When the river speaks

Affective atmospheres in a city struck by a flood.

Anna Fial

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Thesis for MSc. Urban Geography, Faculty of Geoscience

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1. Introduction

In July 2021, heavy rainfall led to widespread flooding in Germany, Belgium, and the Netherlands. Over 140 lives were lost in Germany and Belgium. In the Netherlands, while no casualties occurred, the damages ran into the hundreds of millions of euros. Valkenburg aan de Geul, a town in the southern province of Limburg, was one of the hardest hit areas. The river Geul, normally a symbol of natural beauty and tourism, turned violent as it overflowed its banks and surged through the town's historic center.

In the Dutch context — a country known for its engineering prowess and cultural pride in water control — the idea that floods cannot be prevented is difficult to accept. As De Jong & Asselman (2022) note, no single measure can guarantee future flood prevention. This challenges the dominant narrative in Dutch water discourse, which Wiering & Arts (2006) describe as rooted in centuries of "fighting the water" and mastering nature through dikes, levees, and land reclamation.

When technical measures fall short, it might be needed to work together with nature. In the Netherlands, Valkenburg aan de Geul had been hit especially hard by the flood. The Geul flows through the center and plays an important role in the beauty of the region. On the one hand, the river brings beauty and tourism. On the other hand, the river can bring destruction and fear.

To understand the relationship between human and river, it is necessary to understand how the river and the inhabitants of Valkenburg live together now. A way to do this is by looking at emotions between the river and the people. How do people feel about the river? In television and newsletter interviews, people mention feeling uneasy and scared when it is raining for longer periods of time, afraid of their property being damaged again (Alders, 21-10-2021). The importance of adequate psychological care after the flood was clear immediately after the flood (Van Dam, 19-06-2021). However, it might be the case that people still suffer from the flood and the aftermath. To understand what effect the flood had on the relationship between the Valkenburger and the river, this thesis answers the following research question:

"What emotions are linked to the Geul in Valkenburg, and how is the relationship between humans and water reflected in Valkenburg's public space?"

Emotion, or *affect*, either understood as an 'elemental state' or as an 'intensive force', is a way of explaining the human-water relationship. Affect theory serves as a starting point for the theoretical framework (Ott, 2017; Anderson, 2009). The theoretical framework provides a basis for the methodology of affective atmospheres. This thesis would fit into a body of case studies that uses affective atmospheres to uncover hidden relationships and to figure out power relationships between different users of the space. Examples are atmospheres in football stadiums (Edensor, 2015) or the role of music in forming an atmosphere (Riedel & Torvinen, 2019). Monica Porzionato recently investigated the emotions and atmosphere between people and floods in Venice (Porzionato, 2025). Her research serves a great inspiration for this thesis.

These case studies provide stories and depth to the research on climate change. As Maree Brown, quoted in the Guardian (2023) says: "We are shaping the future we long for and have not yet experienced. I believe that we are in an imagination battle." However, the Netherlands and its relationship with water, especially focused on emotions, has not been sufficiently researched yet.

While the Netherlands is recognized for its water management, little attention has been paid to the emotional and affective dimensions of how communities live with water. This thesis contributes to a growing field of emotional geography and more-than-human urbanism by focusing on everyday feelings, memories, and spatial expressions of human–water relations after disaster. I will strive to make a valuable contribution to understanding the relationship between human and water.

The thesis is structured as follows: the following chapter provides a theoretical framework grounded in affect theory, affective atmospheres, and Sara Ahmed's theory of emotion. Chapter 3 outlines the methodological approach, drawing on participant observation, interviews, and documentary analysis. The results chapter identifies and interprets four affective atmospheres in Valkenburg. The discussion connects the results with the theory, including recommendations for future research. The thesis concludes with a summary of the main findings and reflections on emotional responses to water in times of climate change.

2. Theoretical framework

This paragraph explains concepts that are used to answer the research question. It provides an overview of the concept of atmospheres, including affective atmospheres. Then, affect and emotion are explained. The role of water as a nonhuman body in space is discussed. Finally, the effect of a flood on a community is discussed, including an explanation of different understandings of community.

Affective atmospheres, affect and emotion

One might be familiar with phrases like 'I love the lively atmosphere in this neighborhood' or 'when I walked into the room, I felt a heavy atmosphere'. In social studies, the phenomenon of atmospheres has been a subject of interest for decades now.

Gernot Böhme defined the phenomenon of atmosphere in multiple books and articles, but the definition of atmosphere sensu Böhme in the encyclopedia of nature gives a clear overview (Böhme, 2021). In this definition, atmosphere means the outer layer of air around the Earth, or it is used as a metaphor, to describe 'moods that are in the air' (2021:1). These meanings have in common that they are about weather. Here, it is about the subjective aspects of a weather event, like a *threatening* thunderstorm. He notices that atmospheres are inherently spatial. Among others, Hirschfeld inspired Böhme in this understanding. Hirschfeld never spoke of atmosphere in his work, but did describe the phenomenon quite accurately, according to Böhme. He spoke of natural scenes with roles assigned to trees, streams etc. The scene would have a character, which can be seen as the atmosphere. The character or atmosphere could be produced by placing certain trees in a certain way, or by playing with light. In addition to these elements in spatial design, the viewer is the one who notices the atmosphere. So Böhme states "atmosphere is a phenomenon that occurs *between* subject and object" (2021:3). In further developing his theory of atmospheres, he makes a distinction between reception-aesthetical, which is concerned with the emotions a subject might feel in a certain space, and production-aesthetical, which investigates how 'objective factors and their constellation" produce a certain atmosphere in a space.

An atmosphere can be felt because the subject in it - is affected by it. *Affect* has become a noun, in addition to being a verb (Bille & Simonsen, 2019). Spinoza used the word *affectus* for the force that influences a body and the word *affectio* for the state of the body when it is affected by another body (Ott, 2017). The latter could be seen as emotion, while the first is something that foregoes this emotion. The discussion on whether affect, emotions and feelings are the same, has more history to it, and has not come to a conclusion yet. However, Bille & Simonsen (2019) state that it is counterproductive to search for clear conceptual boundaries of the two, as they want to overcome binaries such as body and mind. This is why they do not choose to understand affect as being a 'biological/physical process' and emotion as being purely being a 'cognitive representation' (Bille & Simonsen, 2019:297). Böhme's idea of atmosphere brings both affect and emotion together (Anderson, 2009). As geographer Anderson states:

> "[Atmospheres] mix together narrative and signifying elements and non-narrative and asignifying elements. And they are impersonal in that they belong to collective situations and yet can be felt as intensely personal." (2009:80).

Gandy (2016) elaborates the concept with urban atmospheres and affective atmospheres. The latter comes from a philosophical movement 'the new phenomenology'. Phenomenology, in short, is the study of reality as subjectively experienced (Flood, 2010). *New* phenomenology is a perspective developed by Schmitz. Here, the focus is on lived experience and corporal sensations. The senses are of central interest (Schmitz, Müllan & Slaby, 2011:243). This understanding of reality is at the base of affective atmospheres. Seeing is no longer a more 'objective' sense as opposed to smelling, hearing, tasting etc. (Gandy, 2016). Affective atmospheres are used in many disciplines, including cultural and urban geography. Examples include research in the soundscape of cities (Revill, 2015), light design in spaces (Edensor, 2015), and smell in changing urban environments (Sliwa & Riach, 2011).

Besides senses, emotions as a bodily experience are of interest too, even though it was and has been neglected as an aspect of understanding the world. Anderson & Smith write:

> "[The] marginalization of emotion has been part of a gender politics of research in which detachment, objectivity and rationality have been valued, and implicitly masculinized, while engagement, subjectivity, passion and desire have been devalued, and frequently feminized." (2001:7).

To understand emotion in affective atmospheres, I turn to Sarah Ahmed's Cultural Politics of Emotion (2004). Ahmed provides an understanding of the concept of emotion in a cultural context. She describes emotion as a sensation that does not come from within a human body, but as something that moves between and 'sticks' to bodies. It is generated when two bodies meet. Some emotions stick to certain bodies more than to others. This follows Descartes' belief that 'we don't have feelings for objects because of the nature of objects. Feelings instead take the 'shape' of the contact we have with objects' (Ahmed, 2004:5).

Emotions occur when bodies meet each other and impress on each other or leave an impression. To make this more concrete, she uses pain and fear. The feeling of pain indicates the existence of the boundary of a human body, the skin. When another body inflicts pain on the human body, the process goes from 'this hurts' to 'you hurt me' towards 'you are hurtful or bad'. Ahmed calls this the impression of the negative. A literal mark might be left on the skin. Fear is less visible. It is more about an object that might come in the future, instead of something nearby. The chance of the object appearing makes a human body fear. In other words, fear is about anticipation of something bad happening. As Ahmed states: 'fear works by establishing others as fearsome insofar as they threaten to take the self in' (Ahmed, 2004:64). The self can refer to the body, but also to someone's property or life as they know it. This fear leads to restricting movements of bodies. One body might stay where it is safe, or another body might be restricted in their movement (Ahmed, 2004).

Why is emotion relevant in research into the relationship between human and nature? During the early 2000s, an affective turn took place in the social sciences and especially in geography (Thien, 2005; Thrift, 2004; Anderson & Smith, 2001). Researchers were turning away from the Cartesian thought that emotion has no place in science (Thrift, 2004). Jimson & Milligan explain in their introduction to emotional geographies:

> "Without doubt, our emotions *matter*. They have tangible effects on our surroundings and can shape the very nature and experience of our being-in-the-world. Emotions can clearly

> alter the way the world *is* for us, affecting our sense of time as well as space. Our sense of who and what we are is continually (re)shaped by how we *feel*." [original emphasis] (2004:524)

In addition, is important incorporate emotion and/or affect into research because "the *manipulation of affect* for political ends is becoming not just widespread but routine in cities" [emphasis added] (Thrift, 2004:58).

Even though the ontological discussion on affect has not ended (Bille & Simonsen, 2019; Anderson, 2009; Arnold, 2016), the body of research in emotional geography has grown significantly (Pile, 2009). Examples are affective atmospheres in football stadiums (Edensor, 2015), in holiday resorts (Rokka et al., 2023), at memorial sites (2016), during the COVID-19 pandemic (Yu, 2024) and how atmospheres can make you feel 'at home' in a city (Daniels, 2015). Atmospheres of the past can also be investigated, argues Sørensen (2015). He argues it is even possible to analyze prehistoric atmospheres.

Affective atmospheres are also emerging in the fields of ecology and political ecology. For example, some studies map out what emotions emerge in ecological crises or in case of climate action (Neckel & Hasenfratz, 2021; Stanley et al., 2021). González-Hidalgo & Zografos (2019) provided a conceptual framework to enable researchers to include both emotions and the political circumstances when researching environmental conflicts. Croog (2016) investigates the role of emotions in the connection between students and grass root sustainability projects.

According to Paiva & Sánchez-Fuarros (2020), an urban space can have more than one atmosphere present. They carried out ethnographic research in Lisboa and found that besides the produced touristic atmosphere that was present, protests against unwanted effects of tourism, 'collateral atmospheres' became present. The notion of atmospheres being produced links to Hirschfeld's idea of atmospheres as a stage (Böhme, 2021). Anderson (2009) explains how jobs try to influence and fixate atmospheres:

> "Practices as diverse as interior design, interrogation, landscape gardening, architecture, and set design all aim to know how atmospheres are circumvented and circulate." (2009:80)

Affect and emotion play a role in how a space is designed and what human and non-human bodies can get access to space and which bodies cannot (Ahmed, 2004; Anderson, 2009). Nonhuman bodies refer to animals, natural elements like heat and wind, but also urban elements such as waste (Fiore, 2023). Water as a nonhuman element influences people in the urban environment as well, in relation to health and well-being (McDougall et al., 2020).

The way a lake reflects light, how a waterfall sounds or how the rain smells can have calming effects on people (Strang, 2005). Several studies show that exposure to nature, whether this is a body of water or green space, has positive effects on people's perceived health (Kondo et al., 2018; Völker & Kistemann, 2015; White et al., 2019).

Völker & Kistemann (2015) unraveled what people feel when they are near a body of water. They found that sight and smell are often noticed by their interviewees. The study finds that urban blue space in combination with 'active passivities' (e.g. standing or sitting) allows people to enjoy deep relaxation. In addition, blue urban spaces help people to orient themselves, as the bodies of water

have a clear edge or boundary and, in the case of rivers, a direction of flowing. The researchers structured their questions and results in four types of space: experienced, symbolic, social and activity space. Symbolic space refers to the importance of the water body for the city or town identity. Respondents connected the river and its beauty to positive emotions. Without the river, their city would be "a city like any other" (2015:202).

In the spaces described above, the human experience is the center of attention. Scholars and philosophers have been advocating for an equal role for nature in the human-nature relationship. As philosopher Böhme said in an interview:

> "[The] natural being and rational being must first be considered as equal. This primarily concerns external nature. We are already living in a cultural and civilized nature, and it is only now that we realize that what has been carried out as the domination of nature is, in fact, a totally impossible project. On the contrary, nature must be recognized as our partner and we should gradually adapt to such a partner relationship." (Wang, 2013)

This perspective can be described as nonhumanism, posthumanism, or more-than-humanism. Posthumanism is a philosophical perspective that traveled to every scientific discipline there is today (Braidotti, 2019). It means to stop putting the human being at the center of all interest. This means not only researching animals and other organisms as part of our world, but also to look into robots or cyborgs or even aliens (Haraway, 2007; Braidotti, 2002; Braidotti, 2016). In other words, it is to center the other inhabitants of the earth, whether they are technological or environmental. Deleuze is a philosopher that was very important for nonhuman thinking. As a neo-Spinozist, he believes that the relationship between nature and culture is a continuum rather than a division (Braidotti, 2019).

Forlano (2017) explains what this shift in perspective means for design. This view provides opportunities for a more equal relationship with nature:

> "In design projects, the question is usually 'what is best for humans?'. By not putting the human in the center of design anymore, a whole array of questions needs new answers – to start with: "Who or what — human/nonhuman, human/animal, individual/organizational/network — are the user(s), and for whom or what should the design be desirable?" (2017:19).

Floods and communities

Why is it important to see water, among other natural elements, as an equal user of space? In the face of climate change, the Netherlands are at risk of heavy rainfall, droughts, heatwaves and flooding (Kennisportaal Klimaatadaptatie, n.d.; IPCC, 2023). These threats are mostly water related (Arnold et al., 2009). The body of research on technical measures to reduce these threats (i.e. Jain et al., 2018; Tourment et al., 2017; Van et al., 2016) and on water governance (i.e. Haasnoot et al., 2016; Van der Brugge et al., 2005) is quite extensive. However, there is a shift happening from research into 'flood control' towards 'flood resilience' (Wang et al., 2022). Adger et al. support this shift, as they state that the cultural aspects of climate change and adaptation are equally important, as it is culture that defines how people and communities will react to new adaptation policies, or how the people even interpret the phenomenon of climate change itself (Adger et al., 2013).

An early example of research into this is Baan & Klein's research on how Dutch people perceive flood risk. This research was done relatively shortly after the river Meuse floods of 1993 and 1995. Without using the term resilience, they describe something similar:

> "Not all feelings are negative. People in a flood-threatened polder experience togetherness and solidarity, which they qualify as being positive feelings. The social coherence and the relationships between inhabitants improve during an immediate flood threat." (2004:115)

Flood resilience is not a straightforward concept. After a literary review, McClymont et al. (2019) argued that there is not an all-encompassing definition of flood resilience, and that a single definition would not improve our understanding of the concept, since it is interdisciplinary, both top down and bottom up and researched on different time and spatial scales (McClymont et al., 2019). In geographical research into flood resilience, the concept of place attachment is important, as Han (2025) explains that individuals that experience an emotional connection to their town or neighborhood can motivate them to take measures in preventing damage from potential floods. They foster 'a sense of responsibility and care for their surroundings' (2025:2). A study from Blondin (2021) finds that the level of place attachments coheres with the capability to adapt to the environment and with a resistance to moving.

In the case of a flood happening, the way a community reacts depends on several factors. Place attachment plays a big role in community resilience, as more place attachment generally means that a community does not want to move location after a flood (Carone et al., 2025). However, high place attachment has both positive and negative implications for resilience (Han, 2025; Carone et al.. 2025). As Carone et al. state:

> "Whereas some studies highlight an improvement in awareness and better preparation for possible events, others point to the underestimation of risks and a low propensity to take adaptation measures. [...] The main common finding is that the role of PA in community resilience is influenced by landscape/community characteristics, which generally lead to resistance to relocation" (2025:13).

Another example is a study in the coastal areas of France. Lemée et al. (2019) researched the way people cope with the risk of coastal flooding, and the role of place identity in this. They differentiated active and passive coping, the first one meaning trying to adapt to or to reduce the possibility of flood risks, and the second one referring to reducing emotions like anxiety and fear. They combined this with place identity and found that people's place identity increased when their living space was under threat. The passive coping mechanisms - trying to reduce stress - also increased if their living place was threatened (Lemée et al., 2019).

Place identity or place attachment are in close relation with community in a place. It can explain why people want to stay in spaces prone to natural disaster, like flood prone places anyway (Blondin, 2021; Swapan & Sadeque, 2021). Several studies attempted to conceptualize place attachments, i.e. into personal, communal and environmental dimensions (Raymond et al., 2010), or individual, community and place interrelationships (Erfani, 2022). At the same time, some scholars state that community attachment and place attachment are not to be used interchangeably, as Trentelman (2009) notices. Erfani (2022) addresses this by using sense of

place, a concept that both includes individuals and communities in people-place relationships (2022:453).

What effect do floods have on communities? Arguably it heavily depends on the pre-existing community (Wickes et al., 2015). The way a community in New Zealand responded to a flood was no uniform, it took many forms, i.e. the forming of community flood groups. Unique to this community was the indigenous practices that shaped the response to the flood (Auliagisni et al., 2022). Another study looked into the flood resilience of elderly in Thailand, relevant because Thailand has a high degree of elderly. This community engaged in flood rehearsals and communication plans for nurses and families, for example (Yodsuban & Nuntaboot, 2021). Some studies use a flood-resilience index, such as Manandhar et al. (2023) comparing the 2021 floods in Germany and China, and Leandro et al. (2020) testing Munich for climate change resiliency. It must be acknowledged that these measuring tools work based on assumptions made about a system (Schipper & Langston, 2015) and that these tools are imperfect (Keating et al., 2017).

In addition, besides existing communities, new groups can appear in the aftermath of a flood. Ntontis et al. (2020) noticed altruistic bonds forming between victims and people who want to help. These new groups can disappear as quickly as they appear.

3. Methodology

To combine the elements of emotion, water and space, I used a method of Sarah Pain, called atmospheric ethnography. I draw on Pain (2015) and Porzionato (2025), who did a similar study of emotions during the aqua alta, as the seasonal flooding is known in Venice. In this chapter, I describe the method, and I provide a short history and description of Valkenburg aan de Geul. The chapter is structured in six parts:

1. Research context
2. Methodology: atmospheric ethnography
3. Methods of collecting the data
4. Method of analyzing the data
5. Ethical considerations
6. Positionality

3.1 Research context

Valkenburg aan de Geul is a municipality in province Zuid-Limburg. The municipality consists of multiple towns and one city: Valkenburg. Valkenburg has about ten thousand inhabitants. The city has a rich history of tourism. The river Geul played an important role in the beauty of the region, and so in attracting tourists. In the following section, I provide a concise summary of the town's history, the flood in 2021 and its current state, as to explain why Valkenburg aan de Geul is a place worth researching. For historic facts, I largely draw upon the book of Jacobs & Leenders (2017) that bundles traveler stories from 1819 until 1913.

It was in 1839 that Limburg became a part of the Netherlands. However, its people felt more connected to mostly Belgium. This is why, since the 19th century, Limburg is referred to as 'somewhat foreign' (Jacobs & Leenders, 2017, p. 8) by travelers, who do not recognize the landscape or language to be very Dutch. In 1843 and 1848, the inhabitants attempted to join respectively Belgium and Germany. After these failed attempts, Limburg remained part of the Netherlands.

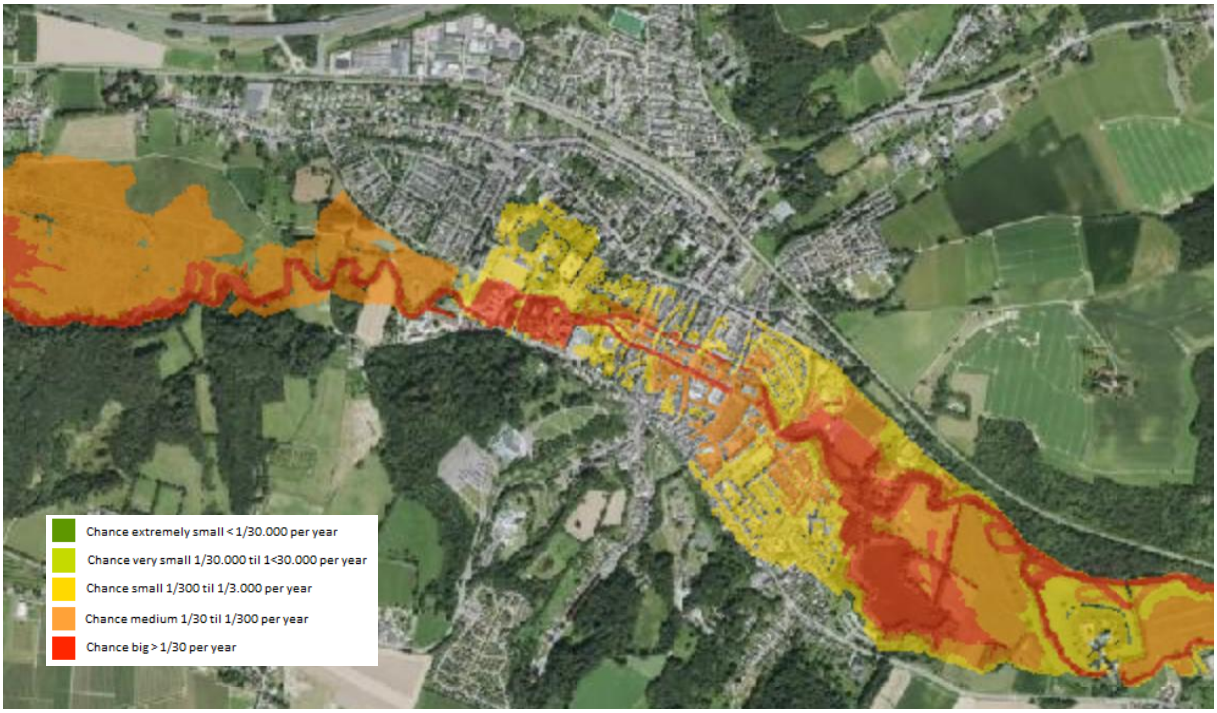
Valkenburg existed long before Limburg became a Dutch province. It is first mentioned in writings in 1033. In the second half of the 19th century, the town became a famous spot for tourism. It was then that the first walking guides started to appear. An important development was the railway connection to the west of the Netherlands, built in 1877. After this, the valley was much easier to access. The Geul valley in Limburg has been a popular touristic spot ever since, with Valkenburg being described as touristic in stories dating back to 1872. Some travelers referred to the surroundings as Little Switzerland. The Geul had an important role in the beauty of the landscape, described by Bruinvis in 1882, among others (Jacobs & Leenders, 2017). Valkenburg counted several hotels and taverns to accommodate the visitors (Weusten et al., 2006). Valkenburg is also the place where the first organization for tourism emerged, in 1885: the Vereniging voor Vreemdelingen Verkeer, also known as the VVV. This organization started because some entrepreneurs from the region wanted to promote their town to tourists (VVV Nederland, n.d.).

The river has been through some changes since the first time it has been described. The river Geul starts in Belgium, close to the German border in Raeren. It enters the Netherlands close by the town of Cottessen. Three other streams join the Geul on Dutch ground. The river is about 60

kilometers long and joins the river Maas at the town Bunde. The river is the fastest flowing river of the Netherlands, because of a 250-meter drop from beginning to end. The river used to be canalized in some places, but now flows freely (Versteeg, n.d.).

The Geul flooded not often, compared to the Lek or other, bigger rivers in the Netherlands. However, in 2021, the river Geul flooded Valkenburg and damaged 2,300 homes and hundreds of stores, restaurants and hotels. The costs of the damage were estimated to 400 million euros. The city had to deal with river water, sewer water and waste (NOS, 2021; Kusters, 2024). Research organization Deltares carried out an investigation of this disaster. In an extensive report, the effects were researched of the high water-levels in the Geul in combination with the high levels in the Maas (De Jong & Asselman, 2022). The Atlas voor Leefomgeving provides a map, see image 3.1, of flood risk of the Geul in Valkenburg, which gives an idea of the affected area. Deltares also carried out research to find out if these disasters can be prevented. The conclusion was that this is not the case, although it is possible to make changes in the landscape that help by raised water levels. The most important recommendation is to start working with people and municipalities across national borders (Slager et al., 2022).

Image 3.1. Flood risks in Valkenburg.



Source: Atlas voor de Leefomgeving, n.d.; Rijkswaterstaat, 2024.

3.1 Atmospheric ethnography

The method of atmospheric ethnography is used to capture the emotions that emerge between the human and the body of water, the river Geul.

Atmospheric ethnography is closely related to the sensory ethnography of Sarah Pink (2015). Sensory ethnography involves conventional ethnographical methods such as participatory observation and (semi-structured) interviews, but expands by focusing on what the researcher sees, smells, feels and hears. In geographical research, this method is used in for example

researching the production of landscape by a certain group of users, or by researching the role waste plays in urban developments (Fiore, 2023).

I took inspiration from Porzionato (2025), who states that both types of ethnography "are situated research methods that pay particular attention to what and how bodies feel in particular places characterized by particular material arrangements." (2025:93). In this thesis, the material arrangements are the objects in the city center of Valkenburg that are either hiding or showing the river Geul or defining its course for example. Degen (2001) explains that analyzing public spaces with a focus on senses helps understand how power relations are established in urban spaces and how certain practices or memories are in- or excluded. The in- or exclusion of the memories of the flood in 2021 in the design of Valkenburg's center could lead to interesting insights into the emotions the residents experience towards the river (McEwen et al., 2017).

An atmospheric ethnography uncovers the encounter between human bodies and the non-human body, i.e. the river, in certain locations and at certain times. However, because the non-human body is situated in a certain place, ethnography gets a distinct spatial character (Porzionato, 2025). To 'capture' an atmosphere means to carefully observe how the researcher is being affected. Noticing calming or distressing sounds, pleasant or unpleasant smells and striking or hidden objects (Pink, 2015). Besides the effect that the surroundings have on the researcher, other people's movements and conversations are markers and reinforcers of the present atmospheres as well (Böhme, 2021; Anderson, 2009).

3.3 Selection of research sites and research participants

To explore the atmosphere of Valkenburg and its connection to the river Geul, I selected different sites to do my participant observations. To see how the river is incorporated in the city center, I walked along the river and followed it outside the city center, about one kilometer upstream. In addition, I spent time 'hanging around' the river in the city center, to observe people interacting with the river.

The timeframe for this fieldwork is six full days. This is short for doing ethnographic research. Studies acknowledge that researchers often do not have the resources or time to spend a long time in the field, and this does apply to this thesis as well (Pink & Morgan, 2013). However, the methodology for data collection for this research does not only consist of fieldwork but extends to documentary analysis as well.

Respondent A acted as a gatekeeper in the process of finding important spots in and around Valkenburg. The respondent is an artist; they made several artworks about the flood. Some of these are made together with other inhabitants. In addition, the partner of this person owns a hotel that suffered from the flood. The family played a role in the documentary. Respondent B is an old member of NatuurKracht, who I came into contact with via e-mail. Respondent C is a former resident of Valkenburg. I encountered this person via a mutual friend.

3.4 Collection of empirical materials

To collect the materials I needed to answer the research question, I made use of several methods. First, an analysis of a documentary; second, participant observation and finally, a formal, semi-structured interview.

Video and documentary analysis

First is the analysis of the documentary. The use of video has been broadly discussed in social sciences. In this practice, it is important to notice the way the documentary is produced. The profession in which the video is made, the director's intentions and the intended public of the video are all important to understand if the video is fit for use in the research. In addition, the editing of the video needs to be considered. Scenes are cut, clipped and replaced in order. Clips were intently left out or emphasized. Finally, the way the video is viewed matters. The viewer can decide to watch it in slow-motion, sped up, or frame per frame. This influences the data that is obtained (Knoblauch et al., 2006).

According to Knoblauch et al. in the handbook for qualitative research (2014), video analysis can be done in a standardized or interpretive method. The interpretative method is fitting for analyzing videos of social interaction. Knoblauch et al. define social interaction as "[involving] any action performed by someone who is motivated by, oriented to and coordinated with others, irrespective of whether these 'others' are other participants, animals, artefacts or whatever." (2014:236). The type of video data could be native video data or video induced by the researchers. Two important features of video as a data source are density and temporality. Density refers to the dense amount of data that can be gathered from the video. As every movement, expression, interaction is filmed, it allows for scruEsther and critical observation. Knoblauch et al. refer to this as video being a 'social microscope' (2014:440). Temporality refers to the possibility to reproduce the research, as the video is available for other researchers to watch, which helps validate videography as a research method (Knoblauch et al., 2014). However, it must be noticed that I am not the owner of the rights to the documentary, which means that I cannot control whether or not the material remains accessible for public use.

The documentary used for this research is called Valkenburg in de Geul. The documentary is produced by Zeppers Film en TV and it is broadcasted by the Dutch broadcaster NTR. The director of the documentary is Hans Heijnen. He is a film maker from Zuid-Limburg. For the documentary, he visited Valkenburg a year after the flood, in July 2022. The documentary consists of three parts, all with a duration of 45-47 minutes. It aired in June 2024 (NTR, 27-6-2024). The documentary falls in the Knoblauch's category native video data. It is fitting for an interpretive analysis, as the director of the documentary follows different human actors around as they navigate through Valkenburg. The documentary mostly consists of social interactions, monologue and filler images of nature, the town and the river.

While it is good to be aware of the production goals and editing of the documentary, the focus of this analysis is the content rather than the production (Chanan, 2010; Gandi, 2021; Fazeli et al., 2023). To analyze the documentary, I use the method of Figueroa (2008) for analysis of audio-visual, media-produced data: the AVO-approach. Viswambharan & Priya (2015) applied this method on a film about Indian communities that had been through several disasters in their hometown. The method exists out of three parts. First the researcher's epistemological stance needs to be written down. Then, the macro propositions or themes of the film had to be defined. To do this, the sequence of the scenes was written out, see appendix B. Writing down the sequence allowed me to determine the most appearing characters and the main themes. The themes are written down in table 1.

Table 1. Themes of 'Valkenburg in de Geul'.

#	Code	Explanation
1	recalling the event	The subject talks about the night of the flood, or the moments direct after the flood
2	helping each other	The subject mentions inhabitants and others helping each other during or after the flood
3	bodily distress	The subject talks about mental or physical complaints and treatment in relation to the flood
4	financial suffering	The subjects talk about costs or money-related topics regarding the flood
5	collaborations between agents	A collaboration between two or more organizations that are active in nature
6	relationship human and nature	The subject talks about the relationship between human and nature, in light of the climate change
7	nature-based solutions	The subject talks about nature-based solutions for water management
8	technical solutions	The subject talks about technical solutions for water management
9	distrust towards insurances	The subject mentions a distrust towards insurance companies, regarding the disaster
10	distrust towards government	The subject mentions a distrust towards government agencies with regard to the disaster
11	communal activities	An activity for the Valkenburg community takes place
12	tourism	The subject talks about tourism, or touristic elements of Valkenburg are highlighted
13	speaking dialect	The subject talks about speaking the Valkenburg dialect
14	history	The history of Valkenburg is mentioned.

After identifying the themes, or *macropropositions*, the themes are refined by analyzing the sequence of scenes and the content of the interviews (Viswambharan & Priya, 2015; Figueroa, 2008). The events and the main characters' story lines are laid out to understand the understand both the film making decisions and the effect of the flood on the people of Valkenburg.

Participant observations

To experience and capture the atmosphere around the river Geul in Valkenburg's center, I had to visit the site and see how the people and the river interact with each other. In her research on communication and floods in Venice, Porzionato describes:

> "Observing the ways in which people moved around and referred to floods did not allow me to directly grasp collective ways of feeling floods, but did facilitate an understanding of the existence of affective atmospheres of the city …" (2025:103,104).

This captures the essence of the need for participant observation. Participant observation is a staple in ethnography. It is usually not the only method used in qualitative research but is helpful in providing context in combination with data gathered with other qualitative or quantitative research methods (DeWalt-Musante & DeWalt, 2010).

DeWalt-Musante & DeWalt listed several activities that fall under participant observation: using everyday conversation as an interview technique; informally observing during leisure activities; recording observations in field notes; and using tacit and explicit information in analysis and writing (DeWalt-Musante & DeWalt, 2010:16). I left out: living in the context for an extended period; learning and using local language and dialect and actively participating in activities. The first one is not feasible with the available resources, which leads to difficulty completing the last one. As for learning and using the local dialect, I assumed speaking the same language and understanding the dialect would suffice. I elaborated on this in the discussion.

Short term ethnography is hardly comparable with classical ethnographic techniques (Pink & Morgan, 2013). It does still entail "the firsthand involvement of the ethnographer as a core element", but "takes a more deliberate and interventional approach to that of long-term participant observation" (2013:353). However, for the sake of structure, I chose to use the four elements of participant observation as described above, as it helped me structure my days in Valkenburg.

Informally observing during leisure activities is not just looking at a situation from afar. In this research, it takes form of walking around on the selected sites and between them and engaging in small talk with the other people present at that time. In this way, I want to uncover if people engage with the river or if they try to avoid it, and if people feel angry or anxious when seeing or hearing it (sensing it) or if they feel at peace, relaxed. This means observing people's behavior around the river but also talking to them informally. Several researchers have used similar approaches (Nash, 2018; Fiore, 2021; Porzionato, 2025). *Using everyday conversation as an interview technique* is a valuable way to get information on things people would not necessarily deem interesting enough to mention in a formal interview.

The last two elements - *recording observations in field notes* and *using tacit and explicit information in analysis and writing* – return in the paragraph on data analysis.

Formal, semi-structured interview

The interviews conducted are semi-structured, formal interviews. The questions were prepared in advance according to the theoretical framework. In addition, watching and coding the scenes of the documentary helped determine the interview questions. The questions served as a guide during the interviews. This means that the respondent was allowed to wander off or raise topics of their choice (Adams, 2015).

Given the background of the respondents, the research questions are partly the same and partly personalized. In appendix A.1-3, the research questions for respondent A, B and C can be found.

3.5 Method for data analysis

The data is analyzed by using qualitative content analysis (Schreier, 2014). This is a fitting method for analysis, as the data for this thesis takes different forms. It allows the researcher to use the same coding frame for different data types. In addition, it helps reduce the data, rather than enlarge it.

The analysis of the documentary happened first. The documentary is divided into scenes, which then got color coded. The categories are atmospheric images, interviews with the director, events and external videos. The color coding gave an overview of the scene types. Then, the scenes were coded openly, without any pre-existing list of themes. Axial coding followed, which helped to define themes. The process was reiterative, as the documentary had been reviewed several times, which led to several revisions of the coding frame.

The interviews were carried out and analyzed after the analysis of the documentary was done. As mentioned before, the documentary analysis helped in formulating interview questions. As for coding, the transcripts were open coded as well. The axial coding was done by using the same coding frame. This led to changes in the frame. However, the changes did not impact the data

analysis of the documentary. This cycle continued for the analyzing the field notes. Changes included merging codes, adding extra codes and deleting codes.

When interpreting the data, I kept Willig (2014) in mind. She talks of suspicious interpreting and emphatic interpreting. The first one is for digging deeper into the material, looking past the sole quotes of a respondent:

> "'Suspicious' interpretation aims to unmask that which presents itself, to bring out latent meaning which is contained within but not immediately obvious or which is actually obscured by appearances." (2015:138).

Empathic interpretation means trying to understand the presented phenomenon better, without trying to put on external theories or concepts. It is a case of understanding versus explanation (Willig, 2014). As this thesis actively searches for emotion, the understanding plays a main role. However, it does require the researcher to read between the lines to see what emotions might be there, without the respondent explicitly mentioning these emotions. It proved to be a balancing act throughout the process. Understanding and using both types of interpretation helped interpretating tacit information from field notes is a difficult task. It means that the field notes need to be elaborate on mundane information to describe the surroundings and the context of every interaction (DeWalt-Musante & DeWalt, 2010).

3.6 Ethical considerations

In the following section, the following ethical considerations are discussed: voluntary participation, informed consent, anonymity, confidentiality, potential for harm and results communication (Bhandari, 2024).

Voluntary participation is ensured by explaining respondents their rights before the interview begins. The respondent is told that they are allowed to stop the recording of the interview at any time, and that they are allowed to retrieve their participation within 24 hours after the interview took place.

The informed consent form explains what happens to the recording of the interview and what the goal of the interview is. In this case it means that the recordings of the interview are deleted after transcription is carried out. The transcriptions are anonymized and kept on the secure data storage of Utrecht University. To make sure that the respondent understands the subject, they are handed an information sheet. This sheet can be found in appendix A.4.

As mentioned before, the transcripts are being anonymized. This means that the names of the respondents are changed. In addition, any information given in the interviews that is retraceable to their personal lives is left out or anonymized. I have changed the names of the people that participated in the documentary as well. They consented to being in the documentary, but did not have the chance to consent to being in this research. This is why I anonymized any detail that may lead to uncovering of the identity. Any personal information I know about the respondents, either from the interviews or from the documentary, is completely confidential.

Potential harm done to research participants deserves adequate attention. Some of the respondents are left with post-traumatic stress disorder after living through the night of the flood, others might be hurt by the damage done to their personal belongings. X and x conducted research in areas struck by an earthquake. They mention the importance of understanding 'whether disaster survivors would consider research participation an opportunity to share their

personal experiences or a burden', as they might have to live through traumatic events again, or are in psychological discomfort (Mukherji et al., 2014; Collogan et al., 2004).

In addition, it is important to consider if the participant is capable of making the right decisions and if there is enough time to line out a clear research goal and to explain this research goal adequately to the participant (Mukherji et a., 2014). These concerns are less relevant in this thesis, as the traumatic event happened four years ago.

The results communication happened via e-mail. The respondents received the thesis after it was accepted by the university. Plagiarism is prevented by correctly referring to all sources used in this thesis.

3.7 Positionality

To understand how I - as a researcher and as a private person - have influenced the research, an extensive investigation in my own positionality is required. In the following section, I describe how the fact that I do not speak the local dialect and the way that I used a gatekeeper resulted in getting (or not getting) access to the wanted information. In addition, I consider how I contributed to producing atmospheres.

I conducted research in Valkenburg, in Zuid-Limburg. I visited for one week and I decided to sleep on a camping site. Even though I visited as a student-researcher, in my actions I contributed to a touristic atmosphere, as I was taking photos of the Geul and I walked around leisurely, instead of with a goal. I need to be aware of the fact that I am co-producing the atmosphere in the city center (Böhme, 2021; Anderson, 2009). I co-produced the atmosphere of a touristic Valkenburg.

The same happens when I am researching emotions and finding objects that emotions stick to (Ahmed, 2004), I am influencing my respondents with my reactions to their emotions as well as my own emotions. In her research into affected atmospheres in a flooded Venice, Porzionato (2025) explains:

> " [...] when I was in Venice I was not just researching people's emotions towards floods there, as if these emotions existed before I looked for them, but co-creating and sharing these feelings through my methodological efforts, with my own body among the bodies of others, in the specificity of the places I was in." (2025:90)

Besides taking part in producing atmospheres and emotions, my language and being an 'outsider' also affected the results I got. The people in Valkenburg aan de Geul speak in a dialect. Even though I could understand some of it, it also meant that it was clear from the start of every conversation that I am not an inhabitant of Valkenburg. Not speaking the language can be a big obstacle in obtaining information (Mukherji et al, 2014, Drozdzewski, 2017).

The documentary I used for analysis, is made by a man coming from the same region. As he is familiar with the culture and the dialect, he was able to meet the residents shortly after the flood. Not only is this valuable information because he captured emotions shortly after the flood, but it also lowered the bar for inhabitants to talk about the traumatic event, as the producer understands their dialect and culture (Mukherji et al., 2014; Drozdzewski, 2017).

4. Results

The analysis was an iterative process that involved data reduction, data display and interpretation. It resulted in drawing up four affective atmospheres. The coding schemes can be found in the table 1. The anonymized interview transcripts and field notes can be requested by the author. For clarity, the titles Respondent A/B/C are used for interview quotes, whereas quotes from the documentary can be recognized by the codes E1/E2/E3 followed by a code referring to the scene (S13/S14/S15 etc.).

I adopted a chronological order, starting with the atmosphere during the event of the flood itself and ending with the atmosphere one can feel in Valkenburg right now. The atmospheres became tangible through objects in public space and stories that people tell.

4.1 An atmosphere of crisis and vulnerability

"The light goes out, so it's pitch black. Loud noise comes with that force of water. All the cars are underwater." Respondent A

On July 14, 2021, the river Geul spilled into streets, homes, hotels and shops. During the flood, the water did not only damage material possessions but also the sense of safety people had. Here, I explore the atmosphere of crisis and vulnerability that was felt by the inhabitants during and shortly after the disaster. In the stories that inhabitants shared with me or with the filmmaker that visited Valkenburg shortly after the flood, four reoccurring subjects appeared:

> *Recollections of the event* itself — often vivid, disorienting, and emotionally charged.
>
> *Bodily distress,* as people experienced not only emotional and physical stress during the event, but also in the aftermath.
>
> *Financial suffering*, which lingered long after the water receded, embedding insecurity into daily life.

In talking about the flood, I sensed a heaviness. People were unwilling to talk about it, mentioning that is 'far in the past now'. However, there were people who were willing to share their stories. In the following section, I elaborate on each of the above topics and how they are placed in the affective atmosphere of crisis and vulnerability.

Recollections of the event

In conversations about the flood, people often pointed out the material damage: wet walls, a damaged floor or the mud that spread everywhere. The physical examples helped start the conversation. One respondent, a student who moved out of Valkenburg a few months after the flood, started their recollection by pointing out the rubbish in the street:

> "When I came home, everything was in ruins. There were many many garbage containers throughout the whole city, with truly people's whole life thrown away in them." Respondent B

When asked about how the people recall the night of the flood, surprise and fear seem to dominate the story. The electricity stopped working, so the city was dark. The darkness led to disorientation and a desolated feeling, as respondent A mentioned: "You think everybody is gone.

Except ourselves. … It's a very apocalyptic image". The noise of the water recurred in stories. As a person in the documentary says in a video they made that night: "It comes out of the sewer and the Geul – You can't see anything, just hear it". The same person said they slept with the balcony door open, just to hear if anything might collapse.

Not every home in Valkenburg was flooded. The student that lived higher up mentioned feeling scared for their friends and grandmother, who lived closer to the Geul: "It was especially scary to see the videos of how the square was completely under water. And of friends, how they were literally floating out of their homes." (Respondent B).

During my walks in Valkenburg, I looked for signs of the flood in the urban space. It was hard, as there was no information sign or obvious collective remembrance place. This made me feel like the flood was in the past, not to be reminded of too often. When another tourist pointed it out to his family, I did see a sign on the quay of the river, see image 4.1. A coffee shop had a sign as well, showing the height of the water, see image 4.2. Another sign was a paper on a shop, which said "temporarily closed because of water damage'". These signs, or the lack thereof, play a role in how the flood is remembered in the city. Even though there were little reminders of it, every day I heard tourists mention the flood. The contrast in tourists recalling the flood in conversations and the inhabitants minimizing the artefacts that remind them of the flood, links to research into selective memory (McEwen et al., 2017). What memories are kept and what moments are deliberately forgotten?

The closed hotels, one with a sign and one without, are the only tangible objects that remind of the atmosphere of crisis that was in Valkenburg at the time of the flood. The memory of the flood mostly lives in the stories people tell about it – in other words, in recollections of the event. The documentary played a role in the framing of the flood, as well as news articles and scientific reports on the event. However, it needs to be noticed that the collective memory of the flood still has individual meaning for every resident. Where one of the respondents remembers the years after the flood as 'four horrible years', another one said:

> "I don't think people are still afraid. The chance is still there, but it won't happen weekly. And even though it got out of hand last time, no one directly died from the flood." Respondent B.

The flood is by some people described as a traumatic event. Besides experiencing fear in the event itself, people felt anxious or uneasy in the months after the flood. Four people mention needing Eye Movement Desensitization and Reprocessing (EMDR) therapy to process the traumatic event. They mention having trouble sleeping, feeling anxious when it is raining for a long period of time and seeing the water outside as higher than it really is. One of them explains how they experience rain after the flood:

> "At some point, I think 'it is over, I do not suffer from it anymore'. And then it starts raining and storming. At night, everything is illuminated, you can see it shimmer. At that moment, the water seems higher than it is. … In reality, it is not true, but this is how it feels. It feels grim." E2S48.

Image 4.1. Sign showing the water levels.

Photo 4.2. A sign showing the water level in a shop

Bodily distress

In two cases, people mention suffering from depression. In all interactions, it felt like a heavy burden that people had to carry with them. A family with two young children had to move house, because one of the members did not feel comfortable in their house anymore. In the documentary they said: “I said, I cannot sleep here, I had flashbacks – mentally. Little things you can’t explain” (E3S10).

It is not uncommon for flood victims to suffer from PTSD for years after the flood (Ntontis et al., 2020). Even for the people who did not have to deal with PTSD or other mental complaints, the flood left an imprint on their state of mind. When asked how people in the town react to rain and high water now, one respondent would not describe it as fear or panic, but rather a heightened state of alertness (Respondent B). Another one noticed:

> “If it rains very hard now, people feel panic. Not with a little rain, but with a lot of rain, they go and look at the Geul and think ‘oh, is it coming up?’. But of course, the Geul comes up very often. But that feeling is different now than before.” Respondent A.

On the other hand, not everyone talks about the flood in such distressing terms. For example, a fisherman answered when asked about problems after the flood: “problems? What problems? There is water, or there is not. Logically thought, right?” (E2S15). In conversations with me and with the film maker, it seems that the flood left a different impression on everyone. The flood was distressing, but the mark left on the inhabitants’ mental health is different for everyone.

Financial distress

For many inhabitants, the flood is not only remembered by the events that exact night. The aftermath of repairing everything and trying to get it financially covered, left them with long-lasting problems. Two authorities are involved in covering costs in case of this flood. The national government has a law called ‘Law compensation damage disaster’(WTS). On the other hand, some companies and individuals are insured for water damage, or for part of this. However, in both cases, it appeared to be very hard for people to actually receive the money. This seemed to frustrate the inhabitants. These emotions can be seen in conversations about their financial situation. One of them retired shortly before the flood happened, and was visibly upset when talking:

> “The emotions keep coming, I can feel that. It is a mix of anger, fear, and… The feeling of having to beg to get your own stuff back. Even though no one asked for this! [the flood]. And that… I can’t bear that.” (E1S48).

Even directly after the flood, a hotel owner mentioned the financial trouble this would end in: ‘We pay for it ourselves. We are not insured. So, we will see what happens. After covid this is the second blow we get.” (E1S25) The financial distress that people felt carried a lot of weight for some of them. When diving deeper in this distress, another affective atmosphere can be identified, one linked to solidarity – between the inhabitants and people all over the country - fueled by distrust towards the organizations that decide who receives money and who does not.

Image 4.3. An abandoned hotel on Walramplein. An old information sign tells about the rich past.

4.2 An atmosphere of solidarity and suspicion.

After the flood, it took the inhabitants months or even years to recover materially, financially and mentally. In this process, the inhabitants seemed to find each other for support through the community. They did communal activities like doing art together, or doing a remembrance walk, which provided an opportunity to share experiences and worries. This brought people together and brought to the surface the love and pride they have for Valkenburg and each other. Alongside these positive enforcers, coming from within the community, the inhabitants bonded over negative experiences with government bodies and insurance companies. A sense of distrust, anger and frustration dominated the recurring conversations on these topics. Even though the flood brought people together, it also uncovered that sense of community is a complex concept. Not every inhabitant feels as if they are a part of the community, or people struggle to find connection. This might impact the way the community shows resilience and adaptation in the future (Wickes et al., 2015).

In this section, I explore how the emotional response to negative experiences which gave rise to a form of affective togetherness — not one rooted in harmony, but in shared experience, friction, and uneven forms of belonging. Codes included:

> *Helping each other* refers to people reaching out to help clean or repair things after the flood, or when they offer to help with processing the flood.
>
> *Communal activities* are moments when people come together to either play music, make art or walk together. These activities provide moments for people to share experiences.
>
> *Distrust towards insurance companies and government agencies* appeared when people talked about trying to get financial support, or clarity on their chances to get this support.

Helping each other

During and shortly after the flood, people had to rely on each other to make the best of the situation. One of the respondents mentioned that because their household was not struck by the water, they helped all their friends to get sandbags and to move. The owner of an event center got struck badly but still was out there helping everybody else. Respondent A told me:

> "He also suffered damage. He was not there at that moment, but the day after he saw the damage of course. That guy... He committed himself to everyone and everything that needed help. Those kinds of people, they are worth gold." Respondent A.

Another example was the importance of an attentive volunteer in the nursing home. A respondent told me that they were quite scared when it became clear that the water was going to reach their grandmother in the nursing home, but because of this volunteer, there were buses ready to take the fragile people to safety.

In these conversations, a sense of pride and love could be felt. The readiness for action, everybody looking out for each other and providing beds and meals, those were the things that helped the community through the traumatic event.

The helping hand came not just from within Valkenburg. It seemed like spontaneous groups were appearing, like respondent A mentioned providing a hotel room for guards from outside Limburg that came to prevent looting. The help from people all over the country was astounding, they mentioned:

> “We had a lady from Friesland here for a few weeks, who was just cleaning. For three weeks - worked so hard, helped us. That's amazing. Another man from Rotterdam. He got time off from his boss to come and help here. These kinds of people are out there. They really do exist.” Respondent A.

In the months and years after the disaster, other forms of help could be identified. The mayor visited people that were not done renovating, and he pleaded for change in meetings with other government officials. The inhabitants got a chance to share their story, and they seemed grateful for the mayor to be there. One of the inhabitants even gave him a harmonica, after which they played together.

When talking about helping each other after the flood, I did not always get a positive answer. Someone mentioned that some of the other business owners truly were ‘lijkenpikkers’, freely translated people that profit off of other’s bankrupt business (Respondent A). This theme will be explored further in the last part of this section.

Communal activities

Communal activities refer to every kind of activity in relation to the flood. These activities provided a chance to see how people act around the subject of the flood and to feel what kind of emotions were present in the moment.

A year after the flood, the people of Valkenburg gathered to remember the disaster. The day consisted of two parts: the unveiling of an artwork, called a Social Sofa, and a remembrance walk. The artwork was made by inhabitants who wanted to participate – the artist made the design, and the participants laid the tiles in mosaic patterns. The sofa is placed on a square, near the Geul (see image 4.4). During the sessions, the artist noticed that people started talking. About the project, she wrote:

> “Every tile the volunteers glued on the Sofa, is a piece of a story. And every story is just as important as the others. With this in mind, this really is a collective project.” Respondent A.

When I asked about it, the artist mentioned that people had the tendency to compare the damage they had suffered.

> “At one point I noticed - in conversations to process the event - that many people said: "Yes, but you have it worse". ... It is true, we have spent three years rebuilding. We were closed for one year. But in this case, you can never talk about worse or more or bigger.” Respondent A.

In the footage of the Social Sofa getting revealed, and the artist giving a live voice performance, it can be seen that some people on the square get emotional. As a viewer of the footage, I felt the emotional impact of the voice performance as well.

At the time of this research, four years after the flood, another artwork was revealed, see image 4.5. The artist invited me to join the event. The children who attend a school for special education, in a village next to Valkenburg, made a painting of the Geul together. The artist mentioned that it was interesting to see what they remember of the event, as four years in a child’s life is quite long. I talked to some of the children, and they did remember having to go to another school. However,

in talking about the flood, the pride of their beautiful artwork was more apparent than the memory of the flood. During the reveal, a group of children sang a song about the river and the animals living in it. The process of making the art was shown on video. In another video, the children and the teachers of the school sang about the flood, and how it would not get to them because they had each other. I could feel the impact of the move the school had to make, and I saw other adults getting visibly emotional as well.

Image 4.4. The Social Sofa. The course of the river can be seen.

Image 4.5. A part of the children's artwork. The text says, 'We are the Geul, who lives with me?'.

Distrust in governmental agencies and insurance companies

Many people struck by the flood suffered from financial losses. The loss itself caused stress, but the uncertainty of whether they would receive financial support from either insurance companies or the national government. This was not only the case for businesses, but for households as well. This mostly negative experience seemed to bring people together. As one person said:

> "From higher-up, that won't get us further. We should build a connection, from the people, from below." Respondent A.

This implies a distrust that can be recognized in stories from other people as well. The owners of a bed & breakfast talk about feeling coerced into signing an agreement with an insurance company, because of the company stating that 'they might as well get nothing if they don't sign now'. The owner stated:

> "They just take advantage of the fact that I, as a lay person, am not an expert in insurances and the details of the law." E2S11.

Respondent A talks about the hassle of having to prepare documents every time they might get compensated:

> "My husband knew we wouldn't get anything. … But they kept skewering us, to give us a glimmer of hope every time. And then we went full steam ahead… to get all the documents and whatever they asked in order.

Two years after the disaster, people in Valkenburg met with people affected by the earthquakes in Groningen. The initiative came from the artist that made the Social Sofa. When asked about it, they mentioned a feeling of guilt related to the money. If they were to receive money from the government, it would feel wrong, because the people in Groningen suffered from so much damage as well - but they did not get compensated. The artist, together with people from the tourist office of Valkenburg, invited them to share their stories. A person from the tourist office looked back on that week as very special and intense, a week with a lot of emotion. In that week, art students were present to take stories from both parties and to turn them into an art constellation.

According to the artist, the insurance companies and the governmental agencies signaled a sense of distrust from the moment of first contact:

> "We were distrusted. From the very first moment. The first contact is always distrust. So that distrust… We had to constantly spend energy on gaining trust. That is a recurring process, it is standard. So that time, the money, the energy, all of it is lost. It would have helped us so much if we were trusted from the beginning." Respondent A.

The distance between the homes in Valkenburg and 'the desk of the people in Den Haag', is a recurring subject. One inhabitant talks about the administration of their business being completely soaked and starting to rot. The government did not allow them to throw it away, as this administration is required by law. When an official in disaster and security came to visit, he did say that only two people were allowed in the room with the moldy administration. These experiences, they said, made it harder than necessary to recover. Trouble and emotional distress caused by financial organizations after a flood is noticed in other research too (e.g. Lock et al., 2012).

At a much shorter physical and emotional distance, was the mayor and the municipality. Respondents speak of an active mayor, which can be seen in the documentary, which gave them support. However, two respondents did notice that his actions only go so far, as the power of mayor is limited.

The aftermath of the flood showed that people turn to each other to find support. The arts, including painting, mosaicking and playing music together, seemed to provide an opportunity for people to share. They are not only bonded in these positive events, but in their shared experience in trouble with governmental and insurance organizations, which burdened them with uncertainty and extra work. This experience reached even so far as Groningen, which showed that the Valkenburgers are not unique in this matter. The atmosphere is on one hand loaded with love and solidarity, and on the other hand distrust and a feeling of defeat.

4.3 The Geul as a messenger: an atmosphere of green motivation and negotiation

The relationship between Valkenburg and the river Geul has always been important. Since the flood, the relationship might have changed. How this relationship changed depends on what memories of the flood remained. This affective atmosphere can be noticed in spatial changes that are being made in Valkenburg right now, green initiatives that are pushed by the municipality and other green organizations and in the way people in Valkenburg talk about climate change. I identified the following themes in the data:

> *Relationship human and nature,* meaning people talking about the relationship between human and nature, or human and river either before or after the flood.
>
> *Nature-based solutions,* referring to local solutions that work with nature instead of against it.
>
> *Technical solutions* refer to the current ways of doing water management.
>
> *Organizations working together* refer to green and governmental organizations trying out nature-based solutions.

To describe the affective atmosphere of human-nature relationships in Valkenburg effectively, this paragraph is structured differently from the others. Rather than going over every theme, I explain the role of the flood in raising an environmental consciousness and the emotions attached to it by analyzing different observations while referring to the codes.

The question of whether the flood changed the human perspectives on the river is not easy to answer. The way people see nature and how natural disasters change this, is complex and changes over time. In addition, a change in perspective might happen to one person, but not the other – and the change might not necessarily have happened because of the flood. However, during my time in Valkenburg, I encountered projects, people and objects in space that nudged towards a more equal relationship with nature.

To start with projects that have a different relationship with nature in mind, I met with a person who contributed to an organization called NatuurKracht (Power of Nature). It was founded shortly after the flood and it got several municipalities along the Geul and the Gulp, another small river, to sign with them to prioritize nature-based solutions over technical solutions. In addition, the

organization collaborated with ambassadors, who in their place motivated volunteers to work with nature in the challenges they faced in life. Both groups are important, as local knowledge of the characteristics of the ground, the river and the microclimates are vital to implement nature-based solutions effectively.

The flood opened up opportunities to start new initiatives, Respondent C said. The impact of it created momentum, which made it easier to get people aboard with new projects. However, the momentum 'threatens to weaken' and is hard to hold onto, they mentioned:

> "We have to stimulate actively for Nature-based Solutions to stay on the agenda. Right now, it does not appear on the agenda automatically, it is not a matter of course. We constantly have to call it out, it costs a lot of work at the moment." Respondent C.

The mayor of Valkenburg struggled with something similar in his attempts to advocate for Valkenburg. He said:

> "Sometimes I think, if only we had casualties, because I am sure that then, people would look different at the case. And maybe, there would be more interest from Den Haag, to handle things differently." E2S9.

The fact that the mayor is making such a statement gives an insight into how hard it might have been to get Valkenburg on the agenda in meetings about aftercare in case of disaster. The language is harsh and does not align with the actions of the mayor, which show compassion for the inhabitants, for example making music with an older inhabitant.

Nature-based versus technical solutions

The goal of NatuurKracht is to change the way people treat nature. In other words, when encountering an issue in space, the first response should be 'how can we work with nature to tackle this issue? What solutions does this landscape or ecosystem provide for us?'. When I asked residents if they felt as if climate change had become a more urgent matter for Valkenburg, they responded uniquely. One of the respondents told me:

> "I think the Valkenburger was not worrying about climate change that much. There were already plans to widen the river and to make floodplains. A part was already realized, I believe. It helped, but not enough. I think many people now think 'shit, this is reality now'". Respondent B.

This quote shows how the river was a messenger for climate change. The documentary showed how an inhabitant started to place water barriers around her house. The mayor did explain that every water barrier, being a self-built wall, or a wooden plank that stops water from entering the garden, would cause trouble in another place. This is why the Waterschap of Limburg decided to pull back their technical solution of offering mobile water barriers in case of high water.

There seems to be a tension between the desire for nature-based solutions and the urgent need for stopping the water. The person blocking the water from getting into their house shows understandable behavior, as they want to protect their stuff from water damage. On the other hand, NatuurKracht and its ambassadors speak out a desire for giving the river more space. As the mayor said: 'we have blocked the river basin much more than we thought' (E2S23). The artist, who made several art works about the river, said to me that they see the river as her friend now.

The artist and inhabitant is very open to seeing the river as an equal member in space, but at the same time, cannot escape the need to use technical solutions to handle flooding at the moment of happening. For example, they installed machines that pump water out of the basements back into the Geul if needed. In terms of Ahmed (2004), the river becomes an object of love and deserving space. However, the flood is not the same object. Emotions sticking to the flood are fear and anxiety, chaos. The uncertainty makes that people reach for technical solutions – understandable, as 'nature-based solutions take time' (respondent C).

Tangible examples

In the public space of Valkenburg, few elements reinforce this green atmosphere. I noticed working people take out stone tiles, for a project that is meant to green the important streets of Valkenburg. The same project got started with a 'mini forest' of 50m^2 in the city center.

Outside of Valkenburg, two bigger, private initiatives can be found. Both businesses are or aim to be lucrative, and both are on various levels working together with nature. These are examples of how this new relationship with nature might look like. The first one I visited was described as 'the headquarters of NatuurKracht', which is how I got referred to the place. It meant it was the place where the ambassadors would often meet up. It is a farm that is developing a food forest, where they let nature take its course and avoid as much human intervention as possible, see image 4.6. The owner told me they stumble upon new animals and plants every day and that it is not always easy to wait and see how nature deals with an excess of slugs, for example. They catch water from the roof and the parking place of the farm, to use it in dry periods. Besides the ecological aspects, the social goals they have were also quite interesting, such as being able to feed their village in a few years' time. In my field notes, I wrote about my visit:

> Every now and then someone comes onto the property to buy strawberries or other local produce. When two little boys walk on the driveway, he enthusiastically walks up to them and asks if they want a strawberry. They quickly leave, but later he explains to me that he had had them on the farm before, with school. They try to involve the village and the surrounding area as much as possible in their practice, even the other farmers. (fieldnotes, May 28th)

The farmer explained that it was hard to connect with other farmers, as they are not outside very often in his experience. Still trying to find this connection is what NatuurKracht aims to do, according to another respondent. The traditional farmers have a lot of land in their possession, which is something nature-based solutions require as well, they explain. The flood may not have directly impacted the farmers in the region, but they noticed that inhabitants from small villages started to demand action from the farmers in times of rain. This had to do with the fact that the rain would hit the farmland, become muddy and would then approach the village downhill. As inhabitants have to deal with mud over and over, they started to resist increasingly. This resistance might lead to faster change towards nature-based solutions.

Another less obviously 'nature-based' location I got referred to was Chateau St. Gerlach. This was originally a castle with a big garden open for the public. Someone bought it for one gulden to renovate the land and the ruins. When walking in the garden filled with art objects, the luxury of the past and the present facilities could be felt. The artist that sent me there talked about the rich Roman history of the place. It appeared that the restaurant on the terrain chooses regenerative farming on their own lands.

On these visits and in these conversations, I sensed pride. People seemed eager to talk about new developments and were happy to show me their land. Besides pride, there was a sense of realism as well, as they were aware of the time it would take to implement mostly nature-based solutions. Finances are a struggle as well, according to the respondent who leads different projects. It is hard to show the exact financial savings of nature-based solutions. That is also why he called Valkenburg as a participating municipality 'brave' (respondent C).

This atmosphere is one of innovation and a desire for change, but where these desires are reined in at urgent moments that require immediate action, such as the individual applying barriers to prevent water getting into her house. Pride in success stories and the love for nature is what keeps people going, but the fear of new damage shows the limit.

Image 4.6. A farmer picking a leaf from the 'onion-soup-tree' in the food forest.

4.4 Vibrant Valkenburg: the touristic atmosphere

There is an atmosphere in Valkenburg that presents itself immediately: one of leisure, beauty, and heritage. This atmosphere can be felt the moment one enters Valkenburg. The touristic atmosphere is reproduced by objects such as historical information signs, marks that lead the way to attractions and countless restaurants and hotels. In this section, I connect this vibrant atmosphere to the underlying community and observe how it tells a thought-out story of the city. Codes for this atmosphere included:

> *Tourism,* this includes every time a respondent or other inhabitant mentions tourism in Valkenburg, or when traces of tourism were discussed in the field notes.
>
> *History,* this includes the notion of Valkenburg's history in the field notes, or quotes of respondents that talk about the history of Valkenburg.
>
> *Speaking dialect,* whenever speaking dialect comes up in interviews, field notes or the documentary.

Chosen narratives.

The walk from the station to the city center is downhill. Walking up and down the hills and the buildings made of yellow stone – marl stone from the region – did make me understand Jacobs & Leenders' (2017) description of Limburg being somewhat 'foreign'. On the edge of the city center, I was met by a pond and people taking pictures by it. The presence of photogenic waters is characteristic of the city center. The river flows into the city into two streams, the Geul and the Molentak. Both are decorated with flowers and have idyllic bridges over them, which invited many couples to take photos. The river, although it flows quite quickly, appears small and harmless. I heard a man passing by say:

> "You can't imagine it, can you? That *this* was a wild stream?"

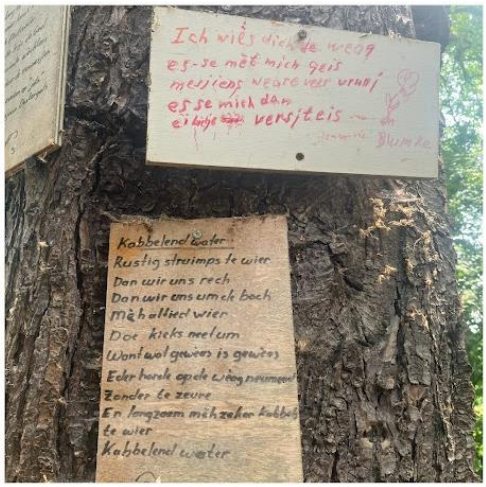
This captured my thoughts when seeing it as well. The image of a harmless, idyllic river is enforced by poems found alongside the river. They are written in dialect and tell a story of a calm river that gives inhabitants a feeling 'that only a Buck (inhabitant of Valkenburg) knows', see image 4.9. These are not the voices of trauma or fear — but of admiration and attachment. The same can be found in songs about the Geul. These elements could be seen as a narrative layer embedded in the touristic atmosphere. It is not just this narrative found in art that produces the atmosphere of leisure and beauty. The towering trees and the flowing river absorbed sounds and provided a calming atmosphere that nature often does. This was reinforced by people enjoying the river while fishing or walking past it, see photo 4.7. The calming way of the water takes over and people are visibly enjoying its presence (Volker & Kistemann, 2015; Strang, 2005).

Image 4.7. People sitting beside the Geul.

Image 4.8. The Geul

The memory of the flood was barely visible in the public space. Besides signs showing the water level on three locations, it is another, older history that is on display. There was a walking route through the center themed around World War II, and many buildings had a small sign explaining the origin and the renovations done. Guided tours walked past, with guides enthusiastically talking about Valkenburg's role in the roman empire and the second World War. These elements take part in producing the atmosphere of an interesting touristic destination with a rich history.

Image 4.9. Four poems and their location.



The community and tourism

In my field notes I wrote:

> "The streets beyond the gate are filled with restaurants. Lots and lots of restaurants. That does give an idea of how many tourists come here. Walking down the street I feel a little watched by the couples on the terrace. With the streets fairly empty, you can't disappear into the crowd."
> Fieldnotes, May 28th

I heard German, English and Flemish language around me. The number of restaurants, hotels and cafés implied that it must be very busy here in the summer season. One thing that attracted my attention was the number of names and words scratched into the marl stone, even outside the big attractions. The big attractions seemed to be a cable cart, ruins of a castle and the caves. The existence of the scratches and the abundance of facilities - all empty or serving a handful of visitors – gave me the feeling that the masses had yet to come. This is in line with what two respondents told me:

> "There are three peak moments: the Amstel Gold Race, the summer vacation and Christmas. I remember, being there in the summer, that I would not enter the city center – simply because I thought it was too busy." Respondent B.

> "The weekends are also very busy, in my opinion. Every weekend there is some kind of walking or especially a cycling event. That drives us crazy." Respondent A.

Besides a lot of tourism, these quotes do imply that these inhabitants do not necessarily enjoy the busyness of the high season, or even just the weekends. Even though they do not enjoy the crowds, they do see that tourism did bring good to the city:

> "The village changed, a lot is renovated. The old part, where the Albert Heijn supermarket was at first – that was a really filthy, old building. It just didn't look good." Respondent B.

The same respondent also noticed that when they speak Dutch, they get treated differently than when they speak the dialect. Not speaking dialect also seemed to influence the sense of belonging in the community. One, who does not speak it, mentions that it is important to him that his children do learn and speak it. Another one said they feel like an outsider because they do not speak it. The fact that the dialect is able to subtly divide the locals, establishes how obvious the divide between tourists and locals is. In my field notes, dialect is a recurring subject. I noticed that I tried to listen in on people to find out if they were visitors or locals. When I visited the school, with only people from the region, I felt especially out of place – the moment I started talking, people know I am not from Limburg or even Brabant.

For an outsider, Valkenburg tells a story of a long history and rich heritage. The caves, the marlstone and friendly inhabitants who speak with a 'zachte G' tell a story of a vibrant holiday destination. However, this quite tangible atmosphere also has the capability to cover up histories that Valkenburg does not want to be reminded of, like the day of July 14, 2021. Preferably, the river Geul stays a calm, lovely stream.

5. Conclusion & Discussion

This chapter reflects on the four affective atmospheres identified in the research — crisis, solidarity, green motivation, and tourism — to consider how the 2021 flood shaped emotional relationships between residents of Valkenburg and the river Geul. Drawing on affect theory, I interpret the river as a "sticky object" (Ahmed, 2004), carrying contradictory feelings shaped by trauma, care, and place attachment. These findings are then discussed in relation to existing literature and possible directions for future research.

The river Geul emerges in my research as a deeply affective presence — an object to which multiple, often contradictory emotions stick. In local poems and songs, and in community art, the Geul is not seen as a destructive force, but as a friend, a familiar presence whose worth is best understood by those who grew up beside her. Even artwork created after the flood — such as the mosaic sofa and the children's painting — center the river not as an enemy, but as something to live with, to care for, and to understand.

This sentiment can be recognized in the interviews: one person described the Geul as "a friend," another said they returned to Valkenburg because they couldn't imagine life without her. Yet emotional residues of the flood remain. One woman described seeing the river as higher than it really is during heavy rains — a subtle reminder of how the fear related to the flood lingers. The Geul is not either loved or feared, but it is a sticky object that has emotions stuck to it shaped by memory, trauma, and place attachment.

Atmosphere of crisis and vulnerability

The atmosphere of crisis and vulnerability that was present during and directly after the night of the flood carried emotions like anxiety and fear. The flood caused people to be disoriented, panicked and unsure whether their friends and family were safe. In the months or sometimes even years after the flood, some people still suffer from PTSD or anxiety. This is not uncommon for survivors of a flood (Ntontis et al., 2020). The problems people had in the months after the flood were more prevalent in the interviews I had and in the documentary. Lock et al. (2012) call the problems people might experience because of the flood secondary stressors. They refer to "the grueling process of submitting an insurance claim" (2012:1) and parents worrying about their children, both elements coming back in the data as well. However, is should be noticed that the sample of respondents was not representative, as the interview sample was small and because there might be confirmation bias in the documentary. In future research, the role of selective memory and erasure might be interesting to investigate into. McEwen et al. (2017) and Garde-Hansen et al. (2017) provide insight into the role of memory in flood resilience.

Atmosphere of solidarity and suspicion

The second atmosphere, one of caring for each other and finding a common enemy, shows solidarity and helpfulness in coping with the traumatic event. People organized a remembrance walk, made art together and the mayor visited victims to grant a listening ear.

However, it is debatable if this research has clear proof of a community being present. Where some talk about the importance of dialect for recognizing 'one of us', others did not want to speak of feeling solidarity towards 'the Valkenburger'. These micro-boundaries suggest that affective

atmospheres of care are also shaped by exclusion and a kind of local identity politics. To better understand the nature of community in Valkenburg, longer-term ethnographic research with more diverse participants would be beneficial.

In the case of this flood - rather than a community – spontaneous groups appear, as Ntontis et al. (2020) describe. They see bonds forming between people in need and people that want to help, similar to the people coming from all over the Netherlands to help clean or surveil in Valkenburg.

Another point of discussion is that governmental organizations and insurance companies were described as not helpful in any way in the aftermath of the flood. Here, confirmation bias may occur as the people who did get insurance or other financial support are not heard. For example, in the documentary there is only one person who shortly mentions that their financial losses were all covered by their insurance. In addition, the role of the government during the disaster itself is not explored to the full extent. Research of Botzen & Van Den Bergh (2009) provide an interesting account of the role of insurance companies during climate disasters in the Netherlands.

Atmosphere of green motivation and negotiation

The atmosphere of green motivation and negotiation reveals a force field between affection for the river and granting it more space and fearing floods and wanting to react fast in case of high water. These affective contradictions show that the river Geul has contradicting emotions sticking to it, in Ahmed's terms (2004). The affective atmosphere around the river is dynamic (Anderson, 2009).

In other words, when the river is calm, it invites reflection, creativity, and cooperation — a mood conducive to imagining nature-based solutions. People speak of the river as a friend, create art inspired by it, and support projects like the food forest or green infrastructure. But when rain intensifies or the water begins to rise, that calm atmosphere is disrupted. Fear reactivates, memories of the flood resurface, and emotional urgency pulls people back toward technical solutions — pumps, barriers, and other forms of control.

This is not merely rational versus irrational — it reflects what Anderson (2009) might describe as shifting affective atmospheres, provoked by weather, memory of the previous flood, and risk perception. The emotions related to the river changes: in calm times, it is a friend and in crisis, it becomes something unpredictable. As such, the desire to work with nature is not abandoned, but it seems temporarily overridden by fear and the need for control.

Regarding the debate on technical measures versus nature-based solutions, it must be noticed that this tension is not new, see for example Vis et al. (2002). However, a natural disaster such as a flood does create momentum nature-based solutions. In Valkenburg, this resulted in more interest in the food forest, for example. Gernot Böhme said in an interview:

> "A wonderful symbiotic relationship in fact existed in traditional agricultural society. Today, on the contrary, in the industrial agriculture that we have, such a sustainable human-nature relationship must first be established. Now the problem is that we have to develop patterns of production and consumption that understand nature as a partner in an interdependent sense." (Wang, 2014)

The food forest is a good example of this alternative for traditional agriculture that Böhme is looking for. The effect of the food forest might be different than the project of greening streets in the center of Valkenburg. Further research into the reach and depth of the projects could lead to interesting insights into what projects succeed in changing the relationship between human and nature.

Atmosphere of tourism

The atmosphere of tourism referred to the feeling a visitor gets when they enter Valkenburg. It shows parts of Valkenburg's history and identity. However, it also covers up history. For future research, it might be interesting to look into how this collective identity is determined. The connection with power relations between the human and the non-human, but also between certain types of inhabitants might show why certain narratives are left out in the Valkenburg identity, for example. This could either be done by ethnographic research, or by analyzing policy documents of the municipality.

General limitations

It might be valuable to create an ethnographic account of Valkenburg using more time and talking to more respondents. In this way, it might be possible to reveal collective emotion towards the river, with more narratives to back it up, like Porzionato did in her research (2025).

Another consideration is the role of place attachment and community. Research shows a connection between high place attachment and the ability to adapt to a changing environment due to climate change (Blondin, 2021), and a connection between the prevention of flood damage and emotional connection to the landscape (Han, 2025). These concepts are interesting to elaborate on in the future.

On a final note...

In this thesis I have explored how the 2021 flood shaped emotional and affective relationships between the people of Valkenburg and the river Geul. The Geul emerged not just as a source of damage or beauty, but as a kind of messenger — a sticky object carrying memories, contradictions, and possibilities for change. Through shifting atmospheres of fear, care, and ecological hope, the Geul revealed the complexity of living with water in times of climate change. Understanding these affective layers helps reimagining human–nature relations not as static and hierarchical, but as equal and emotional.

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Appendix A. Documents

Interview guide – 1

Interviewee: local artist, based in Valkenburg.

Subject: the river Geul and people's relation with it

Goal: obtain firsthand information on how the flood was and how Valkenburg is as a resident rather than a tourist.

Form: semi-structured interview.

Introduction. I start by introducing myself and the research I am doing. I will talk about climate change being tangible in Valkenburg, with the flood of the Geul. I wonder what changes and feelings 'stuck' after the flood.

1. Could you tell me a bit about yourself and what you do on a daily basis?

The art studio.

2. When did you open the atelier?
3. In what ways do you incorporate stories from Valkenburg and its inhabitants in your work?
4. You work as an ambassador for Natuurkracht as well. How does nature come back in your work?

Elaborate on the art project SocialSofa. This project is made by the artist and the inhabitants of Valkenburg, to process the traumatic event and go get people to talk.

5. Could you tell me about the project SocialSofa?
6. What kind of people participated?
7. What was your impression of the sessions?
8. How did you experience the session and how did other participants experience it?
9. What is your experience with people sharing emotions in Valkenburg?
10. What emotions came to the surface?
11. On your website, you say:

    "I consciously choose the quietly flowing and meandering Geul. She speaks the language of nature in various ways. She shouted loudly to warn us in the summer of 2021. Did we actually hear what she said? Was it enough to make us aware that we are not taking good care of the earth? It seems not."

    The way you talk about the river, you seem to see the river as an equal user of space here. Do you agree?

12. What would that agency look like according to you?

The event of the flood

13. (If you feel comfortable talking about it) How did the flood impact on your life and your family's?
14. On your website, you write that you feel like a 'richer' person after the flood happened. What do you mean by this?
15. How do you recall that time of the flood?
16. How would you describe the atmosphere in the city the days after the flood?

Life after the flood

17. After the flood, did the image of the Geul change for you personally?
18. In the documentary, people mention fear and anxiety a year after the flood happened. How was this for you?
19. Now it is four years since the disaster. Is the fear of flooding still alive in the city?
20. We talked about the river getting more agency, as being seen as an equal user of space. Is this something you see happening right now? Or is the river hidden more, being tucked away, because of the memories?

Interview guide – 2

Interviewee: young woman, grew up in Valkenburg but moved in October 2021.

Subject: growing up in Valkenburg, experiencing the community and the flood.

Goal: to obtain firsthand information on how the flood was and how Valkenburg is as a resident rather than a tourist.

Form: semi-structured interview.

Introduction. I start by introducing myself and the research I am doing. I talk about climate change being tangible in Valkenburg, with the flood of the Geul. I wonder what changes and feelings 'stuck' after the flood. 4 years later, do people still feel it is relevant? I also mention that I want to get to know Valkenburg through the eyes of a resident, so that she knows even the mundane activities are interesting to me.

1. Could you tell me something about yourself?
2. For how long have you lived in Valkenburg?
3. Where in Valkenburg did you live?
4. Could you describe three places in Valkenburg that are important for you?

Growing up

5. What was it like growing up here?
6. How would you describe Valkenburg to a stranger/outsider?
7. How did Valkenburg change over the years to you as a child and a teenager?

Community

8. Do you call yourself a Valkenburger, or rather a Zuid-Limburger, Limburger or none of that?
9. Does speaking dialect have a role in getting a long with other Valkenburgers?

Flood

10. How did you experience the flood?
11. Living close or further away from the Geul, how did this impact your experience?
12. In the year after the flood, there were many renovations needed. What did you notice during this time?
13. Did you visit the remembrance walk?
14. Some people talked about a collective trauma, do you think this is/was the case?
15. People mention that people used to not talk about the struggles after the flood. Do you think this is the case? Is it something typically Valkenburgs to wave away worries?

Interview guide – 3

Interviewee: employee of the WWF. He did several projects in Zuid-Limburg.

Subject: working together with inhabitants in sustainability projects.

Goal: to find out about projects done in Valkenburg by the WWF or the NFM. To find out how these projects were perceived and if they succeeded.

Form: semi-structured interview.

Introduction. I start by introducing myself and the research I am doing. I talk about climate change being tangible in Valkenburg, with the flood of the Geul. I wonder if Valkenburg's inhabitants and organizations are more willing to make changes for climate adaptation than other parts of NL.

1. Could you tell me something about the work you do now?
2. Could you tell me something about your personal experience with the flood in 2021?
3. What is the vision you and the WWF have, regarding the relationship between human and nature?
4. (How) is Zuid-Limburg different from other regions you have worked in? What are the unique features?
5. Deltares said that floods like the one in 2021 are not easily preventable, only with a whole array of changes in the water system and the way people handle water. How does WWF respond to this, do they have an idea of an integral approach?
6. What projects did you do in Zuid-Limburg? Did one of these include the Geul?
7. What is your experience with getting other organizations to participate?
8. Is there a feeling of urgence in climate adaptation in this region?
9. Did the projects gain momentum because of the flood?
10. What is the general response you get on projects? Are people understanding, or maybe indifferent?

A.4. Information sheet for respondents

Valkenburg als voorbeeld in de klimaatadaptatie

Beste meneer, mevrouw,

Hartelijk dank voor uw deelname aan mijn scriptieonderzoek over Valkenburg. Op deze informatiesheet vindt u een uitleg van mijn onderzoek en mijn contactgegevens. Mocht u nog iets kwijt willen over het onderzoek of over het interview, schroom dan niet om contact op te nemen met mij. U kunt uw deelname aan het interview nog intrekken tot 24 uur na het interview.

Inhoud van het onderzoek

Dit onderzoek doe ik om af te studeren aan de studie Urban & Economic Geography aan de Universiteit Utrecht. In het onderzoek probeer ik uit te zoeken welk effect de watersnoodramp van 2021 heeft gehad op de stad. Ik ben vooral benieuwd naar het perspectief van de inwoners: wat is er blijven hangen van de ramp vier jaar na de ramp? Valkenburg heeft aan den lijve ondervonden dat klimaatverandering niet altijd te stoppen is. Houdt klimaatverandering de mensen nu nog bezig?

De echo van de watersnood en het aanpassen aan het veranderende klimaat is natuurlijk niet voor iedere Valkenburger hetzelfde. Daarom maak ik onderscheid in verschillende identiteiten van de stad: de toeristische trekpleister, een groene stad met unieke natuur, en een stad met een hechte gemeenschap. Deze drie identiteiten, of atmosferen zoals ik ze in de scriptie noem, zijn allemaal voelbaar en zichtbaar in de stad. Door middel van observatie, interviews en het analyseren van de documentaire Valkenburg in de Geul beschrijf ik ze.

Het resultaat van het onderzoek bestaat uit een uitgebreide analyse van Valkenburg en de lessen die daaruit te halen zijn. Het kan zo zijn dat de watersnood de gemeenschap van Valkenburg in beweging heeft gebracht tot het geven van meer ruimte aan de Geul. Een andere uitkomst kan zijn dat de toerismebranche zich niet zo bezig houdt met klimaatverandering en toekomstige overstromingen. Dit zijn slechts twee mogelijke uitkomsten, lees voor de daadwerkelijke resultaten mijn scriptie.

De scriptie wordt ingeleverd op 26 juni. In de zomer zal deze gepubliceerd worden op www.studenttheses.uu.nl . Ik kan u ook een digitale of papieren versie toesturen.

Contactgegevens:

e-mailadres: a.b.fial@uu.nl

telefoonnummer: +31 6 22352214

A.5. Informed consent form

Onderzoek naar mens en water in Valkenburg

Opzet van het onderzoek

Dit onderzoek wordt uitgevoerd ter afronding van mijn masteropleiding *Urban & Economic Geography* aan de Universiteit Utrecht. In dit onderzoek onderzoek ik hoe inwoners van Valkenburg de rivier de Geul en klimaatverandering ervaren. U wordt uitgenodigd voor een interview waarin ik u vragen stel over uw persoonlijke ervaringen met de Geul en/of over het beleid van uw organisatie met betrekking tot water en natuur in Limburg.

Het interview wordt opgenomen met een digitale recorder, zodat de antwoorden later nauwkeurig kunnen worden uitgeschreven en geanalyseerd. De opnames worden opgeslagen op een beveiligde server van de Universiteit Utrecht en worden na afloop van het onderzoek permanent verwijderd. De transcriptie van het interview wordt volledig geanonimiseerd; uw antwoorden zijn op geen enkele manier tot u persoonlijk te herleiden. Uw contactgegevens zijn uitsluitend bekend bij de onderzoeker en worden niet gedeeld met derden.

U behoudt het recht om op elk moment tijdens het interview de opname te laten stoppen. Daarnaast kunt u tot 24 uur na het interview uw deelname zonder opgaaf van reden intrekken, mondeling of schriftelijk.

Toestemming voor deelname
Ik verklaar hierbij dat ik voldoende ben geïnformeerd over de aard en werkwijze van het onderzoek. Ik geef vrijwillig toestemming voor mijn deelname aan dit interview. Ik begrijp dat ik mijn toestemming te allen tijde mag intrekken tijdens het interview en tot 24 uur na afloop. Als mijn interviewbijdrage wordt gebruikt in wetenschappelijke publicaties of andere vormen van verslaglegging, gebeurt dit uitsluitend in geanonimiseerde vorm. Mijn persoonsgegevens worden niet met derden gedeeld zonder mijn uitdrukkelijke toestemming.

Ik heb de bovenstaande informatie gelezen en begrepen en ga akkoord met deelname aan het onderzoek:

Naam:.....

Handtekening: .....

Datum:.....

E-mailadres/telefoon: a.b.fial@uu.nl / 06 22352214

Utrecht University

Appendix B. Documentary analysis

Sequence analysis of the three-part documentary 'Valkenburg in de Geul', by director Hans Heijnen (2024). Table A contains the explanation and color code for the types of scenes. In the following tables, the scene sequence for the three episodes can be found. The names are changed for privacy purposes.

Table A. Explanation of types of scenes.

Type of scene	Explanation	Colour
Atmospheric images	Images of the Geul flowing, or the streets of Valkenburg	
Interview with the director	Scenes where people are talking to the director, who is standing behind the camera	
Event	Big or small gatherings of people in public space or hotel Walram with a certain communal purpose.	
Exernal videos	Videos of inhabitants filming the flood on their phone OR material of news channels.	

Table B. Scene sequence part one, titled 'de Hotelheld' (the Hotel hero).

Timestamp	Scene description	Theme	Code
00.00-01.00	River Geul, song about the river		E1S1
01.00-01.40	Scenes of Valkenburg, Director narrates questions:		E1S2
01.40-01.54	Scenes of flood in dark Valkenburg Sirens, monologue continues	History	E1S3
01.54-02.08	Scene of a car drifting away Filmer commentating on happening	Recalling the flood	E1S4
02.08-02.39	Drone shot of flood Street shot of damage and rubbish Commentator asks questions	Recalling the flood;	E1S5
02.39-03.43	Resident Robin visits street and house, the house is wet and damaged. He talks about the flood	Recalling the flood	E1S6
03.43-03.47	Opening shot of Hotel Walram. Title shows: de Hotelheld (the hotel hero)		E1S7
03.47-04.07	Shot of people putting things in place in the hotel. Commentator talks about re-opening of Walram.		E1S8
04.07-04.15	Karin and staff walking around, noticing missing things		E1S9
04.15-04.50	Interview with Karin in hotel Walram About first guests, missing of George due mental struggles.	Bodily distress	E1S10
04.50-06.29	Interview with 90-year-old woman Tilla about her personal history and her actions during flood	Recalling the flood	E1S12
06.29-07.04	Interview with Karin in Walram. Other people working. She talks about repairs, new furniture bough	Recalling the flood;	E1S13
07.04-07.51	Interview with Tilla continues, about WW2 and growing up in other times.	History	E1S14
07.51-08.21	Karin and (another hotel owner) in Walram discuss whether or not inhabitants having a collective trauma	Bodily distress	E1S15
08.21-08.42	(another hotel owner) interview in Walram about not speaking the dialect and missing it	Speaking dialect	E1S16

08.42-08.52	George and son looking around in Walram		E1S17
08.52-10.22	Interview George in Walram About suppressed emotions coming back Shots of repairs done by family, Jean talks about opening soon	Bodily distress; financial struggles	E1S18
10.22-10.44	Guests checking in		E1S19
10.44-13.22	Jean talking to employee Esther in a small room Talks about bond with staff, giving bonus About thinking, stress about the hotel	Communal activities;	E1S20
13.22-14.35	Interview with Esther, employee for 30 years Recalls the night of the flood	Recalling of the flood	E1S21
14.35-16.26	Interview with Tiemen, son of Jean Emotional talking about worries for wellbeing of his family, especially his dad	Bodily distress	E1S22
16.26-16.57	Videos that Tiemen made with his phone Voice over of Tiemen talking about getting help if the mental complaints stay longer	Recalling the flood; Bodily distress	E1S23
16.57-17.31	Interview with Esther About the sadness and worries for her boss	Bodily distress	E1S24
17.31-19.02	Interview with Jean, done by Telegraaf on the street the day after the flood. He talks about the high water, not being insured. Discussion with no audio	Recalling the flood;	E1S25
219.02-20.28	Interview with Jean about emotions coming back, no longer suppressing, not wanting the same for his son.	Recovering from the flood: bodily distress	E1S26
20.28-21.51	Interview with Karin about Jean life, different options in lifestyle	Recovering from the flood: bodily distress	E1S27
21.51-22.36	Interview with Tiemen about study and being away from the hotel, about his future		E1S28
22.36-22.48	Scenes of the family eating dinner at home. Piano music plays.		E1S29
22.48-23.34	Interview with Lara Laheij about feeling powerless, being less worried than her brother	Recalling the flood	E1S30
23.34-23.49	Shots of outside hotel and fish tank inside hotel		E1S31
23.49-24.22	Shot of people working outside the hotel and on a square. Voice-over tells about presenting an artwork one year after the flood		E1S32
24.22-25.12	Artwork is revealed on a square, shots of people watching and up close on the artwork The mayor gives a speech about the artwork and the town's shared experience in the flood.	Communal activities	E1S33
25.12-27.10	Shots of the mayor and kids on the square, of Jean crying, of people on the square. Images of the flood and of Karin making the artwork are shown. Karin gives voice-performance about the night of the flood and she makes a live charcoal artwork.	Communal activities;	E1S34
27.10-27.30	Karin finishes and receives applause and her family joins her. Her daughter is crying.	Communal activities	E1S35
27.30-28.13	The fish Mattie is shown. The river Geul is shown. A man putting a building block in a bridge pillar.		E1S36
28.13-28.43	Images of orchestra, festivities on a square Voice over tells about the remembrance walk	Communal activities	E1S37
28.43-29.29	Jean at home watching television Interviewer asks why he is not at the walk. Jean talks about being an outsider, not knowing the dialect.	Speaking dialect	E1S38
29.29-29.45	Mayor puts on his chain on the square	Communal activities	E1S39

29.45-30.12	People walk with lampions and chat.		E1S40
30.12-30.28	Robin talks to his dog about a year ago.		E1S41
30.28-32.34	Mayor stands on a balcony with other people. He gives a speech, after a few sentences stops talking and starts after 10 seconds. He talks about material and im. He ends the speech and takes of his chains	Communal activities Helping eachother	E1S42
32.34-32.48	Shot of the river at night, saxophone music		E1S43
32.48-34.16	Mayor plays saxophone on the stairs in his home Talks about importance of creativity		E1S44
34.16-35.24	Male choir sings about the Geul. Shots of people watching with lampions or wineglasses in their hand. Cuts to historic videos of Valkenburg and the Geul.	Communal activities; history	E1S45
35.24-36.47	Jean sits on the couch watching tv. He talks about new, young entrepreneur and the relationships and competition with other hotels	Tourism Helping eachother	E1S46
36.47-37.15	On the square, the mayor talks to a woman with tears in her eyes and makes her laugh. She says she brought her social worker.		E1S47
37.15-37.26	Voice over introduces Saskia Scheffers.		E1S48
37.26-39.56	Saskia is in her home and shows pictures of the flood on her phone to the camera. Sitting at a table, she talks about financial troubles since her rental home flooded.	Financial suffering;	E1S49
39.56-40.57	The mayor walks into his office. He talks about the time it takes to help people. He talks about frames set up by the insurance companies.	Financial suffering	E1S50
40.57-41.19	Shots of people working in the streets, moving stuff.		E1S51
41.19-41.30	Store front shows. Inside the shops are motorcycles. Voice over introduces Aart, who lives there.		E1S52
41.30-42.18	Aart stands in a sort of showroom and he shows his works, a giant hammer and wrench and tells about them.		E1S53
42.18-43.36	Aart's father is in his shop. He tells about the history of the business. He tells about the flood affecting his business and the need to throw everything away	Recalling the flood; Financial suffering	E1S54
43.36-45.07	Aart is in the showroom. He talks about his father, his work, his motor collection and his terminally ill brother Simon.		E1S55
45.07-45.50	Edit of old videos of an event in Valkenburg. Woman sings about Valkenburg.	Communal activities	E1S56
45.50-46.03	Shot of tower.		E1S57
46.03-47.12	Outro, voice over fragments from next episode.		E1S58

Table C. Scene sequence part two, titled 'De ramp na de ramp' (The disaster after the disaster).

Timestamp	Scene	Theme	Code
00.00-01.00	Introduction. Producer narrates. Poses questions: will life in Valkenburg return to before the flood? And are the inhabitants really done with the damages the flood has done?		E2S1
01.00-02.16	Kees, father of Aart, is in his store. He tells about an oven he builds to be cremated in. His ashes should go in the river.		E2S2

02.16-02.52	Shot of the Geul, of the workshop. Aart tells about moving back closer to the river and about memories of the Geul.	History	E2S3
02.52-03.34	Kees talks about five earlier floods. He tells about measures he would take. About the flood disaster, rescuing the dog. Living in the bedroom for 11 months.	Recalling the flood;	E2S4
03.34-03.49	Family photo		E2S5
03.49-04.29	Aart about family importance, his brother's illness. The dad talks about Simon.		E2S6
04.29-05.05	Shot of shopping streets.		E2S7
05.05-05.31	Three accordion players in a room.		E2S8
05.31-07.09	Geul outside the city. Mayor in online meeting in office. Mayor narrates "What did we learn?" He is advocating for Valkenburg, talking to the laptop about the need for changing the governance.	Financial suffering. Technical solutions.	E2S9
07.09-07.19	Photos of flood		E2S10
07.19-08.57	Man and woman and the mayor in B&B onder de linde. Talking about insurance problems. About WTS. Feeling of manipulation and being pushed into agreeing.	distrust towards insurance.	E2S11
08.57-09.11	Mayor leaves. Bridge over the Geul.		E2S12
09.11-10.36	Mayor in another house. House is not finished. Man showing a moving floor. Talks about repairing a floor. Woman joins, people at the table.	Financial suffering; .	E2S13
10.36-11.05	Images of house, fisherman, duck.		E2S14
11.05-12.16	Fisherman at the banks, talks about the beauty and excitement of the Geul. His flooded home. About not having problems anymore. Not getting money from insurance.	Recalling the flood; financial suffering; ; distrust towards insurance.	E2S15
12.16-13.01	Images of the flood. Drone shots.		E2S16
13.01-14.14	Two years after the flood. Meeting Emmalaan. People in a living room. Mayor talks about a new bridge, that moves with the water. People chat. Mayor tells people about initiative from ombudsman to talk to young people.	Financial suffering;	E2S17
14.14-15.25	Interview Jim. Talks about the flood. That the water came from the other side. About being startled. His own videos are shown. About trying to help his mom.	Bodily distress	E2S18
115.25-16.47	Videos made by his mom Ellen. Interview. She talks about the continued feeling of being alert. Being aware that the bridge might collapse. Videos of her shutting down the electricity.	Bodily distress;	E2S19
16.47-17.28	Videos of an open street. Jim with dog. Narrates about the PTSD he has from the sounds. When it was raining, he could not go outside. A shock he had while in bed.	Bodily distress	E2S20
17.28-17.59	Ellen talks about EMDR therapy she received.	Bodily distress	E2S21
17.59-18.34	The mayor tells the people in the living room about the flood, that is was a tsunami. About the luck for the Geul having a broad valley.		E2S22
18.34-19.50	Ellen in a garden. She shows where the water came. She shows an invention to shut out the water. It is a waterkering. She tells people in the living room.	; Communal activities	E2S23

19.50-21.24	The mayor reacts, says it is important to take the whole area into account. Example of mobile waterkering from waterschap. He talks about blocking the stroomgebied, compares with Germany and Belgium.		
21.24-22.05	Man gives a presentation. In NL we have a good organization of water. talks about international teamwork, which is unique.	Communal activities; collaboration bt organizations	E2S24
22.05-22.50	Jim talks about the expenses of living on your own. That he prefers to stay home, to help out in the house.		E2S25
22.50-23.39	Jim is gaming in his room. He talks about a former relationship. About that he wants to feel better before he gets in another relationship.	Bodily distress	E2S26
23.39-24.59	Aart is upstairs in his bedroom. Talks about being happy with his life, not wanting a wife. Old photos of Aart and ex girlfriend.		E2S27
24.59-26.07	Aart in living room talks about breaking up. Not wanting children. About having commitment issues in love.		E2S28
26.07-26.46 26.46-27.37	Karin leads a session in a room full of art. A woman puts hand on water.	Communal activities; Bodily distress	E2S29
	Karin talks about busy life, exposition taking up her time, connecting less with her family.		E2S30
27.37-27.47	Hotel images		E2S31
27.47-28.55	Tiemen in a bike shelter. Talks about studying every day. During vacation he had a bad time. Sleeping bad. Bad concentration. Physical complaints. Mood swings.	Bodily distress	E2S32
28.55-30.02	Karin talks about Tiemen schedule he followed for three months. Feeling he had to make up for the losses of the hotel.	Bodily distress	E2S33
30.02-30.25	Tiemen talks about sleeping longer, wanting to perform at the very best.		E2S34
30.25-31.19	Lara talks about performance pressure. Two years ago it was worse, now she is more relaxed.	Bodily distress	E2S35
31.19-32.14	Jean talks about Tiemen being sensitive because both parents are as well.		E2S36
32.14-33.02	Karin about Jean being 24/7 stressed, and the toll on the family. About not having a break for two years.	Bodily distress	E2S37
33.02-33.33	Jean talking seeing his family affected, about thinking the family is doing better. About himself getting worse, feeling himself slip away	Bodily distress	E2S38
33.33-35.19	Dhr Rutte talks to entrepreneurs. Jean talks to a man about what still has to be done. About not knowing finances. About making an estimate.	Financial struggle; Distrust towards government	E2S39
35.19-35.44	Rutte talks to a camera about the insurance companies.	Financial struggle	E2S40
35.44-36.09	Rutte at a table with entrepreneurs. Jean says if it happens again, we will get nothing.		E2S41
36.09-36.40	Jean in the room. About not hearing back. About the flood expenses. Shot of people working at the swimming pool.	Financial struggle: distrust towards insurance and government.	E2S42

36.40-37.32	Jean with an accountant in his office. Talks about companies getting insured for water damage.	Distrust towards insurance	E2S43
37.32-38.26	Mayor and Rutte walking down a path to a care home, photos being taken.		E2S44
38.26-39.33	People in the elderly home. Rutte introduces himself to people. In a circle, a man sharing his experiences. A woman, Anneke, telling about her mother being evacuated and losing her home.	; Communal activities	E2S45
39.33-39.54	Shot of old people being evacuated.	Recalling the flood	E2S46
39.54-40.22	Anneke, daughter of the evacuated woman. Narrator tells about her not wanting to end up in the home and the relationship with her son.		E2S47
40.22-42.26	Anneke tells about the evacuation. Fear for falling of the tractor. Pictures being made, that made her angry. About having EMDR therapy, not knowing if it ever gets better. She talks about seeing the water outside higher than it really is when it is raining. About her meeting two policemen, being grateful for them and feeling safe.	Bodily distress	E2S48
42.26-42.58	Photo and video of the happenings.		E2S49
42.58-44.30	Mayor presenting at the veiligheidsregio meeting. Talks about the disaster after the disaster. Being to late with warning people, being too late. Comparing to Germany and Belgium.		E2S50
44.30-45.00	Videos of Belgium and Germany		E2S51
45.00-46.00	Videos of Christmas festivities in Valkenburg, dancing and performing children. Optocht.	Communal activities	E2S52
46.00-46.58	Outro.		E2S53

Table D. Scene sequence part three, titled 'Lotgenoten' (fellow sufferers).

Timestamp	Scene	Themes	Code
00.00-01.18	Intro Producer narrates that Valkenburg is recovering and that the people are 'done with talking about the water'. He asks the question, is the water done with Valkenburg?		E3S1
01.18-01.32	NOS reporter talks about the distance between Groningen and Zuid-Limburg and what brings the people together: a feeling of powerlessness.		E3S2
01.32-02.14	NOS report. Narrator talks about the initiative of Karin to invite people from Groningen on holiday. When asked what she wanted to achieve, she talks about giving them time off and a helping hand.	Distrust towards government; Communal activities	E3S3
02.14-02.56	A bus tour. A guide talking about the landscape. About the Geul and the flood. He tells a local sage about the Hakenman (Hook man).	Communal activities	E3S4
02.56-03.49	The mayor talks to Veiligheidsregio Groningen. About reaching out to Groningen before, about soil issues. About the similarities between Limburg and Groningen.	; collaborating between organizations	E3S5
03.49-04.54	In a lunch café. The mayor talks to earthquake victims about jurisdiction and expiration of laws that protect inhabitants.	; distrust towards government	E3S6

04.54-05.20	People eating and working in the hotel. The narrator talks about how the Groningers in hotel Walram sleep and how other restaurants provide meals for them.	Communal activities	E3S7
05.20-06.22	Karin talks to a group in the hotel lobby. She is emotional. She talks about not weighing everyone's trauma, reaching out to each other.	; Bodily distress	E3S8
06.22-07.44	People are seated in the hotel. NRC journalist interviews Karin. 'when did you start seeing parallels with Groningen?'. Karin talks about the promise of Rutte. A woman talks about the lengthy process of reporting things. The damage on her property.	; distrust towards government	E3S9
07.44-08.31	Shots of a white house. A living room. The woman, Elena, and her husband are interviewed. She talks about the damages. About asking for help and experiencing mental and physical complaints.	Bodily distress	E3S10
08.31-09.01	Marcel, Elena's husband, talks about taking over care and becoming over tired.	Bodily distress	E3S11
09.01-09.35	Fragment of flood in the garden of Elena's house.	Recalling the flood	E3S12
09.35-10.12	Elena talks about finishing moving in the house. About missing home as a safe place to be.	Bodily distress	E3S13
10.12-11.43	People around a table. A woman talks about her experience with the NAM in recovering her house. About her marriage suffering. About issues with the government.	Communal activities; .	E3S14
11.43-12.36	The woman, Keesine, is sitting beside the Geul and tells about the struggles with the damaged houses, about energy poverty, about not being heard.	Financial struggle.	E3S15
12.36-13.37	Two families are eating at the house of Jim and his parents. Jim tells the Groningen family that he has a gap year to recover from the emotional damage of the flood.	Communal activities	E3S16
13.37-14.58	Shot of a school seen from Jim's bedroom. The producer narrates that Jim and his mother had to flee to a school. Jim tells he got bullied on this school because of his size. He says that he is doing better than three months ago and that he is enjoying life more.	Bodily distress	E3S17
14.58-16.02	Shot of the Geul. Shot of a health care facility. Tiemen tells a trauma therapist that he maybe needs to go to a closed mental care facility.	Bodily distress	E3S18
16.02-16.37	Shots of people in Valkenburg		E3S19
16.37-17.40	Jean is in the hotel lobby. He talks about Tiemen needing to be in urgent care. About suicides of close friends of him. About Tiemen thinking about suicide.	Bodily distress	E3S20
17.40-18.04	Shots of people in Valkenburg.		E3S21
18.04-19.41	In the house of Elena. A child is playing, and Elena is opening boxes with her husband.		E3S22
19.41-19.58	Shots of Valkenburg, empty streets		E3S23
19.58-22.42	Anja stands in the door opening. She talks about the market of earlier times. She complains about the state of a hotel down the street. She talks about renovations in her own house. About that she does not want furniture anymore. She talks about her grave being ready.	Bodily distress; Recalling the flood; History	E3S24
22.42-22.58	Shots of the cemetery. Of the resting place of Simon.		E3S25

22.58-26.41	Aart sits on a table. He talks about the loss of his brother Simon. The producer asks him if he often thinks about the water. Aart says no. He talks about a joke his brother made about the water. He talks about memories and doing fun things again, about starting to collect again after a period of stopping.		E3S26
26.41-27.30	Aart's father plays accordion in a room with two other men. They read sheet music.	Communal activities	E3S27
27.30-27.41	Shot of frame hanging crooked on the wall. It shows Simon playing drums in a white costume.		E3S28
27.41-28.01	Aart's father feeds the ducks in the Geul from his garden. He talks about life needing to go on. About Simon's chair staying empty.		E3S29
28.01-28.12	Shot of an acceleration in the Geul, white waves.		E3S30
28.12-29.12	Jean in the hotel, talking about an opportunity to sell the hotel for a higher-than-expected price. About struggles in his marriages and the fear to be alone if Karin decides to leave.	Bodily distress; Financial suffering.	E3S31
29.12-29.30	Shots of the living room in Jean and Karin's house and of the garden.		E3S32
29.30-30.06	Lara walks with a rabbit in her arms in the garden. She talks about the rabbit having babies. She cleans the cage.		E3S33
30.06-30.21	Shot of the Geul and two people walking in the forest.		E3S34
30.21-32.31	The mayor is seated in a garden with an older man. Talks about troubles with a contractor. The man is a bit deaf. The mayor walks away to answer a phone call	Financial suffering.	E3S35
32.31-35.04	The conversation continues about music. The man says he will buy a new accordion, as the old one is damaged by the water. He gives the mayor a harmonica. The mayor plays on it. They play together.	Communal activities	E3S36
35.04-35.31	Fragments of a smaller flood two years after the disaster.		E3S37
35.31-36.42	Jean and Karin are pumping water out of the basement with a machine.		E3S38
36.42-37.14	Jean is in the hallway. He says he is not used to basements flooding when it rains like that. He heard that the sewer system was full. Karin says the basements in Valkenburg are old and easily permeated with water.		E3S39
37.14-38.00	Shots of people in the hotel. Employees wearing rain boots. Jean is at the bar talking to the camera. He says he can't think of selling it. That the hotel is doing well. That this gives peace.	Financial suffering.	E3S40
38.00-38.58	Shots of rain in the streets, of sandbags. Different news reports narrate the fragments, talking about heavy rainfall, and problems in the neighborhoods. A man interviewed by the NOS says these rains were heavier than thought and were predicted for 2050.		E3S41
38.58-39.54	People are sporting in Valkenburg. Jim and a girl are sitting on a bench. They talk to the camera about their relationship, that the break up was good for Jim to get better.	Bodily distress	E3S42

39.54-40.33	Two men are riding Simon's tombstone on the graveyard and place it. Simon's family is sitting in the garden of the father.		E3S43
40.33-41.29	Shot of the lobby of the hotel. Jean sits in a room, talks about financial losses, being able to cope with them. About many people in Valkenburg being traumatized by the water or depressed and nobody talking about it.	Bodily distress	E3S44
41.29-41.45	Shots of the river, of the forest.		E3S45
41.45-44.24	Tiemen is throwing a ball for the dog on a field. He says he is more relaxed when it is raining, he dreams less about drowning. He is doing better than in April, medicine helps. His motivation has changed.	Bodily distress	E3S46
44.24-45.52	Outtro Tiemen playing in the Geul with his dog.		E3S47