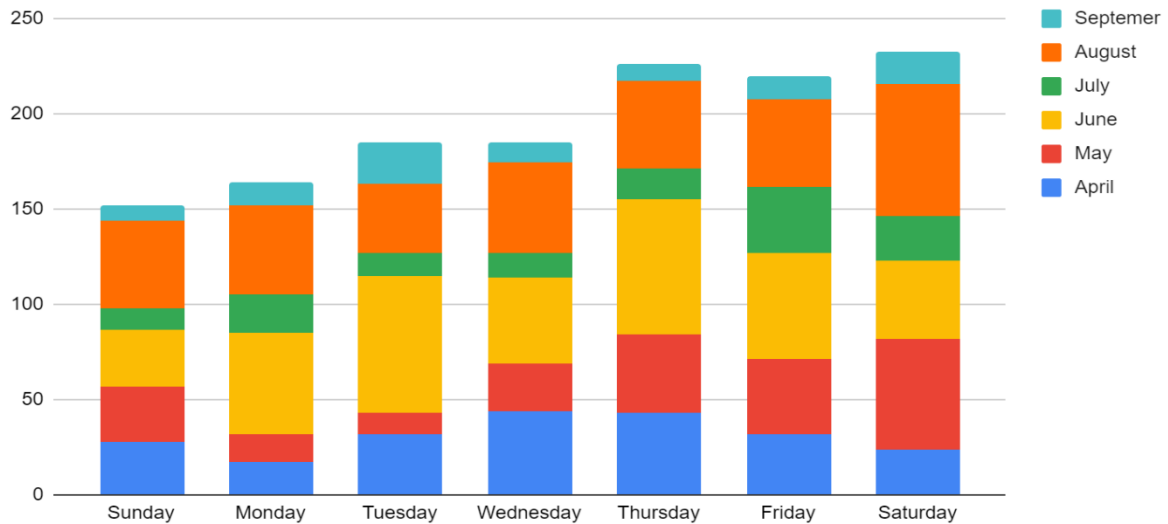


Figure R5: The amount of reports filed per day and per month

In addition, the weather has a great influence. This can be seen in figure R6; when the temperature rises, this is followed by an increase of the amount of reported nuisance. It also shows that when there is a rainy period, the nuisance is almost immediately reduced, for example in early July and early September. The lower levels of nuisance reported in September are by the end of the summer vacation and habituation to good weather.

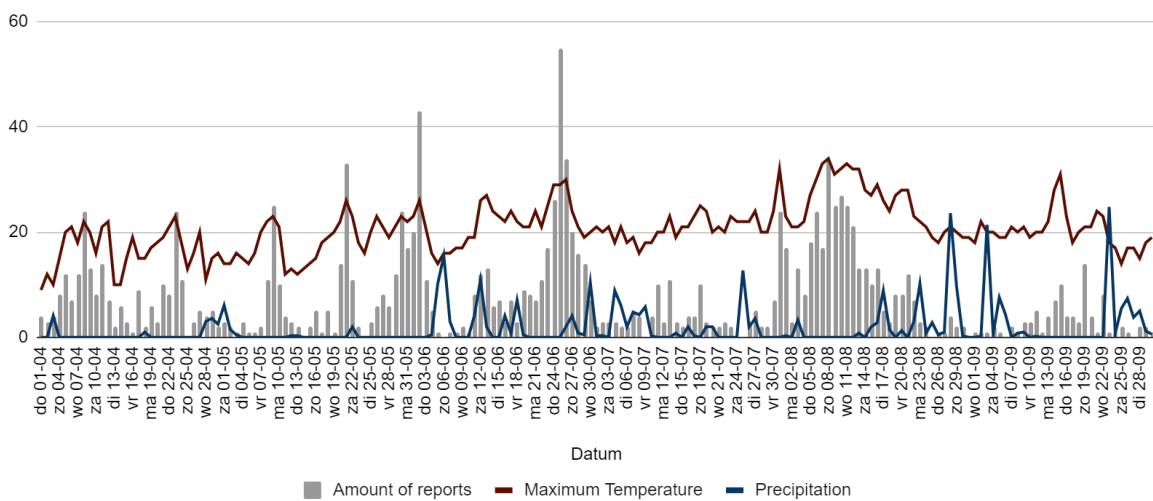


Figure R6: The amount of reports (in gray), plotted against the maximum temperature (red) and precipitation (blue). When the temperature rises and it is dry, the amount of nuisance reports rises as well.

SUBJECTIVITY – OBJECTIVITY

The majority of the causes of summer recreation nuisance that have been reported, can be objectively measured. For example, the amount of moored or anchored boats can be counted easily, and the same goes for kids jumping of bridges. This does also make sense; make a distinguishment in the nuisance experience between the observation and the evaluation, the same consideration has been made as for this category.

One difference is that in the experience process, the objectivity is measured from the observation of the citizen filing the report. From a public management perspective, other observation methods can be available. For example; when a citizen there is a difference between an observation of alcohol use and drunkenness. But when the observation is done by the policy, they can verify alcohol use with a breathalyzer. From a research perspective, there are even more possibilities to make observations, especially with the advancements that have been made in sensing and surveillance technologies.

INTERVENTIONS

After the first three sub questions have been answered, we now know where summer recreation takes place and what the cause and impact from nuisance experiences is. During the summer of 2020, several measures have been taken by the municipality to reduce the amount of people gathering in large groups because of COVID-19 limitations. This chapter looks into the question what citizens report on the evaluation of implemented interventions and other desired interventions. A table with all interventions in the reports and surveys per level of preventive intervention can be found in Appendix D.

CURATIVE INTERVENTIONS

Curative interventions take place after the damage has been done – through law enforcement and by repairing the physical damage. Of course, there is always the standard regulations and cleaning and recycling services. Regarding the cleaning services as they are, some suggest to carry out the cleaning at night; that way, the litter has less time to be spread through the wind or by vermin. Other ‘repair’ proposals that have been made are to more frequently remove incorrect parked bikes, and to clean the shrubs and the grass areas.

In the Netherlands, there is a difference between municipal law enforcers, called or Buitengewoon opsporings ambtenaren (BOA) or handhavers, and the National Police. The biggest evaluation point that comes forward from both the nuisance reports and the survey on the law enforcement part is that the policy and the municipal law enforcers are not present when the nuisance is happening. As the majority of the summer recreation nuisance is social, being present is key for all types of law enforcement. For this reason, a more direct line with than the SIA system is desired by some respondents.

SIA-571085: *“There is regular noise nuisance from music from boats on the Amstel. I would like to know how I can reach the relevant enforcement by telephone. 14020 [general phone number of the municipality of Amsterdam, ed.] makes no sense as it is closed after 6 pm, weekends and holidays.*”

In addition, when law enforcers are present, they don’t always have the means to act upon the scale of the problems, or don’t write fines. For example, if there is just two municipal law enforcers and there are more than a hundred people, they won’t be very effective. Furthermore, the police and handhaving only have jurisdiction to work on land, so a form of law enforcement on the water is also desired in both the nuisance reports and the survey as well.

SIA-551174: *“In the past we have had very appropriate consultations with the police, the district council and the waterways department. The cluster of complaints that we presented there was clear but invalid in the protocols. We had to report. So again: The crowds of people were overflowing on the Loswal this week. “The tolerated natural bath Weesperzijde” had once again taken on dangerous proportions. As a resident you suddenly live in a kind of football stadium full of drunk people. I ran into two helpless enforcers this week. They stood still and did nothing. I spoke to them and they asked me nervously, ‘But don’t you experience nuisance then’. It is difficult to perform if you’re unarmed and maybe you can’t swim yourself I guess. They said that ‘water management’ did nothing and that there were many ‘docking boat’ violations.”*

In May, the Bogortuin, Park Somerlust and the Weesperzijde-Loswal have all been evacuated at least once because they were too crowded according to the then existing covid-regulations and a safe distance between

people could not be guaranteed. In the reports, these actions are seen as highly effective, as the social nuisance is directly dissolved. Other times, individuals or smaller groups have been send off by the police, municipal law enforcement, or youth workers. This is less effective; some nuisance reports state that usually people return or are replaced by other groups, and the nuisance resumes.

SIA-515593: The Loswal and the green strip are again fully loaded with people who do not keep their distance. Please send law enforcement to evacuate the area, and enforce it again one hour after. They are all back within half an hour, it was like that a few days ago as well.

Later in the season, restrictions have been implemented on the Weesperzijde-Loswal and Park Somerlust to prevent boats from anchoring and docking in these areas (twitter Gemeente Amsterdam, Parool). Boat drivers could get a fine if they cross these areas that were lined off with buoy lines. This has had a very positive reception in the survey, because it diminishes the amount of noise through music from the water a lot in Park Somerlust, and there is less public urination near the Weesperzijde-Loswal.

BOZ- R69fa249a: The anchoring ban is many times more effective than all other measures combined. The park was suddenly a normal, pleasant and safe place again. That should absolutely be maintained. It's a difference of day and night.

Other suggestions are to establish or specifically improve the law enforcement on – appearance in order of size – alcohol and substance use, amplified music, littering, swimming, recreation, unleashed dogs, scooters, and food deliveries. Also mentioned is a complete ban on barbecuing. This has been partially implemented in the Bogortuin and Park Somerlust, as zoning has been applied to where you are allowed to barbecue, and signs show that barbecuing outside these zones can be fined with €140 (Figure R7). A critique on the zoning of barbecuing is that it is not always clear how the zoning works, and people do barbecue outside the designated zone.



Figure R7: At the Bogortuin, restrictive zoning has been implemented to reduce the area where people are allowed to barbecue. A sign (left) communicates the fine of €140, and special pavement indicates where you are allowed to barbecue.

SPECIFIC INTERVENTIONS

Specific prevention works by implementing interventions that operate through supervision and by communicating rules and regulations. One of the implemented interventions in this category was the presence of stewards or hosts for crowd control, when the temperature reached higher than 20°C. During the summer of 2020, this has been done at the Bogortuin and Park Somerlust to prevent the areas from getting to crowded and becoming a public health hazard because of the spread of COVID-19.

The effectiveness of this intervention is not directly visible in the nuisance experience data. However, when analysing the content of the reports, it becomes clear that the hosts are appreciated. On June 5th the temperature was above 20°C but there was no crowd control present at the Bogortuin, which was immediately noted:

SIA-520546: "Highly skilled crowd managers were on hand over the weekend to ensure everything went smoothly. Yesterday they were not there and immediately it was party time again, via social media it was immediately announced that the park was 'free' again and we had noise pollution until the night and the police had to come again to clear the field. Please continue crowd managers above 20 degrees, otherwise we will keep this all summer. Thanks!"

The lack of direct visibility of the presence of the crowd control in the nuisance experience data can be explained because they have a *preventive* function – the hosts can control the access of the area, but they have no authority to write out fines for violations such as public urination, littering and amplified music. Furthermore, the analysis of the nuisance experience showed that a major part of the nuisance is caused during evenings and at night. In 2020, the stewards were only present during the day. Presence until later at night is often proposed in the reports and the survey.

In several locations, signs have been installed that point out desired behaviour at the locations, and sometimes the local bans as well (Figure R8). Although a sign might seem a small gesture, for local residents it is a way of support as they address people that cause nuisance on their behaviour, which can be successful. On the other hand, locals also interpretate the behaviour suggestions as fixed rules; if a sign states that is should be quiet at 22.00 o'clock, then after that moment they have a right to a municipal law enforcer to reinforce that the area is quiet.



Figure R8: An overview of the different signs that the municipality has provided in or near recreation locations. Photos by author.

SIA-505802: There is a large group of young people noisily playing soccer at 10:40 PM. Can't there be a sign with agreements about until what time the field can be used /an appointment for silence after 10 p.m.?

Another proposed intervention in the survey is to close off the areas at night, so that the night rest can be guaranteed. This is specific prevention, because if the access to the area should be managed, this needs to be done with a sort of supervision. For example, if the football or sports cages were to be closed at night, there needs to be someone responsible for making sure the area is evacuated, closed off, and opened again in the morning. Other measures that fall in this category are a visitor limit, a (paid) admission ticket, and to close off the area just for local residents.

Technical surveillance methods have been mentioned less in both the survey and the reports. Two of these kind of interventions have been proposed. One proposal is a camera on the bicycle path that can be used to fine scooters that make use of these paths while they are supposed to take the road for cars. The other proposal is to install sound sensors in the recreation areas that are linked to the control rooms of the law enforcement. If there is too much noise, an sign will go off to alarm the law enforcement to send people over to the area.

GENERAL INTERVENTIONS

When the COVID-19 pandemic started, people were supposed to stay at home as much as possible. For that reason, initially general interventions that would normally be taken were not implemented, as there were not supposed to be any people in the recreation hotspots. One of these measures are temporary public toilets, or Dixie's. They were however, sorely missed. When the COVID-regulations were lessened, the toilets did get installed. In the Bogortuin, this lead to a sharp reduction of nuisance complaints about public urination: from 21 reports in May to 3 reports in June.

SIA-492287: "When the weather is good it gets very busy on the lawn around the Bogortuin. In recent years there have always been Dixie's, but probably because of the corona these were not placed. People still have to do their needs. So they do this again in the bushes where children play in the next day (hide and seek). Is it still possible to place or otherwise maintain the Dixie's (WC)?"

The temporary toilets are very successful in preventing public urination. There are also some complaints about the toilets; some people find them ugly and smelly, and others are afraid that by facilitating the toilets a place becomes even more suitable and therefore more attractive for people to recreate. From the survey comes a final remark on the temporary toilets: on the Weesperzijde and in Park Somerlust, people suspect that the toilets are used by drugs dealers, as they are out of sight of the police.

Another measure would be taken in normal situations as well, is an increase of the capacity of the waste bins, either through more and larger bins or containers, or by upping the frequency for collecting waste by the recycling services. However, after the extra bins did get placed, there is no decrease visible in the reports about waste and littering – it even increases. One strong desire that comes forward is a further increase in the waste collection capacity. Other proposal regarding waste are special bins for pizza boxes, and to provide cleaning tools for residents.

SIA-456014: "In the summer there are extra waste bins on the lawn. They haven't been installed this year. Result: a lot of loose litter. Can this be arranged soon please. Thanks."

There have been two measures been implemented for COVID-19 purposes. Circles have been painted on the grass and on the popular piers. However, there is little evaluation of this measure available. Secondly, a temporary fence has placed to be able to supervise the amount of people staying in the Bogortuin and Park Somerlust. When this was positively reviewed in the survey, it was mainly because it made it harder for the recreants to go from the lawn to the bushes and to use these for public urination.

However, it was not welcomed without comments; in the survey, 30 respondents stated that they would like the fences removed and not returned again in the next season. The main argument was that the fence was considered ugly as it detonated with the architectural quality of the area, and it make the area feel like an animal enclosure or a prison. Even in the positive comments about the fence, people stated that they would like a fence that is better integrated in the architectonic character.

BOZ- R6c627a2a: "The fences did help against urinating in public around our building, but I hated the fact that there was suddenly a festival site that was difficult for residents to access. I was glad they were gone. It's not a solution of course..."

There is a whole list of interventions that propose some sort of redesign of public space. The largest category is to improve the facilities for bike parking, by providing other or more locations so that the access to homes is not blocked by bikes. The second largest category in this type of general preventive measures is to reduce the size where people can recreate by reducing the lawns by planting more shrubs and visual green. Less frequent proposed measures are the installations of sprinklers that would go on at night and thereby evict the lawns, and more dramatically the installation of spikes on the bridges to prevent bridge jumping and to place visible rubble in the water to prevent swimming.

There are also proposals for extra services and provisions that serve local residents as well, such as community gardens, a small-scale play facility, a trim facility, a drinking water tap, to do allow barbecuing with fixed barbecue places, and a leased utility buildings with a small catering service that can also take care of toilets, or to actually improve the swimming safety.

FUNDAMENTAL INTERVENTIONS

Fundamental prevention relates to policy and interventions that have a positive effect on the nuisance problem of a specific site, but are not specifically targeting one case. As a complete policy review on recreation did not fit in the scope of the thesis, as the focus is to analyse information that is provided by citizens through nuisance reports or through a survey. Based on the information available, two fundamental prevention strategies have been identified.

A first implemented and still desired measure is that there is no more (positive) publicity on the locations where summer recreation nuisance is experienced. A few years ago, the Bogortuin was promoted as a location for swimming through municipal communication canals. Before, the Bogortuin was mainly used by local residents, but this attracted a big group of people from outside the neighbourhood as well. The current policy on swimming, is that swimming is only allowed on official swimming locations, and no other locations will be communicated by the municipality.

The second fundamental prevention measure proposed by citizens is to create more and other locations for recreation, to spread the pressure and make summer recreation close to home available for everyone. A proposed locations is the Kop van Java, which is suitable because there are no residential buildings and it is sunny during the whole day.

There is another review about fundamental prevention that is not from the citizens, but from conversations that took place with several civil servants during the internship. Currently, the interventions are only implemented as a reaction on nuisance complaints. There is no city wide policy on summer recreation, and seasonal facilities such as temporary toilets and waste bins are financed from a different budget each year.

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

CONCLUSION

As summer recreation in the urban context has become more popular during the last decade, nuisance problems started to rise in several locations as well. This thesis has tried to answer the question:

“How can we better understand nuisance problems in relation to citizen reporting on nuisance experiences and interventions in the context summer recreation in urban green-blue open spaces in Amsterdam East?”

To do so, the individual nuisance experience, nuisance experience classifications and the prevention pyramid have been described in the theoretical framework and combined into one conceptual model, that integrates different aspects of nuisance. To answer the question, nuisance reports that have been filed by citizens have been selected both on content and spatial relevance. As a verification method, a survey from the municipality of Amsterdam on summer recreation has been used.

In total, 1365 reports have been coded in Atlas.Ti. The two largest locations where nuisance is experienced and reported are the Bogortuin and Park Somerlust. There are also a few smaller locations, these are all quay walls: the Levantkade, the Ertskade, the Borneokade, and the Weesperzijde Loswal.

The content of the nuisance reports on the nuisance experience has provided insight in the causes and effects of summer recreation. Summer recreation nuisance is caused by the presence of groups of, often young, people, that cause a lot of noise both from the land and from water; either through being noisy themselves (shouting, yelling, laughing), by playing music, or through activities such as sports and swimming.

It is not necessarily recreation itself that causes the nuisance, but the behaviour that accompanies it and causes noise. A part of the problem is also that people get intoxicated and stay until late at night, disturbing the night rest in the areas. Another effect of recreation that causes nuisance is pollution. There is often a lack of waste capacity, which causes litter to spread. When there are no public toilets accessible, another form of pollution is public urination.

When characterized, summer recreation has both a social and physical character. Social, because the actual presence of the groups of people and their behaviour causes nuisance. Physical, because of the waste pollution and public urination. The most reports on the social nuisance have been filed at night, whereas reports on pollution are often filed the next morning. A good predictor for summer recreation is the weather and the days of the week. More nuisance reports are filed on Thursdays, Fridays and Saturdays. When the temperature rises and there is no precipitation, the amount of nuisance reports rises as well.

Often, it is not recreation in itself that is the problem, but it goes accompanied with some forms of illegal nuisance such as public urination, drug use and dealers, swimming, and bridge jumping. The behaviour of the recreants not directed at the people who experience nuisance, so summer recreation causes indirect victimhood.

The both the evaluation of existing and the proposed interventions have been classified by the prevention pyramid. Regarding curative measures, citizens indicate a lack of capacity of the law enforcement. The masses of people are too vast to solve the problem by handing out incidental fines. What does help are specific bans to prevent behaviour from happening and to make law enforcement easier, such as the anchoring ban at Park Somerlust and the Weesperzijde.

Regarding specific prevention, the presence of hosts or stewards does help to mitigate the pressure and reduce the total amount of people. However, a large part of the nuisance is experienced at night, when the stewards aren't present. Surveillance at night is a frequently proposed measure.

The implemented general measures deal with the physical nuisance of pollution because of waste and public urination. The temporary toilets are very successful. More waste capacity is still on the wish list. A fence was used to control the capacity of the Bogortuin and Park Somerlust, but respondents from the survey mostly

found those very ugly, and prefer not to use this measure again. Interventions in this category that have been proposed are different ways of changing the physical set-up of the areas to reduce the space that can be used for recreation and thereby reducing the size of the total amount of people.

Fundamental prevention: the current implemented interventions are not rooted in any way of fundamental prevention: there is no policy on the seasonal use of public space and the necessary budgeting for extra toilets and waste collection, and recycling and cleaning services. The current policy is to only have these facilities at official swimming locations. A proposed alternative is to create more locations for summer recreation.

Together, the analysis of the individual nuisance experience, the characteristics of the experience nuisance, and the evaluation of interventions and proposed interventions give an integrated view of what causes nuisance experiences, and what actions can be taken to mitigate and prevent it.

DISCUSSION AND RECOMMENDATIONS

The theory on the individual nuisance experience from Smeets and Moors (date) has been developed to provides insight to governmental bodies about communication strategies regarding to nuisance, and to generate more attention for the subjectivity of nuisance. The article wants to challenge the idea that nuisance is just it's 'cause', but is constructed also by the observation, evaluation, and the impact it has on the individual observer.

For this study, it has been used to gain insight in the cause and effects of summer recreation nuisance. Although first met with a bit of scepticism, the analysis of the observations and evaluation do provide useful insights. For example, noise nuisance is a very general but also subjective and elusive description of nuisance, as it is a personal threshold to go from 'just loud' to 'noise' to 'so much noise I feel stressed out and experience nuisance'. By making a distinction between the observations and evaluations in the individual nuisance experience process, provides insight in the more objective causes of nuisance. For future research, it would be interesting to see if this analysis structure holds up for other types of nuisance as well.

The benefit of classifying the experienced nuisance, is a better problem analysis that might lead to better interventions. For that goal, some of the classifications for the experienced nuisance were more useful than others. The physical-social division can be linked towards respectively the general and specific levels of the prevention pyramid, and thus provide insight in related interventions. Also useful in this case was the analysis of time and frequency, as summer recreation nuisance takes place during the evenings, weekends and when the weather is good. Finally, knowing whether the nuisance is caused by a criminal conduct or not, does not help per se – it only indicates that something is off in the prevention pyramid and that the law enforcement should be supported by other measures as well.

For future research, I would not recommend the other classifications. The classification direct-indirect victimship provides little insight for potential interventions. Most of the literature on this classification has been written in the 1990's. From today's point of view, nuisance with a direct victim would be better labelled as harassment. The subjective – objective classification has a major overlap with the observation-evaluation steps from the individual nuisance experience.

Knowing the nuisance causes and characteristics, opens up possibilities to solve the nuisance problem with targeted solutions. At the core of the prevention pyramid stands the idea that all higher layers of the pyramid need to be rooted in the underlying layers. This way, integrated solutions can be designed. The prevention measures that have been analysed in this thesis do not form one integrated intervention, but are typically reactive and separate interventions.

An example of an integrated Toilets -> city wide policy on seasonal temporary toilets incl budget -> dixi's are place there on time and prevent public urination -> if stewards are present, they can redirect people if necessary, but this will be less as there is already an alternative -> when the amount of people violating the rules is reduced, there is also less need for curative measures such as fines, which then stays within the capacity of the law enforcement bodies.

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APPENDICES

APPENDIX A: OVERVIEW OF ALL SIA-CATEGORIES

The categories used to make the first selection have been highlighted.

- Afval
 - o Asbest / accu
 - o Bruin- en witgoed
 - o Container glas kapot
 - o Container glas vol
 - o Container is kapot
 - o Container is vol
 - o Container papier kapot
 - o Container papier vol
 - o Container plastic afval vol
 - o Container plastic kapot
 - o Grofvuil
 - o Handhaving op afval
 - o Huisafval
 - o Overig afval
 - o Puin- / sloopafval
- Civiele Constructies
 - o Afwatering brug
 - o Beweegbare brug
 - o Kademuren
 - o Oevers
 - o Sluis
 - o Steiger
 - o Vaste brug
 - o Watergangen
- Ondermijning
 - o Vermoeden
- Openbaar groen en water
 - o Beplanting
 - o Boom - dood
 - o Boom - gevaarlijke situatie
 - o Boom - illegale kap
 - o Boom - ontbreekt
 - o Boom - overig
 - o Boom - plastic en overig afval
 - o Boom - stormschade
 - o Boom - verzoek inspectie
 - o Boom - ziekten en plagen
 - o Eikenprocessierups
 - o Japanse duizendknoop
 - o Maaien
 - o Onkruid in het groen
 - o Overig groen en water
 - o Snoeien
- Overig
 - o Overig
 - o Overige dienstverlening
- Overlast Bedrijven en Horeca
 - o Geluidsoverlast installaties
 - o Geluidsoverlast muziek
 - o Overig bedrijven / horeca
 - o Overlast door bezoekers (niet op terras)
 - o Overlast terrassen
 - o Stankoverlast
- Overlast in de openbare ruimte
 - o Auto- / scooter- / bromfiets(wrak)
 - o Bouw- / sloopoverlast
 - o Fietswrak
 - o Hinderlijk geplaatst object
 - o Lozing / dumping / bodemverontreiniging
 - o Markten
 - o Overig openbare ruimte
 - o Parkeeroverlast
 - o Stank- / geluidsoverlast
 - o Wegsleep
- Overlast van boten
 - o Blokkade van de vaarweg
 - o Boten – overige overlast
 - o Geluid op het water
 - o Oppervlaktewaterverontreiniging
 - o Vaargedrag - overig
 - o Vaargedrag - snel varen
 - o Wrak in het water
- Overlast van dieren
 - o Dode dieren
 - o Duiven
 - o Ganzen
 - o Meeuwen
 - o Overig dieren
 - o Ratten – in de openbare ruimte
 - o Ratten – in en rond een woning
 - o Wespen
- Overlast van en door personen of groepen

- Daklozen / bedelen
- Drank- / drugsoverlast
- Jongerenoverlast
- Overige overlast door personen
- Overlast door afsteken vuurwerk
- Overlast van taxi's, bussen en fietstaxi's
- Wildplassen / poepen / overgeven
- Schoon
 - Drijfvuil bevaarbaar water
 - Drijfvuil niet-bevaarbaar water
 - Gladheid door blad
 - Gladheid door olie op de weg
 - Gladheid winterdienst
 - Graffiti / wildplak
 - Onkruid op verharding
 - Prullenbak is vol
 - Uitwerpselen
 - Veeg- / zwerfvuil
- Wegen, verkeer, straatmeubilair
 - Autom. Verzinkbare palen
 - Belijning
 - Bewegwijzering
 - Camerasystemen
 - Fietsrek / nietje
 - Klok
 - Omleiding
 - Onderhoud stoep, straat en fietspad
 - Oplaadpunt
- Overig Wegen, verkeer, straatmeubilair
- Parkeer verwijssystemen
- Parkeerautomaten
- Prullenbak is kapot
- Put / riolering verstopt
- Speelplaats
- Sportvoorziening
- Stadsplattegronden
- Straatmeubilair
- Straatverlichting
- Tijdelijke Verkeersmaatregelen
- Verkeersbord
- Verkeerslicht
- Verkeersoeverlast
- Verkeerssituaties
- Wonen
 - Leegstand
 - Onderhuur en adreskwaliteit
 - Overige Wonen
 - Vakantieverhuur
 - Woningdelen / spookburgers
 - Woningkwaliteit

APPENDIX B: COMPELTE CODELIST ATLAS.TI

Achtergrond informatie	Meldingstype (niet exclusief recreatie)	Bezoekerstype	Overlast type	Incidenten	Maatregelen (1/2)	(2/2)
Adres	Hangjongeren	Groep(en) jongeren	Afgemeerd op het water	Betreden privéterrein	(Extra) prullenbakken gewenst	Klacht gebrek (actie van) handhaving/politie
Buurt Omschrijving	Samenscholing COVID	Groep(en) niet gespecificeerd	Afgemeerde botten en objecten	Bewoner eigent openbare ruimte toe	Aanleggen railing rond steiger	Maatregelen zijn een succes
Datum	Anders		Afval - bakken zijn (over)vol	Brutaal	Afval ophalen in het weekend	Meer bekeuren/beboeten
Tijdstip			Afval - ongedierte	Dealers	Ankenverbod	Ontruimen/leegvegen gebied
Hoofdrubriek			Afval - Zwerfvuil	Eind seizoen - hond weer toegestaan	Bezoekers attenderen op regels door hosts	Picnicktafels verwijderen
Sub rubriek			Afval Totaal	Fietsparkeren	Bloembakken verwijderen	Plaatsen planten/schutting t.b.v. privacy
Toelichting			Alcoholgebruik	Honden (poep)	Bord(en) plaatsen	Positieve nudging afval
			Barbecue	Thuiswerken	Brug niet toegankelijk voor springen	Reinigen grasveld/struiken
			Brugspringen	Vandalisme	Camera's vanwege scooters op fietspad	s Avonds afval/reiniging
			Drukke	Vechten	Cirkels	Schoongemaakt door bewoners
			Feesten	Verkeersdrukte door recreanten	Contact met gemeentelijke diensten)	Sluiten speelveld
			Geluidsoverlast op land	Verwonding bij zwemmen	Corridor met stoplichten op het water	Snoeien struiken i.v.m. wildplassen
			Geluidsoverlast vanaf het water	Vissen	Crowd management geen succes	Specifiek i.v.m. corona
			Hard varen en gevaarlijke situaties op het water	Vuunwerk	Crowdcontrol 's avonds	Sproeiers
			Horeca	Wapens	Crowdmanagers bij warmer dan 20 graden	Stadsstrand op andere locatie (zonder huizen)
			Leefbaarheid onder druk		Dixi's - aantrekkende kracht	Stilte na 22.00 uur / avondronde
			Leefbaarheid onder druk (2)		Gebied preventief afsluiten	Toiletvoorziening gewenst
			Middelengebruik		Geen crowd control	Touwen van brug verwijderen
			Nachtelijke overlast		Handhaven op niet (goed) opruimen afval	Vaker afvalbakken legen / vuil opruimen
			Recreëren		Handhavers/politie lopend i.p.v. motor	Waterbedeffect afsluiten grachten
			Rotzooi maken / troep achterlaten		Handhaving /wegsturen niet succesvol	Weghalen bosschages
			Scooters/motoren/auto's		Handhaving gewenst (op land)	Wegsturen niet effectief
			Sfeer recreatiegebied		Handhaving op het water	Zwemtrap weghalen
			Sport/spel		Hek gewenst	
			Wildplassen, -poepen en overgeven		Hekken verwijderen - einde seizoen	
			Zwemmen en watersport		Infrastructurale maatregelen	

APPENDIX C: OVERVIEW ANALYSIS PER EXPERIENCE CODE

Code	Count (Reports)	Count Survey	Observation/Ev	Physical/social	Criminal offence?	Victimhood: direct/indirect	Time? (Day)	Frequency? (Year)	Subjective/objective / inbetween
Afgemeerd op het water	121	2	Obs.	Social	Afh, van locatie	Indirect	Eind van de middag / 's avonds	Vooral op donderdag/vrijdag/zaterdag, in juni en augustus	Objective
Afval (totaal)	213		Obs.	Physical	Yes	Indirect	Morning / noon - visibility during the day after	Weinig in juli/september -> slecht weer, einde seizoen / start school etc	Objective
Alcoholgebruik	63	23	Obs.	Social	No	Indirect	's avonds rond 2000/2100 uur	Mei / Juni / augustus	Unclear
Barbecueën / open vuur	29	2	Obs.	Physical	Afh, van locatie	Indirect	Tussen 1800-2100	Mei/Juni	Objective
Brugspringen	28	-	Obs.	Social	Yes	Indirect	Tussen 1400-2000	Mei/juni/augustus	Objective
Dealers	7	17	Obs.	Social	Yes	Indirect	-	-	Subjective
Drukke	64	25	Ev.	Social	No	indirect	Piek eind van de middag - waarschijnlijk is de massa dan ook op z'n hoogtepunt?	April/Mei/Juni/Augustus	Subjective
Feesten	31	4	Ev.	Social	No	Indirect	Zowel 's middags als 's avonds	Juni/juni/augustus	Subjective
Fietsparkeren	7	28	Obs.	Physical	No	Indirect	-	-	Objective
Geluidsoverlast op land	321	12	Ev.	Social	No	Indirect	Evening; 70% of these reports are filed at night, between 2100-2300 o'clock	Juni/Augustus	Subjective
Geluidsoverlast vanaf water	250	-	Ev.	Social	Afh, van locatie	Indirect	1600-2200	Juni/augustus	Subjective
Hard varen en gevaarlijke situaties op het water	41	1	Obs.	Physical	Yes	Direct	1900 uur, niet superduidelijk	-	Unclear
Leefbaarheid onder druk	21	-	Ev.	Social	No	Indirect	Begin van de avond	Mei/juni/augustus	Subjective
Middelengebruik	61	35	Obs.	Social	Yes	Indirect	Geen duidelijk patroon	Geen duidelijk patroon	Unclear
Nachtelijke overlast	103	35	Obs.	Social	No	Indirect	's Avonds	Juni/augustus.	Subjective
Recreëren	31	1	Obs.	Social	No	Indirect	's Middags, niet superduidelijk	April/mei/juni -> COVID?	Subjective
Scoters/motoren/auto's	39	10	Obs.	Social	Afh, van locatie	Indirect	niet superduidelijk	April/Mei/Juni/Augustus	Objective
Sfeer recreatiegebied/festival	25	22	Ev.	Social	No	Indirect	Hele dag door	Juni/Augustus	Subjective
Sport/spel	61	9	Obs.	Social	No	Indirect	2200-2300 uur, 's avonds laat	April/mei/juni, juist ook doordeeweeks	Objective
Wildplassen, -poepen en overgeven	58	-	Beide	Both	Yes	Indirect	Eind van de middag/ begin van de avond	Heel duidelijk in april - daarna volgden de dixi's - opgelost	Objectief
Zwemmen en watersport	42	-	Obs.	Social	Yes	Indirect	Hele dag door	Juni/augustus	Objectief
Samenscholing COVID	218	11	Obs.	Social	Yes	Indirect	Afternoon - evening. Vanaf ca. 1500 's middags	Mostly in april/may - 80%	Objective
Groep(en) jongeren	155	-	Obs.	Social	No	Indirect	Voornamelijk 's avonds, na 21:00 uur	Geen duidelijk patroon	Subjective
Hangjongeren	90	-	Obs.	Social	No	Indirect	Zowel 's middags als 's avonds	Mei	Subjective
Groep(en) niet gespecificeerd	54	-	Obs.	Social	No	indirect	Vanaf 1400, piek om 21:00 uur	Voornamelijk in het voorjaar	Objective

APPENDIX D: OVERVIEW INTERVENTIONS

Curative: 'law enforcement & care'	Evaluation/ proposal	Reports	Survey
Noise nuisance from recycling services	E		4
Law enforcement not (sufficiently) successful	E		
Evicting the area	E	6	
Cleaned by residents	E	3	
Sending people off not effective	E	14	1
Law enforcement desired (on country): more/better	evaluatoin	3	11
Prohibit anchoring (inc buoy line)	both	4	46
Law enforcement on not (properly) cleaning up waste	P	42	91
Law enforcers/police by foot	P	1	
Law enforcement on the water	P	32	14
More fines	P	9	16
Cleaning the lawn and/or shrubs	P	3	
Waste collection and cleaning at night	P	2	
Prohibit alcohol/substance use	P		26
Prohibit barbecueing	P		26
Prohibit delivery	P		1
Prohibit unleashed dogs	P		3
Prohibit recreation	P		2
Prohibit amplified music	P		23
Ban on swimming / more enforcenent of the ban	P		9
Mandatory driving license for boats	P		2
Remove incorrectly parked bicycles	P		1
Prohibit scooters	P		2
Specific prevention	Evaluation/ proposal	Reports	Survey
Crowd management: geen succes	E	2	
Crowd management: bij warmer dan 20 graden	E	2	
Klacht gebrek (actie van) handhaving/politie	E	42	
Geen crowd control	E	2	
Crowdmanagement: Bezoekers attenderen op regels door hosts	P	2	
Bord(en) plaatsen	P	11	12
Camera's vanwege scooters op fietspad	P	1	
Contact met gemeente(lijke diensten)	P	9	9
Crowd management: 's avonds aanwezig	P	2	
Geluidssensoren koppelen aan meldkamers	P		1
Sluitingstijd': Stilte handhaven 's avonds, sluiten sportkooi	P		88
Toegangsbewijs (betaald)	P		8
Bewoners als hoofdgebruikers	P		
Bezoekerslimiet	P		
General prevention	Evaluation/propo sal	Reports	Survey
Waste: (Extra) trash cans desired	E	34	48
Fence - negative, please remove	E	1	30
Toilet - positive	E	14	24
Fence - positive, less nuisance	E	1	10
Toilets - negative	E		5
COVID: Circles for Distance	E	2	

Pruning bushes because of wild urination	E	2	
Toilets: Dixi's - attracting more recreation	E	1	
Bicycle parking: Other/more location(s)	P		31
Refurbishment - general	P		18
More plants / shrubs / 'visual green'	P		10
Reducing grass area	P		8
Pizza: Special waste bins for pizza boxes, or a deposit system	P		3
Garden(s) for residents	P		3
Barbeque - do allow	P		2
Move bike path	P		2
Remove street furniture (e.g. picnic tables & flower boxes)	P	2	2
Improve swimming safety	P		2
Ecological zone	P		1
Leased utility buildings	P		1
Catering: no alcohol-to-go (existing catering)	P		1
Small-scale play facility	P		1
Positive nudging waste	P	1	1
Pickers etc for residents	P		1
Privacy at homes, e.g. placing plants/fence	P	1	1
Sprinklers	P	1	1
Jetty desired for short mooring (e.g. pick up)	P		1
Trim/sports facility	P		1
Fixed bbq places	P		1
Water tap	P		1
Visible debris in water (such as at Ertskade)	P		1
Create more space	P		1
Installing railing around jetty/pier for safety	P	1	
Make bridge inaccessible for bridge jumping	P	4	
Infrastructural measures	P	1	
Remove ropes from bridge	P	1	
Remove bosses	P	1	
Remove swimming ladder	P	2	
Fundamental prevention	Evaluation/ proposal	Reports	Survey
Policy on recreation: other/more locations for recreation/urban beaches etc	P	1	21
Policy on dogs: Other/More Locations for Walks	P		1
No more publicity	P		1
Waterbed effect after closing canals for boating		1	
More tolerance from local residents			1