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An Introduction to Forest & Nature Therapy: Opportunities for Human and Forest Health, Green Jobs, and Social Benefits.

Lead Authors: Tamberly Conway, Ph.D., Kathryn Fernholz, Eliza Meyer

Co-Authors: Sarah Harris, Dave Bubser, Ed Pepke, Ph D., Gloria Erickson, Kathleen Preece

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Dovetail Partners

528 Hennepin Ave, Suite 703

Minneapolis, MN 55403

612-333-0430

info@dovetailinc.org



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Executive Summary

The practice of Shinrin-Yoku, “forest bathing”, or literally translated, *bathing in the atmosphere of the forest*, was established in Japan by Japan’s Ministry of Agriculture, Forestry, and Fisheries in the early 1980s to bring people back into nature in support of improved human health and wellbeing. Forest bathing, forest and nature therapy, forest immersion, and the Japanese term, Shinrin-Yoku, are all names that are often used interchangeably to describe the practice of “making contact with and taking in the atmosphere of the forest.”¹

This report explores the basics of forest and nature therapy, development of training and certifications to support credentialed practice, and research findings from around the world. The development of forest and nature therapy creates green job opportunities such as forest therapy guides and trainers, research and development roles, certified forest therapy trail implementation, and other associated products and services. These practices are now being introduced in the United States and Europe and the scientific basis is being expanded, including adoption within the USDA Forest Service. Forest and nature therapy is also being incorporated into treatments prescribed by clinicians. Additional research is necessary to continue to quantify the benefits of these practices and provide an expanded scientific-basis for further adoption.

What is Forest & Nature Therapy

Forest and nature therapy is, at its core, immersion in the forest or other landscapes to derive mental, physical, emotional, and spiritual health benefits while being engaged in activities focused upon sensory connection to the land. The styles and methodologies of practice vary depending upon cultural elements and other factors. In the Republic of Korea (South Korea), for instance, the practice is guided by trained forest therapists, who lead walks through the forest, while engaging participants in an array of forest-focused educational or experiential activities that may focus upon cognitive games, breathing exercises, physical exercises, and a variety of sensory experiences. It is important to recognize that the credentialed and prescribed practice of forest and nature therapy is more than a simple walk in the woods or a naturalist hike. Similar to the fact that talking with a friend or family member isn’t the same as a clinical therapy session, forest and nature therapy is a structured and defined process, and through this formal practice a variety of health benefits have been demonstrated.

Development of the Practice

Since the design and development of the original forest therapy practices in Japan, an array of methodologies have arisen around the world. This global expansion has been supported by a variety of organizations, including the Association of Nature and Forest Therapy Guides and Programs (ANFT). The ANFT was founded by M. Amos Clifford and developed a framework for training and forest therapy guide certification that is used globally.² To date, ANFT has trained over 2,000 guides who are applying this framework for practice in over 60 countries.³ Practices guided by ANFT Certified Nature and Forest Therapy Guides include a standard sequence of guided sensory invitations that are designed to allow the participant to have whichever experience in the natural world is right for them. The motto of ANFT Guides is, “The Forest is the Therapist. The Guide Opens the Doors.”⁴

The ANFT was the first to advance forest therapy training globally. Many other training programs have emerged, including Forest Therapy HUB, The Forest Therapy School, The Forest Bathing Institute, as well as other original training programs such as International Society of Nature and Forest Medicine (INFOM). More information about the ANFT certification as an example of a training and credentialing program for guides is included in Appendix A. A few case study examples of forest and nature therapy are provided in Appendix B.

¹<https://conservationconexions.com/about/>

²The ANFT framework was developed with contributions from many guides, inspiration from Japan, the Republic of Korea and other cultures, and an array of other guiding practices.

³The listing of global ANFT guides is available at: <https://www.natureandforesttherapy.earth/worldwide-member-map>

⁴This approach supports the belief that the forest and other landscapes give people what they need to heal. These “relational” nature and forest therapy sessions enable connections to self, others, and the land. The “relational” component refers to the individual experience and the connection between the person and the forest or land that brings people into deeper intimacy with natural places. Through this “relational forest and nature therapy” practice, the participant can enter a process for repairing relationships between people, as well as relationships with places, including forests and other landscapes, especially in conditions of grief or where ecological restoration and healing is needed.

Remotely Guided Practice

Forest and nature therapy is typically an in-person and outdoor practice. However, upon the onset of the COVID-19 pandemic, many guides began delivering remotely guided forest and nature therapy experiences that could be done indoors or outdoors and with the guide connected via a video call or meeting format.⁵ These remote practices emerged globally and were viewed as especially important for improving connectedness and addressing health needs during stressful and unprecedented times. This methodology is now recognized as an additional effective approach which also provides improved access for those that may not be able to participate in the typical practice. During a remotely guided practice, participants engage with nature in whatever means are available to them (e.g., backyard, local park, greenhouse, garden, a window view) and the guided invitations are conducted by the guide through the virtual meeting platform.

Adoption by the USDA Forest Service and International Cooperation

The USDA Forest Service (USFS) Conservation Education Program provided funding for the first-ever bilingual (Spanish and English) ANFT Guide Training to promote increased accessibility among diverse audiences. The newly trained guides provide access to the practice among Latino audiences in the US and Latin America and their training was among the first to integrate remotely guided forest therapy. Guides from this cohort have led forest therapy sessions for the US Forest Service and USFS International Programs Office. These sessions have included USFS employees and partners. Several USFS employees also serve as ANFT Certified Guides and have brought the practice into the USFS Workplace Environment Program, the Resource Assistant Program (youth recruitment program), New Employee Orientation Programs, and in support of Wildland Firefighter recovery and restoration. During the XV World Forestry Congress in Seoul, South Korea in May 2022, The Korea Forest Welfare Institute, the Korea Forest Therapy Forum, the University of British Columbia Faculty of Forestry, Conservation Conexions⁶, and the US Forest Service established a memorandum of agreement to advance the work of forest therapy research, practice, and policy. A number of other federal and state agencies, such as the National Park Service, Missouri Department of Conservation, and non-governmental organizations in the conservation sector, such as the American Forest Foundation, Women's Forest Congress, Greening Youth Foundation and others have engaged Certified Forest Therapy Guides to support health, wellbeing, interconnectedness and reciprocity among employees.

Leaders in Forest Therapy Development and Policy

Dr. Qing Li, a physician and the President of the Japanese Society of Forest Medicine, the Vice-President of the International Society of Nature and Forest Medicine (INFOM), and one of the Directors of the Forest Therapy Society in Japan, coined the term "Forest Medicine" in 2007 and has been instrumental in expanding forest bathing and the related research to the global scale. Dr. Won Sop Shin, former Minister of the Korea Forest Service (KFS), from 2013-2017, in the Republic of Korea has over 30 years of experience engaging in research and applications around forests for public health, and now serves as Department Head of the Graduate Department of Forest Therapy at Chungbuk National University in South Korea. His department has enrolled approximately 150 students in masters' and doctorate programs addressing forest therapy. Dr. Shin led policymaking related to forests for human health and welfare during his tenure with KFS and has continued his work in public policy through the creation of the national Forest Welfare Act. The Forest Welfare Act in South Korea promotes economic, social, and emotional wellbeing through nationally designated forest welfare services delivered through the National Center for Forest Therapy forest welfare complex. These services are provided to all citizens with programs ranging from pre-natal to forest burials, and sometimes referred to as "cradle to grave" offerings. National Forest Healing Centers within the complex provide forest healing programs, education, products and other offerings that advance the culture of forest healing (HEROST, 2022).⁷ There is an expanding network of National Forest Therapy Centers throughout South Korea that may be found in both the public and private sectors.



Photo Courtesy of Adelalde Rivas Sotelo

⁵Many other therapists, mental health, and other health practitioners also expanded their operations to offer remote and video-based services during the pandemic.

⁶Lead Author, Tamberly Conway, Ph.D. is the founder of Conservation Conexions

⁷These services are open to Korean nationals and tourists at full rates. These programs are also accessible to underserved, socioeconomically disadvantaged, people with different abilities, and veterans. Forest Welfare vouchers offer free or discounted services so all citizens have affordable opportunities to participate in these programs.

Research Findings Related to Human Health

Research conducted around the world has contributed to quantifying the human health impacts of forest bathing and provides a basis for the clinical use of this therapy. Research has classified forest and nature therapy benefits into physiological, psychological, and environmental categories and suggested the potential for use of the practice by educators and health professionals seeking low-risk educational and intervention alternatives for their students and patients (Mathias, 2020).

Research has shown numerous health benefits resulting from forest and nature therapy practices, such as reduced blood pressure, increased immunity, increased natural killer (NK) cell production (see definition in sidebar), stress reduction and other health related benefits that are linked to a reduction in chronic disease. For example, a study in Poland (Bielinis, et al, 2018) examined the impact of forest bathing in the winter season on human psychological states and concluded the forest environment caused a decrease in the participants' negative moods and an increase in positive moods.⁸ The researchers concluded that in the conditions of Central Europe, short interaction with forest had a substantial emotional, restorative, and vitalizing effect on the surveyed participants (Bielinis, et al, 2018). A study of adults in Japan found positive immune system responses from forest bathing and also found that the benefits lasted more than 30 days, suggesting that a monthly practice would enable the benefit to be maintained (Li, 2010).⁹ Another study with experiments in 24 forests in Japan found lower concentrations of cortisol (see definition in sidebar), lower pulse rate, lower blood pressure, and other nervous system benefits, which suggest forest bathing could be used as a strategy for preventive medicine (Park, 2010). A review of empirical evidence (Shin et. al, 2009) revealed positive effects on human psychological wellbeing, which ultimately relates to economic and cultural shifts in society, and which have a direct relationship with overall national health-related outcomes.

⁸Additional information about study methodology and results: Sixty-two participants were divided into two groups, each group was exposed to city forest or urban (control) environment for 15 minutes. The participants completed four psychological questionnaires before and after exposure: the profile of mood states (POMS), the positive and negative affect schedule (PANAS), the subjective vitality scale (SVS), and restorative outcomes scale (ROS). The forest environment influenced the surveyed participants, causing a decrease in the negative subscales of POMS and an increase in the positive (vigor) subscale. Moreover, after exposure to the forest environment the participants had the highest scores of SVS, ROS, and a positive subscale of PANAS. (Ernest, et al, 2018)

⁹Additional information about the study methodology: Adult Japanese individuals, both male and female, participated in a series of studies aimed at investigating the effect of forest bathing trips on human immune function. The subjects experienced a 3-day/2-night trip to forest areas, and blood and urine were sampled on days 2 (the first sampling during each trip) and 3 (the second sampling during each trip), and on days 7 and 30 after the trips. Natural killer (NK) activity, the numbers of NK, granulytin-, perforin-, and granzymes A/B-expressing lymphocytes in the blood, and the concentration of urinary adrenaline were measured. (Li, 2010)



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Key Terms and Definitions

Forest bathing: The practice of immersing yourself in nature in a mindful way, using your senses to derive a range of physical, mental, emotional, and social health benefits. ¹⁰

Forest and nature therapy: A research-based framework to support health and wellness through immersion in forests and other natural environments. ¹¹

Phytoncides: Airborne chemical compounds that protect trees and other plants from bacterial, fungal, and insect attacks and may also provide benefits to human immunity systems. ¹²

Anion: A negatively-charged ion (meaning there are more electrons than protons due to having gained one or more electrons) that can provide benefits to human health and air quality. ¹³

Natural killer (NK) cells: A type of immune cell that has granules (small particles) with enzymes that can kill tumor cells or cells infected with a virus. A natural killer cell is a type of white blood cell. ¹⁴ NK cells may be boosted in the presence of phytoncides and forest air.

Cortisol: The body's primary stress hormone released under acute, chronic or traumatic stress. Numerous studies have shown that forest therapy lowers cortisol levels, which is associated with stress reduction and reduction of chronic disease.

Photo Courtesy of Adelaide Rivas Sotelo

Trees and other plants are known to emit volatile chemicals, called phytoncides (see sidebar for definition). These phytoncides have been found to boost human immune systems, reduce cortisol levels¹⁵, and increase NK cells (these cells attack cancer cells and other pathogen or virus-infected cells in humans).¹⁶ These benefits can occur when we breathe the air containing phytoncides and absorb the phytoncides in the pores of our skin. A study by Shin et. al in 2011 found significant reduction in stress and depression in college students after inhalation of an essential oil from *Chamaecyparis obtusa*, or the Hinoki Cypress, which is one of many essential oils emitted by conifer and hardwood species. Research has also shown increased levels of self-awareness, self-efficacy, and improved social engagement, as well as increasing cognition, creativity, focus and innovation as a result of forest bathing (Shin et. al). In 1995, Kaplan suggested that exposure to nature results in numerous restorative effects to human function by reducing stress, anxiety, low self-esteem and other negative cyclic beliefs and restoring attention to more positive and productive thoughts and actions.¹⁷ A curated collection of research findings related to forest and nature therapy can be found at Green Cities: Good Health¹⁸, created by Dr. Kathy Wolf, Research Social Scientist at the University of Washington. Dr. Wolf has compiled the research addressing the mental, physical, and emotional benefits derived from immersion in nearby-nature settings, especially in relation to urban greenspaces.¹⁹

In a systematic review and meta- analysis of studies related to investigating the effects of forest bathing on stress levels (i.e., salivary or serum cortisol as a stress biomarker) cortisol levels were significantly lower after intervention in forest groups and the researchers concluded that overall, forest bathing can significantly influence short term cortisol levels in such a way as to reduce stress (Antonelli, et al, 2019). Another meta-analysis concluded that forest bathing can be effective in reducing mental health symptoms in the short term, particularly anxiety (Kotera, 2022). A review of medical empirical research on forest bathing (Wen, 2019) highlighted the needs for continued research and concluded: "Forest bathing activities may significantly improve people's physical and psychological health. In the future, medical empirical studies of forest bathing should reinforce basic studies and interdisciplinary exchange to enhance the methodological quality of papers while decreasing the risk of bias, thereby raising the grade of paper evidence." A review of research activities shows that research continues to explore many potential forest therapy benefits, including physiological and psychological effects, heart-rate metrics, physiological disease states, psychological, autonomic nervous system effects, and sensory metrics (list derived from Hansen, 2017).

¹⁰Definition adapted from: <https://healingforest.org/>

¹¹<https://www.natureandforesttherapy.earth/about/the-practice-of-forest-therapy>

¹²<https://www.ecotherapyheals.com/what-are-phytoncides/>

¹³Jiang SY, Ma A, Ramachandran S. Negative Air Ions and Their Effects on Human Health and Air Quality Improvement. Int J Mol Sci. 2018 Sep 28;19(10):2966. doi: 10.3390/ijms19102966. PMID: 30274196; PMCID: PMC6213340. <https://pubmed.ncbi.nlm.nih.gov/30274196/>

¹⁴<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/natural-killer-cell>

¹⁵Cortisol, the primary stress hormone, increases sugars (glucose) in the bloodstream, enhances the brain's use of glucose and increases the availability of substances that repair tissues. It alters immune system responses and suppresses the digestive system, the reproductive system, and growth processes. Source: [Mayo Clinic Staff](#)

¹⁶Effects of forest bathing (shinrin-yoku) on levels of cortisol as stress biomarkers: a systematic review and meta-analysis <https://pubmed.ncbi.nlm.nih.gov/31001682/>

Richard Louv, author of *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*, has expanded his journalistic focus to consider how:

“...tapping into the restorative powers of the natural world can boost mental acuity and creativity; promote health and wellness; build smarter and more sustainable businesses, communities, and economies; and ultimately strengthen human bonds”. Louv shares compelling stories, research findings, and anecdotal evidence through his book *The Nature Principle* in which he states *“The twenty-first century will be the century of human restoration in the natural world.”*

Clinical Use of Forest and Nature Therapy

The potential benefits associated with forest and nature therapy continue to be studied as part of on-going research. Based upon existing findings, physicians, therapists, and clinicians are prescribing nature within their treatment of patients. New tools and systems are now available to formalize the practice (see sidebar about Prescribing Nature).

Prescribing Nature

Park Rx America (PRA) provides a system and resources for clinicians to prescribe nature to their clients. The website and platform allow the clinician to customize outside nature time, write a prescription, and set up reminders. Patients can also use the resources to initiate a conversation with their healthcare provider about a nature prescription. Additional efforts are underway with patients being encouraged to write their own nature prescriptions and to provide more accessible nature-based experiences.

For more information, see:

<https://parkrxamerica.org>

<https://www.childrenandnature.org/resources/giving-patients-the-power-to-self-prescribe-nature/>

¹⁷Kaplan, S. (1995) The Restorative Benefits of Nature: Toward an Integrative Framework. *Journal of Environmental Psychology*, 15, 169-182. [https://doi.org/10.1016/0272-4944\(95\)90001-2](https://doi.org/10.1016/0272-4944(95)90001-2)

¹⁸Green Cities: Good Health, available at: <http://depts.washington.edu/hhwb/>

¹⁹<http://depts.washington.edu/hhwb/> also see: [Human Dimensions of Urban Forestry & Urban Greening](#)

Research and Developments Related to Forest Health

The practice of forest and nature therapy can inspire reciprocity and define a closer relationship between forest health and human health and wellbeing. An improved relationship between people and the land often inspires a conservation ethic, which ultimately relates to the importance of weaving this practice into environmental education and land management. A study conducted by Kil et al in 2021 found that forest therapy participants report stronger preferences for achieving personal, health and social benefits while on-site, as well as personal, social, economic, and environmental benefits once off-site. Through this and other studies, Kil et al found that forest therapy participants often develop a higher sense of place attachment to the natural areas in which they engage in forest therapy experiences. This sense of “place attachment” can serve as a support mechanism for landowners and land managers, as these visitors who share such levels of place attachment are more likely to serve as advocates for natural areas and greenspaces in the face of threats or when funding is needed to support these important places. Recommendations which arise from this study include proposed implementation of forest therapy trails, which may be established through both guided and self-guided formats, in natural areas, forests, parks and urban greenspaces, which support a sensory connection and deeper awareness and relationship with place, thereby inspiring a conservation ethic and a sense of reciprocity to the land and waters.

Forest Ecotherapy and Green Jobs in the Forest Sector

The profession of forest therapy provides growing job opportunities in response to demand for these services. Development of forest therapy jobs and career opportunities are recognized as part of the emergence and growth of green jobs as reported on by the United Nations and referred to as *forest ecotherapy*.²⁰ In addition to job creation as guides, there are a number of related supporting products and services also recognized by the UN and contributing to a green economy (Tables 1 and 2). Many of these services are derived from countries such as Japan, the Republic of Korea, and others that have led the efforts in integration of forest therapy as a nationwide mechanism to seek health and wellbeing.

Table 1. Tasks, activities, and services in the field of activity Forest Ecotherapy

Future Tasks and Duties	Activities, Products and Services
<ul style="list-style-type: none"> • Site selection, establishment and development of suitable forest ecotherapy areas in suitable forests • Organization of forest ecotherapy and nature walk sessions in suitable forest locations • Provision of training and mentoring on forest ecotherapy to suitable and relevant personnel • Advocating for and promoting public awareness and acceptance of the benefits of forest ecotherapy 	<ul style="list-style-type: none"> • Health restoring recreation; forest bathing • Ecotherapy services in the forest • Green care and green prescriptions • Forest therapy centers • Measurable non-timber benefits • Nature walks/Forest interpretation

Source: ECE/TIM/DP/71, Green Jobs in the Forest Sector, 2018. https://unece.org/DAM/timber/publications/DP71_WEB.pdf

²⁰<https://unece.org/docs-22>

Table 2. Outlook on jobs that would be increasingly needed in the field of activity Forest Ecotherapy

Key competencies, skills to be developed	Jobs that would be increasingly needed
<ul style="list-style-type: none"> • Communication and forest interpretation skills • Detailed knowledge and awareness of the practice and philosophy of Shinrin-yoku or “forest bathing” • Competency in public relations and interviewing methodology • Basic training in psychology and general mental health issues 	<ul style="list-style-type: none"> • Researchers on forest healing effects • Forest ecotherapists • Medical doctors working in forest therapy centers • Sports professionals, forest health coaches • Forest educators and guided walks leaders

Source: ECE/TIM/DP/71, Green Jobs in the Forest Sector, 2018. https://unece.org/DAM/timber/publications/DP71_WEB.pdf

Ecosystem Services, Forest Certification, and Forest Therapy

When the Millennium Ecosystem Assessment (MA)²¹ emerged as an ecosystem services framework over twenty years ago, the attention focused upon the very important indirect services of human health due to provisioning of water, food and other services or benefits; however there were few linkages to the direct benefits of nature exposure and experience. It is heartening to see this acknowledgement decades later, and the recognition is emerging in the scientific literature as well.²² The MA also provides a basis for forest certification programs, including the Forest Stewardship Council (FSC), to further advance a full range of ecosystem services.

In December of 2019, FSC approved a procedure that enables FSC certified forest management organizations to make verified market claims about the maintenance, conservation, restoration or enhancement of ecosystem services. The current version of the procedure (FSC-PRO-30-006 V1-2) limits claims to a specific set of ecosystem services: carbon sequestration and storage, biodiversity conservation, watershed services, soil conservation, and recreational services. The procedure is now undergoing a revision process and some individuals and organizations are actively promoting the inclusion of Human Health and Well-being (HHWB) activities as additional ecosystem services that could be verified and claimed in the marketplace, if they are included in the revised procedure.²³ Specific indicators are being developed for demonstrating the benefits of forest bathing and forest therapy in FSC managed forests, including the potential for job creation and income generation for local communities. Field testing of these indicators have been undertaken in the forest, which is reported to have generated important insights and was rich in terms of “lessons learned”.

²¹The Millennium Ecosystem Assessment (MA) was called for by the United Nations in 2000 to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those systems and their contribution to human well-being. <http://millenniumassessment.org/en/About.html>

²²Dr. Kathleen Wolf, correspondence
<https://www.science.org/doi/full/10.1126/sciadv.aax0903>,
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²³Information drawn from: Astra-Academy. 2022. Human Health and Wellbeing in the Forest. Available at: <https://www.astracademy.net/userfiles/files/220425-Human-Health-and-Wellbeing-in-the-Forest-article.pdf>

Conclusion

Forest bathing emerged in Japan over forty years ago and today the concept of forest and nature therapy has emerged in Europe and the US to reflect the integration with medical and professional health practices, including tools for patients and clinicians to engage with nature prescriptions. The establishment of training and certification programs have elevated the green job and career opportunities for the field of practice, including a number of support services related to the forest resources and nature spaces that are integral to forest and nature therapy. Forest and nature therapy is a research-based framework to support health and wellness through immersion in forests and other natural environments. This is an opportune time for agencies and organizations to engage in data collection to further the understanding of the relationship between healthy forests and healthy people. Research to date supports the continued use of these practices, and on-going research is needed to gain additional insights.

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Appendix A: Forest Therapy Guide Certification

The Association of Nature and Forest Therapy (ANFT) has developed a certification program which trains people worldwide to become Certified Nature and Forest Therapy Guides. The concept is that the guide opens the door, but nature and forests are the “therapists”. The ANFT has documented and contributed to researching the mental, physical, emotional, and spiritual benefits that emerge from this practice. In addition to the reconnection with self and the land, the practice is also a meaningful way to connect in community through sharing and bringing social coherence.

ANFT Certified Forest Therapy Guides²⁴ learn:

- How to guide ANFT’s Standard Sequence
- Sequencing forest therapy invitations for maximum impact and benefit
- The heart-centered Way of the Guide approach
- The Language of Invitation to help create powerful connections with self and nature
- Somatic techniques for embodied awareness
- The pedagogy and fundamentals of nature connection
- Nature and forest therapy research and knowledge
- Trail awareness and safety -how to choose a forest therapy trail
- Getting to know your bioregion, its history, watershed, awareness and more
- Facilitation skills that promote an open environment for group sharing
- Expressive arts activities for forest therapy
- Competency standards: what a Forest Therapy Guide should know and be able to do
- Tips for successfully promoting your forest therapy offerings

Becoming an ANFT Certified Forest Therapy Guide is a 3-step process that includes remote learning, extensive activity-based assignments that develop relationships with the natural world and in-person immersion leading to certification (Figure 1). It is generally a 6-month process from application to certification and certified guides are provided with a number of training materials, experiences, and resources (Figure 2). Certified Forest Therapy Guides must also obtain a Wilderness First Aid (WFA) or Wilderness First Responder (WFR) certification to ensure they are able to respond to first aid needs or minor emergencies that may occur while guiding²⁴

²⁴<https://www.natureandforesttherapy.earth/guide-training/training>

Figure 1. Steps to Becoming an ANFT Certified Forest Therapy Guide



Source: <https://www.natureandforesttherapy.earth/guide-training/training>

Figure 2. ANFT Certified Forest Therapy Guide Training Materials, Experiences, and Resources



Source: <https://www.natureandforesttherapy.earth/guide-training/training>

Appendix B: Case Study Examples of Forest and Nature Therapy

Korea Forest Service and Korea Forest Welfare Institute

The Korea Forest Service and the Korea Forest Welfare Institute have established six National Forest Therapy Centers, as a result of the Korea Forest Welfare Act, which provides forest therapy access to all Korean citizens at a rate that is amenable to all people. These National Forest Therapy Centers offer forest healing services, educational opportunities in forest healing, development of forest healing products and expansion surrounding the culture of forest healing. These Centers focus upon forest healing programs that support immunity levels, as well as mental and physical restoration for individuals who have experienced burnout from high levels of stress in their daily lives (<https://herost.org/listings/korea-forest-therapy/>). They also offer free programs based on the 'Forest Welfare by Life-cycle' to underprivileged groups through the green fund, which are typically provided at a minimal cost to all citizens. The primary focal area of forest therapy, as is practiced in South Korea through a variety of forest guiding techniques, falls around research-related efforts surrounding the human health and wellbeing benefits derived from being in a forested environment. There are ten factors or elements of data collection that support the determination of these human health-related benefits

Top level researchers from the Korea Forest Welfare Institute have honed their data gathering techniques and areas of focus surrounding forests and human-health relationships, gathering data such as the amount and level of phytoncides released by different tree species and forest types and at different times of day, presence or absence of vegetation or "green", heat index related to forest canopy, anion presence and other measurable factors that are related to human health and well-being.

Guided and Self-Guided Forest Bathing Trails, Globally

Networks of Forest Therapy Trails can be found in Japan, South Korea and throughout other nations. The Association of Nature and Forest Therapy has expanded this model globally by establishing a Certified Forest Therapy Trail program that trains ANFT Certified Guides to serve as Certified Forest Therapy Trail Consultants who support private and public landowners/land managers in establishing certified Forest Therapy Trails in greenspaces throughout the world. Currently, 17 trails may be found throughout the US, Canada, Costa Rica and Europe (<https://www.natureandforesttherapy.earth/certified-trails>). One example is a trail in St. Anthony, Minnesota, USA, described in the following excerpted article.

"A new self-guided, Forest Bathing Trail at [Silverwood Park](#) in St. Anthony, Minnesota, helps visitors unplug and experience a meaningful and therapeutic immersion into nature. The Silverwood trail, designed by David Motzenbecker, Landscape Architect, Biophilic Design Expert and ANFT Certified Forest Therapy Trail Consultant, which opened December 2020, is the first of its kind in Minnesota (USA) certified by the Association of Nature & Forest Therapy (ANFT).

David Donovan, Silverwood program coordinator said the trail is in line with what people are looking for from Three Rivers Parks, especially now. He said, "People want to get off of Zoom and are looking for a deep connection with nature."

As the trailhead sign explains, time spent in nature enhances our health. The long list of benefits includes stress reduction, better focus, improved mood, an increased sense of calm, more altruistic behavior, enhanced creativity and boosting the immune system.

Although the path is just .25 miles, the suggested time spent on the trail is two hours. The two hours allows time to unwind and enter into a meditative state. David said some common feedback he hears is that people are surprised at how long they can spend on such a short span of trail, and he has experienced this himself.

"Often the time flies by and you don't even realize you've had your eyes closed for 25 minutes," he said. However, he encourages people to visit even if they only have limited time. "You can still get a great benefit from a quick visit."

The trail has five guideposts after the trailhead sign. Each invites the visitor to connect with nature through a series of questions and suggestions.

Each suggestion helps further immerse the visitor into the experience. Similar to meditation, the journey helps awaken the senses."

For example, one post reads:

Touch: Stand still. Close your eyes. Can you feel the breeze or the sun/shade on your skin? What do you notice?
Touch the fingertips of one hand to the back of the other, to your face, your clothing. How do these sensations feel?

- Information excerpted from nature rx: silverwood's forest bathing trail by: Mary Christine Kane, May 24, 2021 Available at: <https://www.threeriversparks.org/blog/nature-rx-silverwoods-forest-bathing-trail>

Forest Bathing, Latin America

In November 2019, the USDA Forest Service provided funding to support the first-ever bilingual ANFT Guide Training in Puerto Rico. Fifteen participants from the US, Mexico, Colombia and Nicaragua graduated after a modified training due to the onset of COVID, in order to bring the Forest Therapy practice to their own communities, while weaving in the cultural values of their regions. ANFT has also held two Spanish-language trainings that have primarily focused upon training new forest therapy guides throughout Latin America, which has supported the expansion of this practice in support of wellness tourism and sustainable tourism practices in these regions.

The forests of Chile and the area of Patagonia have become important areas of forest bathing practice in South America. Chile has 105 protected wild zones (41 National Parks, 46 National Reserves and 18 Natural Monuments). The nation of Chile is a leader in forest bathing, also called nature bathing, and there are many local guides that have been training to guide in the diverse natural areas of the country.²⁵ The practice of nature bathing in Chile is also connected with “grounding” which is connecting with the Earth through bare feet. These relationships with the land are respectful of the Indigenous people in Chile and manifested in their worldview on the Pachamama (Mother Earth) and Ñuke Mapu.²⁶

A recently developed Well-being Forest is an example of innovation and expansion in nature bathing in Chile. The Well-being Forest offers a one-mile trail that includes contemplation areas, forest therapy, trails for slow walking, search trails for finding our ancestral roots, and a trail that offers wildlife viewing and listening experiences.²⁷

The Comisión Nacional Forestal (CONAFOR) of Mexico has served to expand the forest therapy practice, research and policy throughout Mexico and beyond. In partnership with the University of British Columbia, CONAFOR hosted an International Conference on Forest Therapy in October 2020. Global experts joined to share advances in research, practice and policy to advance the concept in support of mental, physical and emotional health and welfare.

In 2021, the municipality of Bogota, Columbia, along with the Bogota Botanic Garden, launched the Vitamina N symposium, based upon the inspiring work of Richard Louv, author of *Last Child in the Woods* and other works that focus upon the human need for nature connection. Again, global leaders in forest therapy, NatureRx and health and nature initiatives shared powerful impacts to both people and the natural areas and greenspaces that are interdependent and a prime example of the One Health model. The Bogota Botanic Garden supported two employees to be trained in the ANFT Guiding practice in order to serve visitors to the site, as well as to support employee health and wellbeing.

²⁵<https://tierrahotels.com/blog/healing-through-forest-bathing/>

²⁶<https://www.chile.travel/en/blog-en/forest-bathing/>

²⁷<https://foresttherapyhub.com/the-wellbeing-forest-in-chile-to-take-medicine-from-nature/>



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