

Valorization of Forest Heritage for the Improvement of Population Health and Well-being

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The Main Target

How to enhance the regional forest heritage for purposes of well-being and human health and, simultaneously, activate socio-economic dynamics in the mountain areas

Non Communicable Disease (NCDs)

- Despite advances in medicine, non-communicable diseases (NCDs) are responsible for the deaths of 41 million people, or 71% of global deaths (WHO, 2018).
- The NCDs include cardiovascular diseases. These are causing the highest number of deaths, 17.9 million people.
- In the NCDs we must also include anxious depressive syndromes affecting 350 million people worldwide.
- The cost of NCDs is a major cost item in developing and developed countries and is expected to increase further by the WHO.
- More than 1.9 million deaths per year are attributable to poor physical activity (WHO, 2018).

Literature Review - Positive Effects on Well-being of Forest Contact

Psychological effects



- ✓ Depression, mood and anxiety
- ✓ Mental relaxation, attention restoration
- ✓ Vitality and sense of well-being

Physiological effects



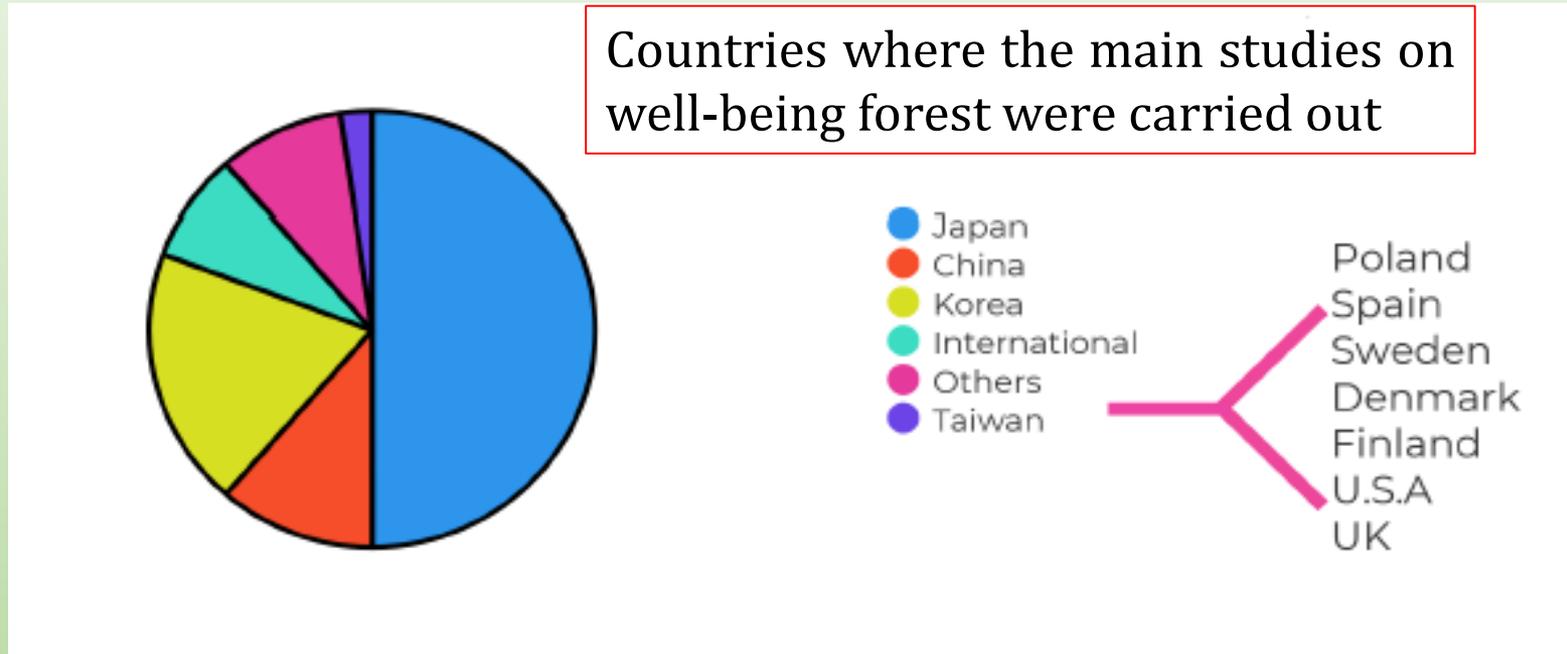
- ✓ Immune System (NKCells, Inflammation)
- ✓ Nervous System (cortisol, heart rate ratio)
- ✓ Cardiovascular system (blood pressure)
- ✓ Respiratory system
- ✓ General Health promotion

Social effects



- ✓ Social skills
- ✓ Emotional skills
- ✓ Self-esteem
- ✓ Creativity and Spirituality
- ✓ Positive behaviour towards nature and health

There are more than 200 scientific studies that demonstrate the psychophysical benefits of targeted physical activity in a forest environment carried out . Much of this research has been conducted in Japan, China and Korea.



These studies have thus allowed the birth of a new scientific approach that combines the enhancement of the forest heritage with the medical therapy that has taken the name of "**Forest Care Initiatives**" (FCIs).

For Example

Part of the benefits are produced by the inhalation of volatile organic substances the 'terpenes'. They represent the largest class of organic compounds naturally present with more than 40,000 structures reported so far. Terpenes are produced from different plants, particularly from conifers. Most of them are associated, not only with the plant's defense mechanism against herbivores and the environment (phytociques), but also with their physiological development.

Forest Care Initiatives

May be described as a practice supporting the physiological, psychological and social healing of individuals through their «immersion» in forest atmosphere

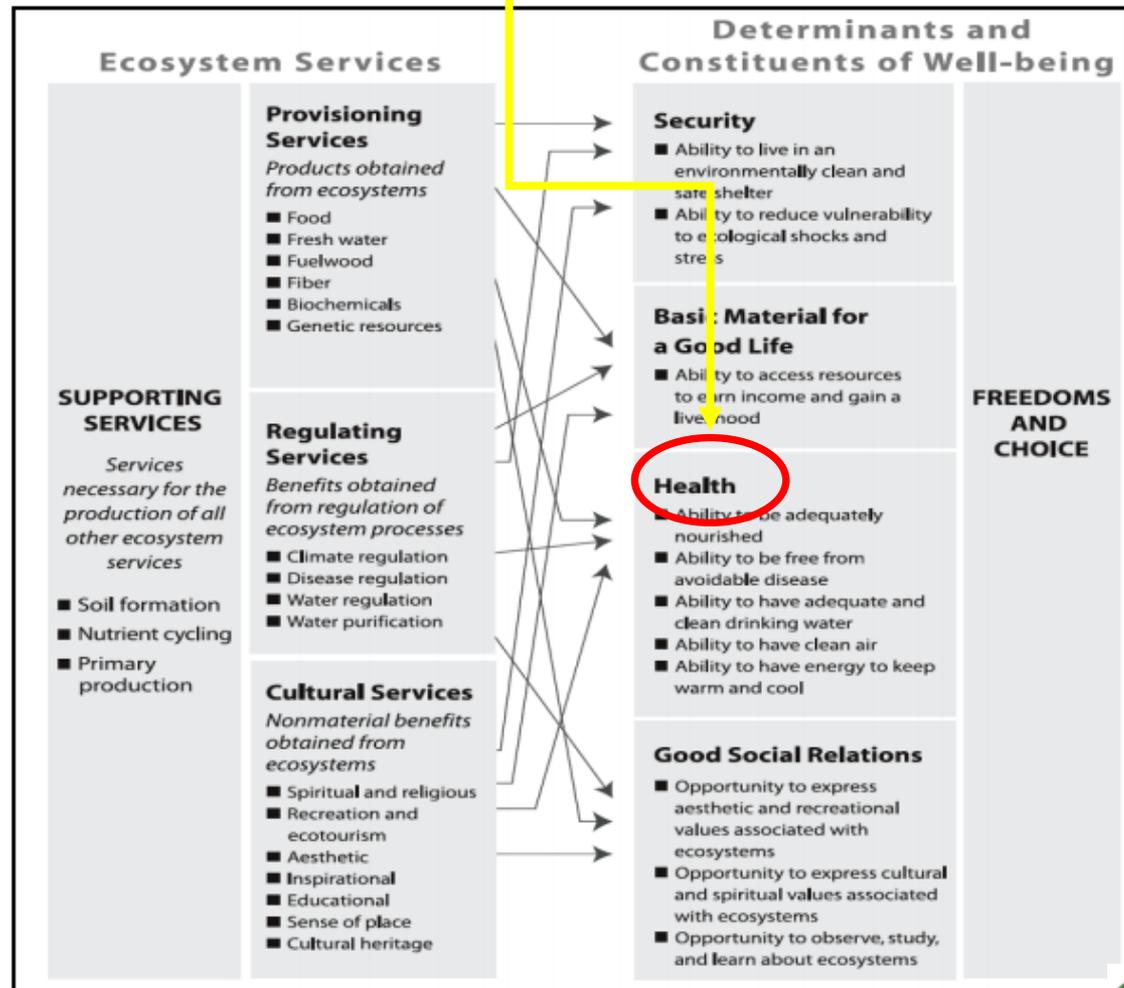
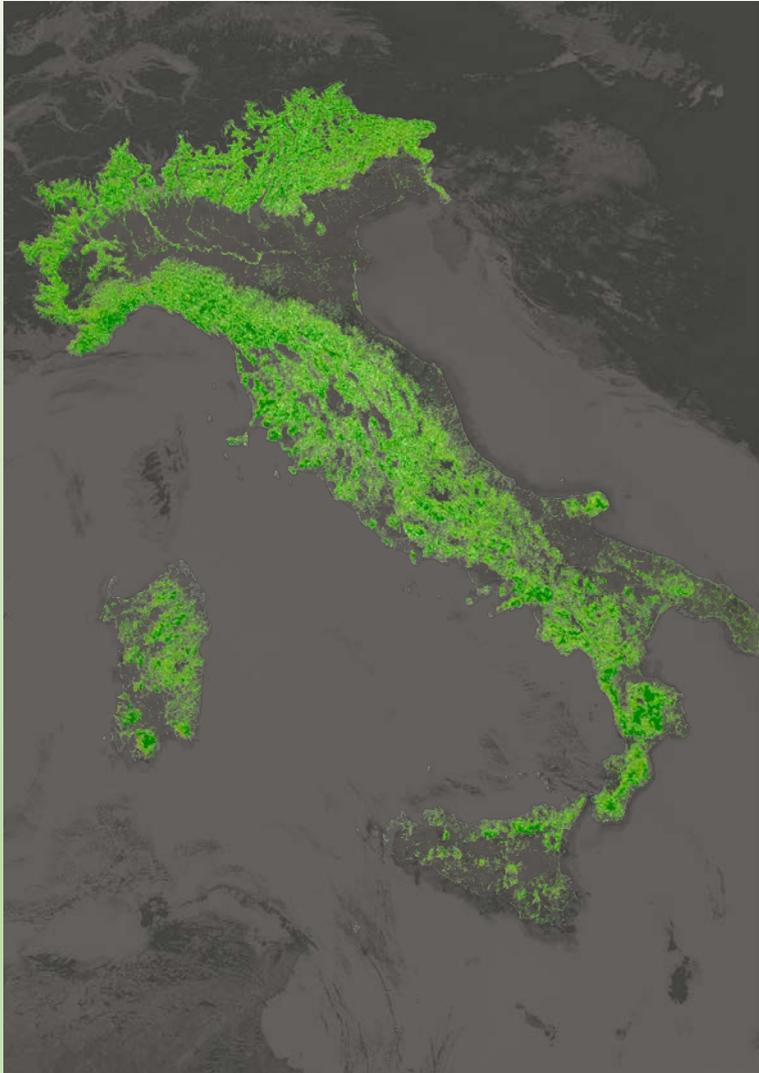


Fig. 2: Relazioni fra servizi ecosistemici e benessere umano

Forest in Italy



NEVER SO ABUNDANT

The forest area is wider than the agricultural area (2018).

Almost 12 M hectares (37% of the national territory).

The expansion process is still ongoing:

- from 1990 to the present 800 m² of new forests per minute (Marchetti et al., 2018);
- over the last 50 years the forest area has doubled (the most significant increase among European countries).

The forest area in the Friuli Venezia Giulia region amount to 316000 hectares (40% is public property and the remaining private property)

What we would like to realize

1. Implement the results of the existing biomedical studies on the relationships between the use of forest heritage and human health in a perspective active ageing also.
2. Classify the regional areas that could become potentially FCIs' station.
3. Assess the ecosystem service "health" provided by forests in monetary terms.
4. Build a business model to develop the economics in the mountain areas.

A lush green forest scene featuring a waterfall cascading into a pool of water. The water is clear and reflects the surrounding greenery. The foreground is dominated by large, light-colored rocks and patches of vibrant green plants. The background is filled with dense, tall trees and hanging vines, creating a sense of a deep, secluded natural environment.

Thank you for your attention