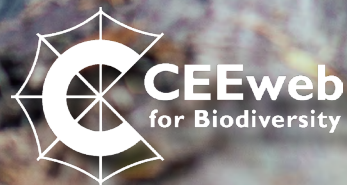


A photograph of a person's legs in blue jeans and white sneakers walking on a large, weathered log in a forest. The ground is covered in fallen leaves and pine needles. The background is a blurred forest scene.

A HEALTHIER FUTURE, WITH A LITTLE HELP FROM OUR NATURE

Green infrastructure integration into the health sector



THE CHALLENGE

Today, we are all witnesses of health and social issues such as urban population growth, environmental degradation and climate change effects. Urbanisation is connected to increased mortality from diseases related to lifestyle such as cancer and heart diseases, as well as to higher body mass index and cholesterol levels. Our health is also affected by pollution, chemicals and even noise, causing not only physical but mental disorders as well. Consequences of climate change, such as floods, droughts and storms, are becoming daily news now and are an increasing threat to our security. A warmer climate we are experiencing is likely to increase substantially the mortality risks associated to poor air quality and extreme heat. It is now a widely accepted fact that a low quality of living and working environments damages our health and wellbeing. Furthermore, a poor environmental state comes with costs for the society - the economic impact of health problems associated to the environmental challenges is substantial. This represents a challenge for all of us - ordinary people, experts and politicians.

- **MORE THAN €1 TRILLION** IS THE ANNUAL ECONOMIC BURDEN OF HEALTH IMPACTS FROM **AIR POLLUTION** IN EUROPE
- **1–3% OF TOTAL HEALTH EXPENDITURE** IN MOST EUROPEAN COUNTRIES ACCOUNTS FROM **OBESITY**
- **UP TO €300 PER EUROPEAN INHABITANT** PER YEAR IS THE COST OF **PHYSICAL INACTIVITY**
- **BETWEEN €1.8 AND 3.5 BILLION PER A YEAR BY 2030** IS THE ESTIMATE OF THE DIRECT DAMAGE COSTS TO HEALTH CAUSED BY **CLIMATE CHANGE**



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DID YOU KNOW?

- IF YOU GROW UP/LIVE IN MICROBE-RICH ENVIRONMENT, YOU WILL HAVE **FEWER ALLERGIES**
- THE CLOSER PEOPLE LIVE TO GREEN AREAS, THE LOWER THEIR **MORTALITY RATES** ARE
- IF YOU SPEND YOUR TIME IN AND AROUND NATURE, YOUR **BLOOD PRESSURE, PULSE RATE** AND LEVELS OF CORTISOL, THE **STRESS HORMONE**, WILL ALL BE **REDUCED**
- A 30M TREE BELT REDUCES THE **SURROUNDING NOISE** UP TO 10 DB(A)

HOW CAN NATURE HELP?

Research shows that people living in a greener environment experience less health problems and evaluate their health more positively than those living in less green environments. In general, there is strong scientific and practical evidence that nature has a significant role in addressing the health challenges that we, the EU citizens, are currently facing. Nature has a significant role in prevention, and prevention reduces healthcare expenditure.

The solutions that are based on or inspired by nature, such as green infrastructure, can offer affordable, replicable and sustainable benefits for a vast number of areas affecting public health and social well-being.

THE BENEFITS OF NATURE FOR OUR HEALTH:

- increased provision of water, food, air and medicine
- improved air, water and food quality
- improved climatic conditions
- improved physical health
- improved mental health

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WHAT IS GREEN INFRASTRUCTURE?

Green infrastructure (GI) is a network of green spaces that provides **multiple and significant benefits both for people and for nature.**

Parks, gardens, tree lines, orchards, woodlands and other green spaces (or “green infrastructure elements”) have always been around us, and are now getting more and more popular as growing urban population is seeking to reconnect with nature. They are present both in urban and rural settings and can range from small-scale urban spaces such as green yards, indoor gardens and green roofs, to very large areas such as nature reserves and extended forests.

Moreover, the **added value of green infrastructure is in putting these elements together into a network** in order to enhance their connectivity and to strengthen the multiple benefits for all living things. It also allows creating a framework for a more structured approach to the management of those benefits.

LINK NATURE - HEALTH - GI:

The natural environment is fundamental for human health - green infrastructure provides a structure of the natural environment that ensures benefits both for people and nature - the benefits provided by the green infrastructure network are reflected in improved health conditions of the human population.



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GREEN INFRASTRUCTURE AND HEALTH POLICIES: EUROPEAN EXAMPLES

In urban environments, the integration of nature into health and social policies has been applied in a range of cities across Europe which are investing in parks, green roofs, tree-lined

streets, green corridors and access to protected natural sites and in that way supporting the health and wellbeing of their citizens. A successful implementation of such cross-sectoral

policies contributes to creating a reputation of attractive places to live and work in, which in return brings increased interest in business investments. Outside of urban environments,

the health benefits of nature have been considered mostly in the context of protected areas and sites with unique characteristics such as mud baths or thermal spa centres.

GI ELEMENTS AND HEALTHCARE FACILITIES:

SWEDEN

GARDEN IMPROVES MENTAL HEALTH, PRIMARY CARE COSTS DROP

The Alnarp Rehabilitation garden was created to research the role that nature plays in improving the mental health of patients. By dividing the garden into different spaces, each designed for a specific aspect of mental restoration, patients are able to have their diverse rehabilitation needs met. Patients who suffer from severe stress or depression have shown a reduction in their need for conventional health care options while visiting the garden. There was also a decrease in the number of visits to their doctors and in inpatient psychiatric care. One year after rehabilitation, the costs for primary care had dropped by 28% for the intervention group in Alnarp, while the length of hospital stay has dropped by 64%. Patients reported improvements in their daily function, general health and reduced stress. The ideas and practices have now been transferred to other 10 nature based rehabilitation programs within Sweden.

ITALY

HOSPITAL CONNECTING CHILDREN TO NATURE

Meyer Children's Hospital in Florence with 150 beds was designed to create a healing environment for patients and landscape alike. The hospital is airy and bright with high ceilings and lots of open space, which creates a serene, peaceful setting for young patients and their families. The facility was built into a sloping hill so it causes less disruption to the surrounding environment. It features a greenhouse, green roofs, gardens and an open buffer space with trees. This hospital is strong advocate of extra-medical forms of health promotion that contribute to anxiety and stress reduction and allow children to be children even as they are convalescing in a medical setting - these include connecting with nature through garden therapy.

HEALTH BENEFITS FROM NATURE IN URBAN PLANNING PROCESSES:

CZECH REPUBLIC

SUSTAINABLE LIVING IN A HEALTHY CITY

The Healthy City Project was launched in 2001 in Chrudim with the aim to increase the overall well-being of the population of the city. This included substantial investments in green infrastructure. Chrudim has run a programme of greening to deliver health benefits to its citizens and visitors, with activities such as investing in arborists to care for city trees, developing new public parks, greening housing estates, and providing residents with new opportunities for outdoor recreation. In general, Chrudim benefits from much more residential participation in city planning and politics and receives wide support for promoting sustainable living in a healthy city.

SPAIN

A PLAN FOR A SUSTAINABLE CITY WITH A RICH BIODIVERSITY

The Barcelona Green Infrastructure and Biodiversity Plan 2020 set the goals of the city of Barcelona to become a city where natural and urban blend together and enrich each other. It also aims to tackle challenges such as climate change adaptation, changes in population, and health. The plan has 5 key aims to address a number of health issues including a reduction in noise and air pollution, more outdoor physical recreation, wider access to recreational areas, and new interactions between various age groups. Thirteen different elements of green infrastructure will be built, including green corridors.



WHAT IS STOPPING US FROM HAVING MORE NATURE?

- Lack of awareness about the relevance of green infrastructure for physical and mental health;
- Lack of adequate institutional and legal frameworks for the deployment of green infrastructure in the function of health, especially outside of urban environments and protected areas;
- Insufficient financial support and/or incentives from EU and national governments for projects that involve green infrastructure elements for human health and wellbeing.

WHAT CAN YOU DO?

- Communicate benefits of nature and green infrastructure towards citizens;
- Compile comprehensive policies that incorporate nature for the benefit of the health sector;
- Promote strategies, plans and investments that take into account health, social and wider benefits of nature in order to meet the needs of their citizens;
- Get informed about funding possibilities for the integration of GI into the health sector, provide this information to relevant authorities, businesses and organizations and support them in project development;
- Identify, support and promote health-care facilities and health-care organizations that work to enhance the benefits of nature for health.

GREEN INFRASTRUCTURE IN THE EU HEALTH-RELATED POLICIES AND PROJECTS



THE EU HEALTH STRATEGY “TOGETHER FOR HEALTH”

is integrated into Europe 2020, the EU’s 10-year economic-growth strategy. The EU Health Strategy recognizes the importance of dealing with the issues of inequities in health that are linked to environmental factors, among others. Moreover, in this Strategy the environmental policies are indicated among key policies for the integration with health issues.

The main instrument to implement the Strategy is the Third Programme for the Union’s Action in the Field of Health (2014-2020), according to which it is necessary to develop actions that tackle the issue of health threats from environment and climate change, among others, as well as fostering supportive environments for healthy lifestyles that take into account environmental factors. Several projects that were partially dealing with these issues have been developed through the previous, Second Programme for Community Action in the Field of Health (2008-2013), such as: Public Health Adaptation Strategies to Extreme Weather Event (PHASE) and Establishment of Environmental Health Information System Supporting Policy Making (ENHIS2).



THE HEALTHY AGEING PROJECT

developed by the Swedish National Institute of Public Health and co-funded by the European Commission, has offered a series of recommendations that would support healthy ageing. The environment is among priority topics for action when it comes to current health issues. It is recommended to improve access to safe and stimulating indoor and outdoor environments for older people; access to technology should be considered as well as the impact of climate change, excessive heat/cold and storms.



“PROTECTING HEALTH IN AN ENVIRONMENT CHALLENGED BY CLIMATE CHANGE: EUROPEAN REGIONAL FRAMEWORK FOR ACTION”

was adopted by all WHO European Member States in 2010. The European Commission has endorsed its conclusions, which include the integration of health in all climate change mitigation and adaptation measures, policies and strategies at all levels and in all sectors; strengthening of health, social welfare and environmental systems and services to improve their response to the impacts of climate change; developing and implementing educational and public awareness programmes on climate change and health; collaborating on increasing the health sector’s contribution to reducing greenhouse gas emissions and management of energy and resources in a more efficient manner.

CURRENT EU FUNDING POSSIBILITIES FOR INTEGRATING GREEN INFRASTRUCTURE AND HEALTH

EUROPEAN REGIONAL DEVELOPMENT FUND (ERDF)

THEMATIC OBJECTIVE 5 - promoting climate change adaptation, risk prevention and management- it is possible to have dedicated investments for adaptation to climate change which can include developing green infrastructure to ensure local/regional adaptation to climate change. Specifically, health-care facilities that are developed through this objective can include GI elements. The same objective is present in the **Cohesion Fund (CF)** as well.

THEMATIC OBJECTIVE 6 – protecting the environment and promoting resource efficiency – it is possible to develop, implement and monitor elements of GI in urban and peri-urban areas through the actions that aim to improve the urban environment. For example, green areas around health-care facilities or in targeted areas with risk population can be developed through this objective.

Under the **THEMATIC OBJECTIVE 10** - investing in education, skills and lifelong learning by developing education and training infrastructure, it can be possible to educate health professionals on the benefits and the importance of green infrastructure for public health.



WHERE CAN I FIND FURTHER INFORMATION?

CEEWEB FOR BIODIVERSITY has vast experience in all aspects of green infrastructure, including policy and project development, providing training for stakeholders and implementing projects at local, national and international level. This experience is further maximized and enhanced through our network of non-governmental organizations in Central and Eastern Europe. We have collected extended knowledge

on green infrastructure and its beneficial role in providing human health and wellbeing. You can consult our Green Infrastructure Hub with a large number of articles and videos at:

www.ceeweb.org/green-infrastructure/

or you can contact our *Biodiversity Policy Officer* Biljana Aljinović: biljana.aljinovic@ceeweb.org

OUR PERSONAL HEALTH, AND THE HEALTH OF OUR ECONOMY AND HUMAN SOCIETY, DEPENDS ON THE CONTINUOUS SUPPLY OF VARIOUS ECOLOGICAL SERVICES THAT WOULD BE EXTREMELY COSTLY OR IMPOSSIBLE TO REPLACE.

Convention on Biological Diversity, 2002, p. 4

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A HEALTHIER FUTURE - WITH A LITTLE HELP FROM OUR NATURE

GREEN INFRASTRUCTURE INTEGRATION INTO THE HEALTH SECTOR

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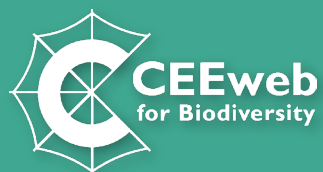
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CEEweb for Biodiversity is a network of non-governmental organizations in the Central and Eastern European region working for 20 years in 20 countries. Our mission is the conservation of biodiversity through the promotion of sustainable development.



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