

NATUREACH

Nature Reachable for All



Joint Nordic Research Conference 3 December 2025 in Vaasa

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Interreg



Co-funded by
the European Union

Aurora





Nature exposures have positive effects on human health and wellbeing

- Physiological changes related to heart rate, blood pressure and hormone levels, muscle condition and physical health, immunological systems
- Mood, emotions, activation levels and stress management, recovery
- Feeling of community, inclusion and acceptance
- Attention and learning
- Environmental responsibility and planetary well-being

Nature Reachable for all: bringing familiar environments to clients and patients via new technology



Sound System
5.1 Surround Sound system

Frame
Powder-coated steel geodesic frame

Cover
Dartex cowling & polished GRP panels



Projection
5 x full HD short throw projection system

Technology
Igloo media server and wifi router

Door
Fully lockable door

Screen
Fully immersive 360° projection screen



Picture edited from <https://www.igloovision.com/>



NATUREACH – Nature Reachable for All

Our joint Nordic project will respond to existing needs and the increasing interest in including nature-based methods to social and health care services by combining the newest VR technology, multidisciplinary research and the competence of care units and nature entrepreneurs in the project area.

Project duration: January 2023 - December 2025

Budget: 1 816 630€

Funding partners: EU - Interreg Aurora, Region Västernorrland, Regional Council of Lapland

Project website: <https://www.slu.se/en/natureach>



NATUREACH – Nature Reachable for All

Project leader: University of Vaasa /InnoLab, Digital Economy, Vebic & Marketing and Communication

Research partners in Finland:

University of Helsinki/Department of Education/Mind and Matter, neurosciences

Hanken School of Economics/ Marketing

Associate research partner: University of Tampere/ EPANET research network /Psychology

Social and Health care partners in Finland:

Wellbeing Services County of South Ostrobothnia /Eskoo Care and Support Unit for clients with disabilities in Seinäjoki

Support partners/client pilots: Wellbeing Services County of Ostrobothnia /Eating Disorders Outpatient clinic in Vaasa central hospital

Research partners in Sweden:

SLU, Sveriges lantbruksuniversitet /Forest Ecology and Management, Landscape architecture

Umeå universitet / Public Health and Clinical Medicine, Nursing

LTU, Luleå tekniska universitet /Nursing and Medical Technology, Health, Learning and Technology

Social and Health care partners in Sweden:

Region Västernorrland: Österåsen Lifestyle Medicine, Sollefteå

Support partners/client pilots: Palliative medicine Umeå and Elderly care units in Övertorneå and in Luleå

Collaborators in VR: ISLE Art Industries, Virtual Dawn, Esa Siltaloppi Media Oy, Polidomes International Ltd.



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Project communication and equality

NATUREACH - Nature Reachable for All

About the project →

Go directly to...

- 2025-08-19 **Workshop 6 - Save the date - Joint Nordic Research Conference 3-4 Dec 2025 in...** →
- 2025-05-15 **Our VR-Nature Environments** →
- 2025-05-20 **Workshops in the NATUREACH project** →
- 2025-05-19 **Manuals and handbook**
The current manuals and handbook being developed and utilized in the Natureach... →

Interventions

” How do you make a nature intervention in a VR-environment? Read about how we develop interventions and different environments for our clients. →

Client groups and measurements

Read more about our six client groups and the measurements we conduct in response to visits to our VR nature environments. →

Overall plans and Horizontal Goals

Go to... →

Measurement methods in Natureach

Read more about the measuring methods used in the project, →

Progress and results

Read more... →

Web page

[SLU.SE/en/NATUREACH](https://slu.se/en/NATUREACH) (English)

[SLU.SE/NATUREACH](https://slu.se/NATUREACH) (Swedish)

Project information

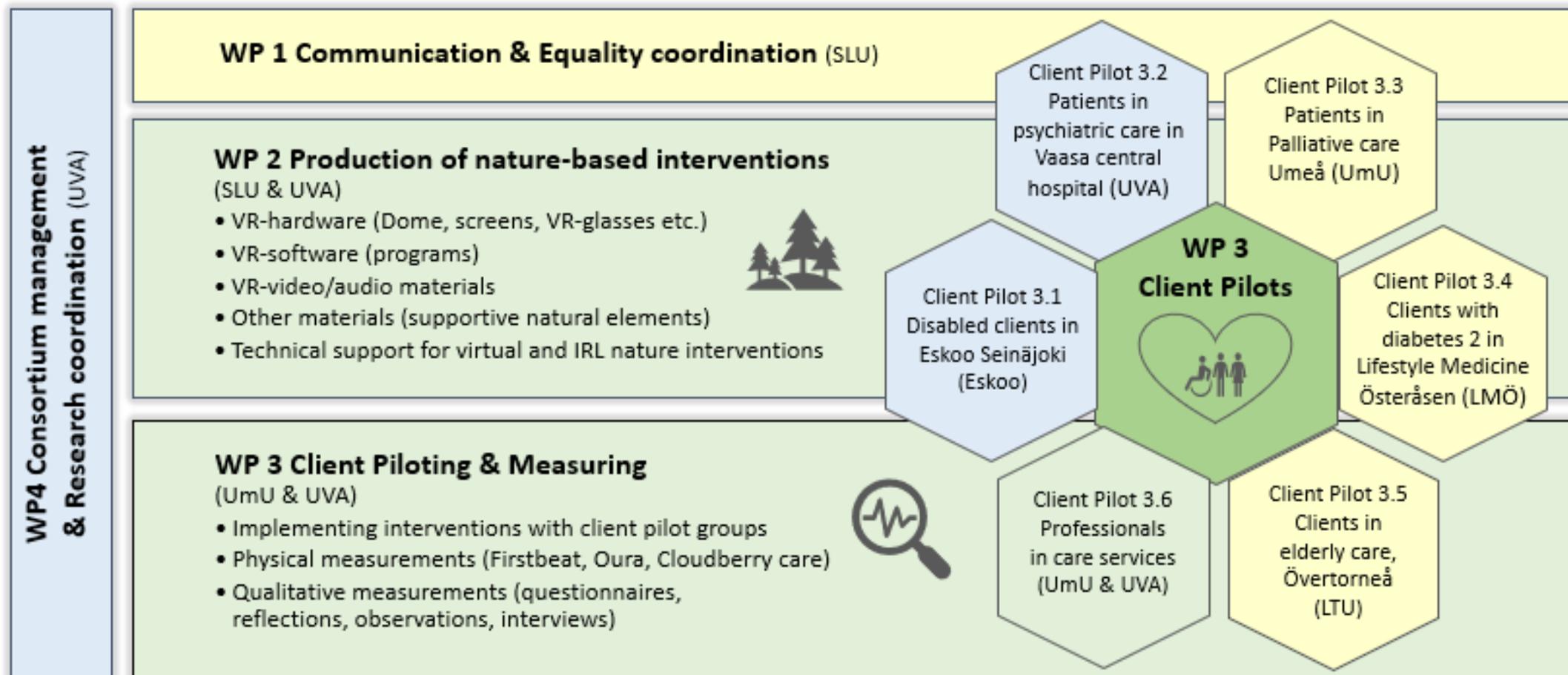
From all WPs on several conferences, VR-demonstration etc.

Equality trainings

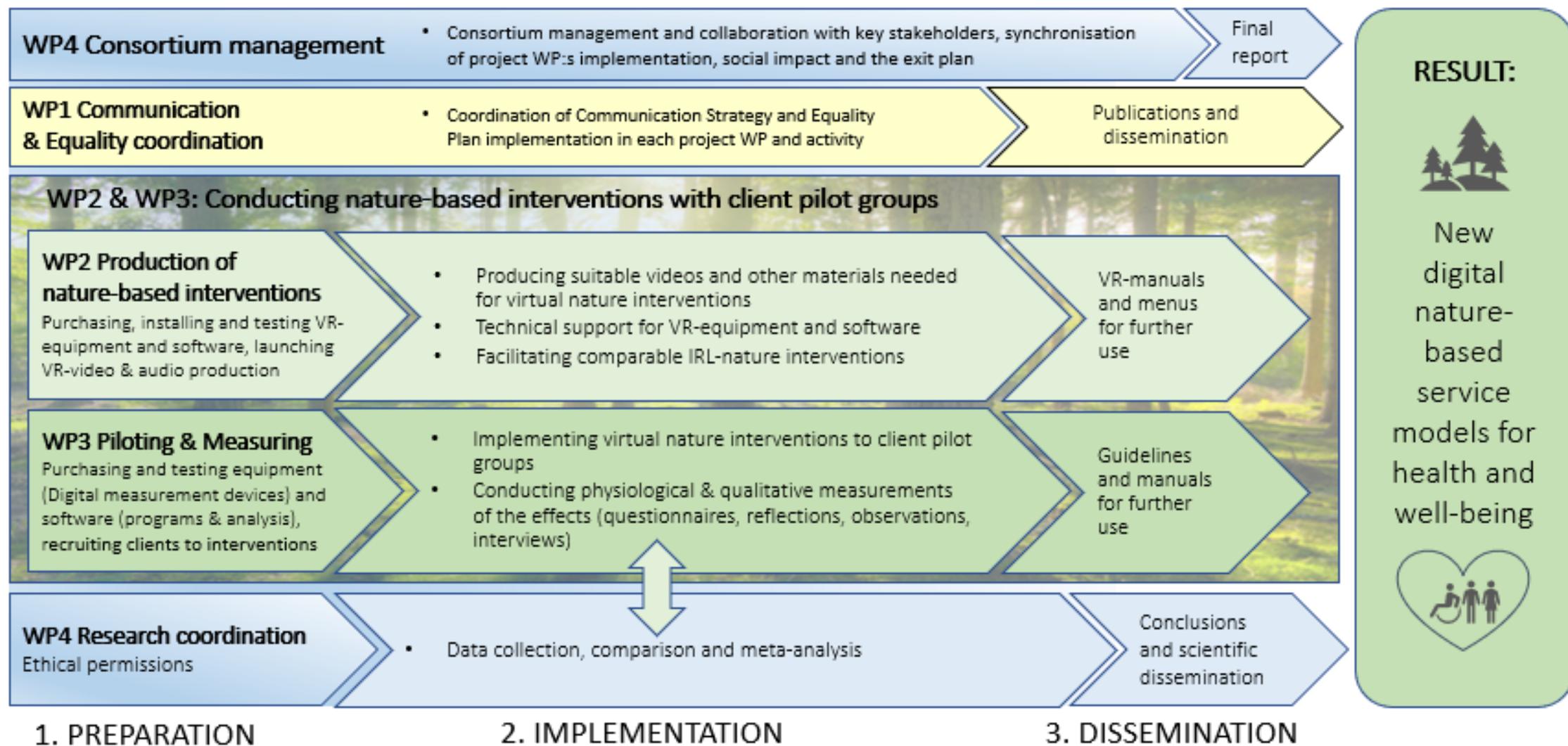
By Ann Dolling, SLU

NATUREACH Project Work Packages

(WP-leader presented in parentheses)



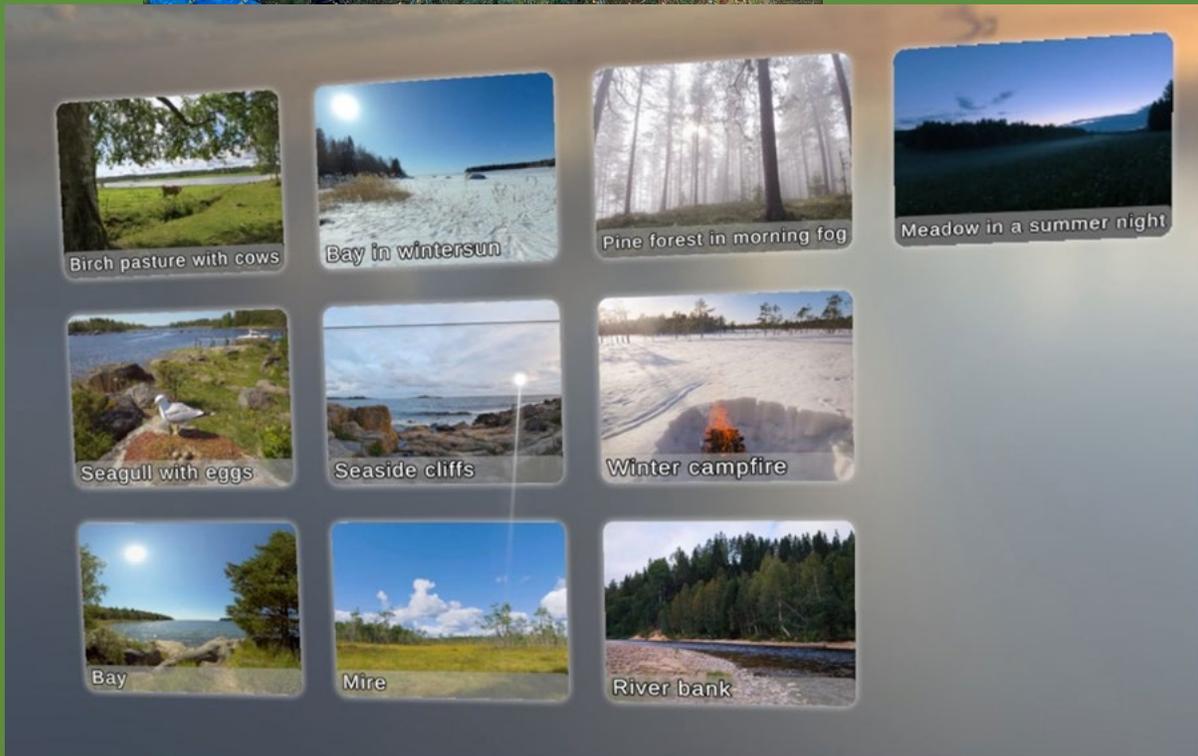
NATUREACH Process flow chart 2023-2025



Production of virtual nature interventions

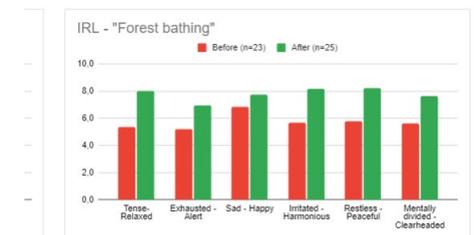


- VR-hardware: VR headsets, VR dome, screens
 - VR-software: NATUREACH-app (media player), survey tool, data platform
 - Production of suitable VR-video/audio materials
- VR demonstrations today: B203 at 16-17**



5 FROM THE WORKSHOP

ass Intervention and a Forest bathing IRL Intervention, respectively:



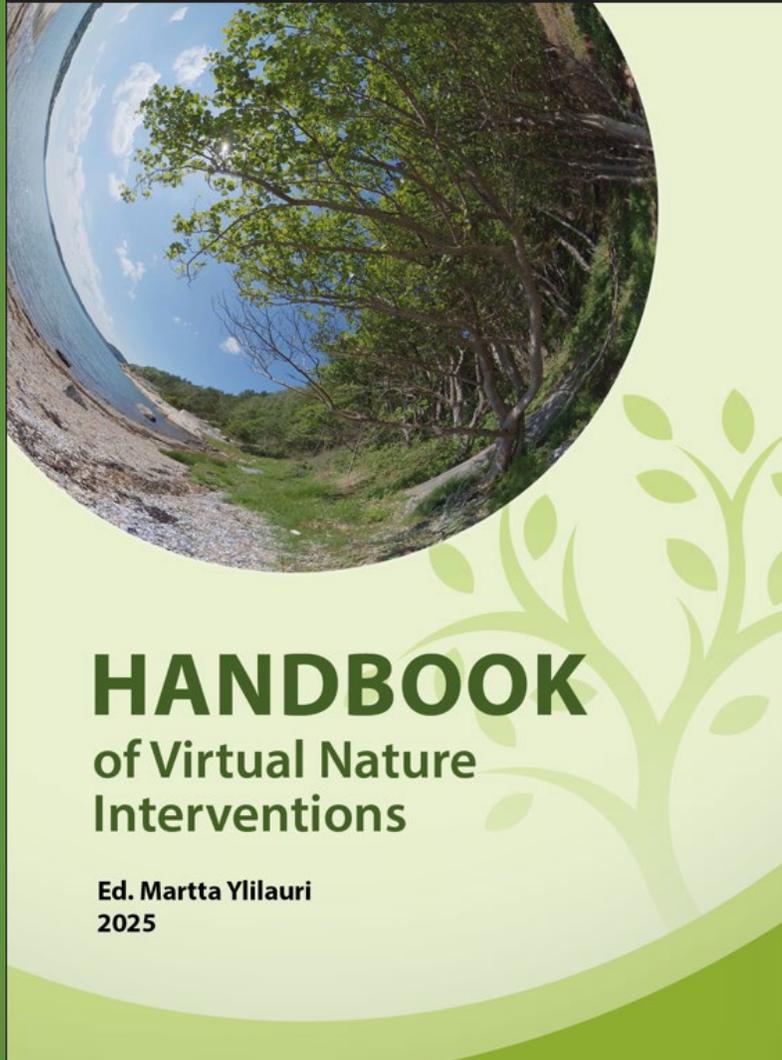


Care-DOME in Eskoo, Seinäjoki



Production of virtual nature interventions

- Technical support for virtual nature interventions: User manuals, technical assistance online and on-site, a more comprehensive Handbook for virtual nature interventions



Using the VR-headset

VR-headset

1. If you want to use eyeglasses with the VR-headset, attach the glasses spacer (see Figure 1).
2. Loosen the top strap located at the top of the VR-headset.
3. Loosen the strap dial located at the back of the VR-headset to adjust the size of the headset (see Figure 2).
4. Put the VR-headset on (see Figure 3).
5. Ensure that the VR-headset fits snugly on your head.
6. Tighten the VR-headset by using the strap dial (see Figure 2).
7. Tighten the top strap.
8. Ensure that the VR-headset sticks to your head.
9. Ensure that the view is sharp.
10. If necessary, readjust the VR headset.



Figure 1.
Attaching the eyeglasses spacer



Figure 2. Strap-dial



Figure 3.
Adjusting the VR-headset



Client pilot groups

- Eskoo support unit and Eskoo care unit clients with disabilities in Seinäjoki (FI)
- Patients in Eating Disorders Outpatient clinic in Vaasa central hospital (FI)
- Patients in Palliative medicine, Umeå (SWE)
- Patients with *diabetes mellitus* in Lifestyle Medicine Österåsen, Region Västernorrland (SWE)
- Nursing home in Övertorneå and a sheltered accommodation in Luleå (SWE)
- Care professionals, relatives (FI, SWE)

Project time 1/2023-12/2025

Research methods

Methods for clients/patients:

- **Psychological measures:** Mood survey, Photovoice + interview, NRS – symptoms of pain, anxiety, nausea and breathlessness, RAND – 36 (Health and lifestyle in everyday life), DES-SF-10 (Diabetes empowerment scale), PSS 14 (Perceived stress scale), Feelings and thoughts last month (14 questions), interviews, observations, reflective dialogues.
- **Physiological measures:** Blood sugar levels, weight, need for diabetes-related drugs, blood pressure, HRV (Firstbeat), Head and eye movement via VR glasses.

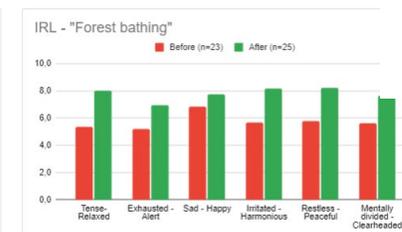
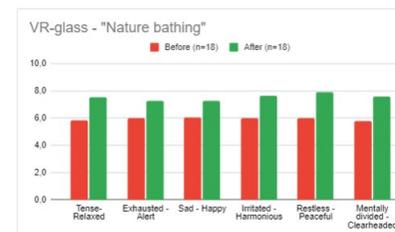
Methods for staff:

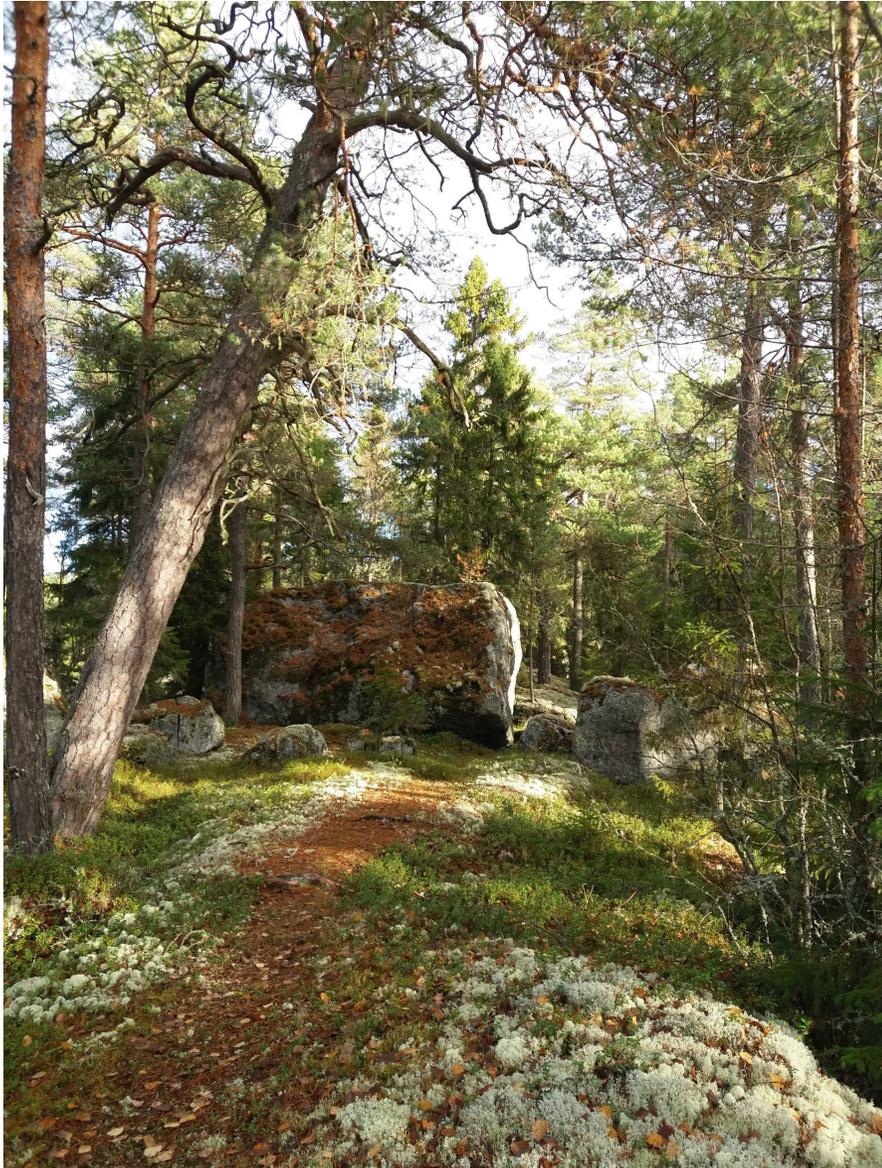
- Stress-Energy survey
- HRV (Firstbeat)
- Oura- ring (heart rate, HRV, temperature, activity, sleep monitoring)
- Interviews
- Head and eye movement via VR glasses



NATUREACH PROJECT GROUP - MOOD SURVEY RESULTS FROM THE WORKSHOP

Mean values (1-10 scale) of all participants before and after participating in a VR-glass intervention and a Forest bathing IRL intervention, respectively:





Expected outcomes & impacts

- Innovative and effective nature-based digital service models for the health promotion of vulnerable client groups with special needs
- Support for occupational health by easily used recharge-tools for care professionals to reduce stress-related symptoms and to support recovery during, and also after, demanding work shifts
- Enhanced research and innovation capacities and the uptake of advanced technologies within social and health care organisations, SME:s and research units in the project area
- Public benefit by cost-effective and sustainable service models enhancing human well-being, bio-economy, green and responsible business, and regional development
- A strong, active and collaborative Nordic Finnish-Swedish research cluster focusing on the relationship between nature, wellbeing and digital service innovation from a multidisciplinary perspective.

NATUREACH Project team in Vaasa October 2023





Thank you!

More information <https://www.slu.se/en/natureach>