



Future Lives with  
Oceans and Waters

## Workplan

*Studying Pioneering Initiatives*



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## 1 Introduction

In contribution to the EU mission Restore our Oceans and Waters by 2030, [FLOW](#) is an international and interdisciplinary project studying young generations' relations and engagement with water and oceans, their expectations, and emotions. Work Package (WP) 3 of FLOW studies five European pioneering initiatives, in which we will study the engagement of adolescents and young adults (16-29 years old, hereafter referred to as 'young adults') in acting for oceans and water. This deliverable, D3.1 Workplan, is the workplan for WP3, where we will elaborate on the approach and methods for studying the selected pioneer initiatives applying the theoretical lens of WP1 and WP2.

### 1.1 Aim, tasks and deliverables of WP3

The aim is to gain insight into the characteristics of pioneering initiatives and participating young adults' motivations to act. This objective will be reached by:

- Evaluating the unique characteristics of the pioneer initiatives to be able to relate their approach to the motivations of the involved young adults (Task 3.1)
- Developing an interview guide for interviewing young adults engaged in the activities of the pioneer projects (task 3.1) and a coding table for analysis of the interviews (Task 3.2)
- Understanding motivations and involvement of young adults and how this matches up with the line and approaches of the pioneer initiatives, described in summary report (Task 3.2)
- Designing and conducting feedback focus groups with a broader group of young adults to validate and strengthen the outcomes of the interviews with the engaged young adults, to provide recommendations for fostering motivations and setting up engaging initiatives (Task 3.3)
- Providing input for the experiential futures workshops in WP4 as far as how engagement and motivations of young adults can be represented (Task 3.3)

See

Table 1 for an overview of the tasks and deliverables within WP3.

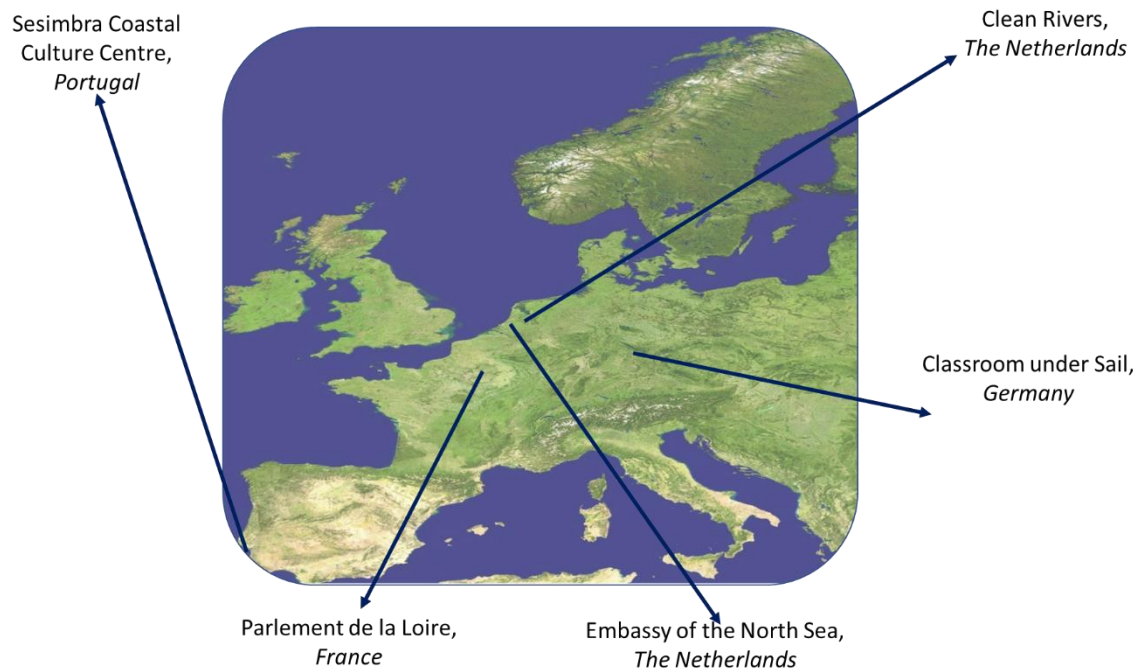
*Table 1 Overview of tasks and deliverables within WP3*

TASKS	DELIVERABLES
T3.1 Studying the pioneer projects	D3.1 Workplan ( <i>current deliverable</i> )
T3.2 Ethnographic analysis of pioneer initiatives appeal to young adults and how this relates to their motivations and involvement	D3.2 Template design focus groups
T3.3 Evaluating and transferring insights	D3.3 Summary report

### 1.2 Pioneering initiatives

Five pioneering initiatives are selected as international case studies (Figure 1). The initiatives are selected for in-depth analysis as they represent a variety of approaches and themes and because they are visible as pioneering and innovative with regard to their approach (e.g., involving citizen science or art projects) and theme (for instance agency of the sea), all in the realm of human-water relationships. Other key criteria were youth involvement, covering different regions in Europe, and embracing the idea of stewardship. Finally, we chose case studies based on practically having field access to them and a high

likelihood of cooperation. The selected initiatives are presented in Figure 1 and have all already agreed to participate.



*Figure 1 Overview of the five pioneering initiatives*

#### 1.2.1 Classroom Under Sail, Germany

**Description:** Since 2008 more than 450 teenagers have embarked on Classroom Under Sail's (*Klassenzimmer unter Segeln, KUS*) progressive adventure education programs aboard of the traditional sailing vessel Thor Heyerdahl. The project of Friedrich-Alexander University Erlangen-Nürnberg has developed and refined experiential teaching methods and evaluated the impact it had on its young participants. The objective of KUS is to strengthen young individuals in their autonomy, initiative taking and sense of responsibility and to raise awareness on human-water interactions.

**Role of the youth:** Teenagers are the target group of KUS. While following the standard Bavarian school curriculum onboard, pupils responsibly participate in ship operations, explore the sea, and engage in citizen science projects. The project provides teenagers with an opportunity to make valuable direct encounters with the sea and different aquatic ecosystems and to engage in different initiatives, including beach clean-ups and citizen science (e.g., taking microplastic and water samplings). Participants will be interviewed after participating in the education program and at the time of interview are 16 years or older.

Classroom Under Sail will be studied by Fraunhofer ISI.

#### 1.2.2 Parliament of the Loire, France

**Description:** In 2019, the Parliament of the Loire (*Parlement de la Loire*) has brought together over 15,000 people from the arts, sciences, public administrations, and civil society, to discuss how the river Loire could be established as a legal entity that expresses itself and defends its interests through a system of interspecies representation. From 2022 onwards, it aims at experimenting new approaches to landscape planning, urban development, and human-nature stewardship.

**Role of the youth:** While the initiative is not only directed at the youth, approximately 50% of the people engaged are below the age of 30.

Parliament of the Loire will be studied by Fraunhofer ISI.

### 1.2.3 Embassy of the North Sea, The Netherlands

**Description:** The Embassy of the North Sea (*Ambassade van de Noordzee*) listens to and involves the voices of plants, animals, microbes, and people in and around the North Sea. Founded in 2018 in The Hague on the principle that the sea owns itself, the Embassy makes political space for sea-emancipation through connection, imagination, and representation. The Embassy plotted a route through to 2030, firstly learning to listen to the sea before learning to speak with it. Finally, they will negotiate on behalf of the North Sea and all the life that it encapsulates.

**Role of the youth:** The Embassy of the North Sea works with multidisciplinary research teams on several cases: Underwater noise in the North Sea; Future of the Delta; A Voice for the Eel; and, Offshore Wind Farms. Part of the output of these cases are workshops for children and students. For example, for A Voice for the Eel they are developing a ‘civil deliberation’ with adolescents in which they learn to debate in the stake of non-humans like the eel. As part of the manifestation Welcome to the Parliament of Things, honouring the philosopher Bruno Latour, a student design contest was organised inviting them to think and design in the interest of non-humans.

Embassy of the North Sea will be studied by Radboud University.

### 1.2.4 Clean Rivers, The Netherlands

**Description:** Together with the North Sea Foundation and Plastic Soup Foundation, IVN Nature Education initiated the project Clean Rivers (*Schone Rivieren*). The mission is to stop plastic pollution in Dutch Rivers by 2030. Together with 1,100 citizen scientists, Clean Rivers maps the litter pollution in the Dutch Meuse and Rhine-delta. In addition, every year 5,000 volunteers clean up the riverbanks and experience the beauty of the Dutch river delta.

**Role of the youth:** IVN Nature Education has several programs that are focused on the younger generation and are connected to the Clean Rivers initiative; young people are involved in river clean-ups; citizen science projects and activities and campaigns that contribute to the connection of other young people to the Dutch river landscape.

Clean Rivers will be studied by Radboud University.

### 1.2.5 Coastal Culture Centre, Sesimbra, Portugal

**Description:** The Coastal Culture Centre is a collaboration between the Sesimbra Municipality, the Norwegian Maritime Museum, the Tromsø University Museum in Norway, and two local Portuguese artisanal fishers’ associations. The main objective of the Coastal Cultural Centre Sesimbra project is to design a program of shared activities with the community around the maritime cultural heritage.

**Role of the youth:** The initiative is designed to involve the entire local community, regardless of age. However, the young generation is specifically targeted when designing various activities related to cultural heritage, and more than 6,600 young people are involved in this initiative. One of the main outputs of this project is an exhibition that will be displayed in both Portugal and Norway, called “Thinking about the Futures of the Oceans”. The exhibition will be ready in May 2024.

Coastal Culture Centre will be studied by UiT The Arctic University of Norway.

## 2 Conceptual Background

The following concepts are at the basis of studying the pioneering initiatives. **This paragraph is largely extracted from the D1.1 FLOW Encyclopaedia (Mashiur et al., 2023).**



## 2.1 Action for nature / water

Acting for nature covers a broad spectrum of activities, and actors for nature are equally diverse in their motivations and involvement (Ganzevoort & van den Born, 2020). In addition to everyday pro-environmental behaviour (e.g. Grilli & Curtis, 2021; Steg & Vlek, 2009), action for nature in the form of nature volunteering is often categorized along four types: recording numbers of species, maintaining landscape, educating others, and administration and management of nature organisations (Ganzevoort & van den Born, 2020). People's engagement to all degrees of action for nature is crucial for environmental conservation and people who voluntarily act for nature are even considered "The foundation for nature conservation" (Sloane & Pröbstl-Haider, 2019, p.158).

### 2.1.1 Motivations to act for nature / water

Peoples' motivations to act for nature are complex and diverse, and understanding these motivations requires an interdisciplinary approach (Admiraal et al., 2017). Previous studies have demonstrated the importance of eudemonia, moral values, and connectedness with nature (Admiraal et al., 2017; Ganzevoort & van den Born, 2020; van den Born et al., 2018) as motivations to act for nature.

Research shows the importance of relational values for action for nature (Chan et al., 2016), such as connectedness with nature, learning, care, and meaningfulness (van den Born et al., 2018). Higher commitments toward action for nature may be limited by all kinds of factors. These may be higher personal or material costs and (time) constraints (Kashima et al., 2014). Moreover, emotions such as feeling powerless or even environmental grief may hinder action for nature. In addition to connectedness with nature, studies among students demonstrated the importance of social context/values in motivating action for environment (Kashima et al., 2014; Tamar et al., 2021; Yu et al., 2019). Difficult situations people encounter when acting voluntarily for nature, are also often related to social interactions (Ganzevoort, 2021; Ganzevoort & van den Born, *forthcoming*). The social context, peers and meeting with like-minded people is also an important motivation for young people's action for nature (van Heel et al., *forthcoming*). Among young people, an important barrier are a lack of time and the large changes go through from teenager to adulthood (Dean, 2015; Ganzevoort, 2021a; Sundeen & Raskoff, 2000).

### 2.1.2 Self-Determination Theory

Deci and Ryan (1985) suggest in their self-determination theory that people are more motivated to act for something if they are self-determined or autonomously motivated. This requires that people need the competence to perform actions, have meaningful relations with others and feel autonomous in their actions (Deci & Ryan, 1985; Ryan & Deci, 2000). Ganzevoort & Van den Born (*forthcoming*) show that in the context of action of nature, this relatedness with others should be broadened to relatedness with nature. Also among young people (18-30), previous research demonstrated that the basic psychological needs can be met in their action for nature and that young people also seek ways of satisfying those needs by their action for nature (van Heel et al., *forthcoming*).

### 2.1.3 Environmental engagement and attitudes

Public engagement can be used as an umbrella term for practices such as communication, consultation, participation, or co-creation. There are various ways of theorizing engagement, including Arnstein's ladder of participation (Arnstein, 1969) that portrays different degrees of engagement/participation or Gaventa's power cube (Gaventa, 2006). Engagement plays a role in many different governance contexts, including engagement with nature. There are different forms and levels of engagement with nature. A distinction can be made between instrumental engagement and idealistic engagement. Within instrumental engagement, this may be in the form of support (acceptation of policy), contribution to achieving goals (e.g., through volunteering), to recreation and education for support. Idealistic engagement may run from legitimacy, co-construction of nature (shared responsibility in nature

conservation), and meaningfulness and health (allowing for personal development). Three discourses can be recognized in the types of arguments for engagement and instrumental/idealistic engagement: “Ecology First”, “Co-creation and Economy”, and “Broadening and Embedding” (Buijs et al., 2017). Research also distinguishes four other types of citizenship orientation: engaged trustful, engaged distrustful, unengaged trustful, and unengaged distrustful (Tzankova et al., 2021).

In environmental psychology many different concepts and measures are dedicated towards Environmental Attitudes. They all have in common that they portray “a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavour”. Research on the differences in people’s attitudes toward, and concern for, the environment reveals that in the majority of OECD countries gender differences in reported understanding and knowledge of climate change are small or non-existent, and that differences between age groups are as yet unclear or little. Education, however, seems to be the biggest determinant of individuals’ concern for the environment. Meanwhile, environmental concern is reduced during periods of economic recession and high unemployment. However, there are ongoing debates about the impact of experiencing natural disasters and other environmental problems on people’s environmental attitudes; while an OECD survey argues that experiencing natural disasters is likely to increase environmental concern, the World Values Survey suggests that economic conditions and tical ideologies are much more important, and that countries that lack affluence and have low educational attainment may not have the resources to attain environmental goals regardless of their level of exposure to natural disasters (Li et al., 2018; OECD, n.d.; Running, n.d.). Meanwhile, a survey of environmental attitudes in Germany revealed more environmental consciousness in women and young people (age 14- 29), and that a growing percentage of the population are environmentally conscious and engaged. In this German study, six environmental awareness types are distinguished: the rejectors, consequentialists, sceptics, open-minded, and oriented (Umweltbundesamt (UBA), 2020).

#### 2.1.4 Youth mobilisation

It is difficult to define youth in any general framework, but for the purposes of the FLOW project we are interested in the generations who will be the drivers of social change within a world that they will inherit. A generation itself is a concept that argues that those who live during a particular timeframe and its formative events share commonalities in group experience. Furlong (2012) argues that such an understanding, however, is less pronounced in (contemporary) scientific discourses on youth due to the perception that it lacks precision and adequate theoretical grounding. The claim that there exists something like a “generational consciousness” (Edmunds & Turner, 2002) that directly results from clash of values, most often triggered by a social, economic, or political crisis, is nowadays rarely supported in research. Research with and on young people does not necessarily have to ascribe a fixed set of generation-specific attributes to people segmented in different age groups. There is an extensive body of research and knowledge on young generations, (namely on what has been labelled generation Z and generation Alpha) (Duarte, 2019; Laliberte & Varcoe, 2021; K. Parker et al., n.d.; L. Parker et al., 2022; Turner, 2015; Twenge et al., 2019).

The climate movement has been a particularly striking example of youth mobilisation that has reversed long-running received wisdom that suggested that young people, particularly teenagers today, are politically apathetic and unwilling to work for change (Han & Ahn, 2020). Young people have had other recent key moments of political mobilization that have been more locally confined, such as in democratic alliance-building in Serbia, Georgia and Ukraine, and over road safety in Bangladesh (Kuzio, 2006). Despite an alienation from the power to enact the changes they demand, there is a growing awareness that young people are willing to work for change, and NGOs that work to facilitate youth empowerment are growing in number (Shehata, 2010). For example, a German study found that in comparison to other age groups, 14-29 year olds have a strong attitude toward climate protection and

willingness to change, but lack the financial means to do so (Umweltbundesamt (UBA), 2020). The international School Strike 4 Climate is an example of an international mobilisation of young people for climate change. Tattersall and colleagues (2022) studied the movement's strategies to influence political decisions and found the importance of different forms of learning within the movement and learning through "heads, hands and heart".

## 2.2 Human – Nature Relationship

Humans have a deeply complex relationship with the natural world, and this human-nature relationship is increasingly the object of scientific study across multiple disciplines. Indigenous authors have argued that the human-nature relationship is much more profound for indigenous populations, and conservation approaches should be taken with respect to the centrality of nature to indigenous ways of life (Salmón, 2000). Images of relationship are worldviews people hold about the appropriate relation between humans and nature (van den Born, 2008). Van den Born (2008) distinguishes four different images of relationship between humans and nature:

- Master over nature. "The Master over nature stands above nature. In his interactions with nature, he is not restricted by moral constraints or knowledge about nature's fragility. Economic growth and technology are expected to provide answers to his problems." (van den Born, 2008, p. 88). The master over nature is the image of human-nature relationships that is generally adhered to least (van den Born et al., *forthcoming*).
- Steward of nature. "The Steward of nature also stands above nature but manages nature. Nature is not owned by the Steward but entrusted to him. The steward owes responsibility to God or future generations" (van den Born, 2008, p. 88). The steward of nature is the image of human-nature relationships that is generally adhered to most (van den Born et al., *forthcoming*), although in a more ecocentric variant.
- Partner with nature. "The Partner with nature stands side by side with nature. Humans and nature are considered to be of equal value. Humans should work together with nature with the aim that this interaction will benefit both." (van den Born, 2008, p. 88).
- Participant in nature. "The Participant in nature is part of nature, not just biologically, but also on the spiritual level. Although humans are a (small) part of nature, they are active participants. For the Participant, the bond between self and nature is very important; it co-constitutes the self." (van den Born, 2008, p. 88).

Over time, both within and between generations, human relationships with water or nature changes. Moreover, also the water and nature humans relate to changes, which influences the relationship as well. Also, between cultures, there are different perspectives on the Human-Nature Relationship. Outside of the in Western societies nature-culture divide, there are other, non-dualistic perspectives such as animism and naturalism (Fourrier et al., 2021). Recent research has moved beyond these divides and find ways to build on an increasing societal belief that humans are not a separate entity standing above nature, but are part of nature (Plumwood, 2006; Zylstra et al., 2014).

### 2.2.1 Human – Water Relationship

The human-water relationship has been defined Simmons et al., (2007) as the point of intersection between the human economy and the hydrological system (groundwater, glaciers, seas, rivers, etc.). "Although water is vital for human survival and growth, the point where human endeavour intersects is the most variable and uncertain in the hydrological system" (p.276). The inherent uncertainty of the hydrological system – accelerated by human economic activity – has, Simmons, Woog & Dimitrov argue, lead to responses of humans attempting to reduce the uncertainty through the creation of systems of regulating water such as dams, dykes, and irrigation, but with the long-term consequence of shortening water availability. Human economies have reached a critical point of running out of the long-term

option of exploiting water, and instead adaptation to the hydrological system is required: “the concept of living with water as a complex entity rather than as a commodity may be the only way open to us” (p.283). The need to understand and live in harmony with water has in particular inspired much Chinese scholarship that studies the historical experiences of Chinese interactions with the hydrological systems of large river basins, and the proposal of new indicators for assessing the sustainability of human-water relationships in regions – indicators such as the Human-Water Harmony Index (Ding et al., 2014). As humans can have a relationship with nature and a connectedness with nature, humans can have a relationship and connectedness with water as well.

### 2.2.2 Relational values

Values of Nature are studied from a range of fields. Values of nature encompass the reasons why nature is perceived to be important and are studied to understand and predict why people act for nature (van den Born, 2008). These values are actualised in human relationships with nature (Rolston, 1981). Values of nature are often categorised as instrumental values, moral or intrinsic values, and – increasingly - relational values (Mattijsen et al., 2020; van den Born et al., 2018)

According to Mattijsen et al. (2020): “Relational values can be distinguished from instrumental and intrinsic values in several ways. The value of the relationship between a person and a tree (or for instance an animal or place) is not found in either the person or tree, but in the connection between the two. With the concept of relational values, humans and nature are therefore not seen as separate entities: humans are part of nature and value their relationship with it (Knippenberg et al., 2018). This does not imply that nature’s instrumental and intrinsic values are not important, but recognising relational values shifts our focus to also acknowledging the qualities of the relationships themselves (Chan et al., 2016). A second distinguishable aspect of relational values compared to instrumental values is that they are non-substitutable (Himes & Muraca, 2018). In the same way that cherished friends or loved ones cannot be replaced by an equivalent other with similar characteristics, so too are the landscapes and species with which we bond not easily replaced by something “just like it”. Relational values thus raise fundamental concerns regarding practices such as biodiversity offsetting: while instrumental values of nature (e.g., timber supply) can be effectively offset, relational values cannot. People bond with a specific forest landscape, not with “forests” as a general abstraction. Third, whereas intrinsic values of nature are inherent to a natural entity, and instrumental value is a one-way street (nature has value for a human valuer), relational values concern relationships that are reciprocal. With this, it is recognised that humans and nature also shape and influence each other and how we as humans fundamentally depend on nature. This reciprocity is emphasised by activists, scientists and indigenous communities to express how nature provides for us, but we should also provide for and take care of nature (Diver et al., 2019; Gould et al., 2019).” Relational values can serve as a “guiding principle in the life of a person” (Schwartz, 1992, p. 37). Riechers et al. (2020, p. 2602) highlight how relational values are expressed at an individual level (such as personal identification with nature), but also at a more collective level (for instance social bonds mediated by nature or cultural identity tied to natural landscapes). The authors also note the importance of responsibility, as both an individual feeling of responsibility for taking care of nature, as well as a collective sense of responsibility experienced within groups. Kleespies and Dierkes (2020) measured relational values among high school and university students survey items by Klain et al. (2017). The strongest agreed with relational values were both related to responsibility: responsibility for our impact on nature and responsibility in how land is managed for plants, animals and future generations (Kleespies & Dierkes, 2020).

#### 2.2.2.1 Care

“Caring is not only an attitude of concern for the well-being of another, but also and foremost a practice” (Jax et al., 2018, p. 23). In this practice, people seek to meet the needs of another human or non-human entity regardless of the benefits this has for oneself. Caring for something or someone



means paying attention (attentiveness, noticing), so as to learn about, act on, and monitor the satisfaction of the needs of the one being cared for (Krzywoszynska, 2019). Care, moreover, relates to concern (caring about) and action (caring for) (Jax et al., 2018). As care emerges in the relationship between humans and nature, care is also a relational value (West et al., 2018). Puig de la Bellacasa proposes to think of care as tasks that make living better in interdependence, maintaining and repairing the world so that humans and non-humans can live in it in a complex life-sustaining web (Krzywoszynska, 2019; Puig de la Bellacasa, 2017)

#### 2.2.2.2 Learning

Many studies on action for nature, for instance on green volunteers or biodiversity monitors, show that learning is an important motivation for them to engage in such actions. Moreover, as learning is also an important outcome of this kind of action for nature, it has a reinforcing effect as that what drives someone is also fulfilled by his own actions. For instance in a European study on action for nature both via life history interviews (van den Born et al., 2018) interviewees were driven by learning and curiosity often already present in childhood and during their teenage years. “Objects of curiosity could be anything: insects, mammals, birds, plants, forests, moors, right up to the working of ecosystems. Guiney and Oberhauser (2009) also found an important role for learning and connectedness, but for many of our interviewees, they were interrelated: knowledge acts as a vehicle to connect them with nature” (van den Born et al., 2018, p. 848). This finding is confirmed by a quantitative card sorting exercise (Admiraal et al., 2017) in the same project. This card sorting showed that the top-ranking motivations for nature action aggregated into two groups: (1) living a meaningful life (consisting of the cards living a worthwhile life and curiosity and learning) and (2) moral values (consisting of the cards future generations and value in itself). This confirms that eudemonic values, such as learning, play a crucial role in motivating nature conservation action, whether these motivations are elicited through qualitative or quantitative methods. Also in another European project, studying birders and their care for nature, learning is found as one of the main drivers (Van den Born et al., 2022). Previous studies have also highlighted learning as a key motivation for citizen science participation (e.g. Bell et al., 2008; Johnson et al., 2018).

Learning as a relational value can also have transformative qualities. As Ganzevoort (2021) notes: “Transformative learning in nature-related projects may include shifting one’s view on the values of nature, human-nature relationships or the relationship between science and society, and draws parallels with literature on single-, double- and triple-loop learning (Tschakert & Dietrich, 2010), in which triple-loop learning includes deep reflection on one’s worldviews and core assumptions.” (p.203).

#### 2.2.2.3 Connectedness

Connectedness with nature is an example of a relational value that drives action for nature (Schultz, 2001, 2002) and is considered crucial in nature conservation (Restall & Conrad, 2015; Zylstra et al., 2014). It is associated with a multitude of terminologies, definitions, and conceptualisations as it is studied from multiple disciplines (T. Braun & Dierkes, 2016). This diversity may be challenging in studying and discussing connectedness with nature (Restall & Conrad, 2015) and the plurality of and continuum within the concept should be acknowledged (van Heel et al., 2023).

#### *Types of connectedness with nature*

Van Heel et al. (2023) distinguish three different types of understandings of connectedness with nature in scientific literature.

- Humans and nature are considered as separate entities that are somehow related and intertwined;
- Humans and nature are considered as being part of each other, or as for example, nature including humans, or humans including nature. This understanding is often rooted in the work of Schultz (2001);

- Humans and nature as one, indistinguishable, entity.

Connectedness with nature may reflect individual or collective beliefs (Bruni et al., 2018; Tam, 2013). In addition to different types of understandings of connectedness with nature, the meaning of connectedness with nature varies with different types and scales of “nature” humans connect (Klaniecki et al., 2018).

#### *Dimensions of connectedness with nature*

Connectedness with nature encompasses different dimensions (Ives et al., 2018). Ives and colleagues distinguish five such dimensions or types of connections:

- Material (e.g., consumption of materials from nature);
- Experiential (e.g., direct interactions with nature);
- Cognitive (e.g., knowledge about nature);
- Emotional (e.g., positive and negative feelings about nature);
- Philosophical (e.g., reflecting on values of nature and on how humans should interact with nature).

These dimensions are not strictly separated and range from external (material) to internal (philosophical) connections, where the internal connections are considered to have most leverage in sustainable transformation (Ives et al., 2018).

More specifically than connectedness with nature in general, people connect to water, seas, or other specific aquatic ecosystems. Despite its relevance, there are only few studies where connectedness with nature is specified to connectedness to water (Ehl, 2023). In studying for example ocean connectedness, specifications of scales on nature connectedness have been used (Nuojua et al., 2022).

Connectedness with nature may drive action for nature in young people (see paragraph 2.1.1). This connectedness with nature can be considered as part of the relatedness, which is one of the basic psychological needs from Ryan and Deci’s Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000).

#### 2.2.3 Emotions

Emotions about water, seas and oceans can be considered part of water literacy (see paragraph 2.2.2, McKinley et al., 2023). Also, connectedness with (aquatic) nature knows an emotional dimension (see paragraph 2.2.2.1; Ives et al., 2018). These emotions can be perceived as positive (e.g. love or joy) and as negative (e.g. fear or sadness).

In a time of environmental and biodiversity loss, Environmental or Ecological Grief describes grief over these lost species and landscapes. Scholars are increasingly questioning how to grieve for environmental losses and what practices and language is needed to do so (Albrecht, 2019; Van Dooren, 2014). This goes together with feelings of guilt, anger, anxiety, but also love and hope. Environmental grief is highly relational and often specific to certain species and landscapes. What one grieves for tells much about what one feels connected to (Cunsolo & Landman, 2017). Much of this grief is anticipatory, already grieving for that what is still around, but will likely disappear in the near future. Grief can also be transformative, thereby having the potential to make those in grief reflect and take action to live together better with the more-than-human species still around (Barnett, 2022).

How do people cope with these sometimes-difficult emotions? Through emotion-focused coping, for example, people seek to escape painful feelings and by denying the problem they conclude that taking action is pointless (Ojala & Bengtsson, 2019). In problem-focused coping people address the problems that cause these feelings and people act for the environment. However, actions there are mostly on an

individual level in the private sphere, and by realising the problem is bigger than they themselves can solve, they often experience low subjective well-being. A third coping strategy is called meaning-focused coping. In this way people find positive value in confronting problems and meaning in the struggle to address it. As they also have trust in actions of others and focus on collective action, they believe these actions can make a difference and find meaning in action. Therefore, this third form of coping with emotions such as environmental grief or climate anxiety, is called ‘constructive hope’ (Chawla, 2020; Ojala & Bengtsson, 2019; Ojala, 2012; Sass et al., 2018). In that way caring about nature can also be transformative (Barnett, 2022).

Emotional connection to water, ocean, coastal systems has received limited attention but is increasingly recognised to play a fundamental role in driving behavioural change (Jacobs et al., 2012; McKinley et al., 2023). The lack of emotions being taken into account in decision-making and behaviour can be considered as limiting the potential for initiatives to meaningfully change behaviour (Bearzi, 2020; McKinley et al., 2023). As especially young people may be impacted by ‘eco-anxiety’ (Coffey et al., 2021), McKinley and colleagues (2023) suggest to balance ‘constructive hope’ and ‘constructive doubt’ in order to engage people in action for oceans and aquatic systems.

## 2.3 More-than-human perspectives

More-Than-Human Perspectives refers to the worlds of the “different beings co-dwelling on Earth, including and surpassing human societies” (de Souza Júnior, 2021, p. 1). Within a system that tends to focus on human experiences and benefits, taking a more-than-human perspective makes other species and systems than humans more visible and allows for (better) acknowledgement and representation of their perspectives. Such perspectives can for example be useful in guiding nature conservation practices (Lorimer, 2012). In including more-than-human perspectives, different methodological approaches are applied that focus on noticing and listening to more-than-humans and their worlds (Dowling et al., 2016).

### 2.3.1 Multi-Species Justice

Multi-Species Justice (MSJ) seeks to understand the types of relationships humans ought to cultivate with more-than-human beings so as to produce just outcomes (Celermajer et al., 2020, 2021; van Dooren et al., 2016). At the core of MSJ is a justice theory that recognizes rights of non-human nature (“more than humans”). Beyond rejecting the belief that humans alone merit ethical or political consideration, multispecies justice rejects three related ideas central to human exceptionalism:

- a) that humans are physically separate or separable from other species and non-human nature (=relational ontology),
- b) that humans are unique from all other species because they possess minds (or consciousness) and agency and
- c) that humans are therefore more important than other species.

MSJ rests on a number of background theories and roots in particular animal rights, political ecology, posthumanist (feminist) theories, actor network theory (ANT), new materialism and indigenous philosophies. It is however unique in its focus on justice theory and aims to resolve tensions between individual rights and ecosystem perspective which are problematic e.g., in animal rights through concepts like sympathetic imagining and shared vulnerabilities.

## 2.4 Experiences in nature/with water

Experiences with (aquatic) nature may be manifold. Clayton and colleagues (2017, p. 647) distinguish different dimensions of nature experiences: (1) observing vs. interacting; (2) consumptive vs. appreciative; (3) self-directed vs. other-directed; (4) separate vs. integrated; (5) solitary vs. shared and (6) positive vs. negative. They also write that experiences in nature may have multiple outcomes: (1)

improved individual well-being, (2) transformed personal identities that recognize the inclusion of nature in self, (3) greater social cohesion, (4) increased individual and collective behaviours that support conservation, and (5) fundamental societal changes (Clayton et al., 2017, p. 650). Related to oceans and water, barriers such as costs of travel or lack of access may limit individual and collective experiences with this type of nature.

Not only millions of species go extinct, our experiences in nature risk extinction too (Pyle, 1993). There are fewer opportunities to interact with nature, especially for children, as nature is further away and lives are increasingly overscheduled (Soga & Gaston, 2016). This is problematic, as a lack of direct contact with nature has consequences for health, well-being, emotions, attitudes towards nature and behaviour (J. R. Miller, 2005; Soga & Gaston, 2016). In short: the extinction of experiences is detrimental to both humans and nature (Colléony et al., 2020). General accessibility to nature, particularly in urban environments wherein greenery can be treated by planners as a luxury rather than a necessity, is crucial to prevent a negative feedback loop of increasing alienation from nature, with the process of nature exposure particularly important for children (Colléony et al., 2020; J. R. Miller, 2005; Soga & Gaston, 2016). The Extinction of Nature is thus a problem that requires deeper collaboration between environmental scientists, conservationists, and urban planners and designers, to ensure wider access to nature near where people live and work, and where children study (Colléony et al., 2020; J. R. Miller, 2005; Soga & Gaston, 2016).

## 2.5 Futures

The pluralisation of the word future aims to reify important tenets of the field of futures studies: a) that “the future” does not exist as such, b) that multiple, often contending, images of the future do exist and influence behaviour and decision-making in the present, and c) articulating a “preferred future” is the socio-political act of using alternative futures to better direct action (Dator, 2019).

Futures Literacy is the capacity to systematically challenge linear anticipatory assumptions and to recognise the rich diversity of phenomena characterising the potential of the present to evolve in a myriad of diverse futures. The key argument is that humans can systematically train their capacity to “use the future” to increase their freedom in the present. The concept was developed by Riel Miller who first proposed “rigorous imagining” as a way to hone futures literacy (Miller, 2007) and then at UNESCO developed this further into the concept Futures Literacy Laboratories (Miller, 2018).

Experiential Futures “involves designing and staging interventions that exploit the continuum of human experience, the full array of sensory and semiotic vectors, in order to enable a deeper engagement in thought and discussion about one or more futures, than has traditionally been possible through textual and statistical means of representing scenarios” (Candy, 2010, p. 3, 2014). This method is a relatively recent advancement of the scenario method and especially suitable to address emotional relationships, as it is using artefacts and experiences to mobilise tacit and implicit knowledge about possible futures (Candy & Kornet, 2019). Genres of intervention include, but are not limited to: immersive scenarios (Candy & Dunagan, 2016, 2017), (tactical) guerilla futures (Candy, 2010), future jamming (Ramos, 2006), speculative design (Dunne & Raby, 2013), diegetic prototypes (Kirby, 2010) and “serious games” (Dator et al., 2013).

### 2.5.1 Foresight

Foresight is a forward-looking approach that aspires to help people explore and anticipate futures and change processes. Rather than merely predicting the future (forecasting), foresight typically involves systematic, participatory, future-intelligence-gathering. The practice of foresight evolves around “structured dialogues” for co-creating imaginaries of possible or desirable futures (Da Costa et al., 2008). Foresight methods, such as scenario development or horizon scanning or experiential futures, structure

and inform these dialogues in order to mobilise collective intelligence out of a diversity of perspectives and to support people in questioning linear anticipatory assumptions and go beyond the extrapolation of today (Rosa et al., 2021).

Existing foresight studies exploring human-waters relations have used different frameworks to elaborate on different values of nature in group settings (e.g. NFF; Rana et al., 2020). Other foresight studies combined scientific evidence with worldbuilding approaches to create science fiction stories. These stories were given to stakeholders to trigger discursive meaning-making and emotional responses (Lübker et al., 2023; Merrie et al., 2018; Pereira et al., 2022; Pereira et al., 2023). This also seems a promising and relevant approach for FLOW. In the WP3 focus groups existing stories could be used to trigger responses, assess hopes and fears and expectations, eventually adding to these stories or altering them.

## 2.6 Critical theories

Critical theories are approaches to social philosophy that focus on society and culture to attempt to reveal, critique, and challenge power structures. In FLOW, they will be used as an analysis lens to the domain-specific theory, in order to increase the societal relevance of the project results. Some of these theories are developed by specific individuals and thus gesture to a defined and coherent set of ideas; other theories are instead movements that organize together quite distinct scholars who write on similar subjects (a similarity which may itself be attributed by outside observers and not the theorists themselves). As such, these definitions and explanations in some cases cannot be more precise than to simply lay out the spirit of an idea. Various critical theories on this list are commentaries on one another, building upon or challenging each other's ideas, whereas some theories are in relative isolation. What unites them is what makes them critical: that they critique and challenge hierarchies of power and the ways in which knowledge is produced.

An overview by Ben Agger (1998) of critical social theories laid out the key characteristics that are common to critical approaches:

- 1) Knowledge is not neutral or objective but is rooted in certain perspectives and social conditions. Social structures are historically contingent, that is, they are not natural and inevitable, but they came about due to a historical process and thus can change further.
- 2) Progress and positive transformation are possible through political action. Critical scholarship provides the necessary analysis and awareness-raising to bring about this change.
- 3) Domination and hegemony are maintained through various structures: culture, economy, discourse (the ways in which things are spoken about or represented). Theorists may differ in their focus on structures to critique.
- 4) Domination is produced through ideologies and worldviews that alienate people from noticing the unjustness of the social order, and critical scholars challenge these beliefs.
- 5) People have agency and are capable of changing themselves and the systems around them; the oppressive social regime is not determined and inevitable.
- 6) Transformation is not quick, simple, or easy.

## 3 Methodological approach

The pioneering initiatives serve as case studies (Flyvbjerg, 2011) to study different approaches and perspectives. The cases provide demarcated systems and a clear context that allow for in-depth exploration of the initiatives' ways of engaging young adults in connecting with and acting for water (Flyvbjerg, 2011). For each initiative, the initiative itself is studied using a document analysis and interviews with initiators or board members (see section 3.2.2), interviews with the participating young adults (see section 3.3) and focus groups (see section 3.3.1).



### 3.1 Ethics and data management

For FLOW, ethical guidelines (D7.2) and a data management plan were constructed and approved (D7.1). Based on these guidelines, we specifically ask for ethical approval for WP3. This ethical approval will be requested for each of the partners working in this work package. RU asks for approval at their faculty's research ethics committee; UiT at Sikt, the Norwegian Agency for Shared Services in Education and Research and ISI at the Fraunhofer ethics committee. The approval needs to be granted before starting the interviews (July/August 2023).

### 3.2 Studying pioneering initiative

The first part of the WP is dedicated to gaining more insight in the pioneering initiatives, their characteristics, mission, and strategy. This will be done using a document analysis and interviews with one or two board members/initiators allowing for triangulation (Denzin, 2017). Based on these insights, a richer description of the pioneering initiatives is made, which will be part of the summary report (D3.3).

Before starting with the document study, we will first have informal **kick-off meetings with each initiative**. During these meetings, we will discuss and gather information to finetune the descriptions of the initiatives (how big are they, what are their current activities?), whether we will study the whole initiative or a specific subproject, the timeline, availability and relevance of documents and potential interviewees.

#### 3.2.1 Document study

In order to gain insight in the characteristics, mission and strategy of the pioneering initiative a document analysis (Bowen, 2009) will be conducted.

#### Data collection

These documents can be publicly available but will also be obtained via the contact persons at the pioneering initiatives. Each project partner will analyse the (printed and electronic) documents available. The number and type of documents will depend on type and size of the initiative, but may include:

- Mission documents.
- Communication / engagement strategies.
- Websites.
- Flyers.
- Social media.
- Annual reports.

Following Bowen (2009), the document analysis is used for:

- Understanding the case context.
  - In case of FLOW this means getting insight in the mission, strategy, and practice of youth mobilisation of the pioneering initiative.
- Suggesting questions that need to be part of the research.
  - For this work package, this provides the opportunity to finetune the interview guides and focus group depending on findings from the document analysis.
- Supplementary research data.
  - In FLOW, the document analysis supplements the data from the interviews to get a better understanding of the pioneering initiatives' characteristics.
- Allowing tracking change and development over time.
  - Whilst our interviews will primarily focus on the current practice of the initiatives, the document analysis (in addition to the interviews with the board members) allows us to

better understand the developments the initiative had in the past and to see what changes were made and how this relates to youth engagement and changing human-water relations.

- Reflect on findings in the other sources (Bowen, 2009).
  - With the studied documents, we can reflect on both the interviews with the board members but also with the young adults.

### Method of analysis

The analysis will be a process combining content and thematic analysis (Bowen, 2009). The documents will be coded descriptively through content analysis and categorised in major themes and categories (Bowen, 2009; Labuschagne, 2003). We will code based on the table in Appendix 7.1, which will be developed in collaboration with the FLOW research team.

The document analysis will result in a more detailed description of the pioneering initiatives, a finetuning of the interview guides, and triangulation with the other applied methodologies in WP3.

### 3.2.2 Interviews board members/initiators

In order to gain more in-depth understanding of the pioneering initiatives, and to gain more insight into the origins and developments of the pioneering initiatives, semi-structured interviews will be held with one or two board members or initiators per initiative. Semi-structured interviews allow pursuing leads relevant to the interviewees' situation and story, while still facilitate comparison of these stories and identification of common themes (Adams, 2015).

### Data collection

The contact persons at the initiatives will be asked to recommend interviewees based on their experience and involvement in the initiative. Key selection criteria are that the interviewees have a strategic profile, knowledge on mission and vision of the initiative and is involved with young adults. Interviews will be held recorded, transcribed, and translated to English in order to allow sharing of the transcripts within the research team. The interview guide is added in Appendix 7.17.2, is made based on the work in WP1 and WP2, and the conceptual background for WP3 (see section 2).

The interview will consist of five parts:

- About the interviewee
- The organisation
- The pioneering initiative/project
- The future of human/water relations
- Other

### Method of analysis

The transcripts will be descriptively coded (Punch, 2014) and thematically analysed (Braun & Clarke, 2014) in an iterative process. The code list will be developed collaboratively by the FLOW research team and discussed in a meeting. Afterwards, one interview will be coded by all researchers based on the draft code list. Differences in interpretations and adjustments to the code list will be discussed. Subsequently, the other transcripts will be coded by the responsible partner.

The interviews with initiators/board members of the pioneering initiatives result in a more detailed description of the pioneering initiatives, a finetuning of the interview guides for young adults, and triangulation with the other applied methodologies in WP3. Moreover, it allows for the possibility to study the different characteristics of these initiatives and allow the initiatives to learn from each other and inspire each other in themes and approaches. This way, the pioneering initiatives not only provide our research with valuable information, but also gain from participating directly.

### 3.3 Interviews with involved young adults

The involved and active young members' relations to and emotions about oceans and waters, their concerns, and motivations to act for nature and water specifically, are studied via qualitative interviews in an ethnographic analysis. Moreover, this allows for analysing how the organisation's mission relates to the youth's engagement and motivates action.

These interviews will be semi-structured allowing room for more in-depth understanding and pursuing leads relevant to the individual's story (Adams, 2015). The young adults will not be compared directly between the different countries, but young adult's engagement will be analysed in relation to the characteristics of the different initiatives.

#### Data collection

We will interview six young adults per initiative. Via the contact persons at the initiatives, we will approach potential participants. We will seek for diversity in duration and role in the initiative or particular project in the initiative, age, gender, background and other attributes. Interviews will be recorded, transcribed and translated to English in order to allow sharing the transcripts within the research team. The interview guide is added in Appendix 7.17.3, is made based on the work in WP1 and WP2, and the conceptual background for WP3 (see section 2).

The interview will consist of five parts:

- About the interviewee
- Emotions towards nature/water
- Role in project
- Visions of the future
- Other

#### Method of analysis

Like the interviews with the board members/initiators, the transcripts will be descriptively coded (Punch, 2014) and thematically analysed (Braun & Clarke, 2014) in an iterative process. The same method of analysis is implemented as described in paragraph 3.2.2.

This ethnographic analysis will result in 30 interview transcripts (transcribed and translated to English) and will reveal patterns and differences among young adults involved in water-related initiatives. Furthermore, the analysis will show how their concerns and motivations connect with their actions for nature within the initiatives. Preliminary findings from this analysis will be used to design focus groups.

#### 3.3.1 Focus groups

To validate and deepen the insights from T3.2, focus groups will be designed. These focus groups will be organised for each initiative with a broader group of young adults (between 5-15 per focus group) involved in the pioneer projects. In the focus groups, the results of the interviews are shared with the group of young adults and will be deepened and contextualized in a group discussion: What patterns appear broader as well? Do some findings need clarification or raise questions? What can be done with the findings by pioneering initiatives, young adults, and other stakeholders? How do the participants respond to future scenarios and signals (WP2)? The design for the focus groups will be developed further based on the interviews and document analysis. In terms of internal knowledge transfer, it is important to enable the implementation of the relevant findings for (finetuning of) the design of the Experiential Futures Workshops in work package 4.

#### Data collection & method of analysis

We will invite 5-15 young adults per initiative. Via the contact persons at the initiatives, we will approach potential participants. We will seek for diversity in duration and role in the initiative, age,

gender, region, background, and other attributes. The focus groups will be recorded, summarised and translated to English in order to allow sharing of the transcripts within the research team.

The focus groups will be held and analysed based on a template (D3.2) that will be the result of studying the pioneering initiative (section 3.2) and of studying the young adults' engagement in the pioneering initiative (section 3.3).

## 4 Summary report

The final deliverable of this work package is a summary report (D3.3) with findings of document analysis, and intentions and ideas of initiators for fostering young people's engagement with oceans and water issues (Task 3.1), and findings of the motivations of young adults involved in pioneer projects across countries (Task 3.2), including reflections of the focus groups and recommendations for fostering motivation and setting up engaging initiatives (Task 3.3).



## 5 Planning

	2023												2024											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<b>WP3: Dive-in Field Work Pioneering initiatives</b>						D3.1						D3.2				D3.3								
<b>T3.1 Studying pioneering initiatives</b>						D3.1																		
<b>Ethical approval</b>																								
Draft proposal for FLOW ethical advisor																								
Revising proposal for ethical committees																								
Revision by ethical committees																								
<b>Contact pioneering initiatives with schedule</b>																								
Make appointments																								
Ask for background documents																								
Plan interview with board members																								
<b>Proposed approach D3.1!</b>						D3.1																		
General approach																								
Method of analysing documents																								
Interviewguide board members																								
Interviewguide young adults																								
Observation scheme young adults																								
Method of analysis interviews & observation																								
<b>Analysis of documents</b>																								
<b>Interviews board members</b>																								
Interviewing																								
Transcribing																								
Translating to English																								
(Shared) analysis of interviews																								
Country reports																								
<b>T3.2 Comparative ethnographic analysis</b>																								
<b>Plan Interviews+observation</b>																								
<b>Interviews+observation young adults</b>																								
Interviewing																								
Transcribing																								
Translating to English																								
(Shared) analysis of interviews																								
Country reports																								
<b>Template focus group D3.2!</b>																								
General approach focus groups																								
Writing template																								
<b>T3.3 Evaluating and transferring insights</b>																								
<b>Focus groups</b>																								
Plan focus groups																								
Focus groups																								
Summarize and translate focus groups																								
(Shared) analysis of focus groups																								
Country reports																								
<b>Summary report D3.3!</b>																								
Report outline																								
Introduction (use 3.1)																								
Theoretical frame (use 3.1)																								
Methods (use 3.1)																								
Description of initiatives																								
Results interviews initiators																								
Results document analysis																								
Results interviews young adults																								
Results focus group																								
Overall analysis + discussion																								
Finalising report																								



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## 7 Appendices

### 7.1 Coding Document Analysis – version A (2023.07.31)

Content related to	Emerging themes	Codes
<b>Pioneering initiative</b>		
<b>Action for water</b>		
<b>Human-Nature/Water relationship + values</b>		
<b>Futures</b>		

### 7.2 Interview guide – board members/initiators – version A (2023.07.31)

Thank you for participating in our research.	
[introduction]	
[about interview]	
[consent/DMP]	
<b>Part 1: about the interviewee</b>	
[intro]	
Main questions	Follow-up questions/checklist
Follow-up question	
<b>Part 2: about the organisation</b>	
[intro]	
Main questions	Follow-up questions/checklist

<b>Part 3: about the pioneering initiative/project</b>	
[intro]	
Main questions	Follow-up questions/checklist
<b>Part 4: the future of human/water relations</b>	
Our project focuses on young people's engagement with water.	
Main questions	Follow-up questions/checklist
<b>Part 5: other</b>	
[intro]	
Main questions	Follow-up questions/checklist

### 7.3 Interview guide – young adults – version A (2023.07.31)

Thank you for participating in our research.	
[introduction]	
[about interview]	
[consent/DMP]	
<b>Part 1: about interviewee</b>	
[intro]	
Main questions	Follow-up questions/checklist
<b>Part 2: emotions towards nature and water</b>	
[intro]	
Main questions	Follow-up questions/checklist

<b>Part 3: role in project</b>	
[intro]	
Main questions	Follow-up questions/checklist
<b>Part 4: visions of the future</b>	
[intro]	
Main questions	Follow-up questions/checklist
Question	Follow-up question
<b>Part 5: Other</b>	
[intro]	
Main questions	Follow-up questions/checklist