Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Mayke Giesen
Student number	4713567

Studio		
Name / Theme	Planning Complex Cities	
Main mentor	Juliana Goncalves	Spatial Planning and Strategy
Second mentor	Leo van den Burg	Urban design
Argumentation of choice of the studio	There are several reasons why I chose the Planning Complex Cities studio. To start with, the point of departure within this studio are observations of disparities. In my case, the ecological disparities are addressed that cause the global ecological crisis. The focus of this studio on research based projects linking spatial and institutional analysis also aligns with my thesis approach with an in-depth literature research as the foundation. Furthermore, this project examines the role of citizens in the ecological crisis in relation to their spatial environment. Investigating civic engagement and participation also are main topics within PPC that are central to my thesis. Through this human-scale approach, I would like to tap into the 'collective intelligence' of local people to inform my spatial design and recommendations for institutional change. So, my thesis takes a participatory approach to sustainability transitions, addressing the question how to engage citizens in ecological action in their living environment to reinforce an ecocentric future. To do this, an exploration on ecological-grief as a key emotion for a societal transformation will form the theoretical foundation.	

Graduation project	
Title of the graduation project	Grieving ecological losses: Engaging and empowering citizens through ecological grief to contribute to a societal transition towards ecocentric values.
Goal	
Location:	Rotterdam Noord
The posed problem,	Global crisis The loss of species, forests, lakes, glaciers and landscapes are merely characteristics of the escalating environmental crises that the world is facing today. The rate and magnitude of the current wave of species extinction indicate Earth's sixth mass extinction event (Ceballos et al., 2017; Dirzo et al., 2014). Unlike the past five mass extinctions caused by natural disasters, the sixth mass extinction is the result of human-induced environmental changes,

like climate change and pollution (Ipcc, 2022; Shivanna, 2020). The interlinked, global threats of biodiversity loss, climate change and pollution are referred to as the triple planetary crisis by the United Nations. Its cascading effects are exacting their toll on individuals, communities and society as a whole (Passarelli et al., 2021). To briefly illustrate the nature and scale of the problem Curry (2011: p.6; as in original) uses the notion of '*ecocide*: the wholesale destruction of life and the source of life, including ours – an Earth able to provide a livable home.' (also see Bender, 2003; Manes, 1990; Gare, 1993; Diamond, 2004). This ecocide can be understood through the dominant imaginaries of the current era referred to as the Anthropocene, which revolves around the notion of human dominance (Malhi, 2017) and ecological dualism separating humans from the natural world (Poole, 2020).

Inadequate action
Despite the collectively sounding alarm by the scientific community, as well as an increasing number of politicians and citizens acknowledging the human-induced planetary crisis, the world is hesitant to take adequate action in order to mitigate the catastrophic impacts (Korteling et al., 2023; Passarelli et al., 2021). Zooming in on the Netherlands, while the effects are clear, influential companies, like Shell and Tata Steel, keep on polluting our environment (Milieudefensie, n.d.; Schildkamp, 2021), and even the Dutch State keeps subsidizing the fossil fuel industry (Hendrickx, 2023). Although ¾ of the Dutch population is concerned about the consequences of the climate crisis (Centraal Bureau voor de Statistiek, 2021), society seems to continue business-as-usual. This distortion in human judgment and decision-making, referred to as cognitive biases (Korteling et al., 2023), illustrates the need for a more holistic approach to address the ecocide.

Cognitive, aesthetic and emotional virtues.
Since humanity seems to lack the rationality that is needed to take action (Korteling et al., 2023), the challenge we face extends beyond the cognitive realm. A broader perspective is taken by philosopher Latour, emphasizing the need for a realization of the consequences of our actions by experiencing the global in our local environment through 'a slow, gradual fusion of cognitive, emotional and aesthetic virtues' (Latour, 2017, p.140). These virtues, that coincide with Schneider et al.'s (2018) elements of psychological empowerment, would lead to insights that go beyond rationality.
However, within Western philosophy emotions are often considered to be undermining knowledge (Jaggar, 1997; Gould, 2011). This devaluing of emotions presumably plays a role in the absence of grief and mourning of environmental losses in the public discourse. This could also account for the scarcity of successful articulations of group emotions as a platform for societal change in the Western world (Mourning Nature, 2017). Acknowledging the importance of emotional intelligence, the emotional shaping of our lives is seen as a powerful source for motivating pro environmental behavior (Mourning Nature, 2017), hereafter referred to as PEB.

Eco-grief as a counter-narrative
Despite the dismissal of the emotional realm, acknowledgement of ecological grief as a legitimate response to the ecocide (Cunsolo & Ellis, 2018) is suggested as a counter-narrative to battle the imaginaries of the Anthropocene. Cunsolo & Ellis (2018) define ecological grief, hereafter called eco-grief, as 'the grief felt in relation to experienced or anticipated ecological losses, including the loss of species, ecosystems and meaningful landscapes due to acute or chronic environmental change'. Facing and coping with eco-grief stimulates PEB and helps to prevent the potential anxiety and depression hindering this action (Pihkala, 2022). Moreover, by publicly mourning the on-going environmental

	losses the systemic flaws of our current way of living can be exposed, reinforcing environmental advocacy (Honnacker, 2023; Craps, 2023). Public mourning reveals the ethical side of the crisis by questioning what is grievable and inducing reflection on the value of and the relationship to the mourned entity. Therefore, eco-grief can be understood as a key emotional experience for transformation to fight the on-going ecocide. Eco-grief in the field of urbanism Recognizing the dominant role of urbanization in the lifestyles of most humans, this thesis, situated in the field of urbanism, addresses the inadequate action regarding the ecological crisis through a spatial strategy for an urban neighbourhood, using Rotterdam Noord as a case study. Because of the increasing amount of people living in cities (United Nations Department of Economic and Social Affairs, Population Division 2017: 1), the impacts of their lifestyles will only become more influential. Due to this rapid growth, a cycle of disaffection towards nature will be reinforced (Soga & Gaston, 2016), which in turn enhances the ecological crisis. Therefore, the aim of this thesis is to engage and empower citizens to provoke PEB, contributing to ecocentric societal change. Approaching urbanism through the lens of eco-grief provides a novel perspective on our relation to the natural features of our living environment. Although indigenous accounts are foundational to the field, other communities with an apparent attachments to a place, like farmers, fishers and coastal communities, are associated with eco-grief as well (Boon, 2019; Clissold et al., 2020; Cunsolo & Ellis, 2018; Eakin et al., 2019; Marshall et al., 2019). These emotional attachments to a place, as well as other place-based and socio-political factors appear to be influential in shaping individual experiences of eco-grief that lead to PEB (Benham & Hoerst, 2024). Thus, in this thesis, eco-grief will serve as the main source of inspiration to improve the governance and design of our cities in order to contribute to a society that cares for its environment.

research questions and	How can ecological grief contribute to a societal transition for ecocentric values in the field of urbanism?
	   1. How does the planetary crisis translate to local level?
	   2. To what extent do citizens experience ecological losses and grief?
	   3. How to design for eco-grief/care to engage in the ecological crisis?
	   4. How to cope with eco-grief to empower for pro-environmental behaviour (PEB)?

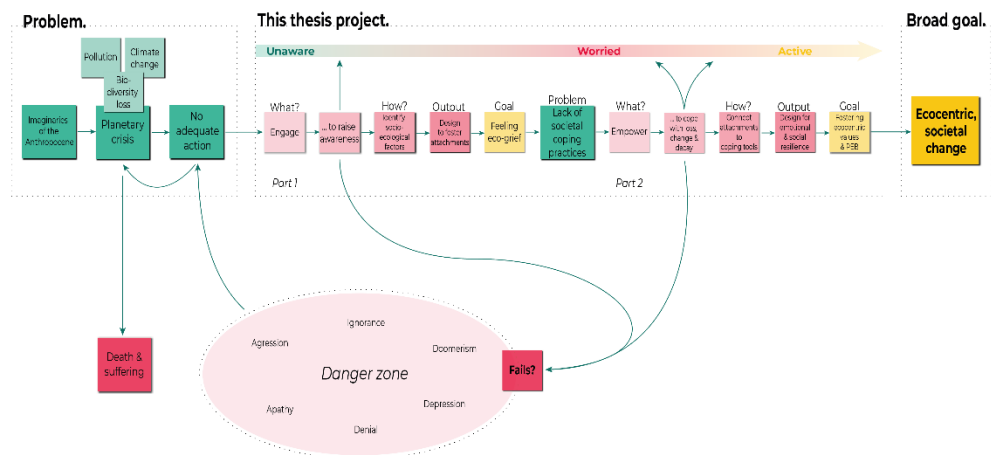| design assignment in which these result.	**Research aim**

Figure 1: Research aim diagram inspired on Theory of Change.

The broad goal of my thesis is to contribute to societal change to battle the planetary crisis. This study adopts a participatory approach that aims to engage and empower citizens. First, the socio-ecological factors will be identified in order to design for engagement through fostering attachments to their natural environment. These emotional attachments should lead to feelings of care and could simultaneously result in feelings of eco-grief. Subsequently, these attachments will be connected to coping tools to empower citizens to become emotionally and socially resilient fostering ecocentric values and positive environmental behaviour (PEB).

The long term goal of this project is to foster ecocentric, societal change through both emotional and spatial perspectives, offering a more holistic and comprehensive response to the complex ecological crisis.

Main elements:
o **Theoretical framework**: a holistic approach to addressing the ecological crisis.
  - Topics: The notion of nature, ecological grief, ecological ethics, extinction of nature experience, societal transitions.
o **Socio-ecological analysis.**
  ▪ Biophysical factors (RQ 1: Identification of local ecological losses)
  ▪ Structural factors (Governance analysis)
  ▪ Geographical factors (Place-based indicators & spatial characteristics)
  ▪ Social identity (Demographics)
o RQ 2: **Portrait of urban eco-grief** in Rotterdam Noord.
  A summarizing visual expressing to what extent the citizens of Rotterdam Noord experience eco-grief and what natural features they value most in their neighborhood.
o **Strategy to foster ecocentric values.**
  ▪ RQ 3: **Engagement design** (guidelines) to foster emotional attachment to natural features of the environment.
  ▪ RQ 4: **Empowerment design** (tools) for positive environmental behaviour (PEB).
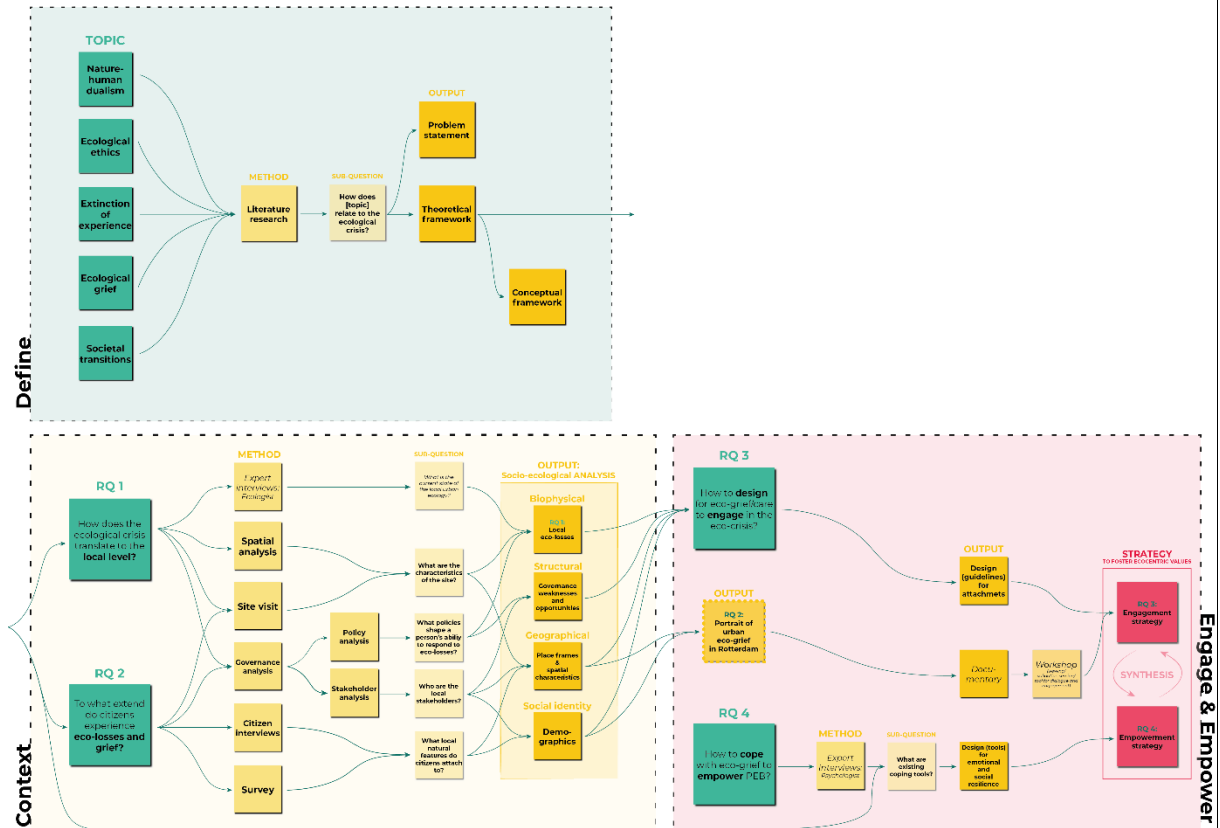 *This strategy integrates ecological grief in the local urban living environment in order to foster ecocentric values. The first part shows how to engage citizens through fostering emotional attachments to natural features of their environment. The second part is focused on empowering citizens to be able to*

face and cope with the unpleasant side of emotional attachments, thus to become more emotionally and socially resilient enabling them to take action. The strategy could include governance and spatial interventions and/or guidelines to inform urbanists how to plan and design for ecocentric values.

Process

Method description
Research flow diagram

Legend:
- **Main elements**
- *Optional elements*

The research flow diagram is divided into three part: Define, Context and Engage & Empower. Each part has its own methods, (sub-)questions and outputs complementing the former section. A further elaboration on the methods can be found in the methodology section.

Define
The first phase exists of an extensive literature research forming the basis for the problem statement, theoretical framework and conceptual framework. It informed the phrasing of the research questions as well. An exploration will be done on the philosophical side of addressing the ecological crisis. The topics that will be elaborated on are the the notion of nature, ecological grief, ecological ethics, extinction of nature experience and societal transitions.

Context
The next step consists of gathering data through several methods in order to constitute a comprehensive socio-ecological analysis. This analysis with the emphasis on place-based indicators helps to understand the factors that influence the experience of eco-grief. The desk research includes a spatial analysis and governance analysis. Besides that, a site visit and survey are the main

parts of the field work. Additionally, the number of in-depth, citizen and/or expert interviews that will be conducted depend on the remaining time. The survey and interviews are the foundation for the construction of place frames. Through place frames, which are central to place making, collective memories and future visions are connected and co-constituted in a spatio-temporal 'dialogue'. Examination of how conflicting collective memories of a place and the framing of the future of this place interact can inform spatial developments (Feola et al., 2023).
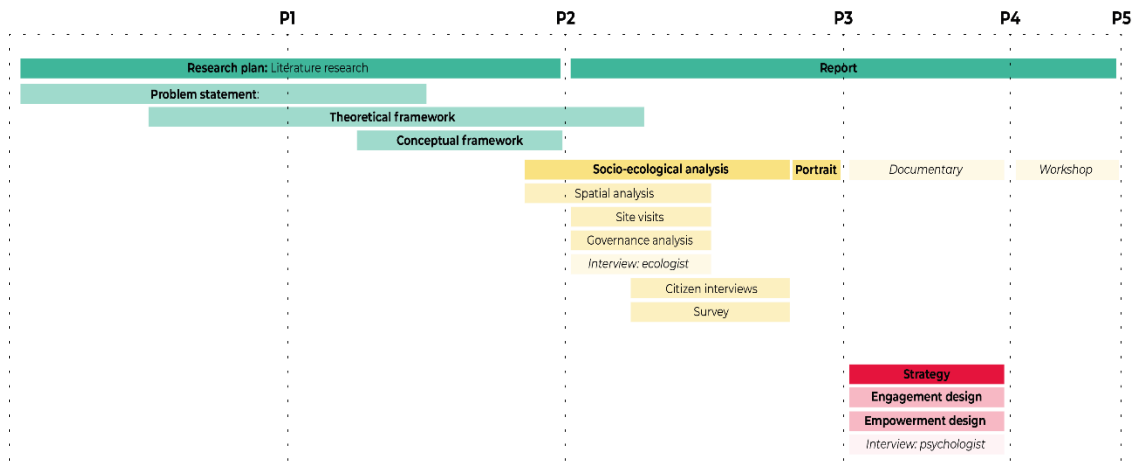
Strategy: Engage & empower
Thereafter, the output of the former section forms the foundation of the Engage & Empower-section. The socio-ecological analysis will be translated into the portrait of urban eco-grief in Rotterdam. If possible, a collection of the interviews will be filmed to create a short documentary as an alternative communication medium of the portrait. This documentary could be shown during a workshop to spark discussion, as well as validate and refine the findings. Moreover, the socio-ecological analysis also informs the design (guidelines) for attachments of the engagement strategy. The empowerment strategy connects coping tools to the former based on the literature research and possibly an expert interview. Lastly, the strategies are merged into one strategy to foster ecocentric values.

Methods
- Literature research: *Scientific papers; books*
- Spatial analysis: *Morphological, ecological, functional, historical, demographical mapping; sections*
- Governance analysis: *Policy analysis; stakeholder analysis*
- Site visit: *Photography; sketching; street interviews*
- Interviews & survey: *Citizens; experts*

Timeline

Legend:
- **Products**
- Main methods
- *Additional methods*

Literature and general practical references
Theoretical framework

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Methods:

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Reflection

- **Relation between thesis' topic and Msc Urbanism**

Recognizing the dominant role of urbanization in the lifestyles of most humans (United Nations Department of Economic and Social Affairs Population Division, 2017), this thesis addresses the inadequate action of citizens regarding the ecological crisis through a spatial strategy for an urban neighbourhood. Since the estimates of the United Nations (2017) project that people living in cities will increase towards 68%, the impacts of their lifestyles will only become more influential. Since the rapid growth of the number and proportion of people living in urban areas are suggested as a trigger to the loss of interaction with nature (Turner et al., 2004; Zhang et al., 2014), a cycle of disaffection towards nature will be reinforced (Soga & Gaston, 2016), which in turn enhances the ecological crisis.

Therefore, the aim of this thesis is to engage and empower citizens of urban areas to provoke pro-environmental behaviour, contributing to ecocentric societal change towards a livable environment for all.

Approaching urbanism through the lens of eco-grief provides a novel perspective on our relation to the natural features of our living environment. Although indigenous accounts are foundational to the field, other communities with an apparent attachments to a place, like farmers, fishers and coastal communities, are associated with eco-grief as well (Boon, 2019; Clissold et al., 2020; Cunsolo & Ellis, 2018; Eakin et al., 2019; Marshall et al., 2019). These emotional attachments to a place, as well as other place-based and socio-political factors appear to be influential in shaping individual experiences of eco-grief that lead to pro-environmental action (Benham & Hoerst, 2024). Thus, eco-grief will serve as the main source of inspiration to improve the governance and design of our cities in order to live in harmony with our environment.

- Relation between thesis' topic and PCC
The basic starting point of projects within the Planning Complex Cities studio are observations of disparities. In my case, the ecological disparities are addressed that cause the global ecological crisis. The focus of this studio on research based projects linking spatial and institutional analysis aligns with my thesis approach with an in-depth literature research as the foundation. Furthermore, this project examines the role of citizens in the ecological crisis in relation to their spatial environment. Investigating civic engagement and participation also are main topics within PPC that are central to my thesis. Through this human-scale approach, I would like to tap into the 'collective intelligence' of local people to inform my spatial design and recommendations for institutional change.

So, my thesis takes a participatory approach to sustainability transitions, addressing the question how to engage citizens in ecological action in their living environment to reinforce an ecocentric future. To do this, an exploration on ecological-grief as a key emotion for a societal transformation will form the theoretical foundation.

- Societal relevance
My research addresses presumably the most pressing challenge of our time: the escalating environmental crisis. It aims to engage and empower citizens to contribute to societal change to battle this. In the long term, my thesis should contribute to two social outcomes.

Firstly, our relationship to the environment should be recovered and strengthened to challenge the destructive status quo. Through fostering emotional bonds, this thesis contributes to a society that cares for its environment. Secondly, recognizing the importance of psychological well-being in times of crisis, social/emotional resilience should be fostered to prevent PEB paralysis.

So, this research strives to contribute to creating a society that is equipped to face, cope and act on the challenges of the future relating to the ecological crisis, ensuring a brighter and more sustainable future for all life.

- Scientific relevance
The scientific relevance of this thesis lies in addressing the relatively overlooked topic of ecological grief. Researchers within social science are starting to acknowledge ecological grief and its associated mental health risks as a legitimate reaction to environmental losses, since it is likely to become a more frequent experience around the world (Comtesse et al., 2021; Cunsolo & Ellis, 2018). Nonetheless, it can still be considered as a form of 'disenfranchised grief' resulting in the remaining research gap on the topic. Battling the ecological crisis through the lens of ecological grief, as well as applying this to an urban environment, is an even more understudied perspective that mostly limits itself to philosophy.

By bridging the gap between philosophy, social science and urban planning, this research offers an interdisciplinary approach to understanding and addressing ecological grief as a planning tool. It contributes to both theory and its practical translation by enhancing the understanding of emotional and psychological dimensions of environmental loss in the context of urban planning and the sustainability transition. Furthermore, this research will include empirical research through a survey and/or interviews. To conclude, this study aims to foster societal change through both emotional and spatial perspectives, offering a novel and comprehensive response to the complex ecological crisis.