

**Interreg**



Co-funded by  
the European Union

**North-West Europe**

---

**Forest4Youth**

# Forest-Based Therapy for Adolescents: A Practice- Friendly Guide for Psychiatrists



Inclusive  
society

# Introduction

Adolescent mental health services across Europe are under unprecedented strain. Rates of anxiety, depression, and social isolation have surged, while conventional psychiatric care systems struggle with long waitlists, limited resources, and engagement challenges. Many young people find traditional clinical settings intimidating or alienating, leading to poor treatment adherence and suboptimal outcomes.

Forest-based therapy represents an emerging approach that addresses these barriers—offering adolescents a less stigmatized, more experiential alternative that can complement conventional care.

This guide draws from a comprehensive analysis of forest-based programs across five European countries—Belgium, France, Germany, Ireland, and Luxembourg—conducted as part of Forest4Youth, an Interreg NWE Project. It distills practical insights for psychiatrists considering how these interventions might support their adolescent patients. The goal is to provide psychiatrists with actionable information about forest-based therapy: when to consider it, how to refer patients, what outcomes to expect, and how to integrate it within existing treatment plans.



# Scope

This guide focuses on adolescents aged 12-18 who have undergone mental health treatment in any format (inpatient, outpatient, or community-based), regardless of diagnosis or severity. It emphasizes practical application over theoretical background, recognizing that busy clinicians need clear guidance for real-world decision-making.



## Current Status of Forest-Based Interventions

Forest-based therapy remains at the intersection of emerging evidence and grassroots innovation. This guide acknowledges both the promise and the limitations of current practice, positioning forest therapy realistically as a complementary approach rather than a replacement for evidence-based psychiatric care.

## Definitions

**Forest-Based Therapy:** Structured therapeutic interventions conducted in forest environments with trained facilitators or health professionals. Includes sylvotherapy, forest bathing, and trauma-informed nature immersion.

**Nature-Based Interventions (NBIs):** Broader category encompassing all therapeutic approaches leveraging nature contact, including horticulture therapy, care farming, adventure therapy, outdoor education, and green exercise.

**Green Care:** Umbrella term describing interventions combining nature, care, and health goals—can include indoor plant therapy, gardening, and social farming.

# Evidence-Based Benefits

The evidence base shows that forest exposure reduces physiological stress markers, improves emotional regulation, and enhances social connection—outcomes particularly relevant for adolescents in their critical developmental years.

## Physiological Impact

- Reduces cortisol levels, blood pressure, and heart rate <sup>1</sup>
- Improves emotional regulation capacity during critical neurological development stages <sup>2</sup>
- Decreases sympathetic nervous activity and increases parasympathetic nervous activity <sup>3</sup>

## Cognitive Benefits

- Promotes attention recovery and eases mental fatigue <sup>4</sup>
- Improves focus, memory, and executive function <sup>5</sup>

## Psychological Outcomes

- Decreases anxiety and depressive symptoms <sup>2</sup>
- Enhances mood regulation <sup>1</sup>
- Rebuilds sense of safety, self-esteem, and agency in trauma survivors <sup>2</sup>

## Social Connection

- Fosters peer bonding through group-based activities <sup>6</sup>
- Reduces feelings of isolation <sup>6</sup>
- Supports emotional growth through cooperative experiences <sup>7</sup>



## Relapse Prevention

Secondary prevention of relapse is a key aspect of nature-based interventions for adolescents recovering from substance abuse.<sup>8</sup> These interventions establish lasting habits that act as protective factors against relapse. Positive learned habits can include:

- Slowing down
- Respecting physiological needs
- Reconnecting with the natural environment
- Fostering more balanced relationships with other

# Clinical Applications

Forest-based programs offer a non-clinical, less stigmatized setting that appeals to adolescents who struggle with traditional therapy engagement. It shows particular promise for patients with:

- Trauma and PTSD
- ADHD
- Mood disorders (anxiety, depression)
- Social isolation

For these populations, forest-based programs blend structured therapeutic intervention with environments that encourage autonomy and exploration.<sup>9</sup> They also support a trauma-informed approach, allowing adolescents to build a sense of safety, self-esteem, and agency in multisensory and non-confrontational environments.<sup>2</sup>

## How to Refer

### Social Prescribing Models (Primary Pathways)

- **Ireland:** Social prescribing link workers connect patients to nature-based programs <sup>10</sup>
- **Belgium:** Green care and forest therapy may be covered by the Institut National d'Assurance Maladie-Invalidité—the body that administers the country's compulsory health insurance—as primary psychological care through care networks; full coverage for youth under 24 <sup>11</sup>
- **Germany/Luxembourg:** Emerging pilot programs in select regions <sup>12-13</sup>
- **France:** Grassroots programs available, but limited formal integration <sup>14</sup>

### Making a Referral

1 Identify patients who would benefit from nature-based interventions

2 Contact local social prescribing link worker or certified forest therapy provider

3 Establish clear therapeutic goals aligned with treatment plan

4 Set communication protocol for outcome reporting

5 Monitor progress through patient self-report and provider feedback

# Program Models to Know

## Belgium

### L'Athantor - Adolescents Care Unit for Centre Neuro-Psychiatrique Saint-Martin <sup>15</sup>

- **Setting:** 2-day/1-night forest immersion
- **Population:** Inpatient adolescents 15-18
- **Funding:** Fully reimbursed through hospital admission
- **Contact:** Supervised by educator and teacher; integrates with psychiatric treatment

## Ireland

### Social Farming<sup>16</sup>

- **Setting:** Family farms offering (non-clinical) therapeutic activities and social support
- **Population:** A wide variety of age groups with limited, but expanding adolescent participation
- **Funding:** Covered by the Health Service Executive though amount of coverage varies
- **Contact:** Most of the contact is with social prescribing link workers and farmers

## Germany

### Heilwald (Therapeutic Forests)<sup>17</sup>

- **Setting:** Legally designated forests with therapeutic infrastructure
- **Population:** Primarily adult-focused but adaptable
- **Funding:** No government coverage
- **Contact:** Therapeutic experiences offered by trained guides

## France

### Bulle de Sérénité<sup>18</sup>

- **Setting:** Year-round forest sessions in Argonne region focused on sensory exploration, sylvotherapy, and Forest School approaches
- **Population:** School groups and adolescents with mental health challenges
- **Funding:** Participant fees plus Ministry of Education support
- **Contact:** Therapeutic coaches

## General Examples of Forest-Based Activities

- **Sensory awareness:** Chilly feet (barefoot wading), mindful noticing of natural textures through touch, scent mapping, observing sounds (or lack of sound)
- **Nature connection:** Creating art or structures with natural materials, nature journaling, photography
- **Group activities for social bonding:** Team-based nature exploration, planting trees, trail maintenance

## The Forest4Youth Program: A Model for Integration

Forest4Youth will approach current gaps over a four-year timespan concluding in 2028 with an in-depth evaluation of how nature-based programs can be implemented successfully for this population.

### Key Goals

- 1 Adolescent-Specific Design:** Developing a menu of targeted interventions directly supporting youth mental health needs
- 2 Evidence Generation:** Rigorous monitoring and evaluation contributing to policy development
- 3 Dual-Sector Training:** Equipping both healthcare professionals and foresters for effective delivery
- 4 Scalable Integration:** Modeling alignment with social prescribing, schools, and existing care infrastructure

### Strategic Value

- Fills critical gap in adolescent-specific forest therapy programming
- Demonstrates feasibility of mainstream integration
- Produces research evidence for broader policy adoption
- Creates replicable model for European expansion

### How to Follow Us

- [Website](#)
- [LinkedIn](#)

# Clinical Considerations

## Assessment

### Mobility/accessibility needs

Can patients physically access forest settings?

### Sensory sensitivities

Will outdoor environments be therapeutic or overwhelming?

### Safety concerns

Evaluate risk factors  
(self-harm, elopement, substance use)

### Patient preferences

Is patient open to nature-based approach?

## Treatment Integration

- Frame as complementary to conventional treatment, not a replacement for medication
- Support the psychiatric treatment plan and adjust medication, when clinically appropriate
- Continue other therapeutic interventions (individual/family therapy)
- Use forest therapy to enhance engagement and emotional regulation



## Monitoring

Track these outcomes:

- Mood and anxiety levels (standardized measures)
- Behavioral observations (from parents, teachers, providers)
- Patient self-report on experience and engagement
- Attendance and participation consistency

# Practical Next Steps

## For your practice

- 1 Research local options:** Identify forest therapy providers and social prescribing services in your region. [Contact us](#) for support finding services in the North-West Europe region.
- 2 Build relationships:** Connect with certified practitioners to understand their approach.
- 3 Start small:** Refer one suitable patient as pilot.
- 4 Document outcomes:** Track results to inform future referrals.
- 5 Share learning:** Discuss outcomes with colleagues to build awareness.

## For the field

- 1 Support research:** Refer eligible patients to clinical trials when available
- 2 Advocate for policy:** Engage professional organizations in discussion on forest therapy
- 3 Cross-train:** Attend forest therapy workshops to understand the approach
- 4 Collaborate:** Work with practitioners to develop adolescent-specific protocols

## Key Takeaways

- ✓ Forest-based therapies offer evidence-based benefits for adolescent mental health, particularly for trauma, ADHD, and mood disorders.
- ✓ Current implementation varies widely across Europe, with Belgium and Ireland leading in policy integration
- ✓ Social prescribing provides the most viable pathway for mainstream clinical integration.
- ✓ Major gaps exist in adolescent-specific programming, standardized training, and research evidence.
- ✓ Psychiatrists can play crucial roles as early adopters, referring clinicians, and advocates for policy change.
- ✓ Programs like Forest4Youth strengthen the understanding of the systematic integration of nature-based interventions in Northwest European regions through rigorous analysis.

## Bottom Line

Forest-based therapy offers a low-stigma, experiential approach that can enhance engagement and outcomes for adolescents struggling with mental health. Consider social prescribing referrals for suitable patients while evidence base continues to develop.



# References

1. Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental Research*, 166, 628–637. <https://doi.org/10.1016/j.envres.2018.06.030>
2. Tillmann, S., Tobin, D., Avison, W., & Gilliland, J. (2018). Mental health benefits of interactions with nature in children and teenagers: A systematic review. *Journal of Epidemiology and Community Health*, 72(10), 958–966. <https://doi.org/10.1136/jech-2018-210436>
3. Carmo, G. Q. D., Ayotte-Beaudet, J.-P., & Jordan, C. (2025). A systematic review of the impacts of nature exposure on the nervous system in children and youth: Implications for nature-based learning. *Journal of Environmental Psychology*. <https://doi.org/10.1016/j.jenvp.2025.102788>
4. Moll, A., Collado, S., Staats, H., & Corraliza, J. A. (2022). Restorative effects of exposure to nature on children and adolescents: A systematic review. *Journal of Environmental Psychology*, 84, Article 101884. <https://doi.org/10.1016/j.jenvp.2022.101884>
5. Nguyen, L., & Walters, J. (2024). Benefits of nature exposure on cognitive functioning in children and adolescents: A systematic review and meta-analysis. *Journal of Environmental Psychology*, 96, Article 102336. <https://doi.org/10.1016/j.jenvp.2024.102336>
6. Dettweiler, U., Becker, C., Auestad, B. H., Simon, P., & Kirsch, P. (2017). Stress in school. Some empirical hints on the circadian cortisol rhythm of children in outdoor and indoor classes. *International Journal of Environmental Research and Public Health*, 14(5), 475. <https://doi.org/10.3390/ijerph14050475>
7. Madera, F., Olcese, M., Cardinali, P., & Migliorini, L. (2025). Nature connectedness in adolescents and young adults: A systematic review. *Journal of Environmental Psychology*, 107, Article 102761. <https://doi.org/10.1016/j.jenvp.2025.102761>
8. Díaz-Martínez, F., Sánchez-Sauco, M. F., Cabrera-Rivera, L. T., Ortín-Fernández, C. A., Orenes-Piñero, E., & Ortega-García, J. A. (2024). Harnessing the healing power of nature: A review of natural interventions in substance abuse treatment and prevention. *Environmental Health and Preventive Medicine*, 29, Article 64. <https://doi.org/10.1265/ehpm.24-00145>
9. Gabrielsen, L. E., Fernee, C. R., & Aasen, G. O. (2019). Why adolescents engage in adventure therapy: A qualitative study of client perspectives. *Journal of Adventure Education and Outdoor Learning*, 19(4), 313–326. <https://doi.org/10.1080/14729679.2019.1686040>
10. Health Service Executive. (2023). Social Prescribing Framework for Ireland: HSE Healthy Communities Programme. <https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/mental-health-and-wellbeing/hse-social-prescribing-framework.pdf>
11. Institut National d'Assurance Maladie-Invalidité. (n.d.). Soins psychologiques de 1re ligne. <https://www.inami.fgov.be/fr/professionnels/professionnels-de-la-sante/psychologues-cliniciens/dispenser-des-soins-psychologiques-de-premiere-ligne-via-un-reseau-de-sante-mentale>
12. Institut für Waldmedizin und Naturtherapie. (2024). Im-Wald-Sein. <https://www.im-wald-sein.com>
13. Centre Hospitalier de Luxembourg. (n.d.). *Le jardin du centre de jour de pédopsychiatrie*. <https://www.chl.lu/fr/actualites/le-jardin-du-centre-de-jour-de-pedopsychiatrie>
14. Fédération Française Jardins Nature et Santé. (n.d.). Présentation et réseau. <https://f-f-jardins-nature-sante.org>
15. L'Athamor. (n.d.). Athamor, lieu pour l'adolescence. <https://www.lathanor.be/athanor-lieu-pour-l-adolescence.html>
16. Social Farming Ireland. (n.d.). Home. <https://www.socialfarmingireland.ie/>
17. Bäderverband Mecklenburg-Vorpommern. (n.d.). Gesundheitspotenzial Kur- und Heilwald. <https://www.mv-baederverband.de/de/baederverband/projekte/gesundheitspotenzial-kur-und-heilwald>
18. Canteau, C. (2024). Bulle de Sérénité – Therapeutic forest program overview. [Internal report]. [Forest4Youth](https://www.forest4youth.org/).



# THE PROJECT

Forest4Youth aims to develop forest-based therapies for young people in North-West Europe by assessing current practices and co-designing care protocols.

Transnational collaboration will ensure these protocols are harmonised and evidence-based, implement pilot projects, explore VR-based alternatives to enhance access, and offer training for professionals adopting these interventions.

**Total project budget**

**€5,5 million**

**EU Funding**

**€3,3 million**

**Timeline**

**2025 - 2028**



[forest4youth.nweurope.eu](https://forest4youth.nweurope.eu)

