

## INTEGRATING NATURE INTO HIGHER EDUCATION: FOREST BATHING

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### Abstract

With the advances in technology, people are increasingly moving away from nature. This situation also leads to negative consequences in terms of mental health. It has become necessary to correct this and increase interaction with nature. In addition to the positive aspects of individuals spending more time in nature in terms of health, contact with nature also increases innovative and creative thinking. In addition, the intertwining of nature and education contributes to the development of positive attitudes towards the environment.

This project, which includes benefiting from nature, contributes to the development of people's emotional skills, increases individuals' communication skills, and supports well-being by discovering their creative sides. Our project provides a perspective on how individuals can benefit from nature to overcome emotional crises. In addition, trainings help to support the formation of a bond with nature by increasing the effectiveness of both education and training between educators and students. In addition, it is expected to directly contribute to the wellbeing of women and the elderly, who are among the disadvantaged groups.

**Key words:** Moodle, students, study materials, nature benefits

### Introduction

INHEF (Integrating Nature into Higher Education) is a project carried out within the scope of Erasmus+ KA220-HED. Its main goal is to incorporate nature-based practices into higher education curricula across various interconnected disciplines. The main goal is to integrate nature-based practices into higher education curricula across various interconnected disciplines. The initiative strives to increase environmental awareness and enhance the long-term physical and mental health of individuals in partner countries and across Europe by promoting nature-based learning approaches. A crucial focus is also placed on ensuring that these initiatives leave a lasting impact on higher education.

INHEF aims to promote a healthy lifestyle for the community while supporting sustainable tourism. Through a research and practice-based approach, it focuses on creating positive impacts on the physical and psychological well-being of its target audience, strengthening their connection with nature, and raising environmental awareness. This project brings together universities from five European countries to design online learning modules, forest bathing guides, and interactive exercises. Furthermore, trainer training sessions are a key component of INHEF, facilitating the transfer of knowledge beyond the initial beneficiaries and encompassing the entire community. Moreover, INHEF also includes vulnerable groups such as women and the elderly.

### Needs Analysis

While the healing effects of spending time in nature on human health have been observed for centuries, scientific research on the subject is relatively recent. The concept of shinrin-yoku (forest bathing), conceptualized in Japan in 1982, has become the most comprehensive research agenda in this field. Shinrin-yoku refers to forest bathing, which is practiced by immersing one into a forested area in Japan (Oh et al., 2017). This therapeutic activity, which involves the active use of the senses, has recently gained popularity due to its stress-reducing and health benefits (Krala-Szkaradowska et al., 2024). An increased amount of literature on the positive impacts associated with forest bathing has been documented (Paletto et al., 2024). Interdisciplinary studies have included forestry and other

areas of study (Doimo et al., 2020). Although empirical data have identified various psychological and physiological benefits associated with forest bathing, no single approach is currently adopted worldwide (Satyawati et al., 2022). However, more research needs to be needed on the benefits of forest bathing for psychological and physiological health (Antonelli et al., 2021). Forest therapy became a national health program in Japan in 1982 (Kasalak et al., 2024). This therapy involves a purposeful immersion into forests in order to feel nature through all five senses to gain benefits from the stimulus obtained from the surroundings (Yin et al., 2025; Yau & Loke, 2020).

Li and colleagues (2008) demonstrated that a two-day experience in a forest environment increases natural killer cell activity and that this effect lasts for a week. Park and colleagues (2010) found that forest bathing significantly reduces cortisol levels, heart rate, and sympathetic nervous system activity. Bielinis and colleagues (2018), in experimental studies conducted under winter conditions in Central Europe, determined that just 15 minutes of forest exposure decreased stress, depression, and fatigue while increasing subjective vitality and positive mood.

The majority of these studies have progressed within the framework of clinical and health sciences. However, the picture is quite different in the context of higher education: there are very few studies on how nature-based interventions, such as forest bathing, can be integrated into university curricula. The INHEF project is precisely fueled by this gap. The project approaches forest bathing not only as an improvement practice but also as an integrated pedagogical tool with sustainable tourism and environmental education, aiming to contribute both to practice and to the academic literature (UNWTO, 2019).

Technological progress and urbanization in today's society have resulted in breaking the age-old link that existed between people and nature, thus causing Nature Deficit Disorder. The constant strain of modern life, coupled with extensive use of digital devices and sedentary lifestyle, has been found to be related to reduced psychological well-being and an increased prevalence of mental disorders amongst academia and general population. The INHEF project is designed as a solution to such problems by incorporating nature-based approaches within the domain of higher education.

Shinrin-Yoku, which underpins the project, is a therapeutic practice that encourages spending time in nature by consciously using the five senses. Based on scientific literature and the evidence provided by the project, it has been proven that this practice significantly reduces cortisol levels, the stress hormone, activates cells that support the immune system, and increases mental clarity. INHEF combines this scientific reality with an academic discipline to propose a new curriculum in higher education.

#### Work Packages

The project operates through the completion of five separate work packages in a logical and systematic order. Work Package 1 relates to scheduling, quality assurance procedures, and reporting. The key point here is that this work package goes much further than mere administration –it represents the very backbone of the project which ensures its success and sustainability in terms of the cooperation involved. As part of work package 2, there will be a production of a guidebook related to forest bathing and other nature-oriented activities. The guidebook will be developed based on literature and best practices of similar projects in Europe as well as the actual field experience in order to make sure that it contains scientifically validated and applicable information. As part of work package 3, which concentrates on training. Specifically, a training programme will be introduced in order to train trainers so that they can successfully conduct the techniques utilized within the project. Once the materials are developed, they will be distributed among students. The phase will involve preparation and assessment of the used approaches.

The project concludes with work package 5, dedicated to dissemination. Through academic publications, digital platforms, and international networks, the aim is to share the project's findings and tools as widely as possible. The work of a five-country partnership will become a resource for the wider European community and beyond.

#### Kick-Off Meeting

The INHEF project officially started with an inauguration ceremony organized by the Eskişehir Osmangazi University on 15 January 2026. The project coordinator is Eskişehir Osmangazi University (Turkey), while it takes place in the context of an international cooperation between the following universities: University of Basilicata (Italy), Mendel University (Czech Republic), Lithuanian Engineering College (Lithuania) and Warsaw University of Life Sciences (Poland).

The audience of the inaugural ceremony included representatives of various sectors, thus confirming the project's wide spectrum. Attendees consisted of academic personnel and university administration members, students and student unions, NGOs helping vulnerable social groups (i.e. elderly people

and women), members of the Ankara Tour Guides Chamber of Commerce, representatives of travel agencies and the hotel sector (Fig. 1).



Fig.1: Kick-Off Meeting

At the kick-off event, project goals, expected outputs, and the international partnership structure were shared with participants, and the importance of collaboration among academia, the tourism sector, and civil society was emphasized. It is expected that the project will make lasting contributions in both education and societal well-being by offering an innovative, inclusive, and sustainable approach in higher education. Within the scope of the project, the integration of a nature-based practice called forest bathing (*shinrin-yoku*) into the higher education curriculum, as well as the development of education models focused on sustainable tourism and well-being, will be implemented under different work packages. The project also aims to examine the positive effects of nature on individuals' physical and mental health at an academic level. The day after the project's kick-off meeting, all partners participated in a forest bathing practice at ESOGU campus forest (see Fig. 2).



Fig 2: Forest Bathing Practice

### **Conclusion - Sustainability and Quality Control**

The success and sustainability of the project are secured through three fundamental mechanisms structured according to Erasmus+ standards.

- Project outputs will be subjected to quality inspection by an impartial expert from start to finish.
- The developed digital modules and guides will be permanently incorporated into the existing course curricula of universities.
- Budget management has been allocated according to each work package leader's area of expertise and has been monitored through monthly financial reporting forms.

The INHEF project redefines higher education not only as a center for knowledge transfer but also as a holistic ecosystem for well-being and sustainability. By transforming the *Shinrin-Yoku* practice into a scientific discipline, the project serves its goals and paves the way for building healthier, more

inclusive, and nature-based societies in line with European Union values. INHEF elevates inter-university knowledge transfer into a 'well-being' movement, setting the academic standard.



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## Souhrn

S technologickým pokrokem se lidé stále více vzdalují přírodě. Tato situace má také negativní dopady na duševní zdraví. Je proto nezbytné tuto situaci napravit a posílit kontakt s přírodou. Kromě pozitivních zdravotních aspektů, které plynou z toho, že lidé tráví více času v přírodě, kontakt s přírodou také podporuje inovativní a kreativní myšlení. Navíc propojení přírody a vzdělávání přispívá k rozvoji pozitivního přístupu k životnímu prostředí. Tento projekt, jehož součástí je využívání přírody,

přispívá k rozvoji emocionálních dovedností lidí, zvyšuje komunikační schopnosti jednotlivců a podporuje jejich duševní pohodu tím, že jim pomáhá objevit jejich kreativní stránku. Náš projekt nabízí pohled na to, jak mohou jednotlivci těžit z přírody k překonání emocionálních krizí. Školení navíc pomáhají podporovat vytváření pouta s přírodou tím, že zvyšují efektivitu vzdělávání i školení mezi pedagogy a studenty. Očekává se také, že přímo přispěje k duševní pohodě žen a seniorů, kteří patří mezi znevýhodněné skupiny.

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