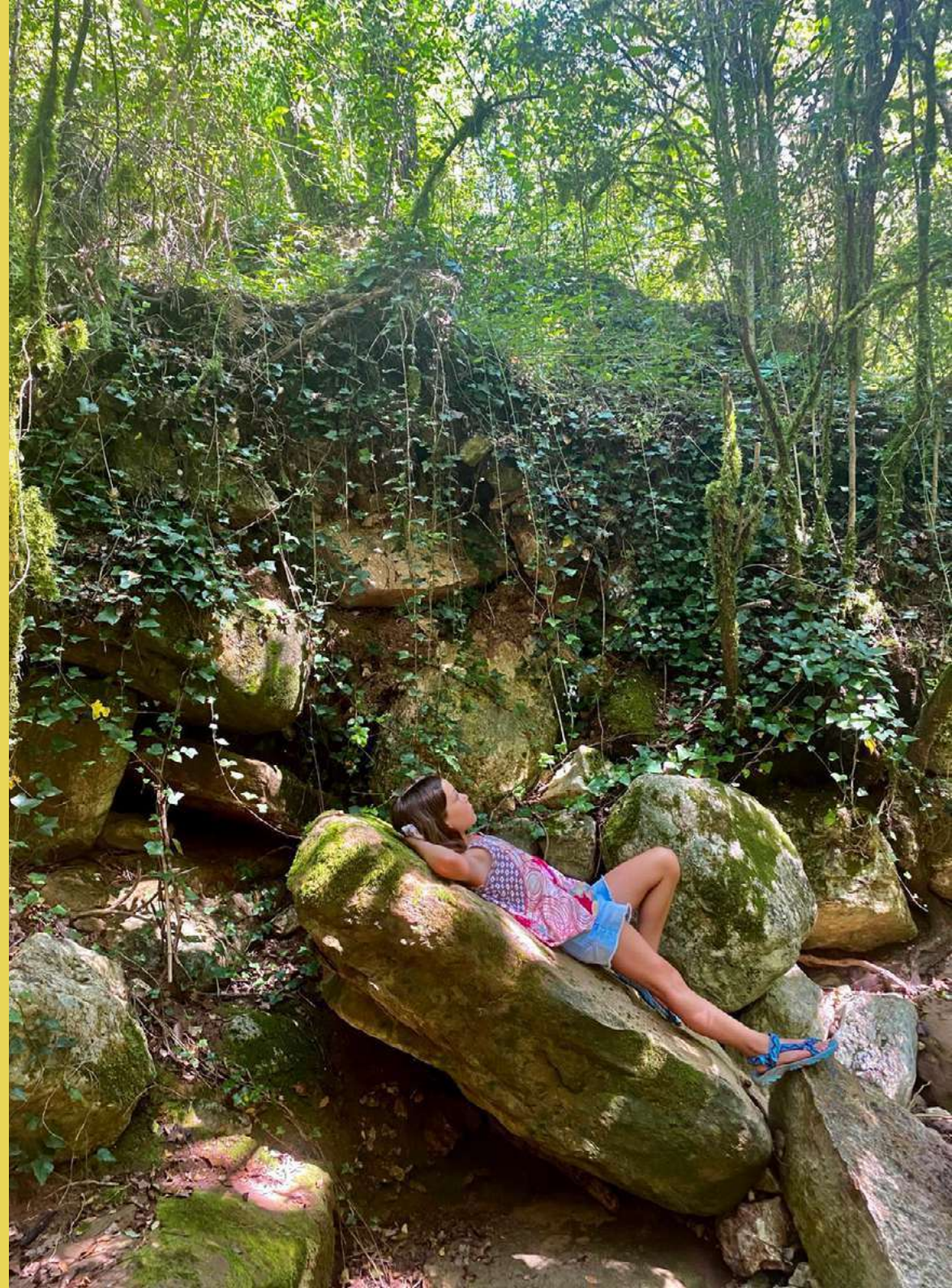


Health and Nature

A guide to promoting the link between health and nature in childhood, adolescence and youth.

€ S C E A



Health and Nature

Guide to promoting the health and nature connection in childhood, adolescence and youth.

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1 INTRODUCTION /

Any time spent outdoors is beneficial, but spending time in nature is even better. Simple experiences such as walking outside, soaking up the sun or listening to birdsong can help restore our connection with nature and reap the benefits it offers.

We can incorporate nature as a key element of our lives and of those around us. It is necessary to find daily moments to connect with nature, preferably close to our homes, to facilitate this bond. And, on the other hand, to plan activities that involve greater contact with natural environments. However, when promoting these actions in different locations, spaces, centres or schools, through proposals from organisations or other public institutions, we must remember to take into account economic and social inequality, which also often poses an obstacle to accessing nature.

This guide is a product developed within the framework of the Health and Nature Table for Childhood, Adolescence and Youth (hereinafter TSN IAJ), by the Catalan Society for Environmental Education (hereinafter SCEA) and in collaboration with the Network for Nature Conservation

(hereinafter XCN), with the support of the Department of Territory, Housing and Ecological Transition (hereinafter TER).

This document offers a compilation of experiences, resources, projects, research and initiatives focused on integrating the health-nature nexus for children, adolescents and young people. The objective is to connect this audience with nature and promote their physical and mental health and overall well-being. Furthermore, it highlights a wide variety of organisations and institutions that incorporate this approach into their actions aimed at these age groups.

Given the importance of people's health and well-being in these interventions, this process requires a clear definition of concepts and the establishment of a solid theoretical framework, which is presented in the first part of the guide.

In the second part, a classification of the different levels of intervention in nature is presented, based on the objectives of each, the approach taken in natural environments and the impact they have on health.

Next, the third section presents practical recommendations for integrating the health and nature duo into projects and activities. In addition, it provides information on various relevant experiences, organisations, projects and initiatives, both in Catalonia and internationally, which can serve as inspiration for creating new projects. It is worth noting that some countries have a long history in the relationship between health and nature, offering valuable and interesting initiatives that are worth knowing about and replicating. Finally, the key elements to consider when organising an activity in this field are detailed.

We hope you find the key elements and inspiration to generate more actions and projects. We invite you to join the interactive map of the Catalan Health and Nature Table to give visibility to your initiatives: www.taulasalutinatura.cat, as well as the SCEA census if your organisation belongs to the environmental education sector: www.scea.cat.

This guide is intended to be a practical and inspiring tool for all those who work or wish to work at the intersection of health, nature and environmental education, promoting a healthier and more sustainable future for new generations.

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2 THE RELATIONSHIP BETWEEN NATURE AND HEALTH /

Nature provides us with all the essential resources for life: water, food sources, building materials, biomass, energy, etc. Moreover, it regulates the cycles on which we depend: it filters water, decomposes materials to produce organic matter and create new food, regulates our atmosphere and climate, and serves as a sentinel (if we know how to listen) regarding exposure to harmful toxins. And, in relation to health, it is the basis of our healing elements, our pharmacy.

We are part of nature and nature is part of us, but rapid urbanisation has caused us to become increasingly distant from it. Recently, however, the evidence for the need to be in contact with nature to maintain our health has grown, and interest in reconnecting, in returning to nature, is increasing, as are the initiatives aimed at achieving this. Understanding what, how and why to do this will help us rethink the cities and towns where we live, our priorities, and our relationship with nature to make this possible.

In fact, this idea is not new, and as early as 1984 the biologist Edward O. Wilson, in his book "Biophilia", developed the theory that connecting with nature and other forms of life is something innate in people. Biophilia has been studied in various fields, including that of

architecture, psychology, biology, and environmental health. This theory suggests that the lack of connection with nature can lead to a series of health and well-being problems.

"Biophilia is the innate human tendency to focus our attention on other organisms and on the natural processes that sustain life"
(Wilson, 1984).

The Social Determinants of Health and Nature

By the late 19th century, it had already been established that environmental, economic and social factors have a key influence on people's health. However, it was not until the 1960s of the 20th century that these factors influencing health began to be studied, apart from each individual's biology or genetics and the health care system, laying the foundations for the health determinants model. In 1974, Marc Lalonde, then Canada's Minister of Health, published the report "New Perspectives on the Health of Canadians", in which he established a

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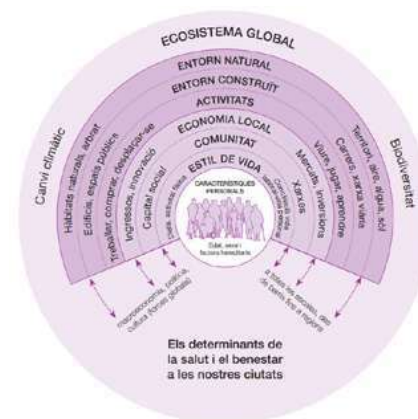
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a conceptual framework for the comprehensive understanding of human health as the result of the interaction of four factors: human biology, the environment, lifestyle, and the health system. Another author, Dever, analysed these factors and concluded that habits and lifestyles are the greatest contributors to health status (43%), followed by human biology (27%), the social and environmental setting (19%), and finally health services (11%).

The Health Determinants Model, established by Dahlgren and Whitehead in 1991, explains how the different factors interact to shape people's health. These factors can influence health either positively or negatively. At the centre are the intrinsic factors of each person: age, gender and their biology. These intrinsic factors are largely expressed in one way or another according to individual lifestyle, as they are directly influenced by it. The social and community network in which an individual is embedded influences their lifestyles. All of this, however, depends on many social, economic, cultural and environmental factors, which provide the basis upon which the community networks of each neighbourhood or area will develop, and which influences the lifestyles of each individual. For example, although many health problems are derived from associated risk factors

to lifestyle, such as tobacco use or a sedentary lifestyle, these are strongly related to a lack of resources and social inequalities.

Figure 1. Model of social determinants of health



Source: Diputació de Barcelona. Barton and Grant (2006). The health map. Developed from the concepts of Dahlgren and Whitehead (1991).

This image stands out for its ability to convey the complexity of the determinants of health clearly and concisely to a diverse audience. It allows anyone to identify their role in promoting health within the overall system. It also establishes a connection between human experience, through the built environment, and broader global factors, such as climate and biodiversity.

Health is, therefore, the result of individual and collective actions and factors, but these do not affect everyone equally. Social inequalities, understood as the avoidable differences between population groups defined by social, economic, demographic and geographical criteria, have a significant impact on health and its determinants. It is also important to emphasise that in societies with similar economic levels, those with less inequality among their members tend to have greater social cohesion, lower crime rates and lower mortality rates, especially those resulting from cardiovascular diseases.

Social determinants of health and social inequalities directly influence the ability to access and enjoy nature. In order to ensure that all people, regardless of their economic, social or physical situation, can benefit from nature, it is necessary to implement measures that reduce these inequalities and promote equitable access to natural spaces. This would not only improve individual health, but would also contribute to collective and planetary health.



The most important aspects in which social inequalities impact access to nature, especially for the population living in neighbourhoods with lower socioeconomic levels:

A *They tend to have fewer green and blue spaces, and those that do exist are often smaller and of lower quality. This lack of green or blue infrastructure not only limits the opportunity to enjoy nature, but also has a direct impact on the health of the residents of these neighbourhoods. The lack of spaces for walking, exercising or simply relaxing contributes to an increase in physical and mental health problems, such as obesity, anxiety and depression. We need to think about how and where we will encourage contact with nature in these neighbourhoods, how we will get there, thinking that they are viable and sustainable options over time.*

B *There is greater exposure to environmental pollutants, such as noise, air pollution from increased vehicle traffic or the presence of polluting industries, etc. In addition to the harmful effects on health from this exposure, there are also higher levels of stress, anxiety and depression.*

C *Difficulty accessing natural spaces, whether due to a lack of transport or the financial costs involved, especially for those protected natural areas outside the cities. On many occasions, these spaces are located far from urban centres, and people without their own vehicle or access to effective public transport are deprived of the opportunity to enjoy them. On the other hand, the cost associated with visiting protected natural areas or taking part in outdoor activities can be another reason. Many of these spaces require not only transport, but also the purchase of tickets, permits or the hiring of guides, or even having suitable equipment for going into the countryside. These aspects can exclude those people or families with fewer resources.*

D *Accessibility for all groups, including people with reduced mobility, older people and families with young children. Many natural areas are not adapted for people with disabilities, which prevents them from fully enjoying nature. The absence of infrastructure such as ramps, accessible signage, accessible paths or adequate facilities limits the inclusion of these groups, depriving them of the benefits that the natural environment can offer for to their health and well-being.*



Nature is a key factor in the health determinants model: it influences food acquisition, access to a drinking water supply, exposure to contaminants, and whether we are protected from or exposed to disease vectors, etc. The World Health Organization estimates that 21.2% of global deaths and 16.3% of global disability-adjusted life years lost are attributable to these risk factors (Gibson JM, 2017).

But as we have said before, all these factors can influence health negatively as well as positively. In this guide we focus on the positive influence of nature on our health, and we do so from a **salutogenesis** perspective.

This is a model developed by the sociologist Aaron Antonovsky, centred on the factors that promote and maintain health, rather than the causes of disease (pathogenesis). Salutogenesis places the emphasis on the general coping resources that enable people to manage stress and other life challenges in a positive way, fostering well-being and resilience, and which stem from within the individual, from their environment, knowledge and experiences. The concept of Sense of Coherence brings together the elements that enable people

move from illness to health, based on understanding what is happening, one's own skills to manage it, and the ability to turn it into something satisfying and meaningful for their life.

In practice, this involves enhancing the protective factors and resources that help maintain physical, mental and social balance, and that promote self-care and overall health. In the context of childhood, adolescence and youth (but also for all people and groups), salutogenesis and the health-nature nexus connect through the idea that **a connection with nature acts as a salutogenic factor**, that is, as a **positive resource that promotes health and well-being**.

Key points of this relationship:

1 **Strengthening resilience:**
Green and blue spaces, outdoor activities and exploring the natural environment foster creativity, autonomy and problem-solving, while helping to better manage stress and emotions.

2 **Social and cognitive development:**
Experiences in nature foster cognitive and social development. Children and adolescents learn to interact with their environment and with others in a freer, more cooperative way, building social and emotional skills for a balanced life.

3 **Fostering a deep connection with the environment:**
Nature is not only a physical space but also a source of meaning and existential well-being. For children and young people, contact with nature helps to establish this connection with the world, generating a sense of belonging and harmony with their environment, which is key to long-term sustainable health.

4 **Building healthy lifestyle habits:**
Exposing children and adolescents to natural spaces from an early age helps them acquire healthy lifestyle habits that can last into adulthood.

2 Benefits of contact with nature

Several mechanisms have been proposed through which exposure to nature produces both psychological and physiological benefits for infants, adolescents and young people, including the reduction of stress; increased social contact and social cohesion; the improvement of physical activity; the mitigation of exposure to air pollution, noise and water pollution; the reduction of heat islands; and the enrichment of the environmental microbiota. Those people with greater access to and connection with nature have higher levels of well-being and a stronger sense of belonging to natural spaces (Anders et al., 2023). In this chapter, we explain these benefits in more detail.

Exposure to green spaces is associated with better pregnancy outcomes, such as a lower risk of low birth weight and low gestational growth, preterm birth, and complications such as pre-eclampsia, gestational diabetes and postpartum depression (Banay et al. 2017), especially among women of lower socioeconomic status.

Although green spaces and urban tree cover have been linked to an increased risk of asthma and allergic conditions due to the release

of allergenic pollen and fungal spores, or due to the use of pesticides or fertilisers used for their maintenance, there are various studies showing how biodiversity acts as a protective factor. That is to say, children and adolescents living in more biodiverse environments have a lower risk of developing asthma and allergies (Hanski et al. 2012). This is because they are in contact with a more diverse environmental microbiome, which acts as an immunoregulator. The increased risk of asthma and allergies is usually due to areas with a high concentration of trees of the same species, that is, a low-biodiversity environment, and it also depends on the climate.

According to the biophilia theory, outlined in the previous section, contact with nature is key to brain development, both structurally and in terms of cognition and behaviour. Foetal development during pregnancy, and the first years of life, when the brain is forming, are key periods where exposure to negative environmental factors (noise, pollution, etc.) or positive ones (such as nature) can play a fundamental role in its development. This influence can be permanent and may manifest in the form of diseases long afterwards, even if exposure to the pollutants has ceased. Similarly, the effects of exposure to nature in these early stages of development could have a long-term protective effect (Dadvand et al., 2019).

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On the one hand, children who grow up in urban areas with little green or blue space and little contact with nature are at greater risk of neurodevelopmental disorders, such as Attention Deficit Hyperactivity Disorder (ADHD) with or without hyperactivity, or Autism Spectrum Disorder. (ASD) (Skounti et al. 2007; Williams et al. 2006). On the other hand, increased contact with nature and nature-based interventions have been associated with improved attention, memory, self-discipline, better behaviour and symptom reduction, and higher scores on standardised tests for ADHD (McCormick, 2017). Motor-sensory, emotional and social benefits have also been demonstrated in children with ASD, despite them often facing significant barriers to accessing nature such as phobias, inappropriate behaviours or unsafe environments (Li et al., 2019). Some demonstrate notable progress, particularly in the area of social and communication skills, and this is maintained over time following nature-based interventions (Ramshini et al., 2018).

Education in contact with nature enhances academic performance, creativity and critical thinking. It also has positive effects on emotional and social development, as it allows for the development of self-esteem and self-confidence to face future challenges and adversities, reduces stress and aggression, promotes impulse control and improves social skills, creativity and imagination (Weeland et al., 2019). Even passive exposure to nature leads to changes in attention, memory and mood (Norwood et al., 2019). In schools with more contact with nature, a significant difference has been seen in students' STEM (science, technology, engineering and maths) ability and health-related Quality of Life, and they also achieve higher exam scores (Sprague et al., 2020). For this reason, it is important that schools consider nature as a valuable educational resource that contributes to children's emotional well-being, helping to develop their social and emotional skills, and improving their learning.



Art and nature programmes, or similar initiatives, offer a way to engage children, adolescents and young people, especially those who would otherwise be disinterested in environmental issues and disconnected from educational programmes. They provide stimuli to increase the connection with nature, understand environmental problems and explore ways to prevent them, increasing environmental awareness and favourable environmental behaviours, and a possible decrease in ecological anxiety (Moula et al., 2022).

In the case of children, contact with nature encourages active play, which, in addition to the detailed cognitive and emotional benefits, is a key aspect for increasing physical activity and preventing obesity. It also improves motor skills, such as coordination, agility and balance, and facilitates the development of socio-emotional competencies and social skills, reducing anxiety and depression (Louv, 2005; Dankiw et al., 2020). Connection with nature is also associated with increased physical activity, and in non-sedentary, screen-free leisure time (Molina-Cando et al., 2021). Natural elements, such as trees, shrubs, water, logs and sand in outdoor play spaces, can offer more opportunities for free play and also help to regulate environmental conditions, such as sun and wind in playgrounds. Play and nature cannot be replaced by other measures or materials (Herrington and Brussoni, 2015).

Adolescents and young people also benefit enormously from contact with nature; at this stage, emotional well-being is of particular interest. A stronger connection with nature reduces psychosomatic symptoms, and adolescents' engagement with nature acts as a protector of their psychological well-being (Piccininni et al., 2018). For vulnerable young people with mental, emotional, developmental, behavioural or social difficulties, nature-based therapies have largely positive outcomes across a wide range of psychosocial and behavioural measures, which often persist after treatment (Overbey et al., 2023).

Nature-based therapies for vulnerable young people with mental, emotional, developmental, behavioural or social difficulties have largely positive outcomes on a wide range of psychosocial and behavioural measures, and these often persist post-treatment (Overbey et al., 2023). (Kellstedt et al., 2024). According to the Phenotype project (2015) by the Barcelona Institute for Global Health (ISGlobal), conducted in four European cities, experiences in nature during childhood, especially but also in youth, which include immersive and engaging skill-development activities involving opportunities for social interaction, such as camping and hiking, help to create and consolidate a connection with nature, which in turn is associated with a greater connection to and more time spent in nature in adulthood. (Kellstedt et al., 2024). According to the Phenotype project (2015) by the Barcelona Institute for Global Health (ISGlobal), carried out in four European cities, adults who had more contact with natural spaces during their childhood may have better mental health than those who were less exposed to nature.

Finally, a connection with nature improves environmentally-friendly behaviours (Maddock et al., 2022). Interventions are needed to increase

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contact with and connection to nature from childhood onwards, to achieve synergistic improvements in human and planetary health (Martin et al., 2020).

2. Consequences of disconnection from nature

Nature deficit disorder, a term coined by writer and journalist Richard Louv in his book "Last Child in the Woods" (2005), refers to the negative consequences that a lack of contact with nature can have on people, especially children. Although it is not an official medical disorder, this concept has gained importance in the fields of health and education, as it helps to raise awareness of the negative effects that disconnection from nature can have on human development. There are several factors that contribute to children and even adults suffering from this disorder, such as:

- / The **reduction of open spaces** for play, for children as well as for young people, adolescents and adults, which are often unnatural.
- / The **lack of quality green and blue spaces** in urban areas.
- / **Poor accessibility to spaces** and, on the other hand, their adaptation for all groups.
- / **The increase in traffic** and travel times between homes, schools or workplaces, which reduce opportunities to enjoy nature.

/ The **media world**, which, with increasingly negative news, fosters a fear of the outdoors.

/ Little **interest, tools or resources for outdoor education**, both in the public and private sectors.

/ **The increase in screens** and electronic communications, which keep people more connected to technological devices-
gical devices than with nature.

Currently, as the spaces in which we spend our day (offices, schools, etc.) are designed, and given our reliance on technology for most of the tasks we carry out, being in contact with nature on a daily basis is often perceived as something distant. Going to a natural environment seems to be scheduled only for sporadic occasions and generally at weekends. Children, adolescents and young people who spend a large part of their time in enclosed spaces often do so in front of screens.

Over time, especially after the lockdowns caused by the Covid-19 pandemic, new scientific studies have supported Louv's observations. In general, several studies by the American organisation *Children & Nature Network* indicate that nature deficit disorder

Nature deficit disorder causes a reduction in the use of the senses, greater attention difficulties, a tendency towards obesity and higher rates of emotional and physical illnesses. Finally, nature deficit disorder weakens knowledge of and management in the natural world, affecting our understanding of the world around us and further increasing fear of nature and disconnection from the natural environment. On the other hand, increasing our connection with nature fosters pro-environmental conservation behaviours, as well as an understanding of its importance for our well-being and that of the planet. These problems are directly related to what experts call the "inactivity epidemic" or the "loss of independent play."

Therefore, the impact of limited access to and connection with nature is serious enough for measures to be taken, both in general and especially within the educational community, including families and teachers, to help young people and reclaim these spaces.

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2The "dos3i" of nature

At this point, we might ask ourselves, how much nature do children, adolescents and young people need?

According to the Global Alliance to Renature Child and Adolescent Health, children should spend at least 12 hours a week (or at least more than an hour a day) in a nearby natural environment to ensure healthy development. Even so, it is considered that with just 2 hours a week beneficial effects can already be seen. Although this may seem like a short amount of time, 25% of children and adolescents living in urban environments only go outside to play in the open air once a month, and only 25% visit an urban green or blue space daily. Spending less than two hours a week in contact with nature is thought to trigger "nature deficit disorder".

The Global Alliance to Renature Children's and Adolescents' Health is an initiative promoted by the Spanish Paediatric Association (AEP) and its Environmental Health Committee to promote the reconnection of children and adolescents with nature. Among its objectives are identifying innovative solutions to environmental health challenges, and it will promote nature prescribing for self-care and carbon neutrality in homes, healthcare and educational centres.

[More information.](#)

However, while it is clear that people need time in contact with nature for its effects, there are other elements that we know also influence the mechanisms of health improvement, such as the connection with nature, perceived biodiversity or the type of activity carried out (Sachs et al., 2024).



Different studies show that:

- 1) The connection with nature and the type of activity are more predictive of mental well-being than the time spent in nature (Richardson et al., 2021).
- 2) Different spaces and biodiversity offer different experiences and, therefore, provide different potential pathways for health improvement (Aste-II-Burt et al., 2022).
- 3) Perceived biodiversity is also linked to improved well-being (Cameron et al., 2020).

Thus, the necessary dose of nature will depend on multiple factors, including the benefits we are seeking, our state of health, our connection with and knowledge of nature, our previous experiences, the weather and the type of natural space (including its biodiversity) we interact with, and the type of activity we undertake there (Sachs et al., 2024).

3 LEVELS OF INTERVENTION IN HEALTH AND NATURE /

If we think about our childhood, we are likely to have many memories linked to natural settings. The images we recall from the past often place us playing in the woods or in a park, perhaps going camping or to the beach, bathing in the sea and building sandcastles. At this stage of life, being able to have contact with nature is vital for proper physical development, but also for emotional and spiritual growth.

In an increasingly urbanised world, access to natural spaces and an understanding of the environment are fundamental to physical and emotional well-being, yet children, adolescents and young people are becoming ever more disconnected from them. Through educational and environmental awareness initiatives involving outdoor activities, healthy habits are fostered while promoting a connection with the natural world, and they offer an ideal framework for developing the connection with nature of the children, adolescents and young people who take part. On the other hand, for children, adolescents and young people, practical learning in nature awakens their environmental awareness and instils values of respect and care for the environment, which are key to conservation and pro-environmental attitudes.

Nature-based environmental education is inclusive, as it offers learning opportunities accessible to all types of audiences, regardless of their abilities or social circumstances. By fostering a sense of belonging and connection with nature, these actions have a lasting impact on both individual and collective health, contributing to the creation of a more environmentally conscious and respectful society.

People's connection with nature can be understood in a gradual way. At first, there is the phase of "seeing" nature, where we observe it without direct involvement. Next, we find the experience of "being within" nature, where we not only observe it but immerse ourselves in it, walking through forests or swimming in the sea, feeling part of its environment. Thirdly, there is 'active participation', where the relationship becomes reciprocal; here we work alongside nature, whether by cultivating it, protecting it, or taking part in activities that promote it. This level of interaction implies an intimate and conscious connection, in which the person does not act merely as an observer, but as an integral part of the ecosystem. Finally, we find therapeutic interventions in nature specifically aimed at treating particular diseases or disorders.

Therefore, depending on the relationship established with nature and the effects sought, we can distinguish different levels of intervention to improve people's health through contact with the natural environment. These levels range from promoting general well-being to specific interventions for treating particular conditions. All levels contribute in some way to improving physical and mental well-being. These interventions are beneficial for everyone, and can be adapted for both children and young people, offering experiences ranging from recreational activities to therapeutic programmes with very specific objectives.

FIGURE 2: Levels of intervention in Health and Nature.



Source: Irene Cervera and Montse Masó, 2024.

Level 1: Nature in everyday life

In an urban world, it is necessary to ensure that everyone has access to nature, even passively. Increasing the green and blue infrastructure of cities, the renaturalisation of spaces and boosting biodiversity, and ensuring it is well-connected, is essential for healthier cities and for promoting contact and connection with nature. Cecil Konijnendijk proposed the 3-30 rule. – 300, meaning that everyone should be able to see at least 3 trees from their window, the cities' vegetation cover should be 30%, and there should be a green or blue space of at least 1 ha within a maximum of 300 metres of home. Various studies show that our cities, especially the most socioeconomically vulnerable neighbourhoods, are far from meeting these targets.

Objective: For children and young people to have access to quality green and blue spaces, and for these to be designed and adapted to the needs of these groups.

Examples:

/ Playgrounds with high-quality plant and aquatic elements, offering play proposals that make use of natural features and interaction with them. The orientation and plant cover should ideally provide shade in summer and, where possible, more sun in winter, for better thermal regulation.

/ That green spaces offer elements and activities of interest to young people, so as to encourage their interaction with the spaces while fostering respect for the environment.



Level 2: Nature Exploration

This level focuses on bringing children, adolescents and young people closer to nature through recreational and educational activities without an explicit therapeutic intent. Children develop a basic connection with the environment, offering an immersion in nature that enhances learning and respect for the environment and, on the other hand, facilitates physical and cognitive development in a natural and spontaneous way. It also offers the opportunity to improve social and relational skills.

Objective: To promote contact with and interest in nature for enjoyment and learning, and to encourage healthy habits.

Examples:

- / Outdoor sports activities: Hiking, cycling, climbing, kayaking and other sports carried out in natural environments.
- / Environmental education: Workshops and programmes that teach participants about the importance of conservation, biodiversity and sustainable practices.
- / Camps and residential trips: Stays in natural settings where learning is combined with play and socialising.

Level 3: Connection with nature

At this level, the aim is to establish a more intentional and profound relationship with nature to improve emotional and physical well-being and overall quality of life. The activities are designed to promote health, environmental awareness and personal development, and to facilitate relaxation, reduce stress, and increase the connection with nature.

Objective: To improve well-being through emotional and physical connection with the natural environment.

Examples:

- / Participation in community gardens, reforestation and other sustainability and conservation initiatives for the natural environment, environmental volunteering.
- / Immersive nature experiences: Educational programmes, residential stays or camps that focus on active interaction with nature and allow for a connection with the natural environment, such as work camps or service-learning initiatives.
- / Mindfulness and wellbeing activities, such as meditation, yoga, forest bathing (shinrin-yoku) and breathing practices in natural settings, adapted for different groups of children and young people.

Level 4: Therapeutic interventions in nature

Interventions that use nature as a therapeutic tool and are specifically designed to improve or treat specific disorders or illnesses, whether physical, mental or developmental disorders in children and young people. These interventions require the involvement of specialised professionals and are tailored to the individual characteristics of each participant, although they can be individual or group-based.

Specific nature therapy programmes that combine psychological and physical intervention.

Objective: To improve specific aspects of health or to provide general therapeutic support by carrying out therapeutic interventions in nature.

Examples:

- / Adventure therapy programmes: Outdoor activities designed by therapists to foster confidence, resilience and communication skills.
- / Animal-assisted therapy to improve the social and emotional skills of children and young people.
- / Agritherapy, hortitherapy, or gardening therapy: Activities related to agriculture, horticulture or gardening aimed at improving specific aspects of health, such as mental health or enhancing social relationships, etc.
- / Nature programmes adapted for children and young people, which include nature movement therapy, art or other tools and resources.
- / Nature-based social prescribing by social or health professionals, ranging from increased contact with nature to specific, tailored interventions for particular health issues (asthma, autism spectrum disorder, etc.).
- / Paediatric Environmental Health Units (PESHU).




4 HOW TO INTEGRATE THE DUALITY OF HEALTH AND NATURE INTO OUR ACTIONS /


In this section you will find ideas, recommendations and aspects to consider for incorporating nature into the daily lives of children, adolescents and young people, as well as into activities specifically designed to improve their health.


Following these recommendations, we will introduce inspiring programmes, organisations or projects, both from Catalonia and from other countries. At the international level, we find various initiatives of these practices that have had an impact on the community. Projects that also serve as an example when promoting these actions from different sectors, taking into account economic and social inequality, which also often poses an obstacle to accessing nature.


4


General practical recommendations

 Incorporate more time outdoors: Plan regular outings to natural spaces with children, adolescents and young people to allow them to play, explore and observe nature.


 Promote environmental education: educational activities that foster environmental knowledge and awareness.


 Include nature-based social prescribing in the public health system.


 Identify the natural assets of neighbourhoods and municipalities and publicise them through organisations, health centres, educational institutions, etc. And incorporate them into the Generalitat's Health Assets Map to improve their visibility and facilitate their prescription.

 Ensure access to protected natural areas by facilitating travel via public transport and/or offering guided activities.

vented for families and groups with fewer resources, or who live in disadvantaged neighbourhoods.

 Invest in green and blue infrastructure to renaturalise and adapt urban environments to the new realities of climate change, especially in the face of weather phenomena. gical extremes.

 Adapt natural spaces, or generate resources to make them accessible to people with disabilities and other vulnerable groups, ensuring that everyone has the opportunity to benefit from nature.


 Conduct projects to assess the impact of nature on health, in order to gather scientific evidence and improve actions to achieve a greater impact.

 Renaturation of schoolyards.

Below, we analyse each of them in detail. For each, you will find examples of projects, organisations or activities that are already being successfully implemented, and the level of intervention to which they correspond.

1/ Spend more time outdoors: Plan regular outings to natural spaces with children, adolescents and young people

It is recommended to visit a green or blue space every day, such as parks or gardens, for an hour. You can use the weekend to do longer outdoor activities with family or friends: go for a walk, go mushroom picking when the season arrives or visit an adventure park in the middle of the woods... You can also look for nature-based initiatives organised in your local area, such as walks, sports activities, clean-ups of the natural environment, activities at community centres, environmental facilities, etc.



LEVEL
2
nature

The **Ter Consortium** is promoting the **Health and Nature project**, with the organisation of activities and workshops to bring closer to nature the most vulnerable groups or those who show no predisposition to have contact with nature, and thus improve their physical and mental health. The activities are aimed at everyone but give preference to people at risk of social exclusion.

[More information](#)





The **environmental playgrounds** coordinated by the **AMB** (Barcelona Metropolitan Area) are spaces where families with children of all ages can share a period of play and experimentation while learning about the values of the metropolitan parks and beaches, as well as other sustainability-related content.

The Environmental Playgrounds also feature an unstructured play and experimentation area, an information point about the park and the municipality in which they are located, and a different guided activity each day on nature and the environment. [More information](#)



The **Network of Natural Parks of the Barcelona Provincial Council** offers activities for all audiences. On their website they include information on inclusive routes, the facilities available, activities that can be undertaken, environmental education materials and resources, and organisations that run activities for various groups, as well as the parks' volunteer group.



[More information](#)



The **Catalan Network of Natural Parks** offers at the its website, and at the information points of each of the parks, a varied range of leisure activities, nature, sports or cultural. In addition, the Parks have with the collaboration of environmental education organisations that offer activities adapted to different audiences throughout of the year, as well as a volunteer programme in the parks. [More information](#)



2 / Promoting environmental education: educational activities that promote environmental knowledge and awareness.

Various organisations, both nature conservation and educational or socio-cultural, offer environmental education activities. In Catalonia, for example, the Scout and Guide movement is particularly noteworthy, promoting values of civism, sustainability and respect for the environment among the youngest. Also included are all projects linked to camps or colonies organised by schools, or during holiday periods, by organisations in the environmental education and educational leisure sector, as well as excursion centres that have sections open to children and young people. It is recommended to consult the census of the Catalan Society for Environmental Education (SCEA) or the list of member organisations of the Network for Nature Conservation (XCN) for a broader perspective.

We cite some organisations or projects as examples in Catalonia, and others at the international level, which we consider inspiring for their reach and impact on the educational community.



LEVEL 2

Marine Scientists' Summer Camp: Plankton diving, In collaboration with the Port of Calafat, they jointly organise a summer camp so that children who live in or holiday in l'Ametlla de Mar can take part in activities exploring nature and the world of the sea, led by marine specialists such as marine biologists or oceanographers, as well as leisure specialists. [More information](#)

LEVEL 3

Forest Schools are projects offering experiential learning experiences in the natural environment, which can be aimed at children, young people and adults and can be presented in various formats: from projects where children attend daily, to weekly sessions within other educational projects such as schools (public or private), weekend nature workshops and camps, etc. In Catalonia, notable examples include projects run by organisations such as [Els Follets del Bosc](#), [Wild Me](#) and [Arrels Escola Bosc](#).

On the other hand, [the Temps de Bosc Association](#) coordinates various nature education initiatives using the Escola Bosc methodology, such as [the Escola del Bosc d'Espinelves](#). It also promotes research and outreach by linking the fields of childhood, education, health and nature, and offers training courses for teachers and professionals from other fields.

[More information](#)



The GEPEC School of Naturalists (Group for the Study and Protection of Catalan Ecosystems) organises camps,

campuses and leisure education activities. They also carry out activities-



nations of environmental education in southern Catalonia for school children in the area's natural environment and raise awareness of the

public.

[More information](#)



The La Sorellona Association works on the design and realisation of various nature education proposals using the Forest School methodology, such as the Espinelves Forest School. It also promotes research and outreach by linking the fields of childhood, education, health and nature, and offers training courses for teachers and professionals from other fields. More information Level



nature, but also projects such as the Sore-llona Plantation of various environmental education activities, which have-

whose main aim is the discovery of nature through

environmental education camps and leisure activities with the

aim of training young collaborators and young people from

various Scout groups and leisure organisations, with the

intention of continuing to train and develop them.

[More information](#) maintaining and promoting the values and ideals of the organisation.





ASDN - a Super power to defend Nature: The project ASDN, funded by ERASMUS+ and SEO/BirdLife in Cata-

Monday, promotes the connection with nature for children



neurodivergent children from Greece, Malta and Italy. It seeks to increase to enhance physical, social and emotional well-being, and to train future environmental activists. The project offers adapted activities to overcome access barriers and promotes environmental education in schools and families.

The project's objective is to involve children with developmental disabilities in environmental activism and nature activities, while special education teachers, environmental and social educators, and families unite with the common goal of protecting the

[More information](#)

[More information](#)



De Peus a Terra, driven by the Axioma association, is a project designed to accompany individuals and groups of young people towards greater integrity, awareness and health. It involves activities in nature, primarily weekend mountain hikes and camps in locations specially chosen for their beauty and inspiration. The coordinates of the work are the triangulation between nature, the group and the individual, with self-knowledge as the core that unites them. During the outdoor activities, various tools and materials are provided so that participants can review and deepen their experience and get the most out of it.

[More information](#)

Children & Nature Network (C&NN) is a network driven by Richard Louv, and believes that nature makes children healthier, happier and smarter. Its aim is to promote a movement that facilitates children's connection to nature. It offers resources and tools to the entire educational community, to families, educators and organisations working for the physical and mental health of children.

[More information](#)





GreenKids (USA) is a programme funded by Nature Forward with the support of the Howard Hughes Medical Institute. It offers participating public schools a two-year programme of free resources, lessons and field experiences to foster contact with the natural environment and environmental literacy, while meeting established curriculum objectives.

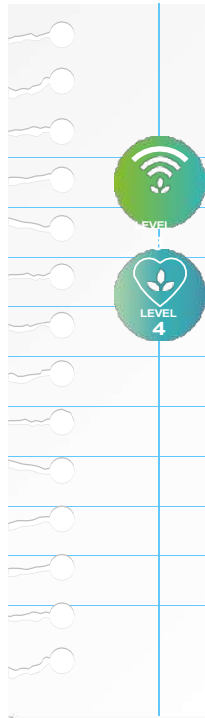
More information



Nature Friendly Schools is a programme led by the English organisation **Wildlife Trust**, which demonstrated how an increase in school activities carried out in natural environments contributes to improving mental health and well-being, involving the educational community. Programmes were designed to boost teachers' confidence in teaching outdoors. By offering placements and personalised training, the project aimed to create networks of schools capable of incorporating nature into pupils' everyday lives.

More information





Connect with Nature School Pack: has been promoted by the Peer Education Project, a mental health programme for secondary. This programme has worked with pupils and staff from secondary schools to create the mate-Connect with Nature school resource, which is available to all schools in the United Kingdom. It provides tools and resources to help pupils connect with nature. It is designed for use in secondary schools, but also contains a lot of useful information for primary and infant schools.

[More information](#)

3 / Including social prescribing in nature in the public health system.

Social prescribing is a mechanism through which a health or social care professional recommends community activities or resources to improve a person's health and wellbeing. It is about offering alternatives to the medicalisation of everyday life's ailments and, in particular, addressing those factors that determine health and are outside the healthcare system.

Nature-Based Social Prescribing (NBSP) is a way of facilitating access to nature to improve people's physical and mental health, and to connect them with community resources. It is also an opportunity to implement the biopsychosocial model in healthcare systems, which integrates biological, psychological and social aspects into healthcare, and for the personalisation of care. Social prescribing can be the link in a wide network of health assets available in an area, connecting the health system with the social system and community networks (Howarth et al., 2020).



The Roger Torné La Casa de l'Aire Foundation acts for the children at risk or in a vulnerable situation, offering to the families with children their programme as an option of



educational, environmental and healthy quality in the time school curriculum and in leisure time. It does so by creating a socio-educational network with institutions, educational centres, entities and associations; which has as its cross-cutting theme ensuring a dignified life and healthy development for the most vulnerable children."

[More information](#)



The Forests for Health project: a baby, a tree, promoted by the PEHSU (Paediatric Environmental Health Unit) of the Olot Hospital and Garrotxa County Foundation, is a nature-prescription initiative aimed at pregnant women and their partners, and families with babies. During pregnancy, an environmental screening is carried out and the importance of contact with nature as a protective factor for health is emphasised. At birth, each child receives a sapling of a native Garrotxa species, the "brother tree", which they plant in the grounds of the county hospital, and activities are held with families and children to raise awareness and promote health around the small grove.

PEHSU Garrotxa has developed various teaching activities, primarily at the regional level, to train and raise awareness among healthcare professionals in the area. It is intended to include a space that provides coverage for the entire country, addresses the most current Catalan and global issues in PHA (Paediatric Environmental Health), and presents experiences, reviews scientific evidence, and outlines strategies and solutions involving the various stakeholders in the field.

[More information](#)



The Experientia Association creates unique experiences in the nature through adventure activities. Their aim is to promote change, self-improvement, growth and to enhance the quality of life of those who participate.



They implement therapeutic and personal development programmes using adventure therapy and nature therapy as intervention methodologies.

Most of their programmes are carried out in collaboration with other organisations (associations, foundations, hospitals, educational centres). They are tailored and implemented with strict physical and emotional safety measures that foster the creation of a safe space for the development of the participants, and are delivered by teams of professionals specialising in various disciplines.

[More information](#)



PEHSU or USMAP Murcia (Pediatric Environmental Health Speciality Unit (Unidad de Salud Medioambiental Pediátrica – USMAP). The mission of the Pediatric Environmental Health Unit is to protect the health and environment of children from the preconception stage through to the end of adolescence. They work to recognise, assess and manage environmentally related childhood diseases and risks in the Region of Murcia, Spain, the rest of Europe, Latin America and the Caribbean, as well as to provide education, training and research in paediatric environmental health.

[More information](#)



People and Parks Foundation is an Australian environmental and health organisation. It is registered as an environmental and health promotion entity. It develops resources to connect people with nature to improve health, well-being and promote sustainable natural environments.



[More information](#)



4 / Identify **nature assets** in neighbourhoods and municipalities and promote them through organisations, health centres, educational institutions, etc.

An asset is a resource that promotes the health and well-being of people or groups within a community. These assets can include people, environments, facilities or community activities. [The Public Health Agency of Catalonia's health assets map](#) allows you to search for activities and resources, with the option to filter them by the type of population they are aimed at, such as children and young people, the health promotion objective they pursue, and the geographical area. Organisations can also add their own activities to be made available for social prescribing projects, or find activities and resources that facilitate the integration of health and nature.

Finding a programme or project that makes this identification for the child and adolescent audience is complex. However, the Barcelona Environmental Facilities Network (XEAB) could be an example of how an equipment in a city district carries out activities in natural environments close to its location, networks with other social or educational centres, and carries out activities to encourage contact with nature and the culture of sustainability.





The XEAB (Barcelona Environmental Facilities Network) is developed through the Barris + Sostenibles programme. This

shares the city's strategic vision with each local area, in order

to ensure maximum coherence between the policies being promoted, municipal action in the districts and neighbourhoods, and the messages that reach the public.



Through local focal points and proximity interventions, a culture of sustainability is promoted, residents are empowered, and opportunities and tools are provided to get involved in concrete projects to improve the neighbourhood and the city.

One of the most visible resources on the ground is the various public facilities that generate activities for anyone interested in getting involved in sustainability in their area. Spaces where activities, workshops, talks, resources and strategies are organised to promote the participation and empowerment of all citizens, making for more sustainable neighbourhoods and, in turn, a more liveable city.

In Barcelona, there are city-wide facilities offering a general service for all citizens, and other district-level facilities more focused on the specific needs of each neighbourhood.

More information



5 / Ensure access to protected natural areas by facilitating travel by public transport and offering subsidised activities for families and groups with fewer resources, or living in disadvantaged neighbourhoods.

LEVEL 2

Europarc Youth Programmes: From the network and programme **Healthy Parks Healthy People Europe** reinforces the pre-knowledge that young people can make a great contribution to their local community when they are encouraged to participate in events focused on nature. By bringing together young people and technical staff, they aim to enable young people to respect and care for their local protected area, while learning about the valuable role the technical team plays in nature conservation. All EUROPARC members are encouraged to develop and offer programmes for the youth of their community.

More information

LEVEL 2

Bus Parc: The Diputació de Barcelona offers a service of public transport to facilitate access to the Natural Park and

LEVEL 2

Lawrence of the Mount and the Obac. Its aim is to facilitate access to the Montseny Biosphere Reserve and the Sant Lawrence Natural Park. to the parks with integrated public transport to different collection points and prevent congestion at the entrances and car parks caused by the influx of private vehicles.

More information



6 Invest in **green and blue infrastructure to renaturalise** and adapt urban environments to the new realities of climate change, especially in the face of more extreme weather events.

This can be achieved by creating, maintaining or renaturalising high-quality green and blue spaces in every neighbourhood, regardless of its socioeconomic level, thus ensuring that everyone has the opportunity to enjoy nature in their daily lives without having to travel far. In addition to the health benefits, this infrastructure will contribute to the climate resilience of cities.



This is the aim of **GiroNat**, a shared project of city, sustainable and demonstrative, which promotes



ty and ecological infrastructure as the backbone of a 180-degree turn towards urban renaturalisation, transforming Girona into a greener, more resilient and healthier city-playable.

The partners in GiroNat are: the La So-rellona Association, the University of Girona, the Xarxa per la Conservació de la Natura Association, SEO/BirdLife (Spanish Society for Ornithology) and the Foundation of the Catalan Institute for Water Research (ICRA).

[More information](#)



7 / Adapt natural spaces, or generate resources to make them accessible to people with disabilities and other vulnerable groups, ensuring that everyone has the opportunity to benefit from nature.



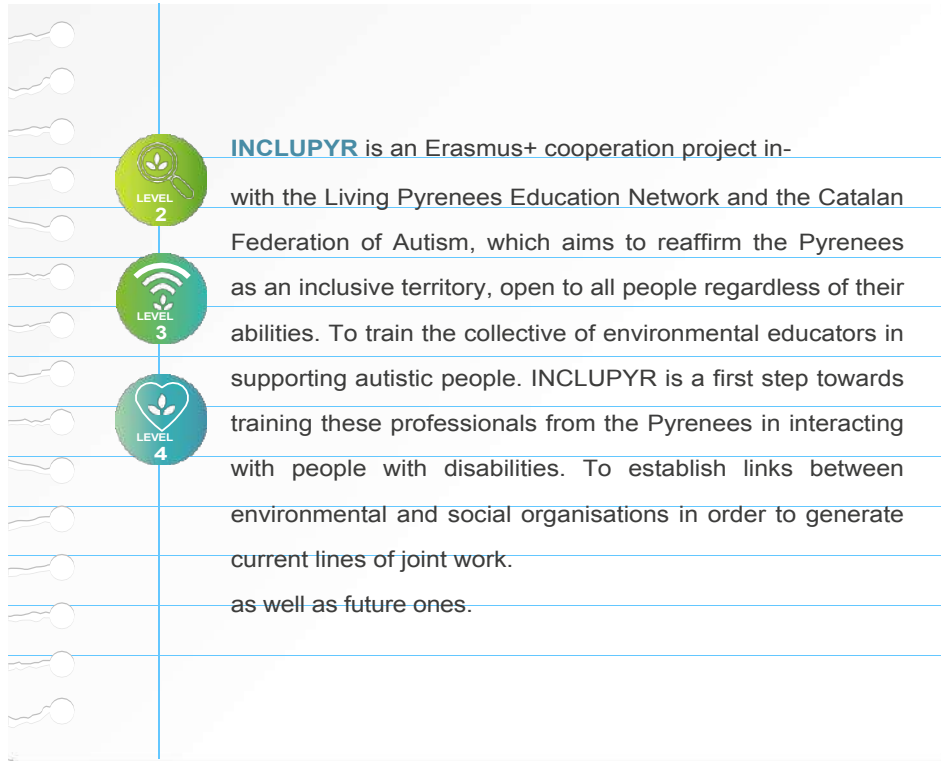
HEALTH AND
NATURE

The **Ripollès Natura Inclusiva** project, promoted by the Centre of the Alt-Ter Environmental Education Centre offers the Joëlette to schools and other centres and organisations that may need it.

The Joëlette is an all-terrain single-wheeled chair that allows to people with reduced mobility to access rural environments or mountain environments not adapted for wheelchair users. It requires a minimum of two people to operate it, and on more demanding terrain a well-coordinated team is needed to ensure the user's stability and safety. The Alt Ter Association, with the support of experts and the Natural Park of the Headwaters of the Ter and Freser (PNCTF), aims to promote its use in the Ripollès, especially in educational centres, to ensure inclusion in activities and outings in the natural environment and to improve accessibility to protected natural areas.

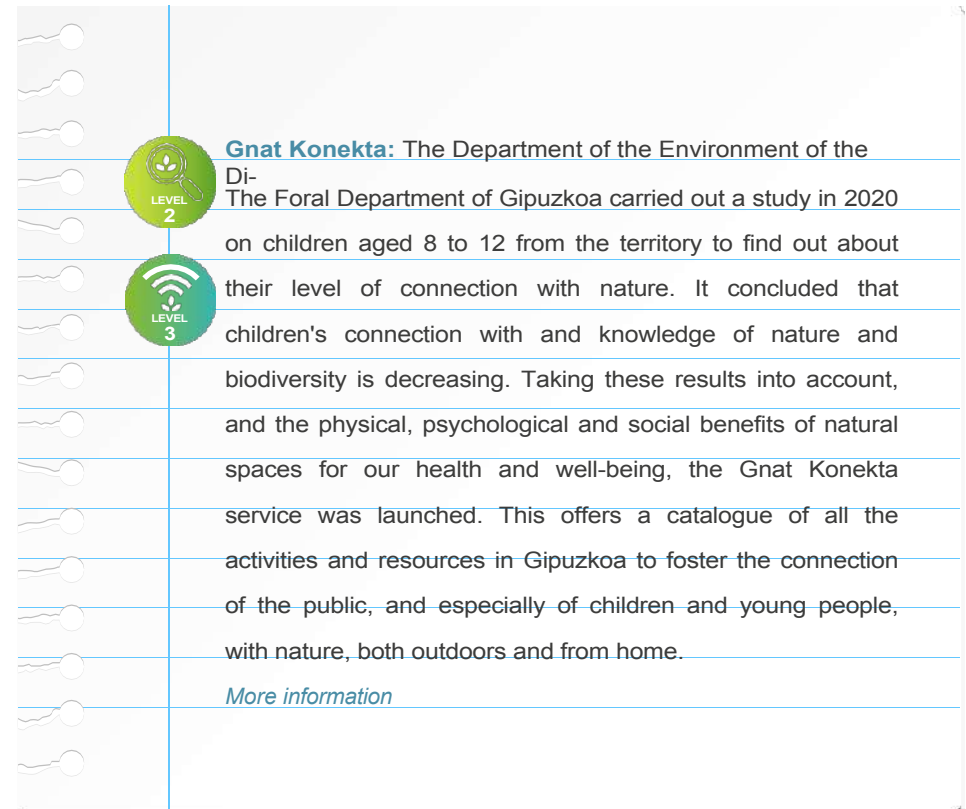
More information

/ HOW TO INTEGRATE THE HEALTH AND NATURE DUALITY INTO OUR ACTIONS



INCLUPYR is an Erasmus+ cooperation project in-
with the Living Pyrenees Education Network and the Catalan Federation of Autism, which aims to reaffirm the Pyrenees as an inclusive territory, open to all people regardless of their abilities. To train the collective of environmental educators in supporting autistic people. INCLUPYR is a first step towards training these professionals from the Pyrenees in interacting with people with disabilities. To establish links between environmental and social organisations in order to generate current lines of joint work.
as well as future ones.

8 / Conduct projects to assess the impact of nature on health, in order to gather scientific evidence and improve actions to achieve a greater impact.



Gnat Konekta: The Department of the Environment of the Di-
The Foral Department of Gipuzkoa carried out a study in 2020 on children aged 8 to 12 from the territory to find out about their level of connection with nature. It concluded that children's connection with and knowledge of nature and biodiversity is decreasing. Taking these results into account, and the physical, psychological and social benefits of natural spaces for our health and well-being, the Gnat Konekta service was launched. This offers a catalogue of all the activities and resources in Gipuzkoa to foster the connection of the public, and especially of children and young people, with nature, both outdoors and from home.

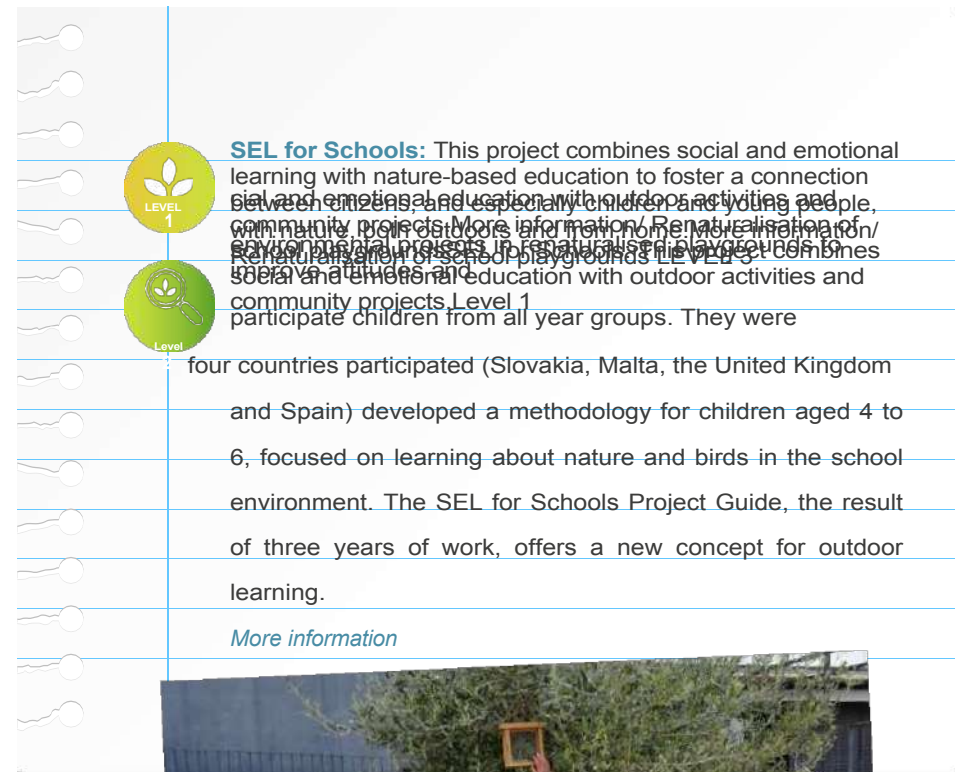
[More information](#)



9 / Renaturation of school playgrounds

Taking into account the scientific evidence of the benefits of nature for children and the current climate emergency, renaturalisation strategies in the management of urban environments must also be implemented in schools. Children spend many hours in the school environment, and we must ensure their well-being in the classrooms and bring greenery into the buildings, but above all we must adapt the playgrounds. In this vein, projects have been carried out in Barcelona at educational centres, promoted by the City Council itself. Since 2020, the project "[Adapting Schools to Climate Change through Green, Blue and Grey](#)" has been underway, and since 2019, the "[Let's Transform Playgrounds](#)" programme, which aims to improve "both the physical spaces and the dynamics and relationships that take place within them". The renaturalisation of school playgrounds, in addition to adapting to climate change and promoting a connection with nature, improving the health of children, also improves play dynamics, reclaiming spaces at the centre of the playground, and not focusing solely on ball games (which are only enjoyed by a portion of the pupils, generally boys).

Connection with nature is a very valuable tool for promoting emotional well-being in schools. In addition to modifying the school's physical space and introducing nature into it, other actions must also be carried out to facilitate this connection between the children and the entire educational community with the natural environment. Recognising and caring for the plants and animals that inhabit the playground is a first step.



LEVEL 1

SEL for Schools: This project combines social and emotional learning with nature-based education to foster a connection between children and education with outdoor activities and community projects. More information: [Renaturalisation of school playgrounds](#), [Renaturalisation of school playgrounds](#), [Renaturalisation of school playgrounds](#). Level 1

participate children from all year groups. They were

four countries participated (Slovakia, Malta, the United Kingdom and Spain) developed a methodology for children aged 4 to 6, focused on learning about nature and birds in the school environment. The SEL for Schools Project Guide, the result of three years of work, offers a new concept for outdoor learning.

[More information](#)





PATIS x CLIMA in Action is a community action programme jointly promoted by El Globus Vermell and Lemur, which began in July 2023. It promotes environmental participation; the learning of methods for taking action in the face of climate change; group analysis and reflection leading to action; the collection of related information and learning in the resolution of environmental conflicts collectively; networking and the building of an active citizenry, working cooperatively between educational communities, administrations and neighbours in the face of the climate emergency.

The main objective of the project is to create a programme that enables the communities surrounding the schools' naturalised playgrounds to become active, and to empower citizens to manage and maintain this space at a neighbourhood level, with the support of the local authority."

[More information](#)



Green Schoolyards America inspires and supports systems change to transform asphalt-covered school grounds into living schoolyards that improve children's well-being, learning and play, while strengthening the ecological health and climate resilience of their communities.

[More information](#)



Cool Schools: Transdisciplinary applied research project
disciplinary applied research project that aims to analyse the multiple co-be-



of implementing nature-based solutions (NbS) for climate adaptation, or what we call climate refuges-tics based on nature in school environments. They explore how these interventions can act as drivers of transformation at larger urban scales through an approach that puts the needs and viewpoints of children and young people at its centre. It is carried out in the cities of Brussels, Barcelona, Paris and Rotterdam.

ties of Brussels, Barcelona, Paris and Rotterdam.
[More information](#)



4

Key considerations

In this section we propose the different key aspects to consider in order to include the health-nature duo when designing educational activities and projects that have a positive impact on the health of children, adolescents and young people.

- 1** **Define the general objective and the specific objectives,** taking into account whether the activity is aimed at:
 - a** / To promote contact with nature in general.
 - b** / Improve well-being and health promotion.
 - c** / The management or improvement of specific health problems.

- 2** **Identify the target audience:**
 - a** / Age. If dealing with minors, consider whether our activity requires permits, etc.
 - b** / Town, neighbourhood, urban environment where they reside.
 - c** / Interests.
 - d** / Know the profile of each participant in case the activity needs to be adapted, especially if it affects any specific health issue.
- 3** **Number of participants:** Consider how many people can take part in the activity to ensure that it is carried out
 - a** / To ensure it is carried out successfully and with the expected results.

4 **Professionals involved in the development of the activity.** *The professionals required will vary depending on the objectives, the profile and the number of participants. It is essential to have qualified staff to ensure that the activity is carried out appropriately with the target audience. Depending on the objectives, it may be important to include professionals with different profiles in the same activity, or not. In general, you need to ensure you have professionals who can manage the group dynamic and others who specialise in the specific objectives of the activity. Some of the profiles that may participate are from the health field (nursing, psychology, physiotherapy, occupational therapy, medicine), the environmental field (forest guides, environmental education) and/or the social field (social work, social education, social integration). These professionals must have the necessary knowledge and skills to adapt the activity to the group, taking into account age, gender diversity and other factors that which may influence their experience.*

5 **Location/venue for the activity:** *it should be accessible and suitable, facilitating participation. There must be the elements we consider essential to achieve the objectives. Activities must be respectful of the environment, leaving the smallest possible footprint and maintaining harmony with the natural space that hosts us.*

6 **Duration:** *It is important to bear in mind the time of day and the duration of the activity, taking into account the audience we are addressing (schools, families, young people, after-school activities, etc.) and their age. If it is carried out outdoors, it is important to take into account the season and other weather data, ensuring they are favourable for carrying out our activity and that participants can be advised on equipment, clothing or other items. We must consider the outside temperature, the presence of shade or direct sunlight, wind speed, etc.*

7 **Monitoring or evaluation of impact:** *We must use evaluation tools to determine whether we have achieved our objectives and to identify areas for improvement. We may wish to evaluate different aspects of our activities: satisfaction, learning, process and adherence, connection with nature, and specific health objectives. We can take physiological measurements, satisfaction surveys, and questionnaires on specific health topics. If we use quantitative (such as validated questionnaires) and/or qualitative (such as interviews or focus groups, for example) research tools, we can contribute to generating scientific evidence. We can consider seeking allies to be able to evaluate the impact.*

5 CONNECTION WITH NATURE, THE KEY TO A HEALTHY FUTURE /

After everything we have set out and the examples cited throughout this guide, it is clear that **our health, both physical and emotional, is intimately dependent on nature**. The benefits of this connection with nature are profound, especially during childhood, where the bond with the natural environment enhances cognitive abilities such as attention and memory, while also enriching learning. Beyond the cognitive effects, the impact on emotional and social development is equally remarkable: it fosters self-esteem, self-confidence and greater resilience in the face of future challenges, while reducing stress and aggression, promoting social skills, creativity and imagination. Finally, knowing and connecting with nature in childhood is key to developing our connection with the natural world, which persists into adulthood, and can shape our environmental and conservation behaviours.



We have found that education in contact with natural environments not only enhances academic performance and creativity, but also fosters a critical spirit. As Heyke Freire, an advocate of "green pedagogy" and an expert in environmental and early childhood education and sustainable development, points out, "nature is a place where children can learn to regulate their **emotions**, resolve conflicts, work as part of a team and develop social skills" (Freire, 2019). In this way, **empathy, cooperation and problem-solving** are **fostered, emotional skills that are fundamental to life.**

Karen Armstrong, author of the book "Twelve Steps to a Compassionate Spirituality", has also spoken about the importance of nature in education. According to Armstrong (2011), "the connection with nature can help children to develop a broader perspective and to understand the interdependence of all things". This understanding of interconnectedness can foster empathy and compassion towards others, which is essential for **emotional health and peaceful coexistence.**

Reducing nature deficit disorder not only improves children's physical and emotional health, but also contributes to greater **ecological awareness**. In the long term, this connection with nature educates children to become responsible citizens committed to the health of the planet. This not only affects their personal health but also **planetary health**, as it fosters a more respectful and balanced relationship between people and the environment.

The current global environmental crisis poses growing risks to people's health and well-being, in line with the numerous pieces of evidence provided by the scientific community. In 2015, the Rockefeller Foundation and the Lancet Commission on Planetary Health published an article in which they formulated the concept of **Planetary Health**, understood as a new discipline that goes beyond the limits of the current global health framework to take into account the natural systems on which human health depends.

HEALTH AND NATURE



/ CONNECTION WITH NATURE, THE KEY TO A HEALTHY FUTURE

/ **Planetary health:** the achievement of the highest level of health, well-being and equity worldwide, respecting the limits of the Earth's natural systems through the integration of diverse human systems (political, economic and social).

/ **Planetary Health Alliance:** The Planetary Health Alliance is a growing consortium of more than 450 universities, non-governmental organisations, research institutes and government entities from over 75 countries around the world committed to understanding and addressing the impacts of global environmental change on human health and well-being. PHA supports the dissemination of new research, the development and curation of basic educational materials, and the convening of communities of practice around the world. It provides extensive literature searches, materials and other relevant information.

[More information](#)

It is therefore clear that children who are in regular contact with nature enjoy **greater physical and emotional well-being**, and tend to develop **healthier lifestyles** in adulthood. They also show a **more respectful attitude towards the environment** and are more aware of the importance of caring for their surroundings and of sustainable development.

/ The Catalan Green Schools Network offers the **Planetary Health Games and Resources Suitcase**.



This contains educational proposals based on games, books and teaching resources designed to provide teachers with tools and resources to convey the concept of planetary health in a playful and dynamic way, and its direct relationship with the areas of biodiversity, the food system and climate change.

[More information](#)

As Dr Juan Antonio Ortega-García, an Environmental Paediatrician and coordinator of the Environmental Health Committee of the Spanish Paediatric Association, expresses, "reconnecting childhood in the school environment with nature contributes to creating freer, more creative citizens in societies more interconnected with the health of the planet" (Faros San Juan de Dios, 2022, p. 277).

It is important and necessary for nature to be part of our daily lives, at all stages of our lives, and we must promote this relationship with the natural environment from childhood. Therefore, it is vital that children experience nature, marvel at it and discover its value, developing a sense of connection and respect for their environment and the space they live in and, consequently, for the planet and their own lives.

Let's connect school with nature, moving activities and lessons from the classroom to natural environments: the woods, the park, the river, the beach. But we don't stop there: we must extend this connection to other key spaces for children, young people and adolescents, leisure and play areas, but also libraries, sports centres, youth clubs and even cultural spaces. Activities such as reading outdoors, sports training in parks or gardens, or creative workshops in natural settings allow nature to be incorporated into the daily lives of the youngest, fostering a deeper and more constant relationship with the environment and promoting their overall well-being. Thus, **nature reveals itself not just as an option, but as an essential condition for a full and balanced life**. Understanding this and acting accordingly is, without a doubt, one of the great challenges of our time.



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