



## FOREST-BASED CARE

### case study

# VALLI DEL NATISONE FOREST THERAPY STATION

Valli del Natisone Forest therapy Station - Friuli Venezia Giulia was the first initiative where in Italy for forest therapy, even though it is still in its early stages. Focusing on evidence-based research, it uses healing properties of trees and forests for therapeutic purposes with a specific focus on people with asthmatic conditions.

*A healthy adult individual consumes, on average, 11,000 – 18,000 litres/day of air by breathing. Thus, there is a need to develop new environmental consciousness, remind people of the its the irreplaceability of clean air to breathe, and understanding of its destruction as a cost for all, for people suffering from both communicable and non-communicable diseases. Clean air is a right but also its maintenance should be considered a public duty with which nature helps in a very cost-effective way."*

Maurizio Drolì

## MODEL IN A NUTSHELL

- **Website**  
[spiaggiadiffusa.it/stazione-di-terapia-forestale-valli-del-natisone](http://spiaggiadiffusa.it/stazione-di-terapia-forestale-valli-del-natisone)
- **Social channels**  
[facebook.com/malinmill1](https://facebook.com/malinmill1)
- **Country**  
Italy
- **Main sector**  
Public and voluntary
- **Specific sector**  
Research, Ecosystem Services, Forestry, Health Tourism, Health, Local development
- **Stage of development**  
Prototype (pilot project)
- **Our work in SDGs**



## FROM FEW TO MANY

In 2012, we (Maurizio Droli and a group of researchers from the University of Bolzano and other researchers interested in what we called "matrix resources") founded the **Valli del Natisone Forest therapy Station** out of a research project on the same topics. The researchers were involved in the project at early stage on a voluntary basis, not as a part of a program. As the project evolved and developed, and the interest and research into the subject also improved, I took a personal interest in the matter and in 2015, we launched an organization and then the station.

In **2017**, the Region of Friuli-Venezia charged the University of Udine to carry out **research focusing on ecosystem services on human health**, specifically forest therapy under the supervision of Professor Luca Iseppi, who serves the research-programme as scientific coordinator. Since then I was involved with the University in interdisciplinary research with medical doctors, targeted at understanding the functional effectiveness of the forests. We collaborate with different hospitals in the region. There are also **emerging partnerships with other Italian and Croatian Universities**. Activities in the field are carried out in collaboration with the food and beverage sector, logistics sector, yoga instructors, forest therapy instructors, hospitality centres, etc.

The organized, forest-based, activities have :

- 1) Forest therapy for people suffering from certain diseases (Asthma, Chronic Obstructive Pulmonary Disease, insufficient respiratory syndrome, Cancer, Diabetes mellitus, Psychological diseases: anxiety and depression, Post-COVID19 Syndrome)
- 2) People having declared to suffer from NO diseases (Forest bathing and other forest-based leisure tourism experiences, E.g. Forest-based yoga, biking, forest-ecosystem explorations, educational and cultural experiences within selected forests).

Beneficiaries are also local guides, sport instructors, local farmers, and other local capabilities providing forest-based services.

## FROM IDEA TO ACTION

The idea came to me around 2010, when my family experienced the positive impact of forests themselves. We moved from a city with polluted air in Pianura Padana region and stayed in the mountains for a while. After seeing the positive improvement of asthmatic conditions of my 2 children, I decided to carry out some research on the reasons for this and the health impacts of forests and the research project and collaboration with University of Bolzano began. In 2015 I came across an interesting study on **functional effectiveness of the forests**, role of organic substances produced by trees that are important to keep trees healthy, but also have a positive impact on human health. This study helped me answer my questions soon after, we established the non-profit organization in the same year and the **forest therapy station was launched in 2016**.

Up to now, generating profit for the non-profit organization "**Malin-Mill**" running the forest therapy station, has not been part of the primary mandate for the initiative. Moreover, the Research programme "Forest ecosystem services for public health purposes: forest therapy" run by the University of Udine is a programme supported by **public funding** (national and international e.g. EU FESR 2014-2020 programmes), incentive and interest. While the research station and research are primarily grant funded, there is also revenue coming from the services that are offered and can be broken into; payments for services offered by the suppliers (70%); association fees (20%); Others. We all want to maintain service fares very low to improve their economic accessibility and allow most people living in environmentally polluted areas to experience forests and the services offered.

The **main activities** of the initiative are

- a) academic, both medical and interdisciplinary research;
- b) health tourism experience planning and development based on the evidence coming from the research
- c) sustainable marketing of those experiences
- d) sustainable management of both front-desk and back-office activities
- e) monitoring and preservation of the forest aerosols (Biogenic Volatile Organic Substances - BVOCs) produced by trees
- f) maintenance of forest paths.

Among the **main impact indicators**, I can mention:

- a) Health improvements
- b) Improvements in tourism market visibility (marketing effectiveness)
- c) Cash-flows generated by the initiative for businesses offering lodging and food services, representing the tourism core-business (economic efficiency improvement)
- d) "Km-0" income opportunities offered by the initiative to the local community, E.g. natural guides, cultural guides, craftsmanship, agribusinesses, etc (Equity of the economic recovery process)
- e) Money gathered to preserve the environment through the initiative (Ecological sustainability).

## FROM OLD TO NEW

This initiative is both **evidence-based and community-based**. It involves patients, both individuals and their associations, medical doctors, hospitals, and universities. Furthermore, it puts together local municipalities, firms operating in the lodging sector, food and beverage sector, agricultural sector, craftsmanship, local experts, not for profit associations. **Health tourism experiences** delivered are brought to the market through partnering with income agencies, tour-operators, bus-operators, schools, etc.

Differently from other valuable and similar initiatives, we try to fully respect the simple but rigorous definition of **'Forest Therapy' (FT)** which has been defined in Japan where FT can be described as **"a research-based practice supporting the healing of individuals through the immersion in forests"**. We believe in the "medical roots of FT" which is an integrative, preventative one rehabilitative medicine approach. For forest therapy purposes the initiative relies on forest aerosols (Biogenic Volatile Organic Substances - BVOCs) produced by trees based on their composition and seasonality.

## FROM NOW TO THEN

The main costs of the project are related to the **academic research fellowship** running the interdisciplinary research in this field. Ancillary spending includes sustainable marketing of services delivered and maintenance of forest ecosystems. Some of these costs are covered through **public funds**, some of them are covered by **reinvestment of the revenue earned**.

Our vision is to achieve the recognition of **public interest of this initiative** and the results of the consistent scientific studies. The idea is to create enough evidence, and also good infrastructure, to prepare the field for **wide-scale use of forest therapy** and green prescriptions by the doctors.

In order to achieve this, we need even more precise result-tracking systems, more funds to finance the above-mentioned key activities and continuous improvements of skillsets of both staff and line organizations.

