

Connecting with Nature for Health and Wellbeing



Nature and Environment
To Attain and Restore Health

Nature and Environment to Attain and Restore Health
(NEAR Health) Toolkit (2015-HW-MS-2)

EPA Research Report

Prepared for the Environmental Protection Agency
by the NEAR Health Project Team NUI Galway



NEAR HEALTH TOOLKIT

EPA RESEARCH PROGRAMME 2014-2020

Nature and Environment to Attain and Restore Health (NEAR Health) Toolkit

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EPA Research Report

A copy of the end-of-project Technical Report is available on request from the EPA.

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NEAR HEALTH TOOLKIT

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The EPA Research Programme addresses the need for research in Ireland to inform policy-makers and other stakeholders on a range of questions in relation to environmental protection. These reports are intended as contributions to the necessary debate on the protection of the environment.





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Contents



NEAR HEALTH TOOLKIT

1

**Executive
summary**



4

Introduction



12

**Engaging
people
with blue
and green
spaces**



22

**Creating
vision for
your blue
and green
spaces**



28

**Connecting
with your
blue and
green
spaces**



64

**Key
messages**

76

Abbreviations



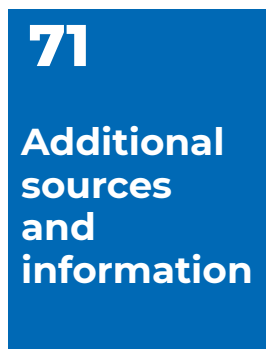
77

Appendices



71

**Additional
sources
and
information**



***Nature should be
accessible to all.***

Practitioner



Executive summary



NEAR HEALTH TOOLKIT

EXECUTIVE SUMMARY

- **The NEAR Health team was funded jointly by the Environmental Protection Agency (EPA) and Health Service Executive (HSE) to investigate how Nature and Environment can help society attain and restore health.** We combined environmental, health, social innovation, and medical fields to build capacity, develop and transform knowledge for communities, policy-makers and practitioners. We categorised stakeholders as promoters and providers of blue and green spaces, educators, decision influencers and policy-makers, active and potential blue and green space users, and health practitioners.
- **We investigated (1) how people value and experience, nature, health and wellbeing, (2) the barriers and bridges to nature connection, (3) what people want from their healthy future environment, and (4) nature-based activities to benefit people's health and wellbeing.** In doing so, we collaborated with communities to co-create the outcomes of this research. This toolkit is based on our research and the efforts of over 560 people. It outlines how we can all implement inclusive nature-based solutions to promote and restore health and wellbeing and help us to value and care for a healthy environment.
- **This toolkit is for individuals, communities, the voluntary sector, practitioners, educators (e.g. outdoor, environment), health professionals, policy-makers, planners and implementers (e.g. local authority).**
- **Findings highlight the importance of valuing blue and green spaces for their non-economic (i.e. social, spiritual, emotional, environmental) as well as economic benefits to all stakeholders.** People hold a variety of values and perceptions, about nature, health and wellbeing. People strongly agreed that nature *should* be accessible to all, but they also highlighted that it was not available to everyone equally.
- **People's connections with nature are also related to environmental quality as they strongly agreed that litter and neglected facilities were disincentives.** This suggests that how blue and green spaces are managed will strongly influence people's choices to spend time in them. People most strongly agreed that showing them what nature is around them motivates them to conserve it.
- **Participatory processes can increase social cohesion and facilitate community connectedness.** Communities identified six key themes (1) awareness, (2) active citizenship, (3) political process and participation, (4) creating an enabling environment, (5) access to spaces, services and resources, and (6) transformative change that were necessary to create and action plan for a healthy future environment. These were linked to short-, medium-, and long-term actions. Although the purpose of the workshops was to co-create an action plan for a healthy future environment, the actions collated at workshops are closely linked to sustainable living.

[← BACK TO CONTENTS PAGE](#)





- **Blue and green spaces in Ireland have high potential for activities that can help foster a greater sense of connectedness (with self, others and nature), as well as promoting an ethic of care.**
- **Nearby nature and nature-based activities in local, easily accessible, blue and green spaces offer important health and wellbeing benefits.** Remote adventure or wilderness locations may typically require greater funding and resources associated with transport, training and equipment.
- **Findings highlight the value of investing in and planning for greater access and use of biodiverse outdoor public spaces, especially coastal and urban blue spaces, in a responsible way.**
- **Social connection and wellbeing benefits are direct outcomes of the nature-based activities we considered.** Shared experiences instilled a greater sense of community as well as care for the environment.
- **Walking or outdoor swimming deserve greater attention, especially for less able-bodied cohorts and to enable people to manage stress.** There are minimal, low or no costs involved in many of these activities.
- **Our evaluations of nature-based activities show that there is cross-sectoral value from health, social and environmental perspectives.** There is added value to be gained from partnership building across sports, recreation, health and nature conservation organisations.
- **There is tremendous potential to adopt citizen science approaches within existing outdoor activities.** An example of this would be to connect the National Physical Activity Plan with some of the monitoring schemes run by the National Biodiversity Data Centre.
- **Funding is needed to support and build on the relationships between health and outdoor promoters, providers and practitioners.**
- **Research gaps need to address understudied cohorts, such as the elderly and youths, and habitats associated with inland waterways and wetlands.** Research should determine cultural components of nature connection, and intersections with other determinants of health, such as socio-economic factors, gender, race and ethnicity.





***We have forgotten
how to listen to nature,
what to look for.
We've stopped noticing.***

Provider

Introduction



NEAR HEALTH TOOLKIT

INTRODUCTION

THE BIG IDEA

Spending time, or doing activities, in nature can help us to feel better, to be more connected to each other and to care more for the environment. There are many ways to do this. This toolkit, based on the NEAR Health research (which deals with nature connections and health and wellbeing benefits), aims to help people to find ways to engage with nature and improve their health and wellbeing.

What is the relationship between nature, health and wellbeing?

We are part of nature and we need nature to be healthy. Being healthy and well is about how we work, rest and play and how we fulfil meaningful roles in society. Nature provides us with clean air to breathe, the food we eat, fresh water to drink, and spaces to spend time in, to be active, to be reflective, to feel joy and wonder at the beauty that surrounds us. At a community level, when we share these experiences with others, nature can foster social cohesion. At a wider scale, natural resources underpin societal and economic processes. When we notice nature and feel joy, we are more connected to nature, and are motivated to conserve it.

Nature is my fix, my relaxation, and the way I deal with any kind of stress associated with work; it's my go to place for calm and anti-anxiety.

Health practitioner

The NEAR Health project was funded jointly by the Environmental Protection Agency (EPA) and the Health Service Executive (HSE) to connect people to nature, to benefit their health and wellbeing, and, in so doing, to support pro-environmental behaviours and conservation practices. Recognising the lack of accessible 'how to' guides, one objective

of the project was to create a toolkit to emphasise the opportunities to use nature and the environment to benefit health and wellbeing, for the public, for practitioners and for policy-makers. We recognise the need to share what we learned, to evaluate what communities value in relation to nature in public spaces and to raise awareness of nature-based solutions (NBSs) in our daily lives.

This project responded to the United Nations (UN) [Sustainable Development Goals](#) (SDGs)¹ 3, 6, 10, 11, 13, 14, 15 and 17 and builds on emerging research in Ireland - [Socioeconomic Health and Environment Research-Wellbeing](#)², [Green/Blue Infrastructure Health](#)³, [EcoHealth](#)^{4,5} and GoGreenEx⁶ - to better understand how engaging with nature might benefit our health and wellbeing. It built on a previous EPA-funded desk study⁷ which summarised benefits from biodiversity and green spaces (ranging from improved air quality to health and wellbeing outcomes). The EPA-funded study showed that while decision-makers all agreed that contact with nature benefitted their health and wellbeing, they differed in their perception of the potential to integrate biodiversity into playgrounds, sports grounds and amenity areas. In recent years, the EPA has emphasised that the achievement of sustainable healthcare objectives depends on a healthy and valued natural environment⁸. This is aligned with the goals of [Healthy](#)

[BACK TO CONTENTS PAGE](#)





[Ireland](#)⁹, the national framework for action to improve the health and wellbeing of the people of Ireland. In 2019, the Royal Institute of the Architects of Ireland (RIAI) Town and Village Toolkit¹⁰ also reiterated this connection between environment and health. The NEAR Health project and this toolkit meet EPA, HSE and Healthy Ireland goals to help create a healthy environment where 'every individual sector of society can play their part in achieving a healthy Ireland'.

Why now?

Gaps in our knowledge still exist; for example, much of the research in the past was not inclusive, in relation to gender, age, and socio-economic conditions¹¹. We still do not fully understand the mechanisms that drive our health and wellbeing responses when we notice nature or take part in activities based in and around blue and green spaces or other aspects of the natural environment¹¹. Perhaps, because of these knowledge gaps, the opportunity to integrate healthy living and connectedness to nature has, to date, been overlooked by nature conservationists, planners, policy-makers, and health promotion professionals and even in some aspects of the media, in Ireland. The NEAR Health project was one of the first to work with communities, to reach across disciplines to find out what they valued in terms of the natural environment, health and wellbeing.

Emerging research in Ireland has shown that health policies can be integrated in the planning of responsive environments^{4,5}. Evidence of connections between blue and green spaces and the socio-economic determinants of health and wellbeing exists in Ireland^{2,3}. Such associations between blue and green infrastructures and health are reflected in National Planning Frameworks⁴ but spaces allocated for amenity use and

recreation may not always be biodiverse⁷. Complementing these studies, NEAR Health examined what communities want from blue and green spaces in their natural environment in relation to health, wellbeing and valuing nature¹¹. It is likely that very clear differences exist between communities and between individuals with respect to perceptions of what is natural, restorative and accessible in relation to shared public spaces and environments. It is important to develop approaches to explore and respond to this expected diversity of perceptions to ensure that environments address the needs of the greatest possible number of people in relation to their physical and mental health and wellbeing. A particular challenge is exploring the kinds of environments that may appeal to those sectors of the community that are at present most sedentary and isolated and which support people in forming and achieving personal goals in relation to physical activity, community engagement and mental and physical health and wellbeing.

Who is this toolkit for?

- Individuals.
- Communities, the voluntary sector, practitioners and educators (e.g. outdoor, environment).
- Health professionals.
- Policy-makers, planners, implementers (e.g. local authority).

What is the purpose of this toolkit?

This is a guide to share ideas and insights, tools, processes and practices for how we might connect individuals and communities with nature to benefit their health and wellbeing.

If you are an individual, community practitioner/educator/outdoor provider or





planner this toolkit will help you recognise how people value nature, in terms of their attitudes and perceptions. It will enable you to recognise motivations for (and barriers to) connecting people you work with to nature, and to understand what impact a nature-based activity (NBA) is likely to have on you, your local area or target population.

This toolkit will help outdoor practitioners, health professionals and policy-makers better understand what outcomes can be expected from different NBAs and interventions.

This toolkit includes the perceptions, knowledge, expertise and values of individuals, community groups, outdoor practitioners, healthcare professionals, research scientists, policy-makers and planners to help:

- develop a framework for integrating health and environment in Ireland;
- evaluate what communities value in relation to public spaces and to pilot nature-based pathways and solutions;
- mobilise use of blue and green spaces such as parks, coasts and other Nature-Based Solutions (NBS) to promote and restore people's health and wellbeing;
- co-create NBSs to engage people with the natural environment as a sustainable and as an accessible health strategy.

How to use this toolkit?

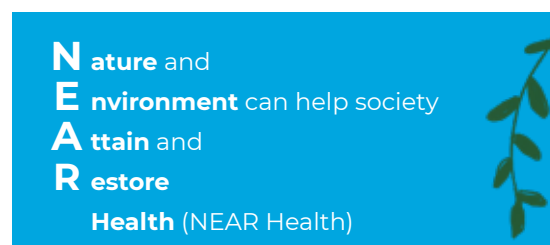
You don't need to read this toolkit from cover to cover all in one go, though you can if you would like to! Each section is a standalone element; some sections may be more relevant for you or your group, depending on what you would like to do, and what aspect

of connecting with nature interests you most, at a particular time. Each section has a short introduction explaining the overall aim, the process involved, and ways to use this. At the end you will find links to external websites, organisations or other sources of information. In this toolkit you will learn:

- how people value and experience, nature, health and wellbeing;
- the barriers and bridges to nature connection;
- co-creation methods to facilitate community-based visions for healthy futures;
- processes, tools and activities that connect people, nature and health for health and wellbeing benefit;
- how to evaluate the impact of NBAs.

Who are we - NEAR Health?

We are experts from environmental, health, social innovation and medical fields working to build capacity, develop and transform knowledge for individuals, communities, policy-makers and practitioners. We came together to investigate how:



NEAR Health is jointly funded by the EPA and the HSE under Grant Award No. 2015-HW-MS-2. This supports the implementation of the EPA Strategic Plan 2016-2020 - 'Our





Environment, Our Wellbeing' and Healthy Ireland, the national framework for action to improve the health and wellbeing of the people of Ireland. The authors would like to acknowledge the contributions of almost 600 people, including the NEAR Health steering committee, and all stakeholders, communities and participants of the workshops.

The question that drives us

How might we co-create NBSs to better engage with the natural environment (blue and green spaces) to promote health and wellbeing for communities in rural and urban Ireland?

Why does this matter?

Our lost connection...

The world we live in is in a state of crisis. We are living in the age of climate crisis and the 6th great mass extinction which is resulting in the decline of biodiversity worldwide. An Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) from 2019¹² estimated that 1 million species worldwide are at risk of extinction. At the European and American levels, 41% of the insect species are in decline and 31% have declined to the point that they are now under threat of extinction. These species are vital for pollinating crops, providing essential nutrients for our soils and keeping our waters clean. From an Irish perspective, the results are no less troubling. Nature and our natural ecosystems are under serious threat, with over 90% of our protected habitats and 32% of our protected species in bad or inadequate condition¹³. Over 98% of Irish forests have vanished and there are no more intact raised bogs (a European Union (EU) priority wetland habitat) in Ireland. Our waterways and coastal waters are failing to meet EU targets for Good

Environmental Status by 2020¹⁴ and the state of our seas are threatened by the increasing burden of our terrestrial waste¹⁵.

This decoupling of society from nature and the accelerated degradation of the natural world has serious consequences for human health globally. We have lost our connection to the natural world. If you have a deep connection with a particular place, it is more likely that you might feel moved to do something if it is under threat. But if that deep connection is absent, how might we respond? Is it your responsibility? Co-founder of Nature in Mind, Barry Lee argues that

'Absence of deep emotional connection between humans and the natural world is at the root of the environmental crisis.'¹⁶

Evidence is mounting that links the environmental crisis to a society-in-crisis. We live in an age of disconnect. We are not just living increasingly urbanised lives, but indoor lives, diminishing access to a wide range of health benefits associated with being in nature. Our society sometimes seems designed to make us passive, we often feel that we live in an 'always-on' culture¹⁷ with little time to reflect, let alone act¹⁸. We feel socially isolated¹⁹ and are suffering an 'epidemic of loneliness'²⁰. A sense of loneliness that extends beyond the human world to what has been coined 'species loneliness'²¹. One of the greatest crises of our time is the rise in mental health issues. Growing stress, anxiety and mental illness are linked to the fact that we have become *disconnected*. We have lost the sense of our

Nature is all around us, it includes us, but a lot of the time people don't even see it.
Active outdoor user and educator





‘aliveness’ in relation to our deep connection with the natural world²².

Engaging in NBAs is one way to help restore a sense of health and wellbeing and rekindle our relationship with nature. Deepening this connection to our natural world in an engaged, active or immersive way can enhance awareness, empathy and environmental concern, such as the heightened awareness of the impact of marine pollution among swimmers after engaging with sea swimming for the first

time. Restoring our relationship matters in a society where nature experiences are in decline with increasing sedentary and indoor, urbanised lives leading to a ‘species loneliness’, social disconnect, detachment from the natural world and feeling overwhelmed in the face of climate chaos^{21,23}.

The preservation of the health of our planet and the prevention of disease and promotion of human health and wellbeing are increasingly intertwined and must be supported and promoted much more.





KEY CONCEPTS AND TERMINOLOGY EXPLAINED

These are set out alphabetically, and not in the order in which they occur in the text.

Actively Engaged Blue and Green Space

User engages in activities in blue and/or green spaces, either on their own or with others. This includes both those physically active, e.g. those who exercise, and those not physically active, i.e. physically passive engagement such as sitting on a bench watching nature or painting.

Backcasting is a special type of scenario storytelling that you can use to present a complex problem to others, to engage them actively in helping you to address this problem. By thinking about how the world might develop (your ideal future) you start with an ideal future scenario, and using collective intelligence and action planning, work backwards to identify the timeline, actions, roles and responsibilities to solve the problem and achieve your ideal future.

Biodiversity is the variety of all living things, including plants, animals, fungi, habitats and ecosystems, and genetic diversity. It includes diversity within species, between species and of ecosystems. It also includes people!

Blue Space in this project, is used to refer to all visible, outdoor, natural surface waters (e.g. rivers, lakes, coasts, sea) with potential for the promotion of human health and wellbeing. We found that there is much blending of the colour palette of outdoor, natural spaces in Ireland with a lot of green spaces on the edge of water.

Co-design/Co-create is when different individuals and groups of people come together to shape joined up ideas, concepts and outputs.

Community is a group of people who interact with each other, either because they are located in the same residence, workplace or locality, or they are connected because they are interested in the same thing and want to engage with each other, and learn from each other about this shared interest.

Enabling Environment is a space or place that people find welcoming and nurturing. The environment around you is supportive and facilitates a sense of belonging.

Green Space in this project, is used to refer to all terrestrial outdoor, natural or semi-natural surfaces or settings or features (e.g. forests, woodlands, parks, gardens and farms) with potential for the promotion of human health and wellbeing.

Health The World Health Organization (WHO) defines health²⁴ as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' yet there is a preoccupation within existing healthcare systems with disease.

Logic Model is a way to show the resources (inputs) needed to implement an activity or programme, the key components of the activity, along with indicative or desired outcomes. Graphs or diagrams are often used to illustrate the process. They have been used in education, public health promotion and planning.

Learning Journey refers to the learning, growth or development that happens to someone as they experience an activity, a programme or a study. While it has been a





term associated with early years education and development, the term has been applied to adult learning as well. We use the term to refer to the holistic way we learn, gain new perspectives or insights and develop skills as we move through life experiences.

Nature-based Activities (NBAs) Any activity or intervention that uses or learns from nature (blue and green spaces) to promote or improve health and wellbeing or manage illness.

Nature-based Solutions (NBSs) Any activity or intervention that uses or learns from nature (blue and green spaces), for example to safeguard human health and wellbeing, to mitigate for or address climate change adaptation, flood risk management and to maximize biodiversity gains. These are cost-effective and simultaneously provide environmental, social and economic benefits and help build resilience.²⁵

Nature Connectedness relates to an individual's subjective sense of their relationship with the natural world²⁶. Studies have shown that nature connectedness tends to be higher in people who have previous (childhood) experience of nature²⁷

and in those who experience nature more frequently²⁸.

Potential Blue and Green Space User does not currently engage in any activities in blue and/or green spaces, i.e. do not engage in physically active or passive activities in blue and green spaces.

Stakeholder We used Freeman's classic definition of a stakeholder²⁹ as 'any group or individual who can affect or is affected by the achievement of the organization's objectives'.

Wellbeing is often viewed in terms of taking a positive approach to living well and fully and contributing to society. This approach has been taken by Healthy Ireland and is based on the approach set down in the Ottawa charter in 1986. Proxy measures for the ability to live well, such as basic human needs and rights, including enough food, water, shelter, having good physical health, access to education, and being safe, can be measured as objective wellbeing. Additionally, we use self-reported or personal wellbeing measures such as life satisfaction, meaning and quality of life, happiness and other positive emotions.



***Being in nature
teaches you to trust
new experiences.***

Educator



Engaging people with blue and green spaces



NEAR HEALTH TOOLKIT

ENGAGING PEOPLE
WITH BLUE AND
GREEN SPACES

This section summarises the thinking process that informed the NEAR Health project. We aimed to connect people with health-enabling blue and green nature spaces and to co-create inclusive NBSs to promote and restore health and wellbeing. Through this, we hoped that a deeper connection would help society to value and care for a healthy environment.

The NEAR Health thought process

Our thought process was quite organic. We followed a similar design thinking process to that used by creative strategist Billy Loizou (Figure 1). This itself is based on the problem-solving process developed by the Hasso-Plattner Institute of Design (d.school) at Stanford³⁰. They consider complex problems from a human perspective and propose pragmatic solutions. Using

this iterative approach helped us to ask questions and listen to people's experiences and motivations around what they value in relation to nature and health. We were able to draw this together to define it and explain why it is important. Broadly speaking, the next steps in our process were then to evaluate or create solutions and test them to see if they work.

Figure 1: NEAR Health iterative thought process

1. INVESTIGATE

What is the problem?
Explain the challenge
and explore the
context

2. DEFINE

Why is it
important?
Question, observe, shape
our perspective

3. SOLVE

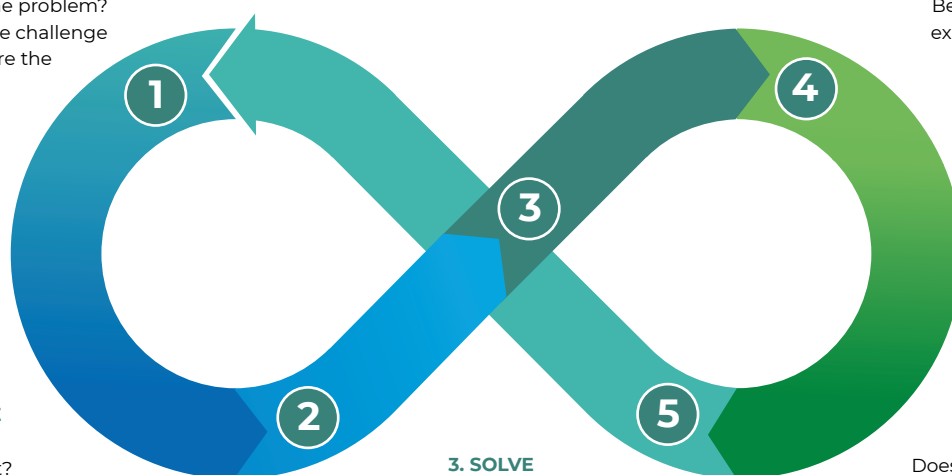
How do we solve it?
Collective intelligence

4. DEVELOP

Be creative,
experiment

5. TEST

Does it work?
Pilot, trial and
implement



[BACK TO
CONTENTS PAGE](#)





We applied these questions specifically to our overall aim of the NEAR Health project: to connect people to nature, and, in doing so, show how much we care for the environment.

- 1 Investigate** - what is the problem? Here we listened to people's perceptions of nature. The challenges relate to the barriers that prevent us all from connecting with nature.
- 2 Define** - why is it important? What are health-enabling blue and green places and how do people value them? Understanding people's values and perceptions of nature helped shape our perspective and showed us the ways that we could overcome barriers to engaging with nature.
- 3 Solve** - how do we solve it? Here we engaged with communities and used collective intelligence to propose and synthesise healthy future environments.
- 4 Develop** - How do we create our solutions - what tools can connect people, nature, and health?
- 5 Test** - Here we worked with others to evaluate NBAs.

This collaborative work involved others beyond the NEAR Health team; it was very important to define our stakeholders and consider how to engage them (Figure 2).

Aim: This section aims to summarise the overall process and key findings from the NEAR Health research. You can use this section to find out more about how people perceive the link between nature, health and wellbeing. Read on to find out what their motivations for using nature for health and wellbeing are.

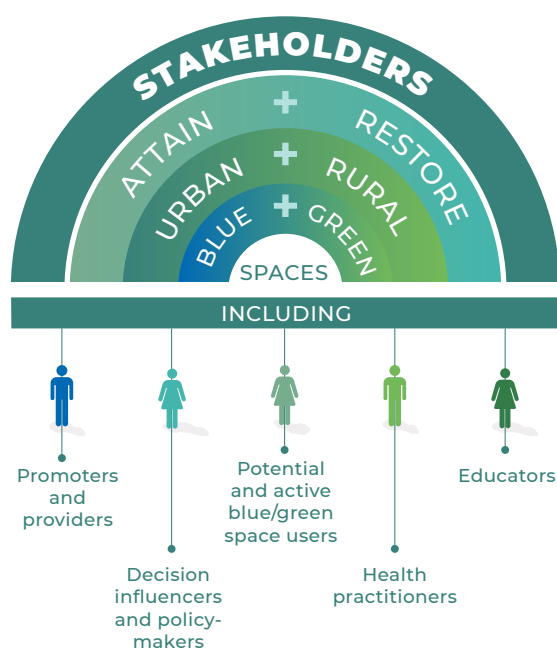
Stakeholder engagement

According to Freeman's classic definition²⁹ a stakeholder is: 'any group or individual who can affect or is affected by the achievement of the organization's objectives'.

For the NEAR Health project, more than 560 people participated as our stakeholders. They comprised those who are engaged in attaining or restoring health and wellbeing, either their own or that of others. They came from both urban and rural areas and were associated with blue and/or green spaces. They included:

- promoters and providers of blue and/or green spaces;
- educators;
- decision influencers and policy-makers;
- potential and active blue and/or green space users and
- health practitioners.

Figure 2: NEAR Health stakeholders







Mental health practitioner

[illegible]



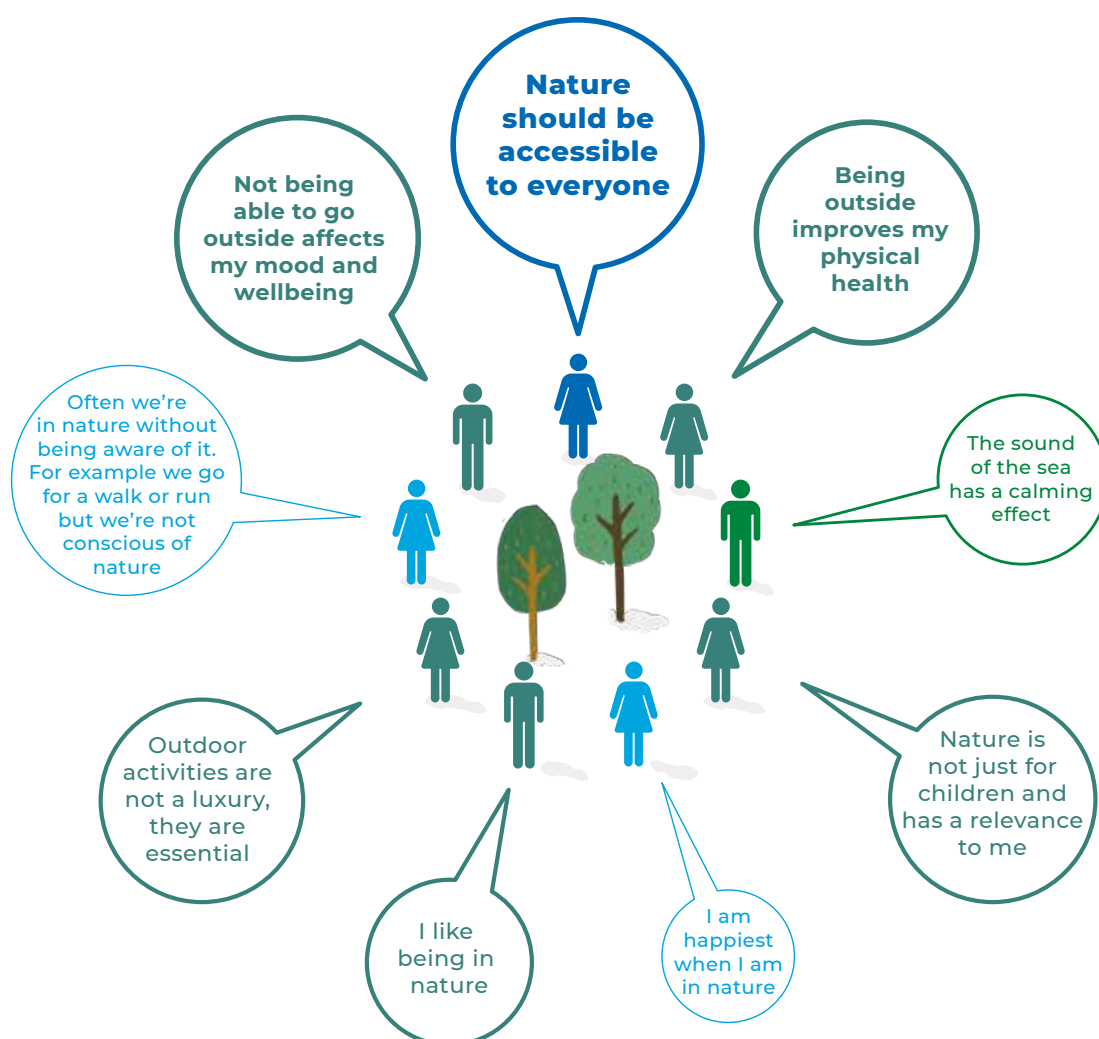
What are the values and motivations to engaging with nature for health and wellbeing that everyone agreed matter most?

Values: By explaining what the values and motivations to engage with nature for health and wellbeing are, stakeholders helped us build a very clear overview of how they feel about nature and what they value about it (Figure 5).

Nature is my fix, my relaxation and the way I deal with any kind of stress associated with work; it's my go-to place for calm and anti-anxiety.

Health practitioner

Figure 5: Stakeholders' views and values regarding nature

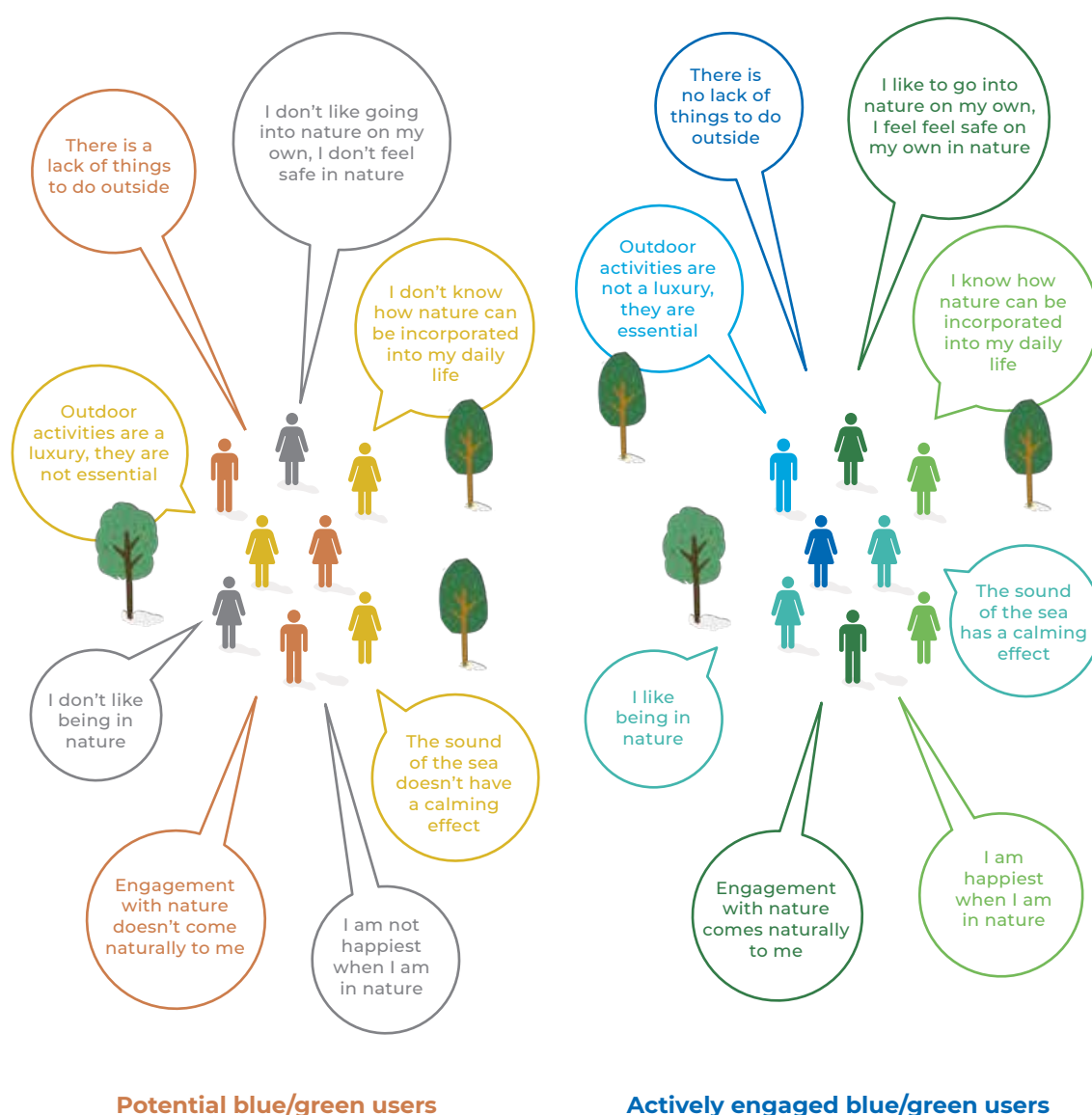




Disconnect: However, stakeholders also helped us see that there is a disconnect from nature for some and that there are clear differences between how those who are

currently not using such spaces see nature and those already actively using blue and green spaces (Figure 6).

Figure 6: Stakeholders disconnected from nature (left) and connected to nature (right)





What are the biggest barriers to engaging with nature?

Figure 7: Barriers identified by stakeholders that prevent them from engaging with blue and green spaces in Ireland



While there is a general acknowledgement of the value of nature and the environment for human health and wellbeing (Figure 5), there are also recognised barriers that prevent people from engaging with blue and green spaces in Ireland (Figure 7). Stakeholders all agree that polluted or degraded environments are some of the biggest barriers to engaging with nature. People have become disconnected from nature, and for some, nature is a place of fear or risk. There is a lack of understanding of how to engage with nature and not enough events to celebrate how we can connect more with

nature. Nature should be accessible for all, but certain groups are often excluded, such as those with disabilities or older people. There is also recognition that people's perceptions can hold them back, limiting their use of blue and green spaces: the less we use an outdoor space, the less time we make for its use.

With outdoor activities there can be a sense of separateness or feeling, 'I'm not one of those people'.
Active user, promoter, provider



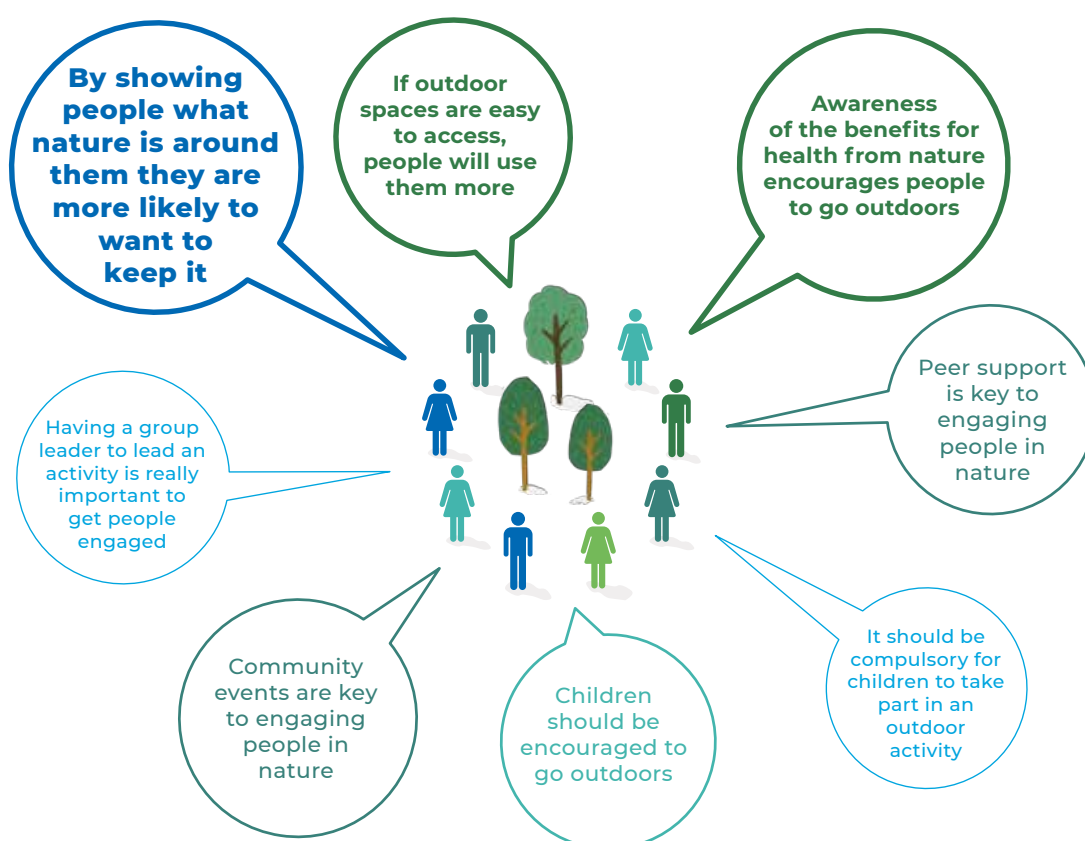


What are the bridges that enable people to engage more with nature?

Stakeholders were also asked how people could be engaged with blue and green spaces and how identified barriers could be overcome (Figure 8). This showed that an understanding of nature and its values, together with increased accessibility are seen as effective ways to overcome the identified

barriers. Opportunities for social and community participation, shared experiences and peer support were also identified as important ways to encourage engagement with blue and green spaces and promote health and wellbeing.

Figure 8: Stakeholders identified ways to overcome barriers and build connection and engagement with blue and green spaces





NEAR HEALTH TOOLKIT

ENGAGING PEOPLE
WITH BLUE AND
GREEN SPACES

This toolkit addresses how some of these 'barriers' can be overcome to create 'bridges' (Figure 8). We show how one NBA turns an unhealthy environment into a health-enabling one, e.g. beach cleans. We introduce examples and tools to help shift perceptions and attitudes by encouraging new ways of seeing, doing and being in nature, for the benefit of all, including nature itself.



FROM BARRIERS TO BRIDGES: A STORY OF NATURE CONNECTION

Every year, a local councillor strimmed the roadside verges to keep them short during the summer. But one year he didn't. People in the locality contacted him as they were concerned about the untidiness of their area. The councillor met them at the location and explained with great pride that this was his pollinator plot and why he was

not cutting it as much as he had done in the past. He explained that he was letting the flowers bloom and set seed for nature. Not only did he change their minds, but he also filled them with hope. In his words, 'I can't wait to see what it will look like next year, and how good it will be for butterflies and bees.'



Tip: If you are inspired by this, you can sign your home, workplace, school or hospital up to the All-Ireland Pollinator Plan³². The website has useful resources such as signs that you can print to show people why you are not cutting the grass and useful guides.



[BACK TO
CONTENTS PAGE](#)



***Whenever I've been through
anything mentally challenging
I've gone to nature to find peace.***

Outdoor practitioner



Creating a vision for your blue and green spaces



NEAR HEALTH TOOLKIT

CREATING A VISION
FOR YOUR BLUE AND
GREEN SPACES

Learn about the processes, tools and outcomes from community-based engagement workshops and NBAs.

In this section we explore what people and communities want from nature for their health and wellbeing and discuss the tools, experiences and activities that can connect people, nature and health. You will also learn about ways to capture or measure the impact of an NBA and some of the key outcomes and take-aways from engaging with our nearby outdoor natural environments.

Knowing about how people connect with nature to promote or restore their health and wellbeing could help you target your efforts where they could have the biggest impact, or understand how you or your activities fit into the context of connecting with nature to enhance health and wellbeing.

'I've only more recently started to value being outdoors, being more aware of the effect of my surroundings and not just the activity I'm doing.' - Outdoor provider

HOW TO CO-CREATE HEALTHY FUTURE COMMUNITIES

The process - connecting communities

The power of backcasting, a participatory workshop, is its ability to connect people with each other, to become immersed in working together to achieve a common vision or future goal. Backcasting has been used around the world to create sustainable scenarios, from heating³³ to food³⁴, water³⁵, energy³⁶, mobility³⁷, and climate resilience³⁸⁻⁴⁰ to name a few. Backcasting starts with a future goal. It empowers you to use all your senses to evoke your ideal healthy future environment and to see yourself there. In taking this imaginary journey, your perspective shifts, from currently feeling disconnected, and lacking experience of connecting with nature, to visualising the space, what it looks, smells and feels like,

what you are doing there and who else is there. As a group, you share your visions, identify common themes and motivators to facilitate your shared vision. The opportunity to prioritise features of the shared environment along with others from diverse backgrounds and perspectives creates time and space for you and others to come together and share your vision. In working backwards, you are still motivated to achieve your ideal future. This method highlights the value and importance of creating spaces that facilitate the coming together of diverse perspectives across sectors and collectively co-create a shared vision.

[BACK TO CONTENTS PAGE](#)





As backcasting starts in the future, current barriers are no longer able to block people's connections.

Removing the focus from the current barriers can empower individuals and communities to be creative. As a process, it enables positive actions across sectors and disciplines.

Workshop participants co-create an action plan to design and implement a new way of living - in terms of policies, education and attitudes to achieve an 'ideal future'³³. As the workshop participants work backwards from the ideal future of a restorative environment to the present situation, they outline the steps needed to design, promote and use the natural environment as a proactive tool to maintain health and wellbeing⁴¹. Participants collaborate to identify barriers to implementing the steps and suggest solutions to overcoming all implementation-related barriers and identify the key actors involved. This forms the action plan to determine what appeals to communities in relation to restorativeness, health and wellbeing from their nearby environments.

Making back casting work - what we did

Six Healthy Future workshops were held throughout the west of Ireland, from Sligo to Cork. There were 112 participants, in total, representing a diverse array of roles, experiences and backgrounds. Most participants were people whose role promoted access to and use of blue and green spaces or whose role involved education. Others included active users, policy influencers, decision-makers, providers

of outdoor space, and, in very few cases, potential and non-users. Think about how many workshops you need to organise and who are the participants you most need to ensure your action plan will be carried out.

Making back casting work - take-aways from NEAR Health

A space to vision

Across all workshops, common visions emerged. Participants desire a clean (and plastic-free) world, with healthy spaces (and water). They hear the sounds of nature, not man-made sounds. They envisage this restorative space in terms of its nature (mentioning birdsong, abundant biodiversity) and expressed it in terms of vitality and passion and relationships. People are physically and emotionally connected to place and recognise that they are also part of nature.

'It's about more than a human's healthy future - what's the view of a fox?'

Workshop participant

There is a lot already happening in local communities to connect with nature, but there is a lack of alignment and/or lack of communication and integration between and across sectors.

This participatory process highlighted how engaging multiple stakeholders in co-creating ideas, visions and actions for a healthy and sustainable future is a meaningful way to facilitate more inclusive cooperation and mutual support.



NEAR HEALTH TOOLKIT

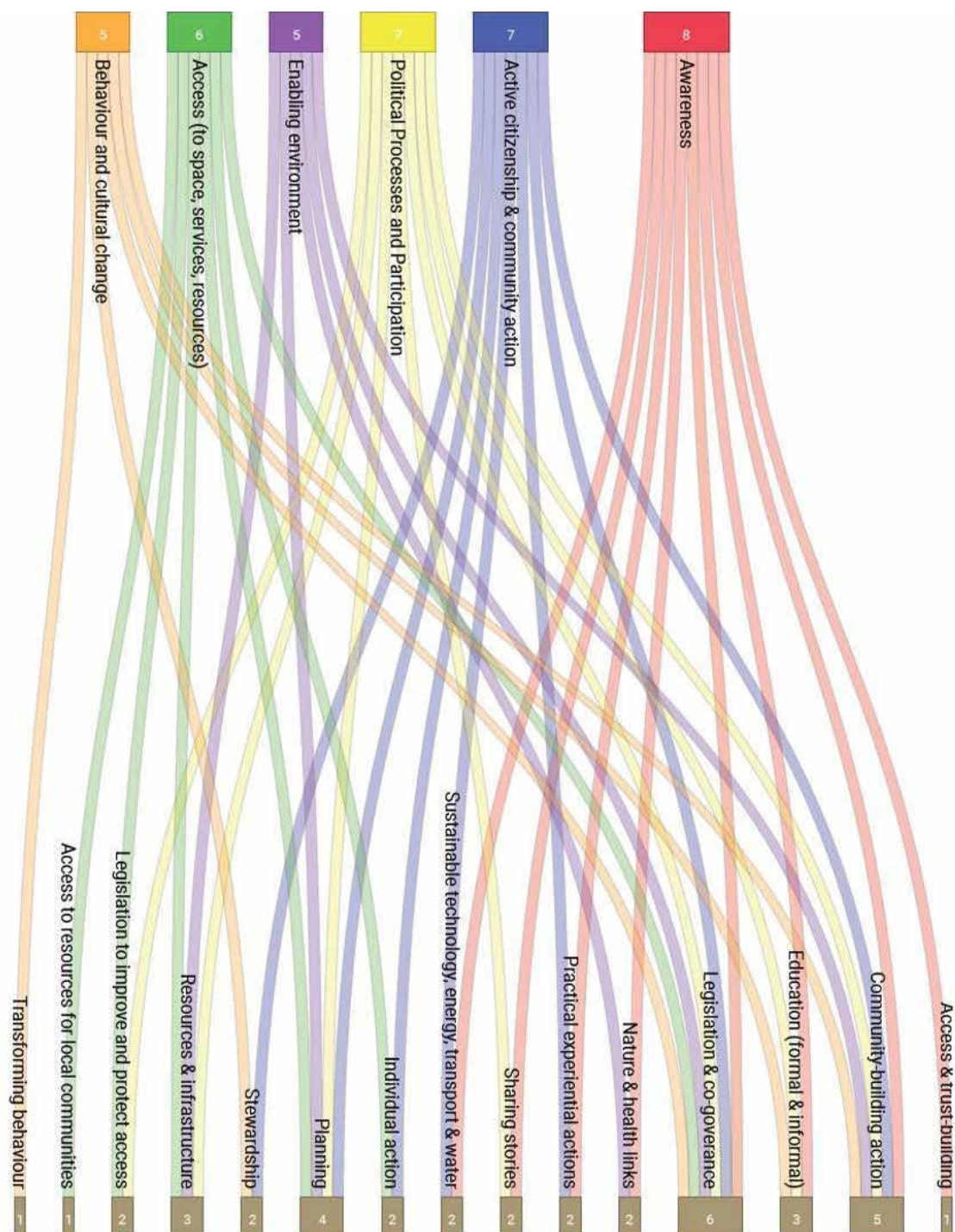
CREATING A VISION
FOR YOUR BLUE AND
GREEN SPACES

[← BACK TO CONTENTS PAGE](#)





Figure 9: Essential themes to create their healthy future environment, as ranked by participants at backcasting workshops





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GREEN SPACES

Key motivating themes and priority actions for healthy future communities

During each workshop, participants shared their vision of a healthy future environment. They then discussed the overarching vision to connect, collaborate, co-create and support a living landscape where people, communities and nature (other species and ecosystems) can thrive together and learn from each other. One hundred and twelve participants from six Healthy Future workshops from around the west of Ireland identified six key themes (Figure 9):

- awareness,
- active citizenship and community action,
- political processes and participation,
- creating an enabling environment,
- access (to space, resources, services),
- behaviour and cultural change.

These were linked to 202 priority actions on 'what matters' for visioning healthy future communities, which are summarised below in a healthy futures transition framework (Figure 10). This framework lists actions which can be carried out immediately (short term, often within a year or two), actions that might need a bit more planning, which can take place in three to five years (medium-term time frame) and actions that build on those in the short and medium timeframe, and need more than five years. This can be used as a template by communities or groups to set in action their own plans for their healthy future space.



[BACK TO CONTENTS PAGE](#)





Figure 10: Healthy Future Transitions Framework

TIME FRAME			
	Short-term Actions Within 1-2 years	Medium-term Actions Within 3-5 years	Long-term Actions Longer than 5 years
AWARENESS	<ul style="list-style-type: none"> Practical experiences Hold fun activities Visit sites of success Share stories 	<ul style="list-style-type: none"> Support informal learning Grow space to swap skills resources and knowledge Mobilise technology 	<ul style="list-style-type: none"> Strengthen and support research and community links Overhaul curricula Create guidelines for teachers Apply co-governance for Health and Environment
	Fund and review sustainable community transport		
ACTIVE CITIZENSHIP AND COMMUNITY ACTION	<ul style="list-style-type: none"> Use purchase power Sign up to All-Ireland Pollinator Plan Source local supplies Hold clean-ups Use social media Engage politically 	<ul style="list-style-type: none"> Sow seeds and grow plants for pollinators Decision-makers to mobilise accessible routes Use accessible routes to walk and move more Include diverse forms of community knowledge 	<ul style="list-style-type: none"> Build on political will and resources to protect, support and promote healthy communities Investigate clean energy, technology and other tools for sustainable communities
POLITICAL PROCESSES AND PARTICIPATION	<ul style="list-style-type: none"> Share success stories Implement Biodiversity Action Plan 	<ul style="list-style-type: none"> Plan for managed and responsible access Reroute fines to fund green schemes and green start-ups 	<ul style="list-style-type: none"> Community contribute and participate in resource management and legislation Cross-sectoral engagement in governance processes
	Provide resources and incentives for partnerships		
CREATING AN ENABLING ENVIRONMENT	<ul style="list-style-type: none"> Run litter awareness campaign Hold clean-up events Select sites for bins Celebrate spaces with a festival 	<ul style="list-style-type: none"> Launch initiatives to address drinking culture and associated littering Run climate campaign Apply organic measures Create local green and blue ways 	<ul style="list-style-type: none"> Incentivise material re-use Instigate maintenance by community initiatives Support creative industry
	Engage and employ community in active contribution to flood mitigation measures		
ACCESS TO SPACE, SERVICES AND RESOURCES	<ul style="list-style-type: none"> Landowners and government to work together to identify barriers to enabling access and tackle issues Support use of local materials 	<ul style="list-style-type: none"> Convene a Citizen's Assembly to develop options regarding access Promote sustainable use of the environment Incentivise Green Partnerships 	<ul style="list-style-type: none"> Enshrine 'Right to Roam' in legislation Ensure statutory planning documents retain existing nature spaces and create new ones such as planting woodlands and digging ponds
BEHAVIOUR AND CULTURAL CHANGE	<ul style="list-style-type: none"> Increase access to a subsidised bus pass Enquire into energy citizenship Produce materials to show how links between health, sustainability and biodiversity apply to everyone 	<ul style="list-style-type: none"> Utilise and promote practical examples that show how biodiversity and health are at the heart of responsible governance Develop, support and promote places that use low or no fossil fuel sources Fix leaky or ageing pipes 	<ul style="list-style-type: none"> Use materials more sustainably and showcase this as a good example Use alternative transport to transition to low carbon Install tertiary water treatment in catchments





CONNECTING
WITH NATURE
for
health
+ wellbeing

Connecting with blue and green spaces



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WHAT TOOLS, EXPERIENCES AND ACTIVITIES CAN CONNECT PEOPLE, NATURE AND HEALTH TO BENEFIT HEALTH AND WELLBEING?

The process - nature-based activities

Engaging people's interest in NBAs (Figure 11 - see illustration) can help overcome inertia and lack of confidence and provide motivation to pursue a more active outdoors lifestyle⁴². In Ireland, groups and organisations are tapping into the restorative power of blue and green spaces to tackle issues like mental health and environmental degradation and/or biodiversity loss in novel ways and reverse the trend in declining nature experiences, for example Clean Coasts beach cleans⁴³, Sailing into Wellness⁴⁴, SECAD Partnership⁴⁵, Tidy Towns⁴⁶ and Irish Men's Sheds Association⁴⁷. Some of the key factors/aims of these NBAs include:

- enhance community-based collaborations;
- co-create inclusive NBSs;
- promote and restore health and wellbeing; and
- value and care for healthy environments.

Mapping the Process of Change for NBAs

We developed a process of change or learning journey, from multiple sources. Sources included survey responses, participating in and observing NBAs over several years as well as formal and informal interviews with participants, volunteers, instructors, and an expert workshop

reviewing the feasibility and sustainability of NBAs. At least 320 people contributed to the overall section on NBAs.

We mapped this process using a logic model (adapted from that developed by Marshall and other authors⁴⁸), to show common features and mechanisms of NBAs (Figure 12). The model spotlights some of the key features and mechanisms that were common across all NBAs regardless of participants, activity or setting, and illustrates some of the complexity of the health promoting and restorative benefits of engaging with nature. It identifies key 'inputs' or resources and tools necessary to deliver the NBA, the key pathways that participants might follow on their learning journey that enables health and wellbeing outcomes to be realised, and the associated health and wellbeing outcomes. This is a dynamic process where outcomes may vary depending on, for example, the type of activity or weather conditions on a given day may present varying degrees of challenge. Inputs, mechanisms and outcomes specific to the NBA using surf therapy are discussed on pages 49-52.

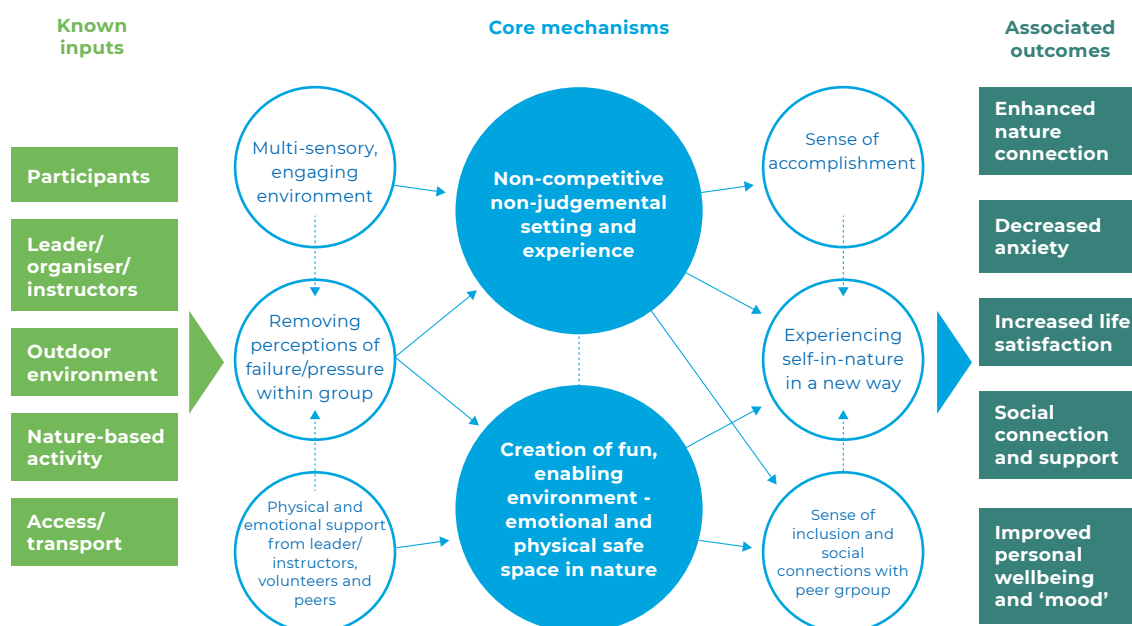
If you are a practitioner, you can use this as an overview to help you plan your NBA, and ensure that you have thought about the resources you

[BACK TO CONTENTS PAGE](#)





Figure 12: NBA map, showing the pathways or learning journeys that people can take on an NBA to benefit their health and wellbeing in different ways (as adapted from Marshall and collaborating authors⁴⁸)



need to consider before selecting an NBA to implement and the potential outcomes for individuals and communities.

The diagram (Figure 12) also highlights resources, enabling mechanisms and outcomes associated with participating in NBAs that were assessed as part of the NEAR Health project.

Diverse pathways are available to each participant depending on factors such as their personal goals, motivations and needs. Read on for more information regarding the outcomes and the strengths and weaknesses of the NBAs we were able to assess.

Although the map highlights specific pathways it does not mean that all participants will experience every element on their learning journey when they take part

in NBAs. For example, a participant may be motivated to participate by the novelty of the experience, which may engage different senses in unexpected ways, thus enabling a deeper sense of self-awareness and nature connection which in turn may influence other wellbeing outcomes such as social connection. For another, they may be more interested in the non-competitive aspects of being active outdoors leading to a sense of accomplishment that may enhance life satisfaction and decrease anxiety. Although there may be a variety of motivations and outcomes, the following enabling factors at the heart of the model are essential:

- Fostering a non-judgemental and non-competitive setting and experience, which means each individual feels that their needs are met where they are.





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SPACES

- Creating a fun and enabling environment that is physically and emotionally safe.

These elements reinforce and support the core aim of the NBAs, to encourage and support positive experiences and active engagement with nature.

The process is a deeply relational one, where wellbeing outcomes emerge through the interplay of personal, societal and environmental processes⁴⁹. The influence of the participants' relationship with the natural environment on their personal wellbeing is evident in this process of change. For example, the multi-sensory and changing state of the natural environment can enhance a sense of self-awareness (i.e. *experience self-in-nature in a new way*). The interactions between the material, natural and emotional dynamics of place are an essential part of the process of change⁵⁰.

Outcomes are the effect the activity has had on those participating in the programme, the difference it has made and how they have grown through the experience. The outcomes assessed included validated indicators such as Inclusion of Nature in Self (INS) scale⁵¹, Nature Connection Index (NCI)⁵² and measures used in Natural England's Monitor of Engagement with the Natural Environment (MENE) surveys⁵³. We chose these as they reflected cognitive, emotional, meaningful and quality of life measures associated with being connected to nature⁵⁴. Physical health outcomes were not assessed; however, this does not mean that there were not physical health benefits. Outcomes are not reserved for only the individual or the participants. The entire 'NBA community' are influenced by this process of change with evidence for health and wellbeing outcomes for instructors or parents/family members.

WHAT EVIDENCE DID WE FIND? NBAS IN FOCUS

In the following pages, we have drawn together some key information to consider on implementing NBAs. Each page contains a snapshot of the activity design, duration, aim, outcomes measured during the NEAR Health study, enabling/limiting factors and resources. This information was gathered from a subset of the NBAs and is intended to give a general outline rather than an exhaustive review of these practicalities. Most studies were 1-day activities, with the exception of three more long-term studies for restorative benefit: biodiversity walk, sailing, and surfing. Use this to help decide which NBA is most appropriate for you or your group.



[BACK TO CONTENTS PAGE](#)



NATURE-
BASED
ACTIVITY

Surf therapy

*Surfing is where he
feels most himself.*

Parent of a participant



Surf therapy



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SPACES



SETTING AND ACTIVITY

**Surf therapy with Liquid Therapy⁵⁵,
Rossnowlagh, Co. Donegal**

One-to-one instruction allowing the experience to be adapted for each child and their goals.

WHO:

Youth with mental and physical disabilities, including Autism Spectrum Disorder.

DURATION:

1 day to 8-week programmes, seasonal (May-Oct).

PRIMARY AIM:

Health restoration.



BENEFITS (Nature, health, wellbeing outcomes)

For youths: Very high potential benefit for children with autism, with increased body connection through water immersion.

- + Significantly reduced anxiety.
- + Significantly increased social and nature connectedness.

- + Evidence of sustained impact.
- + Increases and positive outcomes self-reported for confidence, self-worth, interpersonal skills, surfing ability, ocean awareness.

For parents: Social connection and support, sense of respite/escape while at the beach.



WHAT WORKED WELL

- ✓ Multiple challenge levels provided by the waves.
- ✓ Participants being able to set their goals and pace their surfing.
- ✓ Creation of emotional and physical safe space.
- ✓ Physical and emotional support from volunteers and peers.
- ✓ No fee (programme offered for free).



LIMITING FACTORS

- ✗ Getting in and out of wetsuits could be stressful/time consuming for some.
- ✗ Not everyone will have the same experience, managing expectations could be challenging.
- ✗ Seasonality.
- ✗ Oversubscribed.
- ✗ Funding needed, e.g. fundraising, donations, grant schemes.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Transport to the beach, surf equipment, volunteers, trained instructors, waves!



[← BACK TO CONTENTS PAGE](#)



NATURE-
BASED
ACTIVITY

Sea swimming

Open water swimming is an invigorating experience and creates an amazingly positive link between exercise and emotion.

Ebb and Flow website

Sea swimming



NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES



SETTING AND ACTIVITY

Sea swimming with [Ebb and Flow](#)⁵⁶,
Blackrock, Galway

High health intervention potential in Ireland that might help overcome the underlying culture of fear of the sea.

WHO:

Adults who want to transition from indoor pool swimming to the sea.

DURATION:

16-week swim terms, May-Sept.

PRIMARY AIM:

Health promotion.



BENEFITS (Nature, health, wellbeing outcomes)

- + Improved self-esteem and confidence (beginners).
- + Improved wellbeing with significant changes in mood, personal wellbeing and life satisfaction for beginners.
- + Significantly decreased stress and anxiety.
- + Significantly more refreshed and revitalised.
- + Increased self-reported energy and clarity.
- + Enhanced connectedness across all domains with significantly increased connectedness to nature and the sea.
- + Increased environmental awareness and ocean literacy (understanding the ocean's influence on us and vice versa).



WHAT WORKED WELL

- ✓ Creation of emotional and physical safe space.
- ✓ Mindfulness-based approach: 'relax, let go, flow.'
- ✓ Multiple challenge levels provided by changing sea, tides, weather.
- ✓ Removing perceptions of pressure/failure within the group.
- ✓ Physical and emotional support from volunteers and peers.
- ✓ Provision of swim distance marker buoys.



LIMITING FACTORS

- ✗ Lower uptake by men.
- ✗ Surveying in cold, wet conditions outdoors could be challenging.
- ✗ Managing expectations could be challenging.
- ✗ Seasonality.
- ✗ Oversubscribed.
- ✗ Lack of facilities in the public bathing site for less able bodies.
- ✗ Increase in littering during peak summer/tourist season.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Good bathing water quality, wetsuits, swim buoys, volunteer water safety crew, trained instructors.

[← BACK TO CONTENTS PAGE](#)



NATURE-
BASED
ACTIVITY

Beach clean

There's no judgement from the sea; all it asks is your respect.

Participant

Beach clean



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SPACES



SETTING AND ACTIVITY

Beach clean-ups with Clean Coasts⁴³, various locations around Ireland

High potential as a health and wellbeing intervention that could be rolled out with minimal to no cost.

WHO:

Mixed groups (corporate groups, families, individuals, male, female, young and old).

DURATION:

1 hour.

PRIMARY AIM:

Pro-environmental behaviour.



BENEFITS (Nature, health, wellbeing outcomes)

- + Significant increase in feeling part of nature.
- + Significantly improved self-worth, personal wellbeing and mood, life satisfaction.
- + Self-reported physical fitness.
- + Reduced social isolation.
- + Significantly enhanced sense of nature connectedness, including the sea, and social connectedness, including friends and community.
- + Significantly decreased stress and anxiety.



WHAT WORKED WELL

- ✓ 'protect what you love.'
- ✓ Sense of inclusion and community building.
- ✓ Pro-environmental action and responsibility.
- ✓ Knowledge of group leader.
- ✓ Ocean literacy (learning more about the marine environment's influence on us and vice versa).
- ✓ Peer support and inclusive/gender balance.
- ✓ 'Health by stealth' approach.
- ✓ No cost.



LIMITING FACTORS

- ✗ Transport to the beach.
- ✗ Lack of facilities at public beaches for less able bodies.
- ✗ 'Eco-trauma' - awareness of negative impact of human behaviour on environment.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Beach clean kits (litter pickers, gloves, rubbish bags, high-vis vests).

[BACK TO CONTENTS PAGE](#)



NATURE-
BASED
ACTIVITY

Yoga hike

I met new people and learned more about the environment. It reminded me just how much I love hiking and the outdoors. Feeling healthy and revitalised, relaxed and less stressed concerns on my mind.

First-time participant



Yoga hike



NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES



SETTING AND ACTIVITY

Yoga hike with Havin' A Laugh⁵⁷, Benbulbin, Co. Sligo

A model that integrates the promotion of mental health and nature engagement with outdoor activities.

WHO:

Adults, mixed genders. General public and those availing of voucher scheme. Support services can sign up with Havin' A Laugh and claim vouchers for people to partake in activities that could benefit their mental health recovery.

DURATION:

1 day,
4 hours.

PRIMARY AIM:

Health promotion/
restoration.



BENEFITS (Nature, health, wellbeing outcomes)

- + Significantly improved life satisfaction, mood, personal wellbeing.
- + Increased self-worth.
- + Self-reported physical fitness.
- + Significantly enhanced nature connectedness.
- + Significantly enhanced sense of community.
- + Significantly decreased stress and anxiety.



WHAT WORKED WELL

- ✓ Partnerships between outdoor providers and health services.
- ✓ Sense of inclusion, social mixing and community building.
- ✓ Physical and emotional support from volunteers and peers.
- ✓ Creating a unique/novel experience in an unusual setting.
- ✓ Provision of activity vouchers for people who are in therapy for mental health related reasons.
- ✓ Knowledge and experience of group leaders.



LIMITING FACTORS

- ✗ Lower uptake by men.
- ✗ Access to hiking routes limited by private land disputes.
- ✗ Funding needed for the voucher scheme.
- ✗ (Mis)perceptions and cultural norms associated with outdoor activities.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Transport to/from yoga hike provided, outdoor wear, activity vouchers, trained guides/leaders.

[BACK TO CONTENTS PAGE](#)



NATURE-
BASED
ACTIVITY

Sailing

Our vision is for Sailing into Wellness to be a healthy natural solution for our communities to look after their physical and mental well-being and it is our mission to use the sea to inspire change in our communities.

Sailing into Wellness website

Sailing



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BLUE AND GREEN
SPACES



SETTING AND ACTIVITY

Sailing with Sailing into Wellness⁴⁴

Cork and other locations on the Irish Coast

Participants contribute to the decision-making, in an environment where risk is managed and trust is paramount. This develops leadership skills, enhances social cohesion and may play a role in overcoming a culture of fear of the sea.

WHO:

Adults who are recovering from addiction to drugs and alcohol.

DURATION:

1 day sailing training followed by 3-5 days living on the boat.

PRIMARY

AIM:

Health restoration.



BENEFITS (Nature, health, wellbeing outcomes)

- + Improved inter-personal communication skills.
- + Significant increase in feeling refreshed and revitalised.
- + Significantly improved life satisfaction.
- + Decreased nervousness, stress and anxiety, social isolation.
- + Enhanced connectedness across nature domains, and sense of connectedness to family.
- + Increased eco-literacy (learning more about nature, our interaction with it).



WHAT WORKED WELL

- ✓ Creation of emotional and physical safe space. Space to reflect.
- ✓ Journey instilled pride in being sober.
- ✓ Space to connect with themselves, each other, and being part of a sailing community.
- ✓ Mindfulness-based approach: learned how to be in the moment.
- ✓ Managed risk levels in relation to constantly changing environment.
- ✓ Multiple concurrent/cumulative challenges provided by changing sea, tides, light, wind.
- ✓ Ability to notice and be awed by nature: dolphins, birdsong, etc.
- ✓ Physical and emotional support from crew and peers.
- ✓ Multiple, changing perspectives of landscape and light.



LIMITING FACTORS

- ✗ Less appeal for and lower uptake by women recovering from addiction. Ensure voyage happens at the 'right' time, not too early in their own recovery journey.
- ✗ Not everyone will have the same positive experience; isolation can still be a factor.
- ✗ Stormy weather may restrict dates and locations of sailing.
- ✗ Requires funding.
- ✗ Steps needed to ensure and support legacy in wider community as participants move through recovery programme to re-join society.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Boat, trained instructors, food and fuel, have to complete 1 day of training beforehand.

[BACK TO CONTENTS PAGE](#)



Walking

I don't like walking as an exercise but the idea of enjoying nature attracted me to try to increase my walking in an enjoyable way.

Participant



Walking



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BLUE AND GREEN
SPACES



SETTING AND ACTIVITY

Walking in Nature with **Croí⁵⁸** and NUI Galway

Ready opportunity for walking groups, Tidy Towns, heritage groups, active retired, social inclusion groups to collaborate. If necessary, initial training could be provided.

WHO:

Mix of walking group/retired/ Croí programme participants; majority female, 60 years plus.

DURATION:

1 hour a week for 4 weeks with follow-up 4 weeks later.

PRIMARY

AIM:

Health promotion/ restoration.



BENEFITS (Nature, health, wellbeing outcomes)

- + Significantly improved mood and personal wellbeing.
- + Improved physical fitness (step count significantly increased).
- + Improved self-worth, life satisfaction.
- + Significantly decreased anxiety.
- + Significantly enhanced connectedness to nature and social connectedness, especially for community (no significant change for family or work).
- + Eco literacy (learning more about nature, our interaction with it).



WHAT WORKED WELL

- ✓ 'Health by stealth' approach.
- ✓ Accessible, tranquil, and beautiful location.
- ✓ Sense of inclusion and community building.
- ✓ Noticing nature.
- ✓ Knowledge of group leaders.
- ✓ Peer support/chats/learning as a group/swapping stories.
- ✓ Similar partnerships could be established with other local community groups.
- ✓ Little to no cost.



LIMITING FACTORS

- ✗ Pace too fast for some people.
- ✗ Timing and weather conditions can deter some people from participating.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Pedometer*, plant /wildlife guide, walk leader, walking and observing points, water, sunscreen, hat, walking shoes, raincoat (weather dependent).

* NB: Pedometer not essential as many people have wearable exercise tracking technology such as Smartphone/GoogleFit/Fitbit.

[BACK TO CONTENTS PAGE](#)



Bat monitoring

Being in woodlands is always calming for me and it helps me reconnect with myself, and nature. Along with those usual benefits - learning a bit about bats is interesting and got me thinking and learning about new things. Decreased stress, and it perked me up to be part of the group.

Participant

Bat monitoring



NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES



SETTING AND ACTIVITY

Batbox making⁴⁷ and monitoring⁵⁹

An example of a nature conservation-based activity that included craftwork, walking and monitoring bat activity.

WHO:

Adults, Men's Shed, Direct Provision (DP) Residents.

DURATION:

Batbox workshops, 2 evenings, 3 hours each.
Installing: 1 day, 4 hours,
monitoring walk: about 1.5-3 hours twice a month
May-October.

PRIMARY

AIM:

Pro-conservation and citizen science activity.



BENEFITS (Nature, health, wellbeing outcomes)

- + Improved personal wellbeing, mood, self-worth and life satisfaction.
- + Significantly more refreshed and revitalised.
- + Significantly more satisfied with life.
- + Greater sense of community.
- + Connectedness to woods significantly increased.
- + Sense of inclusion, social mixing and community building.



WHAT WORKED WELL

- ✓ Partnerships between community and conservation organisations.
- ✓ Collaboration meant access to wood-cutting equipment, and bat detectors.
- ✓ Sense of purpose and pride in creating homes for rare wildlife.
- ✓ Night walks: delight at spotting and hearing bats (using bat detectors).
- ✓ Creating a unique scientific learning experience in an urban setting.
- ✓ Participants were inspired to do more to protect nature.



LIMITING FACTORS

- ✗ Funding needed to make the batboxes.
- ✗ Ability to participate limited by access to transport for DP Residents.
- ✗ Location is an urban woodland fragmented by busy roads; this may have deterred some people from participating.



ACCESS/NEEDS/TOOLS/RESOURCES, ETC.

Wood and equipment, transport to/from batbox monitoring site, head torches at night, high-vis vests, bat detectors. This NBA can be replicated for other wildlife-monitoring schemes.

[BACK TO CONTENTS PAGE](#)





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

ASSESSING THE HEALTH AND WELLBEING OUTCOMES OF NBAS

Most of our studies have only been able to show short-term changes. Nevertheless, the studies where we were able to evaluate longer-term changes (e.g. surf therapy, sailing, biodiversity walk) showed sustained impacts in certain areas such as increased nature and social connectedness, enhanced life satisfaction and reduced anxiety. Most of the NBAs we assessed are on-going activities or could be rolled out with minimum costs on an on-going basis (e.g. the biodiversity walk, beach cleans). Short-term findings, such as the increased participation of men in beach clean-ups, could help inform the longer-term planning of coastal programmes, or transfer insights to other NBAs to enable greater uptake and inclusion.

We have mapped the ways that the different NBAs can be associated with different 'quality of life' outcomes as other studies have shown relationships between these, wellbeing, and nature connectedness⁴⁹⁻⁵⁰.

NBAs are not directly comparable as each cohort had diverse needs, ages, abilities, etc. with differing sample sizes (from 14 to 75) with differing motivations for engagement (e.g. promotion/restoration/pro-environmental behaviour).

Some NBAs were targeted therapeutic interventions (i.e. restorative). For example, the biodiversity walk with Croí was targeted at people recovering from heart-related issues and disease, and Sailing into Wellness was targeted at people in recovery from drug and alcohol addiction where there was more of an emphasis on the 'inner journey' and less on social connection/community building.

Other NBAs were more generally health-promoting, although some (i.e. beach cleans, bat boxes) were pro-environmental activities and not framed as an outdoor physical activity, but rather 'health by stealth'.

People surveying biodiversity are happy to engage with nature not just for the science, people have talked about how it helps them with bereavement, they get out walking, gives them a chance to get out and take their mind off the grief.

Policy influencer



Health and wellbeing and quality of life outcomes associated with NBAs

All NBAs significantly reduced feelings of anxiety, with the exception of sailing (which declined but not significantly) and the bat walk which showed no change, but participants had low levels of anxiety to begin with (Figure 13).

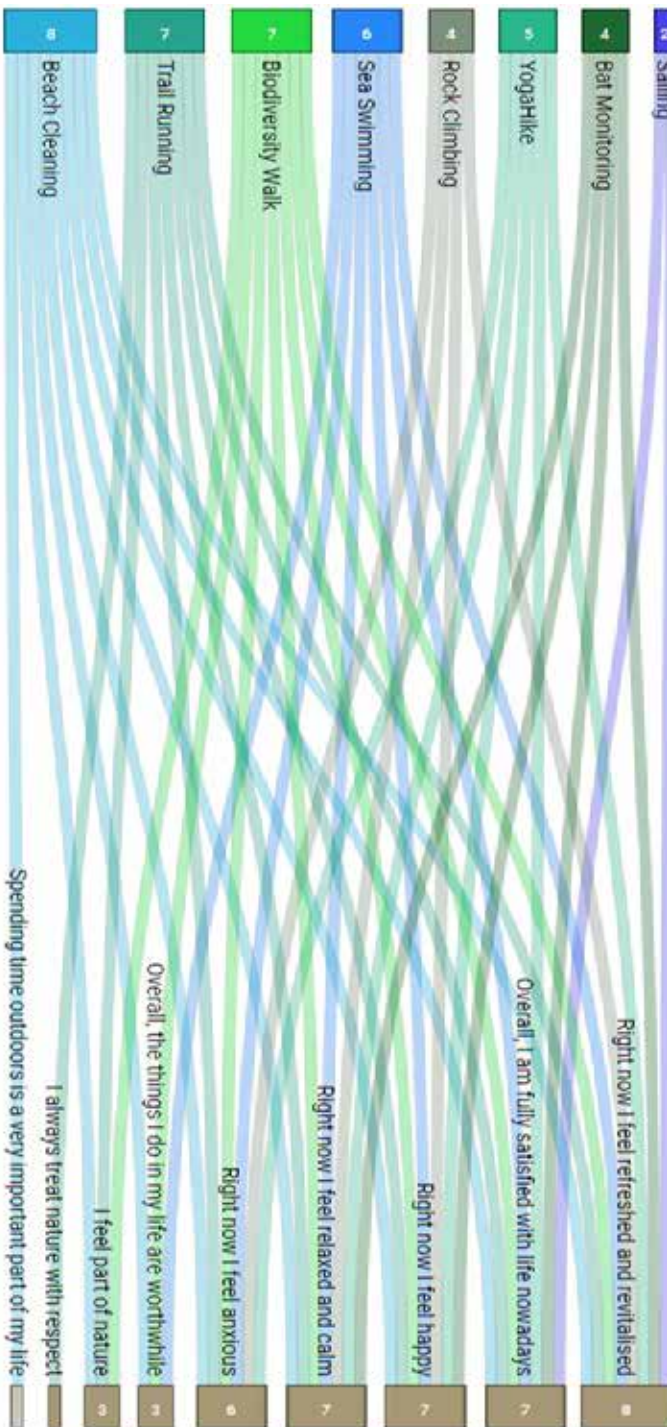
Out of all the NBAs, participating in beach cleans enhanced wellbeing indicators across all domains. The biodiversity walk and beach cleans are the most accessible activities (i.e. low level of inputs required/less resource intensive) with the greatest impact on wellbeing outcomes. These are also activities that have a clear environmental intention, intention to connect and engage with nature directly.

[BACK TO CONTENTS PAGE](#)





Figure 13: Relationships between NBAs and wellbeing and quality of life outcomes (note: surf therapy is covered in detail on pages 49-52)





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

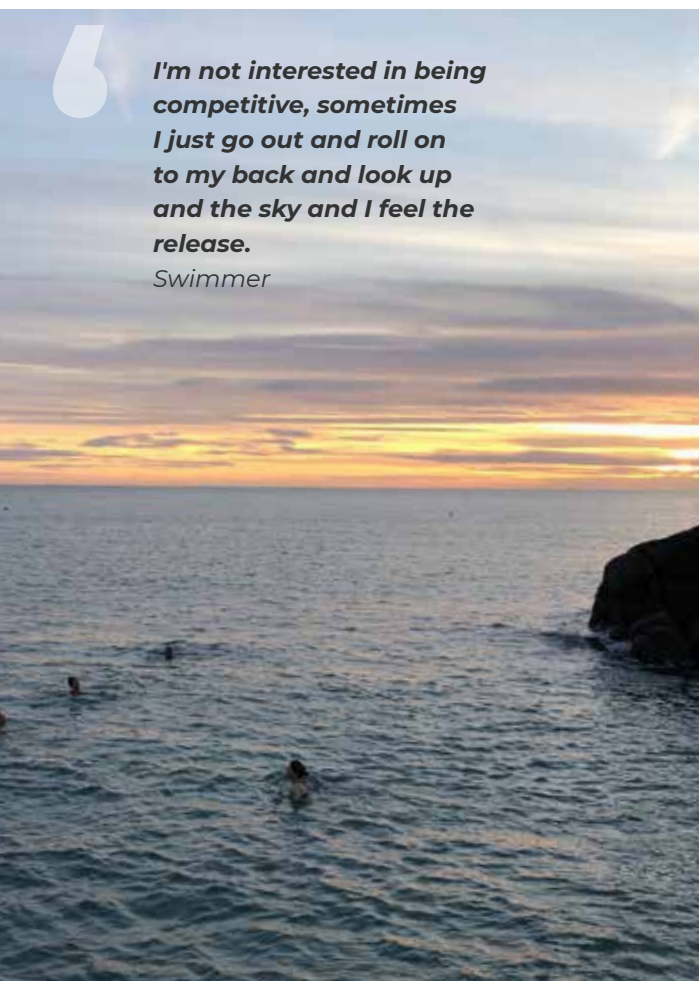
Outcomes for connectedness

All NBAs enhance a sense of connectedness to nature (Figure 14).

Green activities can also enhance a sense of awareness and connection to the sea. Trail running took place in the sand dunes by the coast and the biodiversity walk was by the river Corrib, and participants showed awareness of the connection between the sea and inland waterways. This highlights the importance of the introduction of blueways in Ireland as a way to foster greater connection with inland waterways.

I'm not interested in being competitive, sometimes I just go out and roll on to my back and look up and the sky and I feel the release.

Swimmer



Sea swimming enhanced connectedness across all dimensions of life assessed.

This may be linked to it being the most immersive and multi-sensory stimulating activity, but this needs further investigation as sea swimming is also one of the most under-researched blue space NBAs in the literature. It was the only activity that also enhanced a sense of connectedness to work (statistically significant change between the scores given before and after activity). This may suggest that the timing of the activity is important; swim groups all went swimming early morning before work with frequent comments being 'I'm ready to start my day' and 'It's cleared my head.'

Fostering a culture of care

Overuse of blue and green spaces and an influx of visitor numbers to certain sites can impact the quality of the environment and result in a reduction of health benefits. What these NBAs have illustrated, however, is the opportunities to facilitate a greater connection to nature through activities that incorporates skills, tools and awareness of how to engage with nature in a meaningful and responsible way. As well as beach cleans, NBAs like those run by Ebb and Flow, Sailing into Wellness and Liquid Therapy instil a sense of ocean awareness and essential water safety skills, contributing to an enabling environment.

As an immigrant, coming from the outside to this place, nature saved me. Nature connects me to others - I go outdoors and go hiking and meet other like-minded people and all of a sudden I'm part of a community

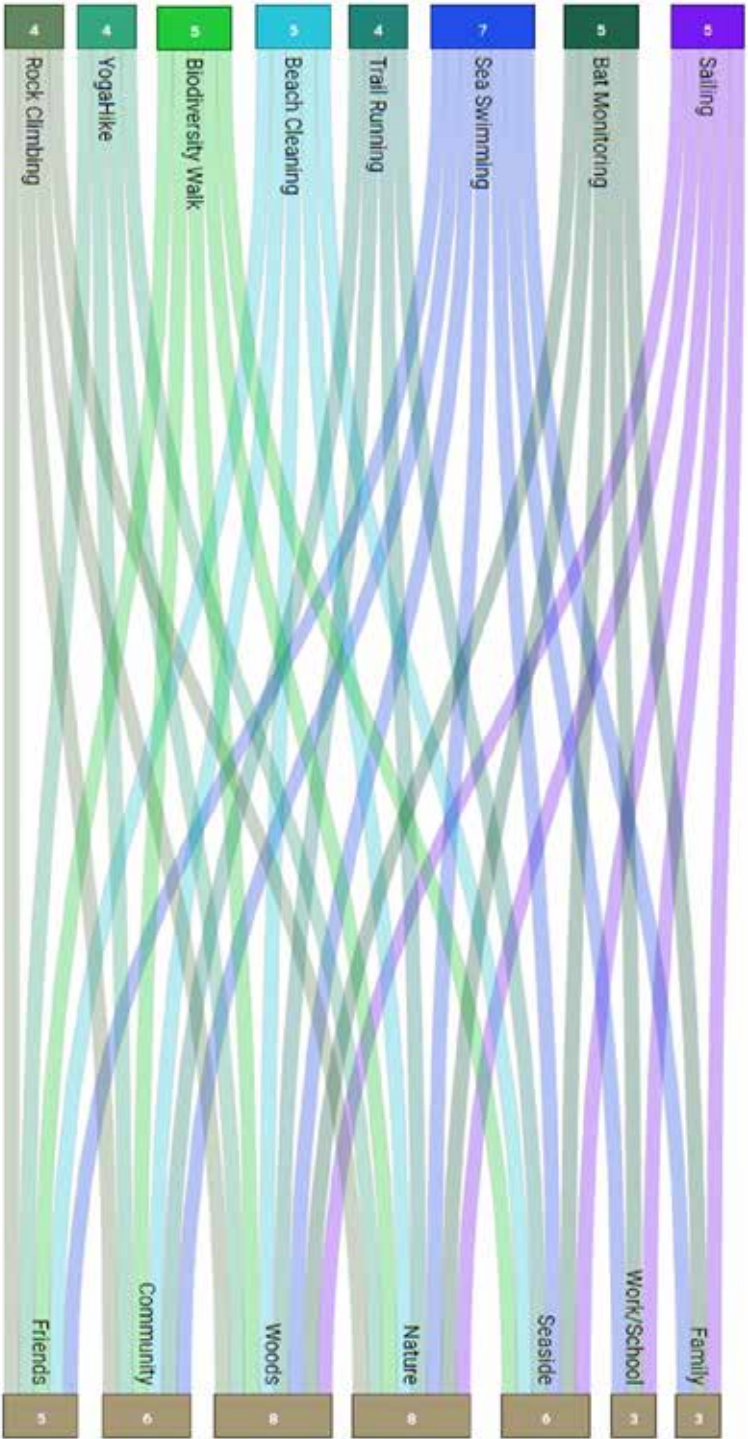
Outdoor practitioner

[BACK TO CONTENTS PAGE](#)





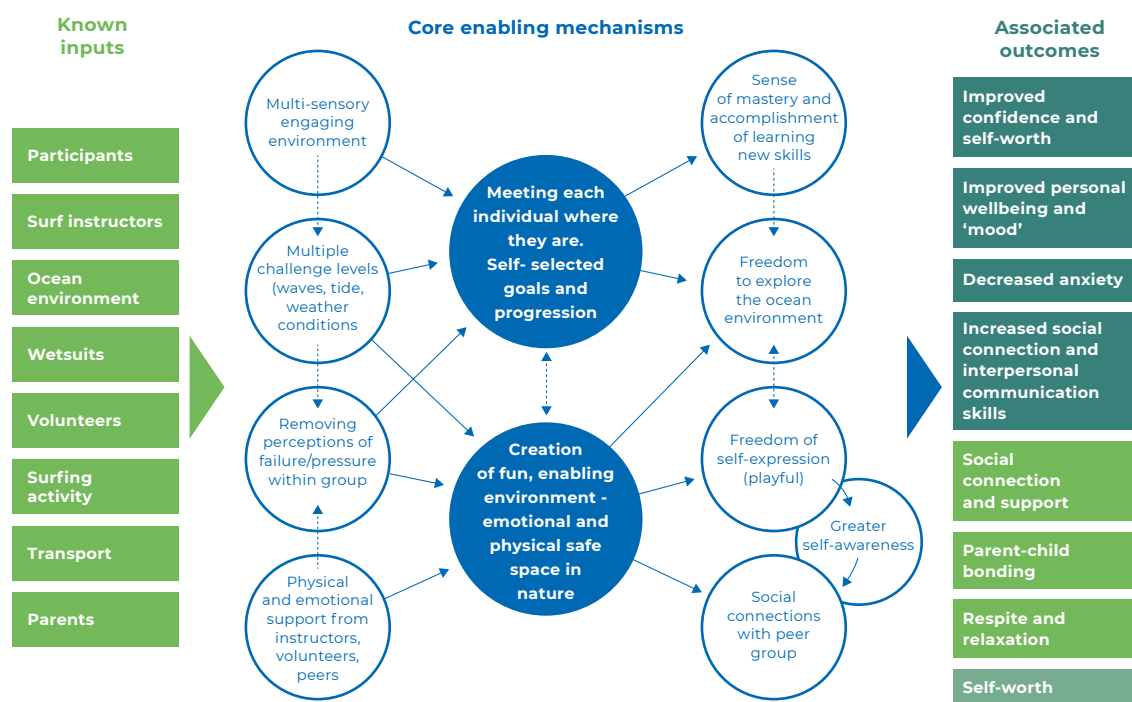
Figure 14: Relationships between NBAs and connectedness outcomes
(adapted from INS scale)





IN FOCUS: SURF THERAPY

Figure 15: Map showing resources, mechanisms, potential pathways and associated outcomes with surf therapy (as adapted from Marshall and other authors⁴⁸)



Surfing is the tool, the mechanism to create change, but it's not the outcome. It's not about learning to surf; surfing is simply the vehicle that enables this process of change.

Tom Losey, Liquid Therapy founder

Mapping the process of change for a restorative NBA - surf therapy

This map of Liquid Therapy's process of change (Figure 15) illustrates some of the complexity of the therapeutic process⁴⁸. It identifies the key inputs or resources and

tools necessary to deliver the NBA, the key mechanisms and potential pathways that participants might follow on their learning journey and the associated health and wellbeing outcomes.

This is a dynamic process where outcomes may vary depending on, for example, the weather and surf conditions at the beach that day that may present varying degrees of challenge.

Although the map highlights specific pathways it does not mean that all participants will experience every element on their learning journey. There are diverse





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

pathways available to each participant depending on factors such as their personal goals, motivations and needs. For example, a participant may decide they want to focus on particular surf skills such as learning to stand on the surfboard which may fulfil a sense of mastery and achievement and lead to an enhanced sense of confidence and self-worth. For another, they may be more interested in becoming immersed in the sea and the sensations of freedom when being carried or tossed by waves leading to a greater sense of self-awareness (which in turn may influence other wellbeing outcomes such as social connection). That said, the enabling factors at the heart of the process are essential:

- Meeting each individual where they are.
- Creation of a physical and emotional safe space.

These elements reinforce and support the core aim of Liquid Therapy, 'to enable every participant to be all that they want to be in the water'.

The influence of the participants' relationship with the natural environment, in this case the sea and surf, on their wellbeing is evident in this process of change. For example, the multi-sensory and changing state of the sea can enhance a sense of freedom and play. The interactions between the material, natural and emotional dynamics of place are an essential part of the process of change⁴².



Why surfing?

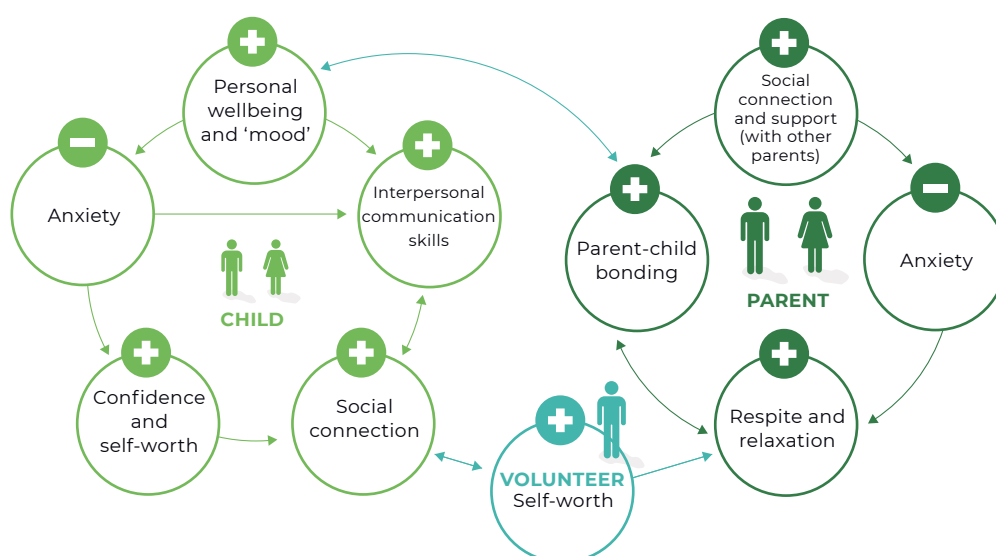
Throughout the world, surfing is popular as a blue care activity⁶⁰. It is increasingly being advocated as a form of therapy for a range of physical and mental health issues, such as the 2013 NHS pilot programme in Dorset⁶¹ and

a study⁶² identifying positive emotional impacts after 30 minutes of surfing. The establishment of the International Surf Therapy Organisation in 2017⁶³ has a specific focus on building evidence-based research.





Figure 16: Interrelated outcomes for children, parents and volunteers in a surf therapy activity



Key outcomes for surf therapy

The entire surf therapy community is influenced by this process of change with evidence for health and wellbeing outcomes for parents and volunteers/instructors also recorded (Figure 16).

Some key outcomes for participants in this study included enhanced sense of self-worth and confidence, and improved social skills, as well as a significant decrease in anxiety over time. The map highlights how various outcomes for participants, parents, and volunteers are interlinked and perhaps even interdependent creating positive, reinforcing feedback loops. For example, improved personal wellbeing for a participant can enhance interpersonal and communication skills which may support greater bonding between parent and child, reinforcing a sense of wellbeing. The volunteer's role in creating an enabling environment and facilitating greater social connection can reinforce their

sense of self-worth. For parents, the support from volunteers and social connection received from other parents can help reduce feelings of anxiety, increasing a sense of respite and relaxation, which in turn might facilitate greater openness, understanding and connection with their child. The needs and experiences of volunteers are often not considered. Liquid Therapy included a debrief after every surf session where volunteers had the space and opportunity to share.

The surf therapy community is embedded in and influenced by other communities such as family, school and health services, which are not included here but are also important to consider.

PLEASE NOTE: Physical health outcomes were not assessed. This does not mean that there were no physical health benefits. Surf therapy has been associated with improved mobility⁶⁴ and physical fitness⁶⁵ for certain groups.



Why water?

Authors have argued that blue spaces offer very different sensory experiences and are used in different ways with different outcomes and benefits that are often overlooked and remain poorly understood⁶⁶. They are multi-sensory environments, important for our health.

Particular qualities of water, especially the power and energy of waves, the feeling of waves breaking over the body, or the sensation of water pressure on the skin/body can all enhance feelings of wellbeing.

***When my world
fell apart the sea
kept me together.***

Swimmer



Immerse



ACTIVE STEPS YOU CAN TAKE TO CONNECT TO NATURE

How to connect to multi-sensory environments, especially immersion in blue space?

Focusing on breath and breathing, a central component of land-based mindfulness practice, can aid relaxation in water. Breathing practices are an essential aspect of Ebb and Flow’s open water swimming programme for adults. Participants identified this mindfulness element as being enhanced in the water.

Fear and anxiety can cause tension in the body. Ebb and Flow’s philosophy,

'Relax, let go, flow'

helps bring an awareness of the environment into your body by focusing on the feeling of each movement, not distance or speed. This connection between body-mind-place can help turn a potentially risky and unpredictable environment, like the sea, into an enabling one.

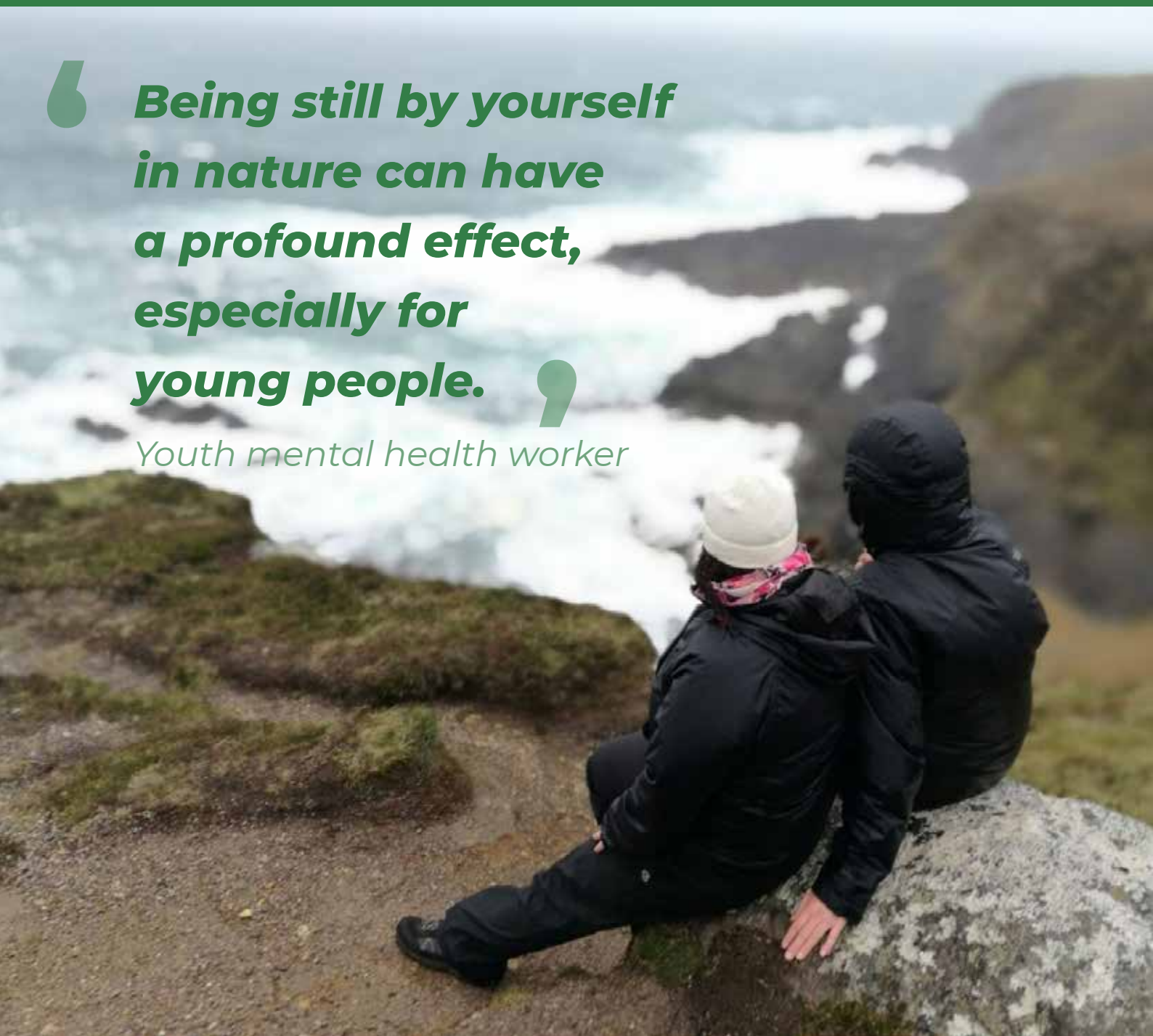
Sit spot...

Our study highlighted the importance and benefit of 'passive' as well as 'active' ways of engaging with nature. For some, their ability to connect with nature is enhanced during moments of solitude where there is little direction or prescribing. One way to connect with nature is the Sit Spot. A place outdoors where we can be by ourselves, observe

nature through all of our senses and let go of thinking. A Sit Spot is a place outside, ideally nearby and solitary, where you can go regularly so you build up a more intimate connection to this place and can notice patterns and changes through the seasons. Just sit, relax and breathe it all in.

Being still by yourself in nature can have a profound effect, especially for young people.

Youth mental health worker



Giving thanks...

... by LEAVING NO TRACE!

We encourage a 'Leave No Trace'⁶⁷ approach to all NBAs, as our stakeholders identified litter, pollution and disturbance to the natural environment is a major barrier to

connecting with nature for health and wellbeing. The adoption of 'Leave No Trace', reduces our impact on the environment and promotes a sense of stewardship and appreciation for the natural world. For more information visit: leavenotraceireland.org



***The Outdoors Is Yours -
Leave No Trace To Protect It***



TOOLS TO CAPTURE THE IMPACT OF CONNECTING WITH NATURE

How to measure impact: before/after survey tool

What we measured and why

We designed a survey tool to get a better picture of how the NBA may be making changes in various aspects of people's lives, for example whether their wellbeing had improved since they started the NBA ([see Appendix 1](#)). To understand changes in how people are feeling, you need to know how people felt before the activity and what would have happened if they did not do it. Our survey is designed to be carried out before and after an NBA, in the same way, asking the same questions. This is to make sure you can compare the answers and get reliable results.

To compare people's experiences across NBAs and with other figures nationally, it was important to have consistent questions and to use validated measures like those by the Office of National Statistics (ONS) in the UK and questions from Natural England's MENE⁶⁸ survey (there is no equivalent in Ireland yet).

Measuring wellbeing

Wellbeing is often measured using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS)⁶⁹. It is a validated scale in which participants rate their responses to 14 statements from never to all the time. We chose not to use this measure as we wanted to keep the length of the survey to a minimum and our focus was not solely on wellbeing.

We used four subjective wellbeing questions the ONS use as they have been well thought out, are widely used and easily understood. They have been used in the Natural England MENE study. We adapted the last two to capture how people feel in the moment because we wanted to check for any changes in mood before and after the activity:

- Overall, how satisfied are you with your life nowadays?
- Overall, to what extent do you feel that the things you do in your life are worthwhile?
- Right now, how happy do you feel?
- Right now, how anxious do you feel?



Tip: To get an overall picture, if you don't have much time or if your survey is too long to include all four of these

questions, the What Works Wellbeing Research Group⁷⁰ recommends using the first question as a good indicator for wellbeing as it has been used for decades around the world.

There are many other measures associated with wellbeing such as resilience and self-esteem that we did not include because we did not want the survey to be too long. We needed it to be easy to understand and easy to complete in a short amount of time before and after NBAs.





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

Public health promotions often focus on recognised attributes of wellbeing: connect, be active, take notice, keep learning, and give⁷¹. These aspects of wellbeing did occur in the NBAs. Specific themes associated with wellbeing, such as self-esteem, autonomy or self-determination, vitality and engagement, were identified as important aspects of people's experiences of NBAs in their responses to open questions and from other qualitative methods such as interviews, group discussions and participant observations. Specific wellbeing themes were identified for various NBAs and were included as measures in future surveys.

Demographics

The survey includes some basic questions on demographics (for example age, gender, occupation, place of residence). We wanted to know how an activity might impact different people in different ways. For example, in some studies we found the impact differed between genders or between people with different levels of experience. It is useful to incorporate this at the start if you need this level of information.

To better understand different aspects of people's lives we also asked some domain specific questions, for example sleep, physical activity, time spent outdoors and distance travelled to the activity. This can help provide a baseline understanding of where people are at and how best to target an NBA.

As well as demographic questions, we included a mix of open-ended and validated measures adapted from the MENE survey⁵³, including indicators from the NCI⁵².

The NCI⁵² was developed for adults and children, and replaces longer, more time-consuming scales. It has been validated against other scales measuring connectedness to nature. Easy to use, it includes aspects of nature connection such as belonging, happiness, wonder, meaning, beauty and respect.

For example, I always treat nature with respect; being in nature makes me very happy; spending time in nature is very important to me; I feel part of nature).

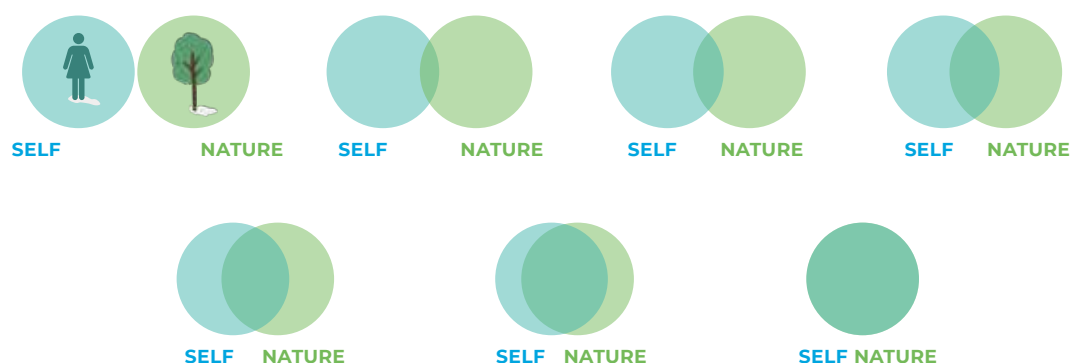


[BACK TO
CONTENTS PAGE](#)





Figure 17: INS scale⁵¹



Measuring connectedness - INS scale⁵¹

We also wanted to understand how connected people felt to the world around them and if this was influenced by spending time in nature. We especially wanted to know if NBAs could help facilitate a greater sense of connectedness across various domains of life including nature, friends and community. This is why we used the validated INS scale (Figure 17), adapted to include six other domains of life. It was important that the survey was not too long or too text-heavy. Using the INS scale allowed us to include a more visual component.

Open questions

Using open questions means that people can answer in their own words. This was important for us to better understand/test assumptions about what nature meant to people and what mattered most for their wellbeing. It could also help us understand what has changed and some of the unexpected reasons why. Although the data can be more time-consuming to analyse, identifying these smaller or more subtle

changes can help understand what matters most for a particular group and to tailor an activity to improve their wellbeing even more.

Examples of open questions:

- Before/after: how does being in nature make you feel?/how has being in nature made you feel?
- After: in what ways, if any, do you think today's activity has impacted your health and wellbeing?
- Before/after: in relation to my health and wellbeing, right now I feel...

We were struck by the mix of emotions and motivations expressed in response to these questions as well as the openness to be vulnerable and express these feelings, the good and the bad, and to share fears.





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

Open questions could also be used to explore and reflect individually or in small groups by asking, for example: what does nature mean to me; how does it make me feel; what motivated me to take part; how do I feel now; what surprised me.



TIP: To learn more about measures for children, look at The Children's Society's questions from their Good Childhood Report⁷².

Tailoring the survey for children

Based on a review of the evidence⁷³, we used an adapted visual 'smiley face' 5-point scale ([see Appendix 2](#)). Including open questions provides opportunity for children to explore their own rich understandings of what nature means, etc. It also gives them an opportunity to share how they are feeling in their own words. Sometimes pre-determined words used in surveys, such as 'anxiety' can be difficult to understand, and children may have other words they prefer to use to capture the feelings associated with anxiety. For example, such as feeling 'weird' or 'silly', or bodily sensations used to describe excitement ('butterflies in my belly') or nervousness ('tightness in my chest').

Limitations of the survey

What needs to be considered beforehand:

- Working with young people means that they may need special assent and consent forms ([see Appendix 3](#)).
- Language will need to be pitched correctly.
- Forms can be too time-consuming for some groups of young people with a range of abilities.
- Forms can be difficult for people whose first language is not English.

Practicalities of doing surveys in-situ in outdoor, and often wet, environments:

- Paper forms are not ideal in some circumstances.
- Families with young toddlers may need to stick to their schedule.
- People may have just come out of the sea.
- People may be carrying out activities at dawn or dusk (not enough light to allow forms to be completed).
- Paper forms are not ideal in rainy situations.

Consider the length of the form; it needs to be appropriately detailed to capture sufficient information but not too cluttered to be confusing, or too long to be off-putting for completion.



[BACK TO CONTENTS PAGE](#)





NEAR HEALTH TOOLKIT

CONNECTING WITH
BLUE AND GREEN
SPACES

Think carefully about the words you use and how others might interpret them. For example, some words and phrases like disconnect from the world can be seen in two different contexts - disconnect from the stress of being available/on the go (via technology) (positive), and disconnect in terms of being separate from nature, from others, from oneself (negative).

Avoid bias: simply asking questions can influence how people feel and what they do. Some changes in wellbeing may even be down to you asking the questions, rather than your activity. You can address this, and other types of bias, with larger-scale evaluations.

IMPORTANT: DATA PROTECTION AND ETHICS

Get informed consent. This means you need to tell people what you want to use their answers for and get their permission before you start your survey ([see Appendices 5-6](#)). If you are working with younger children, you will need a version that explains this clearly to them ([see Appendices 3 and 4](#)).

Follow the General Data Protection Regulation. It is important that nobody can identify the people who took part in your survey from your results. So you need to handle everyone's personal information in line with the Irish Data Protection Act⁷⁴.



TIP: Share what you learn. We can all learn from each other's experiences. Sharing findings can improve best practices and the impact of other organisations like yours.

[BACK TO
CONTENTS PAGE](#)





Potential ways forward

Online formats

- Have an online form (e.g. Google Forms is a useful free template) that people can complete in-situ on a tablet/mobile device or in their own time.
- Include an option to add their email to prompt/remind them to complete the form.

Co-design

- We co-designed, piloted and verified our surveys with community groups which is why some of the surveys were tailored for specific activities or groups and may have had different or additional questions/measures.
- Including participants in co-designing the survey can help identify what is possible for them, and how best to find out the information you want.

Other measures...

A good resource guide⁷⁰ to help you get a detailed picture of different ways to measure the impact of an activity or intervention can be found here: [What Works Wellbeing](#).

Creative approaches to measuring wellbeing in nature

Approaches that are more multi-sensory and embodied that rely less on verbal or written responses.

Body mapping

Body mapping is an interactive tool that engages the senses and draws on similar methods used in dance therapy as well as mindfulness-based practice. It was used

as an experimental method with young participants in the surf therapy programme as a different way of understanding complex experiences of physical health and emotional wellbeing⁷⁵.

When and why to use

This can be a fun and engaging alternative (or complement) to completing surveys and allows for greater freedom of expression by tuning into bodily sensations and feelings, allowing participants to notice how they are feeling in their bodies in the present moment. This exercise also helped build rapport and create a space for different forms of expression. It was also a useful way to prepare for surfing by 'sensing the sea' before entering the water, as well as a way to reflect on how the experience made them feel, noticing any changes in their bodies, immediately after surfing. It is a tool that could be applied in other nature-based settings and activities with adults as well as children.

Limitations

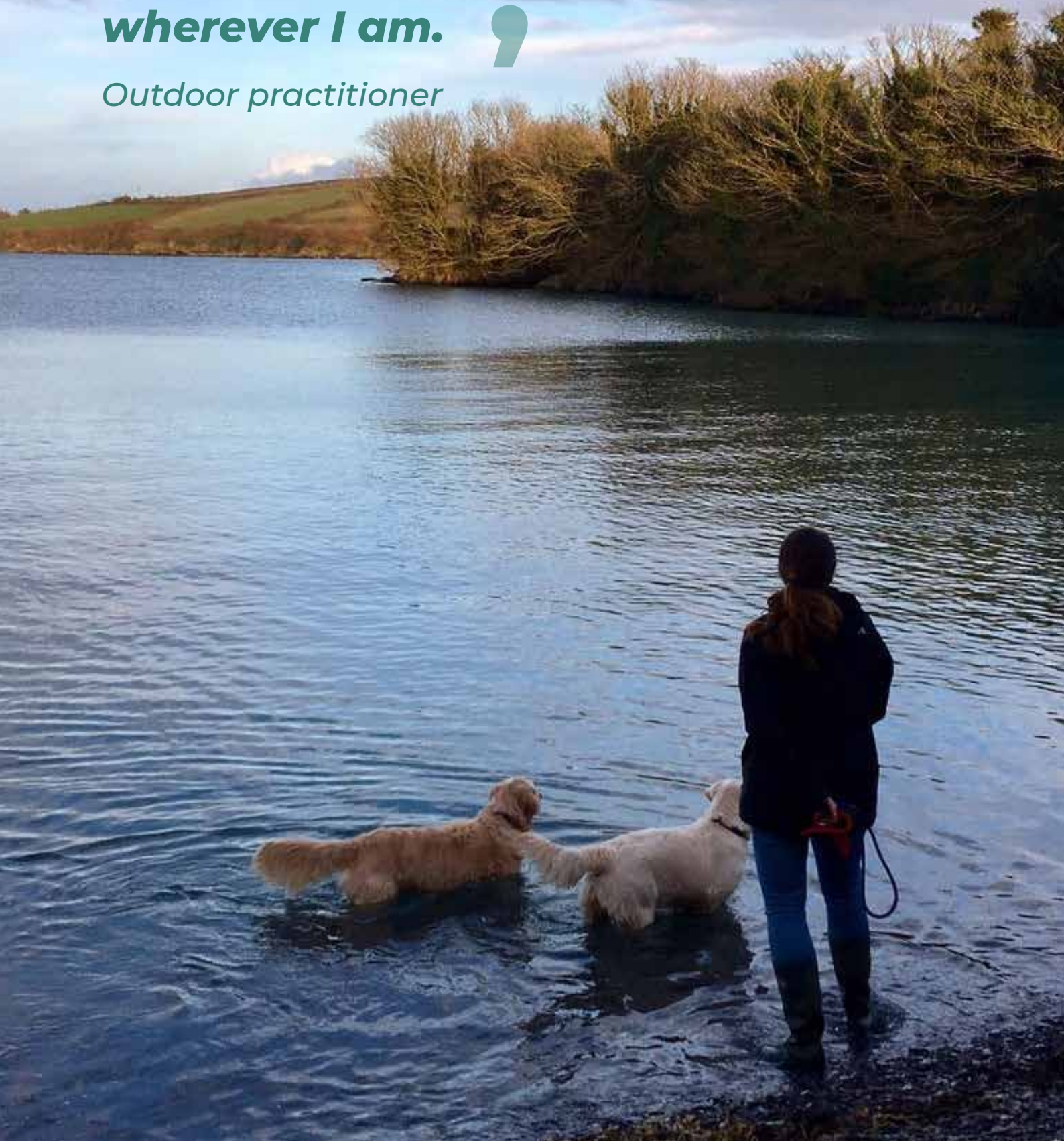
Requires facilitation and can be time consuming, although there is potential to integrate into an existing NBA. Difficult to quantify.

Other examples of creative approaches: The 'Measuring Wellbeing Creatively' project⁷⁵ This project is funded through a UCL Grand Challenges: Human Wellbeing Award, and works with people who have communication difficulties because of a brain injury or stroke. It explores how different colours and sensations can help them express feelings and emotions, which may help to measure their wellbeing.



***Nature gave me the
connection I needed.
Through nature I have my
belonging in the world
wherever I am.***

Outdoor practitioner



Key messages and takeaways



NEAR HEALTH TOOLKIT

KEY MESSAGES AND
TAKEAWAYS

There are many ways of being well and being in nature.

WHAT WORKS WELL...

We grouped the main key messages under the following headings: valuing our blue and green spaces, individual health and wellbeing, social connection and wellbeing, accessibility and feasibility of NBAs, and opportunity for Citizen Science initiatives



There is also wildness in everyday environments.

Educator

Valuing our blue and green spaces

- Findings highlight the importance of valuing blue and green spaces for their non-economic (i.e. social, spiritual, emotional, environmental) as well as economic benefits.
- Nature pathways and walking routes are not just about physical fitness but are about responding to beauty in nature and scenic landscapes and expressing emotion too.
- The value of nearby nature - NBAs in local, easily accessible, blue and green spaces offer important health and wellbeing benefits, rather than remote adventure or wilderness locations which typically requires greater funding and resources associated with transport, training, and equipment.

Individual health and wellbeing

- Time spent in nature can be especially restorative and healing and can be used to complement existing therapies

and healthcare treatments to enhance recovery.

- Evidence shows that direct experiences of nature can enhance our sense of wellbeing and benefit our physical and mental health, especially to reduce anxiety.

Social connection and wellbeing

- Interpersonal as well as individual effects were evident with a strong emphasis on social connection, sense of belonging, and interaction with others who have shared experiences.





NEAR HEALTH TOOLKIT

KEY MESSAGES AND
TAKEAWAYS

- Shared experiences in nature can lead to greater social connection and empathy.
- Small simple actions for the environment, such as beach cleans, can help to foster a greater sense of social wellbeing and community.
- Blue and green spaces in Ireland have high potential for health interventions that can help foster a greater sense of connectedness (with self, others and nature), as well as promoting an ethic of care.

Accessibility and feasibility of NBAs

- Overcoming expectations - NBAs need to manage expectations and take into account how people's perceptions might hold them back, 'People's perceptions hold them back - they think they can't go out because it is raining or outdoor exercise is only for fit people.' One way is to focus on creating an inclusive and enabling safe space when introducing people to new nature-based experiences (Figure 11).
- Passive activities or those requiring little technical skills or equipment such as observing nature, walking or outdoor swimming deserve greater attention, especially for less able-bodied cohorts and

in response to an increasingly stressed-out society. There are minimal low or no costs in many of these activities.

- We have begun to identify some of the mechanisms or pathways from NBA inputs to outputs (health outcomes) which aids evaluation and optimisation of nature-based interventions and solutions.
- NBAs or other forms of nature prescribing are not a single intervention but a pathway and series of relationships, all of which need to function to meet diverse needs.

Opportunity for Citizen Science initiatives

- These experiences can be enhanced through group activities in nature and by participating in community-based and citizen science initiatives. This can be used to get to know your local area and find wonder in the wildlife around you. Find out more from National Biodiversity Data Centre⁷⁷ about their recording schemes.
- There is tremendous potential to adopt citizen science approaches within existing outdoor activities. For example, beach cleans can complement other NBAs and extend to include street cleans, and take place in woodlands, rivers and lakes.



[BACK TO
CONTENTS PAGE](#)





WHERE TO FROM HERE - RECOMMENDATIONS FOR FUTURE ACTION

We grouped our recommendations for future action into (1) partnership building; (2) participatory processes and inclusive practices; (3) funding; (4) promotion, awareness and education; (5) access, training and service provision; (6) policy integration; (7) impact evaluations; and (8) research gaps.

1. Partnership building

- Recognise the importance and value of nature and place as a determinant of wellbeing⁷⁷⁻⁷⁹. This presents an opportunity to struggling healthcare systems to seek and incorporate new, alternative and cost-effective services.
- Enhance the awareness of healthcare providers regarding the availability, opportunity and potential benefits of NBAs for their clients/patients.
- Integrate Mental Health models, such as Havin' A Laugh that promote mental health and nature engagement with outdoor activities as they have high potential to enhance recovery rates. However, this will require buy-in from health professionals/general practitioners (GPs) to create more awareness of what's available and how to access it, as well as evidencing the effectiveness of NBAs.
- Build partnerships within regions between outdoor activity providers and local health services.
- Create networks of support for outdoor practitioners and volunteers to be able to share their experiences, etc. at a community level.
- Consider pro-environmental actions and activities (e.g. biodiversity, pollinator plan, clean-ups, bat walks) within Healthy Ireland's National Physical Activity Plan⁷⁹ as well as the co-benefits of community and environment outlined in the National Biodiversity Action Plan 2017-2021⁸⁰.

2. Participatory processes and inclusive practices

Peer support and social events are key to engaging people in nature. - Provider

- Health professionals, researchers and community officers should advocate for NBAs delivered through a community-based participatory research design. Participants and their engagement are central to the success of NBAs.
- Support the co-creation of community-based NBAs that highlight different ways of engaging with nature in a responsible way, locally and in different environments, 'We do not have enough events that show different ways of engaging with nature.'





- Engage people across the life course in NBAs and in efforts to connect people and communities with nearby blue and green spaces. In particular, think about potential opportunities for young adults (18-25 years) who are poorly considered when it comes to mental health supports and services, as well as elderly individuals and groups.
- Encourage and support greater diversity and inclusion of minority groups in NBAs. Findings highlight the need to encourage and support greater diversity and inclusion in blue and green spaces, in particular for those with diverse needs and abilities, 'In Ireland, we do not cater for people with physical disabilities who want to access nature.'

3. Funding

- NBAs are limited by traditional funding mechanisms. Increase financial support for and awareness of nature-based social enterprises.
- Make NBAs accessible and affordable. Funding for the adoption of 'nature prescribing', such as voucher schemes, enables those who might not otherwise be able to access (e.g. unemployed) or those who might benefit most from NBAs (e.g. those with mental health issues, socially isolated) to participate.

4. Promotion, awareness and education

Education outdoors, in-situ, on the shore has the best effect on kids because the natural environment provides the content and inspiration. - Educator

- Consider diversity and inclusion strategies when promoting outdoor recreation and tourism activities with regard to how these experiences are marketed and to ensure they are made accessible.
- Promote non-competitive forms of engagement - these are as important if not even more so than the dominance of fitness and weight-loss as motivators for health.
- Make information on local health services and supports available to outdoor practitioners.
- Provide and communicate audio-visual water safety information and signage for



those with sight/hearing difficulties or whose first language is not English.

- Create, collate and celebrate new stories and experiences that show why nature matters across tourism/recreation, health, outdoor and community sectors. We need this to overcome the siloed approach to health, environment and tourism in Ireland.





NEAR HEALTH TOOLKIT

KEY MESSAGES AND
TAKEAWAYS

- Consider varied approaches to increase acceptability of NBAs. There are gender differences in how NBAs are experienced and a lower uptake of men for most NBAs, with the exception of beach cleans. A 'healthy by stealth' approach could be one way to overcome persistent stigma that surrounds mental health in Ireland.
- The use of outdoor blue and green spaces will require ongoing monitoring and protection to ensure they do not suffer degradation and to apply sustainable innovations and best practices.

5. Access, training and service provision

There are not enough certified trainers for people with disabilities in aquatic sports.

Policy-maker

- Support and provide transport and local links to ensure the ability to access and experience nature for all. This positive experience can be limited by lack of transport links, especially in rural areas. The continued support and provision of local transport are vital.
- Private land ownership and lack of public spaces remains an issue for the delivery of NBAs.
- Provide monitoring of bathing sites in real time and throughout the year. Access to bathing sites and requirements to ensure excellent bathing water quality standards are essential and require year-round, real-time monitoring by local authorities. Currently monitoring is not real-time and is limited to the summer months.
- Provide facilities and develop approaches to respond to a diversity of needs and differently abled bodies at popular public spaces, especially for watersports and at bathing sites, such as beach wheelchair facilities, nation-wide.
- Make information on local health services and supports available to outdoor practitioners.
- Increase provision of training by governing sporting and recreational bodies - as demands increase for NBAs and 'nature prescribing', it will be necessary to mainstream inclusion practices and training to facilitate nature encounters for health and wellbeing.
- Training in biodiversity and cultural heritage (for example for outdoor walking groups) can enhance a sense of place.



[BACK TO
CONTENTS PAGE](#)





NEAR HEALTH TOOLKIT

KEY MESSAGES AND
TAKEAWAYS

6. Policy integration

- Plan for and invest in greater access to and responsible use of outdoor public spaces. The National Planning Framework⁷⁷ aims to enhance the wellbeing of everyone who lives in Ireland, and to build a fairer, more equal society where everyone can realise their potential, but this does not explicitly refer to planning sustainable access to nature and NBAs.
- The reference within the National Planning Framework to a general network of green spaces in Dublin, including the Phoenix Park and other parks, Dublin Bay and the canals is welcome but this is also a missed opportunity to do likewise for many towns and cities. The commitment within sustainable mobility to provide segregated cycling and walking facilities and networks, in cities and towns is welcome, but rural areas need these facilities too.
- Evaluation of NBAs has highlighted their cross-sectoral value in addressing both individual health, social and environmental issues.
- Consider NBAs within Healthy Ireland's Get Ireland Active! The National Physical Activity Plan for Ireland⁷⁹ as well as the co-benefits of community and environment outlined in the Biodiversity Action Plan⁸⁰.
- Harness the potential of Healthy Ireland to encourage cross-departmental Government policies that ensure that 'everyone should have fair access to a good quality natural environment' - similar to Natural England's 'Outdoors for All Programme' in the UK.
- Include the value of connecting with nature to benefit our health and wellbeing in The National Policy Objective 59⁷⁷ on biodiversity, and other such policies.
- Outcomes for social cohesion have wider implications for the implementation of similar initiatives such as Tidy Towns⁴⁶, An Taisce Green Communities/ Green Campus/Green Schools⁸¹⁻⁸³ and Workplace Wellbeing⁸⁴.



[BACK TO
CONTENTS PAGE](#)





7. Impact evaluations

We need to share diverse perspectives of our experiences of nature. - Participant

- Address local contexts within nature-based health interventions to assess the circumstances in which outcomes are achieved and the transferability of such findings.
- Measure more than 'what' worked well; also evaluate 'how' and 'why' success or failure happened.
- As wellbeing measures are often highly individualised and may fail to account for the socio-ecological factors of disadvantage and social inequality, there is a need to consider holistic and indigenous models of wellbeing^{85, 86}.
- Follow-up evaluations and more longitudinal studies could assess whether the benefits associated with participation in blue and green spaces are sustained, as well as how this relationship to outdoor spaces could vary across the lifecourse, particularly for elderly cohorts.

8. Research gaps

- What are the specific qualities of blue and green spaces that are particularly life-enhancing (e.g. the feeling of weightlessness in salt water and the connective properties of blue space), why do we gain these benefits and what are the mechanisms at play?
- What are the pathways and mechanisms needed to access and participate in NBAs that may appeal to those who are at present most excluded and which supports people in forming and achieving personal goals in relation to nature-based activity, community engagement and wellbeing?
- What are the cultural components and values of nature connection and how might these intersect with other determinants of health such as gender, race and ethnicity?
- What are the socio-economic determinants of access and use of blue and green space and how do we ensure equitable access year-round and throughout the lifecourse (SHEER-Wellbeing, 2020)²?
- What are the therapeutic benefits of wetlands, inland and urban waterways, and their potential to extend the benefits of blue care to communities who don't have access to the coast?
- Blue space, blue health and blue care are in the early stages of development as serious treatments, and deserve greater research attention, especially given Ireland's aquatic potential.
- How do we balance ensuring access to nature with increasing and diverse pressures on natural ecosystems?



Additional resources and reading



NEAR HEALTH TOOLKIT

ADDITIONAL
RESOURCES AND
READING

In this section we highlight the sources we have used and some useful reading and websites to consult, according to the section they occur in.

Introduction

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← BACK TO
CONTENTS PAGE





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← BACK TO
CONTENTS PAGE





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← BACK TO
CONTENTS PAGE





NEAR HEALTH TOOLKIT

ADDITIONAL
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READING

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← BACK TO
CONTENTS PAGE





NEAR HEALTH TOOLKIT

ADDITIONAL
RESOURCES AND
READING

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Key messages and take-aways

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< BACK TO
CONTENTS PAGE



Abbreviations



NEAR HEALTH TOOLKIT

ACRONYMS

EPA	Environmental Protection Agency
EU	European Union
INS	Inclusion of Nature in Self
MENE	Monitor of Engagement with the Natural Environment
NBA	Nature-based activity
NBS	Nature-based solution
NCI	Nature Connection Index
ONS	Office of National Statistics
SDG	Sustainable Development Goal
SHEER	Socioeconomic Health and Environment Research
UN	United Nations
WHO	World Health Organization

[← BACK TO CONTENTS PAGE](#)



Appendices



NEAR HEALTH TOOLKIT

APPENDICES

Here you will find samples of the original surveys used by the NEAR Health project when evaluating the NBAs, including the Before/After survey for adults (Appendix 1); and the Before/After survey for children (Appendix 2). This is followed by a sample participant information sheet and consent form for parents (Appendix 3), and a sample information sheet and assent form for children (Appendix 4). Appendix 5 presents the participant information sheet for adults. Finally, a sample consent checklist for investigators can be found in Appendix 6.



Nature-based Activity Questionnaire - Part I

This survey aims to find out more about the link between engaging with nature and your health and wellbeing. By completing this survey you agree to have the anonymously recorded data used by Nature and Environment to Attain & Restore Health (NEAR-Health) project at NUI Galway.

6. Approximately how far, in kilometres, did you travel to reach the starting point for today's activity? By that we mean the one way distance from where you set off to the destination.

- ☐ Less than 1 km ☐ 1 or 2 km ☐ 3 to 5 km ☐ 6 to 10 km ☐ 11 to 20 km
- ☐ 21 to 40 km ☐ 41 to 60 km ☐ 51 to 80 km ☐ 81 to 100 km ☐ More than 100 km

7. In the last month, how often, on average, have you spent some of your leisure time outside? By outside we mean natural environments or green spaces in and around towns and cities, the coast and the countryside. This could be anything from a few minutes to all day. It may include time spent close to your home, further afield or while on holiday in Ireland. However this does not include routine shopping trips or time spent in your own garden.

- More than
once per day Everyday Several
times a week Once a week Two or three
times Once No visits

8. How many times during the last month did you visit the seaside or coast? This may include walks on a local beach or seaside plus any other coastal trips within Ireland/ N.Ireland.

- More than
once per day Everyday Several
times a week Once a week Two or three
times Once No visits

9. In the past **week**, how many times have you done a total of 30 mins or more of physical activity, which was enough to raise their breathing rate? This may include sport, exercise or brisk walking but should not include housework.

- More than
once per day
- Everyday
- 5 to 6 times
a week
- 3 to 4 times
a week
- 2 times a
week
- Once
- Never








10. During the past month, how would you rate your sleep quality overall? (Where 1 is very bad and 7 is excellent), please select one of the following:

- [illegible]








Nature-based Activity Questionnaire - Part I

This survey aims to find out more about the link between engaging with nature and your health and wellbeing. By completing this survey you agree to have the anonymously recorded data used by Nature and Environment to Attain & Restore Health (NEAR-Health) project at NUI Galway.








15. Please select the image below that best describes you and your relationship with **family**

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Family	Self	Family	Self	Family	Self
						Family

16. Please select the image below that best describes you and your relationship with **work** (if applicable)

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Work	Self	Work	Self	Work	Self
						Work

17. Please select the image below that best describes you and your relationship with your **community**

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Comm.	Self	Comm.	Self	Comm.	Self
						Comm.

Nature-based Activity Questionnaire - Part I

This survey aims to find out more about the link between engaging with nature and your health and wellbeing. By completing this survey you agree to have the anonymously recorded data used by Nature and Environment to Attain & Restore Health (NEAR-Health) project at NUI Galway.

18. How does being in nature make you feel? And what natural setting or outdoor activity most makes you feel this way?

19. Why did you choose today's activity, and is there anything in particular that attracted you to it?

20. Have you participated in an *organised* beach clean before?

☐ Yes. If yes, how many times (approx.)? _____

☐ No, this is my first time

3. The following questions are about how you engage with the natural environment and how you feel.

Select as appropriate, where 1 = strongly disagree, 7 = strongly agree

	1	2	3	4	5	6	7
a Being in nature makes me very happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Spending time outdoors is a very important part of my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c I love the feeling of being active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d I always treat nature with respect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e I feel part of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f I feel disconnected from the world around me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g Right now, I feel anxious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h Right now, I feel happy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i Right now, I feel relaxed and calm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j Right now, I feel refreshed and revitalised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k Overall, the things I do in my life are worthwhile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l Overall, I am fully satisfied with life nowadays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m All things considered, I'm extremely satisfied with my experience of today's outdoor activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Nature-based Activity Questionnaire - Part II








1. In what way, if any, do you think today's activity has impacted your health and wellbeing?

2. How has being outdoors in nature made you feel today?








3. What, if anything, surprised you about your experience during today's activity?

Reflecting on how you feel right now, the following questions ask how you perceive your relationship with various aspects of your life:








7. Please select the image below that best describes yourself and your relationship with **nature?**

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Nature	Self	Nature	Self	Nature	Self
						Nature








8. Please select the image below that best describes yourself and your relationship with the **seaside?**

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Seaside	Self	Seaside	Self	Seaside	Self
						Seaside

9. Please select the image below that best describes yourself and your relationship with the **woods?**








A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	woods	Self	woods	Self	woods	Self
						woods

10. Please select the image below that best describes yourself and your relationship with **friends?**








A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Friends	Self	Friends	Self	Friends	Self
						Friends

On behalf of the NEAR-Health team, thank you for your participation. Any questions or for more information about the project please contact: NEARHEALTH@nuigalway.ie / follow @NEARHealth_NUIG








11. Please select the image below that best describes yourself and your relationship with **family**?

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Family	Self	Family	Self	Family	Self
						Family

12. Please select the image below that best describes yourself and your relationship with **work** (if applicable)

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Work	Self	Work	Self	Work	Self
						Work

13. Please select the image below that best describes you and your relationship with your **community**

A <input type="checkbox"/>	B <input type="checkbox"/>	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	G <input type="checkbox"/>
						
Self	Comm.	Self	Comm.	Self	Comm.	Self
						Community

Are there any other comments you wish to add?

Thank you for sharing your experience of nature today!

On behalf of the NEAR-Health team, thank you for your participation. Any questions or for more information about the project please contact: NEARHEALTH@nuigalway.ie / follow @NEARHealth_NUIG

'Nature and Me' survey - Part I

My age is _____ I'm a boy ☐ I'm a girl ☐

I live in (name of town or local area where you live) _____

1. For each sentence, please think about how you feel. Circle the face that best describes how much **YOU** match the statement. There are no right or wrong answers:

Being in nature makes me feel very happy



A lot like you

Mostly like you

Like you

Sometimes like you

Not like you

Right now, I'm feeling very happy



A lot like you

Mostly like you

Like you

A little like you

Not like you

Right now, I'm feeling anxious or nervous



A lot like you

Mostly like you

Like you

A little like you

Not like you

I always sleep really good at night



A lot like you

Mostly like you

Like you

Sometimes like you

Not like you

2a. What are you most **excited** about for today's activity? _____

2b. Can you describe what **nature** means to you?

3. How does being in **nature** make you feel?

'Nature and Me' survey - Part I

The next questions ask about how you see yourself in relationship with other aspects of life:

4. Please select the image below that best describes yourself and your relationship with **nature**?

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Nature Self Nature Self Nature Self Nature Self Nature Self Nature Self Nature

Please select the image below that best describes yourself and your relationship with the **seaside**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Seaside Self Seaside Self Seaside Self Seaside Self Seaside Self Seaside Self Seaside

Please select the image below that best describes yourself and your relationship with **friends**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Friends Self Friends Self Friends Self Friends Self Friends Self Friends Self Friends

Please select the image below that best describes yourself and your relationship with **family**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Family Self Family Self Family Self Family Self Family Self Family Self Family

Please select the image below that best describes yourself and your relationship with **school**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self School Self School Self School Self School Self School Self School Self School

'Nature and me' survey - Part II

My age is _____ I'm a boy ☐ I'm a girl ☐

I live in (name of town or local area where you live) _____

1. For each sentence, please think about how you feel. Circle the face that best describes how much **YOU** match the statement. There are no right or wrong answers:

Being in nature makes me feel very happy



A lot like you



Mostly like you



Like you



Sometimes like you



Not like you

Right now, I'm feeling very happy



A lot like you



Mostly like you



Like you



A little like you



Not like you

Right now, I'm feeling anxious or nervous



A lot like you



Mostly like you



Like you



A little like you



Not like you

All things considered, I'm very satisfied with today's outdoor activity



A lot like you



Mostly like you



Like you



A little like you



Not like you

2. Did you learn something new about the **nature today**? If so, please share what you learned _____

3. How did being in **nature** make you feel today?

'Nature and me' survey - Part II

How do you see yourself in relationship with other aspects of your life, now?

4. Please select the image below that best describes yourself and your relationship with **nature**?

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Nature Self Nature Self Nature Self Nature Self Nature Self Nature Self Nature

Please select the image below that best describes yourself and your relationship with the **woods**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Woods Self Woods Self Woods Self Woods Self Woods Self Woods Self Woods

Please select the image below that best describes yourself and your relationship with **friends**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Friends Self Friends Self Friends Self Friends Self Friends Self Friends Self Friends

Please select the image below that best describes yourself and your relationship with **family**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self Family Self Family Self Family Self Family Self Family Self Family Self Family

Please select the image below that best describes yourself and your relationship with **school**

A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

Self School Self School Self School Self School Self School Self School Self School

INFORMATION SHEET: NATURE AND ENVIRONMENT TO ATTAIN AND RESTORE (NEAR) HEALTH

This informed consent form is for parents (including those acting in loco parentis) and young people participating in a Nature Based Programme, in conjunction with NEAR Health research project. Participation is voluntary and will have no bearing on your child's participation in the Nature Based Programme. All information is confidential. The first page provides information about the study and why we would like your involvement. The second page is the certificate of consent, where signatures will go. We will give you a copy of the full Informed Consent Form.

Who are we?

We are three researchers who work on the NEAR Health project at NUI Galway. We are doing research which might help your community help people to spend more time outdoors to improve or maintain their health and wellbeing.

What is this about?

This project aims to find out how do nature based programmes in blue and green spaces benefit health and wellbeing. Nature based programmes involve people being outdoors in blue spaces (seas, rivers and lakes) and/or green spaces (woods, meadows and parks) and connecting with nature. They range in exertion from watching wildlife to doing a range of physical activities such as walking or surfing or doing nature conservation work. In our research we will ask children and teenagers, to give us feedback on the nature based programmes they are involved in. Before you decide, you can ask us any questions about the project and we will take time to explain. After you have heard more about the study, and if you agree, then the next thing we will do is ask your child for their agreement as well. You and your child have to agree independently before we can begin. If you both agree, your child will complete surveys which include questions on connection to nature, and health attitudes and practices such as level of sleep. Anonymised and collated information from the surveys will be used by a panel to decide what makes a nature based programme successful. By taking part, your child has the unique opportunity to influence the effectiveness of nature based programmes. The outcome of this research will be co-designed solutions that reflect the practical experience of your child and others and therefore have the largest possible positive impact for health, wellbeing and the environment.

Why my child?

- Your child is enrolled in a nature based programme. As such, they are ideally placed to tell us how they feel about it, what they liked and didn't like.

What's in it for my child?

- Voice their opinion on a unique programme linking people, nature, health and wellbeing.
- Be part of designing solutions for this important issue

What will my child have to do?

- Complete an evaluation survey on the nature based programme immediately before, during, after and at at least 1 follow up interval. Each survey will take twenty minutes. If your child does not wish to answer some of the questions included in the survey, she/he may skip them and move on to the next question.

What will my child get out of it?

- Co-design material which will help shape how we use outdoor spaces for health and wellbeing for the future
- Contribute to a summary technical report which will feature a variety of nature based programmes.

Final thoughts

If you and your child decide to give consent, your child is still free to leave at any time and without giving a reason. A decision to leave, or a decision not to take part, will not affect your rights in any way. All information is confidential. Only the researchers will have access to the survey sheets, which will be stored securely and confidentially until 5 years after the duration of the project, when it will be destroyed by confidential shredding.

Any Questions?

Please keep this leaflet and if you still have questions, please get in touch using the contact details below:

Parental CONSENT FORM - NEAR-Health

I am aged over 18 years	Yes <input type="checkbox"/>	No <input type="checkbox"/>
My child is aged between 3 and 18 years.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I have read and understood the Information Leaflet about this research. The information has been fully explained to me and I have been able to ask questions, all of which have been	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I understand that my child does not have to take part in this research and that my child can opt out at any time. I understand that my child doesn't have to give a reason for opting out.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I am aware of the time commitment needed to participate.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I have been given a copy of the Information Leaflet and this completed consent form for my records.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Storage and future use of information: I give my permission for information collected about my child to be stored or electronically processed for the purpose of scientific research and to be used in related studies or other studies in the future but only if the research is approved by a Research Ethics	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I would like to take part in future half day workshops as part of this	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I would like to be more involved in this project. Please contact me	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Parent Name (Block Capitals): _____

Parent Signature: _____

Date: _____

I agree to take part in the NEAR Health study by filling in a survey at least four times. I have read and understood the accompanying information leaflet. I know what the study is about and the part I will be involved in. I know that I do not have to answer all of the questions and that I can decide to stop at any time. (This will also be read to small children by the researcher).

Participant's Name _____

Signature _____ Age _____

To be completed by the Principal Investigator or their nominee.

I the undersigned, have taken the time to fully explain to the above participant and their parent, the nature and purpose of this workshop in a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have invited them to ask questions on any aspect of the study that concerned them.

Name (Block Capitals): _____

Role _____

Signature: _____

Date: _____

CHILD AND YOUTH PARTICIPANT INFORMATION SHEET: NATURE AND ENVIRONMENT TO ATTAIN AND RESTORE (NEAR) HEALTH

This informed assent form is for children and young people participating in a Nature Based Programme, in conjunction with NEAR Health research project. Participation is voluntary and will have no bearing on your participation in the Nature Based Programme. All information is confidential. The first page provides information about the study and why we would like your involvement. The second page is the certificate of assent, where signatures will go. If you choose to be part of this research I will also give you a copy of this paper to keep for yourself. You can ask your parents to look after it if you want. (This will also be read to small children by the researcher).

Who are we?

We are three researchers who work on the NEAR Health project at NUI Galway. We are doing research which might help your community help people to spend more time outdoors to improve or maintain their health and wellbeing.

We are going to give you information and invite you to be part of a research study. You can choose whether or not you want to participate. We have discussed this research with your parent(s)/guardian and they know that we are also asking you for your agreement. If you are going to participate in the research, your parent(s)/guardian also have to agree. But if you do not wish to take part in the research, you do not have to, even if your parents have agreed. You may discuss anything in this form with your parents or friends or anyone else you feel comfortable talking to. You can decide whether to participate or not after you have talked it over. You do not have to decide immediately.

There may be some words you don't understand or things that you want us to explain more about because you are interested or concerned. Please ask us to stop at any time and we will take time to explain.

What is this about?

We want to find out how do nature based programmes in blue and green spaces benefit health and wellbeing. Nature based programmes are not medical exercises but they do involve people being outdoors in blue spaces (seas, rivers and lakes) and/or green spaces (woods, meadows and parks) and connecting with nature. They range from watching wildlife to doing a range of physical activities such as walking or surfing or doing nature conservation work. In our research we will ask you to give us feedback on the nature based programmes you are taking part in. If you agree, you will complete surveys which include questions on connection to nature, and health attitudes and practices such as how you are feeling.

Anonymised and collated information from the surveys will be used by a panel to decide what makes a nature based programme successful. The outcome of this research will be co-designed solutions that reflect your practical experience and that of others and therefore have the largest possible positive impact for health, wellbeing and the environment.

Why me?

You are enrolled in a nature based programme. As such, you are ideally placed to tell us how you feel about it, what you liked and didn't like.

What's in it for me?

Voice your opinion on a unique programme linking people, nature, health and wellbeing.

By taking part, you have the opportunity to influence the effectiveness of nature based programmes.

Be part of designing solutions for this important issue

What will I have to do?

Complete an evaluation survey on the nature based programme immediately before, during, after and at least 1 follow up interval. Each survey will take twenty minutes. If you do not wish to answer some of the questions included in the survey, you may skip them and move on to the next question.

What will I get out of it?

Co-design material which will help shape how we use outdoor spaces for health and wellbeing for the future

Contribute to a summary report which will include a variety of nature based programmes.

Participation is voluntary: Do I have to do this?

You don't have to be in this research if you don't want to be. It's up to you. If you decide not to be in the research, it's okay and nothing changes. You can still continue to participate in the nature-based programme and activities - everything stays the same as before. Even if you say "yes" now, you can change your mind later and it's still okay.

Confidentiality: Is everybody going to know about this?

We will not tell other people that you are in this research and we won't share information about you to anyone who does not work in the research study. Information about you that will be collected from the research will be put away and no-one but the researchers will be able to see it. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a lock and key. It will not be shared with or given to anyone except the three primary researchers involved in this study.

Sharing the Findings: Will you tell me the results?

When we are finished the research, we will present you and your parent with what we learnt. We will also give you a paper with the results written down. Afterwards, we will be telling more people, scientists and others, about the research and what we found. We will do this by writing and sharing reports and by going to meetings with people who are interested in the work we do.

Any Questions?

You can ask us questions now or later. I have written a number, email and address where you can reach us below. If you want to talk to someone else that you know like your teacher or auntie, that's okay too.

Child Assent Form

I _____, exercising my free power of choice, hereby give my assent for participation in the study entitled: [NEAR-Health](#)

I have been informed, to my satisfaction, by the researcher, about the purpose of the study and the nature of the evaluation to be carried out.

I am also aware of my right to opt out of the study, at any time during the course of the study, without having to give reasons for doing so. (This will also be read to small children by the researcher).

Date: _____

Signature: _____

Name of Principal Investigator (Block Capitals):

Date: _____

Signature: _____

Nature and Environment to Attain and Restore Health Information Sheet: for adults aged over 18 years of age who are participating in a nature based programme.

What is this about?

This project aims to find out how do nature based programmes in blue and green spaces benefit health and wellbeing. Nature based programmes are not medical interventions. They involve people being outdoors in blue spaces (seas, rivers and lakes) and/or green spaces (woods, meadows and parks) and connecting with nature. They range in exertion from watching wildlife to doing a range of physical activities such as walking or surfing or doing nature conservation work. In our research we will ask you to give us feedback on the nature based programme you are involved in. Before you decide, you can ask us any questions about the project and we will take time to explain. If you consent, you will complete surveys which include questions on connection to nature, and health attitudes and practices such as level of sleep. This is not a medical intervention. Anonymised and collated information from the surveys will be used by a panel to decide what makes a nature based programme successful. By taking part, you have a unique opportunity to influence the effectiveness of nature based programmes. The outcome of this research will be co-designed solutions that reflect **people's practical experience** including yours and therefore have the largest possible positive impact for health, wellbeing and the environment.

Why me?

- **You are participating in a nature based programme. Your opinion matters to us, as you can tell us what you thought about it, in relation to your health and wellbeing.**

What's in it for me?

- Contribute to a unique project linking people, nature, health and wellbeing.
- Be part of designing solutions for this important issue

What will I have to do?

- Complete an evaluation survey on the nature based programme immediately before, during, after and at at least 1 follow up interval. This takes twenty minutes. If you do not wish to answer some of the questions included in the survey, you may skip them and move on to the next question.

What will I get out of it?

- Co-design material which will help shape how we use outdoor spaces for health and wellbeing for the future
- Contribute to a summary technical report which will feature a variety of nature based programmes.

Final thoughts

If you decide to take part, you are still free to leave at any time and without giving a reason. Your participation in the NBP is not influenced by your decision to take part or not in evaluating the NBP. A decision to leave, or a decision not to take part, will not affect your rights in any way. All information is confidential. Only the researchers will have access to the survey sheets, which will be stored securely and confidentially until 5 years after the duration of the project, when it will be destroyed by confidential shredding.

Any Questions?

Please keep this leaflet and if you still have questions, please get in touch using the contact details below:

CONSENT FORM

I am aged over 18 years	Yes •	No •
I have read and understood the Information Leaflet about this research. The information has been fully explained to me and I have been able to ask questions, all of which have been answered to my satisfaction.	Yes •	No •
I understand that I do not have to take part in this research and that I can opt out at any time. I understand that I don't have to give a reason for opting out.	Yes •	No •
I am aware of the time commitment needed to participate.	Yes •	No •
I have been given a copy of the Information Leaflet and this completed consent form for my records.	Yes •	No •
Storage and future use of information: I give my permission for information collected about me to be stored or electronically processed for the purpose of scientific research and to be used in <u>related studies or other studies in the future</u> but only if the research is approved by a Research Ethics Committee.	Yes •	No •
I would like to take part in future half day workshops as part of this project.	Yes •	No •
I would like to be more involved in this project. Please contact me again.	Yes •	No •

Participant Name (Block Capitals): _____

Participant Signature: _____ Date: _____

To be completed by the Principal Investigator or their nominee.

I the undersigned, have taken the time to fully explain to the above participant and their parent, the nature and purpose of this workshop in a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have invited them to ask questions on any aspect of the study that concerned them.

Name (Block Capitals): _____

Role _____

Signature: ____

Date: _____

Keep 1 copy for participant; 1 copy for researcher; 1 copy to be kept with research note

**Sample Consent checklist for investigators:
Nature and Environment to Attain and Restore (NEAR) Health**

In order to document consent, investigators might wish to complete the following checklist for each participant who agrees to take part in the research study.

Research Project No.: _____ Date: _____

Participant name: _____ Sex: M/F DOB: _____

Name of investigator obtaining consent: _____

1. Have you given the participant an oral explanation of the proposed research project?
Yes / No

1.2. Have you given the information sheet to the participant? Yes / No

1.3 Have you told the participant that he/she will be kept informed of all relevant information that becomes available during the course of the study?
Yes / No

2. Did your oral explanation to the participant include:

2.1 that this is a research project? Yes / No

2.2 that participation is voluntary? Yes / No

2.3 the aims of the project? Yes / No

2.4 the likely duration of the participant's involvement? Yes / No

2.5 the expected benefits to the participant and/or others? Yes / No

2.6 the procedures which will be involved in participation? Yes / No

2.7 what risks, inconvenience, discomfort or distress may reasonably be anticipated for this participant: the level and the likelihood? Yes / No

2.8 that a refusal to participate may be given without reasons and will not affect the participant's rights or their right to care? Yes / No

2.9 that the participant may be withdrawn from the study if the study investigator considers this is necessary in the best interests of the participant?
Yes / No

2.10 that personal information may be scrutinised during audit by competent authorities and properly authorised people, but all personal information will be treated as strictly confidential and will not be made publicly available?
Yes / No

2.11 that information generated by the study may be published but that no details will be divulged from which the participant could be identified?
Yes / No

2.12 that some such information will be retained for a period after the end of the trial? Yes / No

2.13 whom to contact in an emergency and how? Yes / No

- 2.14 Has the participant given authorisation to you to inform his/her GP of the participants involvement in this study? Yes / No
- 2.15 Is or has the participant been involved in any other research studies relevant to the present one? Yes / No
- 2.16 Have you allowed the participant sufficient time to consider the matter on his/her own, to discuss with others if wished, or ask you questions? Yes / No
- 2.17 In your opinion, has the participant understood and consented to take part in this research? Yes / No



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