

















Health and Social benefits of biodiversity and nature protection – aims and focus

Understand and communicate benefits of nature for health and social inclusion.

Understand the different stakeholder roles in promoting the health and social benefits of nature.

Assess the scale of the benefits to help communicate the opportunities of integration and taking action and improve political will for action.

Identify the tools that have been (or could be) successfully used to help map and estimate the health and social benefits of biodiversity.

Direct and Indirect Health Benefits

Improved air quality & health benefits

Noise reduction benefits

Improved **climatic conditions** & avoiding heat stress

More pleasant & peaceful, less stressful environment

Healthier lifestyles – nature experience

Outdoor recreation and physical activity

Wellbeing – living in attractive location

Promoting social cohesion

Quality of green public spaces, reduced social tension

Opportunities for **involvement** from all sectors of society – **volunteers and employment.**















Workshop structure Day 1



- S1: Addressing societal challenges, hopes for future action
- S2: Air pollution and urban heat islands
- S3: Noise reduction and living near nature
- S4: Case presentation: Poster Session
- S5: Wellbeing and Exercise
- S6: Social inclusion, sense of place, engagement and jobs















Poster Session case representatives

Belgium Hoge Kempen National Park Ignace Schops

Bulgaria Zmeeva Dupka Eco-Trail Ivan Hristoforov & Plamen Stoyanov

Croatia Medvednica Nature Park Tajana Ban Ćurić & Kristina Vugrek

Petljak

Laura Zapata Gonzalez

Finland Moved by Nature Programme Kajala Liisa

Germany StadtKlima Ulrich Reuter

Hungary Lake Hévíz Németh György & Gyorgy Toth

Italy Slow Food Marta Messa

Latvia Green Routes without Obstacles Irena Muskare

Poland Primeval Forest Nordic Walking Walentyna Gorbacz

Park

Portugal Quinta do Pisão João Melo

Slovenia Secovlje Salina Nature Park Sovinc Andrej

Spain Barcelona GI and Biodiversity Plan

2020

Sweden Alnarp Rehabilitation Garden Anna Maria Palsdottir

UK Walkability Paul Casson

















Workshop structure Day 2



- Welcome and recap from Day 1
- S7: Role of Natura 2000 and Green Infrastructure
- S8: Stakeholder roles, collaborations, instruments, successes and needs
- S9: Breakout groups

 Cities and regions; Civil society; Member states; EU institutions;

 Science policy interface
- S10: Reporting back to plenary
- S11: Closing plenary: implementation, EU institutions and health/nature synergies















Session 1 - Speakers



- Humberto Delgado Rosa, European Commission DG ENV
- Marina Maiero, World Health Organisation
- Roby Biwer, Committee of the Regions
- Ignace Schops, EUROPARC
- Agnes Zolyomi, CEE Web















Session 1 – key aim



Explore what health and social challenges society is facing and what role nature can play in contributing solutions...



































Connecting Global Priorities Biodiversity and Human Health

Marina Maiero, WHO

Department of Public Health, Environmental and Social Determinants of Health

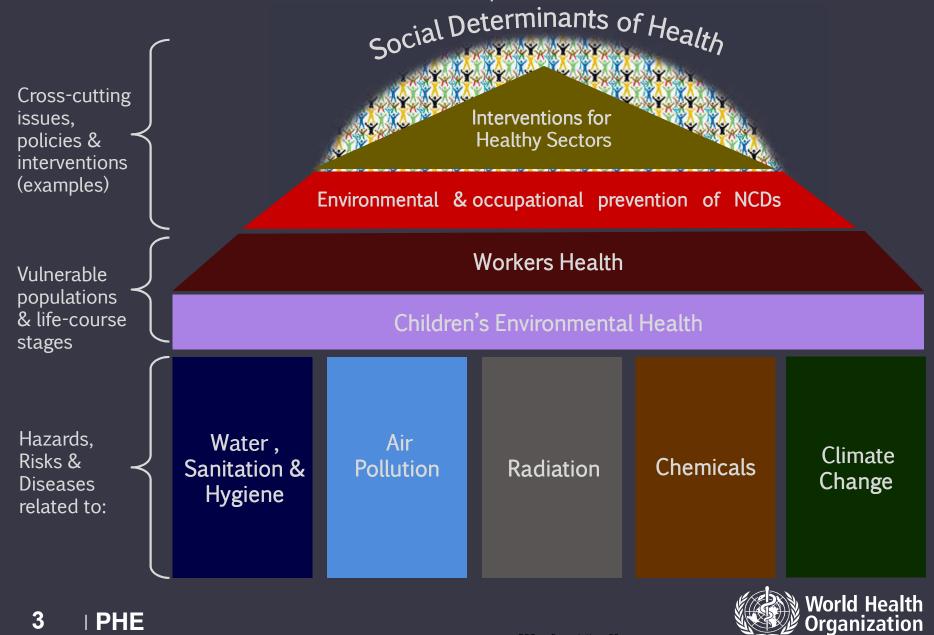


WHO work on Environmental Health

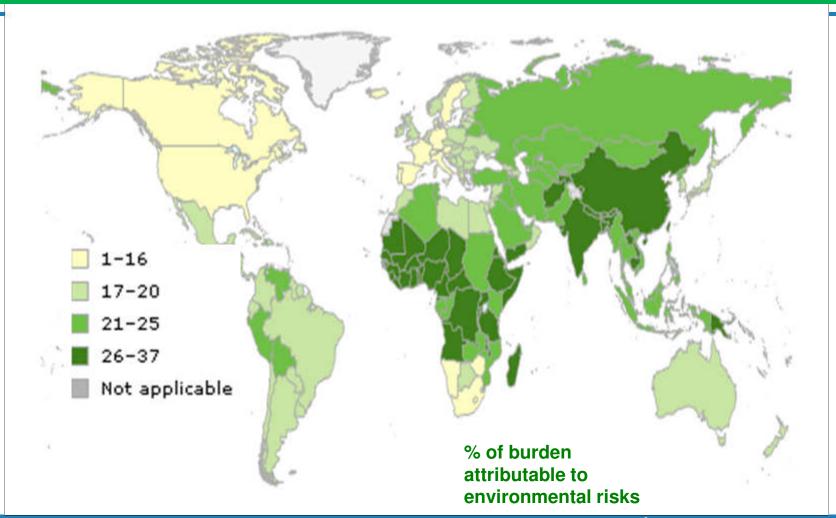
- Assessing and managing risks (such as from outdoor and indoor air pollution, climate change, chemicals, unsafe water, lack of sanitation, ionizing and non-ionizing radiation)
- Intensifying primary prevention
- Promoting a healthier environment formulating evidencebased norms and guidance on major environmental and social hazards to health
- Creating guidance, tools and initiatives to facilitate the development and implementation of policies that promote human health in priority sectors.

World Health

Our work advances primary prevention policies and interventions on a foundation of distinct technical disciplines.

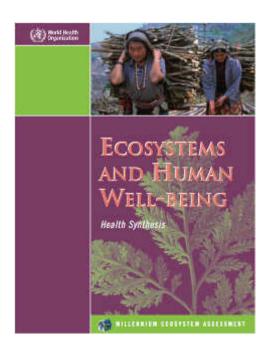


Environmental factors cause a quarter of global burden of disease- more in poorer countries





Importance of biodiversity and ecosystems to human health



An increasing recognition in the health sector of the environmental drivers of ill health that was highlighted by the Millennium Ecosystem Assessment contributed to a call by the international community for increased collaboration between the biodiversity and human health sectors



A new era of collaboration & partnerships



Our Planet, Our Health, Our Future, WHO, jointly prepared with UNFCCC, UNCCD, and SCBD

(2012)

COP 11 (Decision XI/6)

Called for the establishment of a **joint work programme with the WHO**, and others, to support the contribution of the SP to achieving human health objectives;



CBD Mandate on biodiversity and health

Strengthen collaboration with WHO and other partners to support mainstreaming of biodiversity into health policies, programmes & plans.

Investigate how implementation of the Strategic Plan can best **support efforts** to address global health issues...and the MDGs

Bridge gaps between work on impacts of climate change on public health and its impacts on biodiversity.

Continue collaborating with relevant organizations in these fields to support the **mainstreaming** of biodiversity issues into health policy and action plans.

(Decision X/20, para 17)



Evidence-based decision making

Connecting Global Priorities: Biodiversity and Human Health

A State of Knowledge Review









Co-led by WHO & CBD

Peer review & expert consultations
Contributions from over 100 interdisciplinary
scientists

Main finding: anthropogenic drivers of biodiversity loss are hindering the capacity of ecosystems to provide essential services, from provision of clean air and freshwater, to discovery and production of medicines, to support for spiritual and cultural values.

Key risks identified:

- The loss of agrobiodiversity.
- Complex effects on the regulation of infectious diseases.
- -Reduced diversity in human microbiota, contributing to immune dysfunction and disease.



The Rockefeller Foundation -Lancet Commission on Planetary Health (2014-2015)

Three categories of challenges



- 1. Conceptual and empathy failures (imagination challenges), such as an over-reliance on GDP as a measure of human progress, the failure to account for future health and environmental harms over present day gains, and the disproportionate effect of those harms on the poor and those in developing nations.
- 2. Knowledge failures (research and information challenges), such as failure to address social and environmental drivers of ill health, a historical scarcity of transdisciplinary research and funding.
- 3. Implementation failures (governance challenges), such as how governments and institutions delay recognition and responses to threats, especially when faced with uncertainties, pooled common resources, and time lags between action and effect.



Issues addressed in the State of Knowledge Review

Concepts, themes & directions	
	• Chapter 1 & 2
Water and air quality	• Chapter 3 & 4
Agricultural biodiversity and nutrition	• Chapter 5 & 6
Infectious diseases	• Chapter 7
Microbial diversity and noncommunicable diseases	• Chapter 8
Biomedical discovery and impact of pharmaceuticals	
Traditional medicine	Chapter 9 & 10 Chapter 11
Physical and mental health and cultural well-being	• Chapter 12
Climate change and disaster risk reduction	• Chapter 13 & 14
Population, consumption and production patterns	• Chapter 15
Strategies , tools and ways forward	
	Chapter 16



Biodiversity and human health

Health "is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

Biological diversity

(biodiversity) is "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems."

Biodiversity underpins ecosystem

functioning and the provision of goods and services that are essential to human health and well being.

The links between biodiversity and

health are manifested at various spatial and temporal scales. Biodiversity and human health, and the respective policies and activities, are interlinked in various ways.



Direct drivers of

biodiversity loss include land-use change, habitat loss, over-exploitation, pollution, invasive species and climate change. Many of these drivers affect human health directly and through their impacts on biodiversity.

Women and men

have different roles in the conservation and use of biodiversity and varying health impacts.

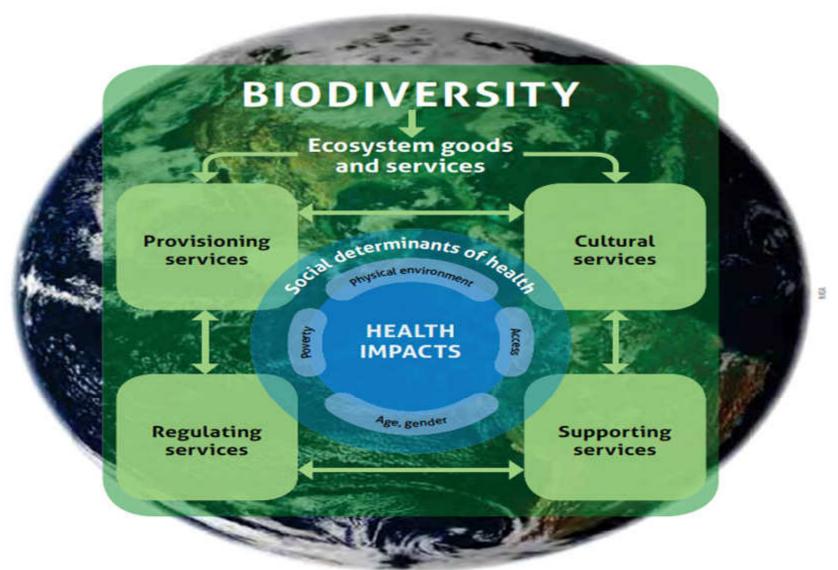
Human population

health is determined, to a large extent, by social, economic and environmental factors.

The social and

natural sciences are important contributors to biodiversity and health research and policy. Integrative approaches such as the Ecosystem Approach, Ecohealth and One Health unite different fields and require the development of mutual understanding and cooperation across disciplines.

Linkages and co-dependencies at the intersection of biodiversity and human health



www.cbd.int/en/health/stateofknowledge

Impacts of anthropogenic pressures

Up to 95 % of wetlands have been lost in some areas;

80 % of grasslands are suffering from soil degradation;

20 % of dry lands are in the danger of becoming deserts;

90 % of all large fish species have disappeared from the oceans in the past half century;

Tropical forest shrinking at about 5% per decade, adding 3% billion tons of CO_2 to the atmosphere yearly;

Current atmospheric emissions of CO₂ are nearly 400 % emissions in 1950.

Sources: JLG 2007 / SCBD 2006/ World Bank 2008/Worm, Lotze and Myers 2003



We all depend on biodiversity for human health, but some more than others

20 to 120 million people live in areas affected by desertification;

1.3 billion live from agro-forestry resources;

60 million indigenous people are almost wholly dependent on forests;

An estimated 70% of world population relies on medicinal plants;

More than 3 billion people depend on marine and coastal biodiversity for their livelihoods and subsistence;

350 million people depend on forests for subsistence and income;

About 33% of the world is living under moderate to severe

water stress.



Biodiversity-Health Linkages: Air quality

Over half of the world population relies on solid fuels for cooking and

heating, often in unventilated space.

Air pollution is one of the most significant environmental health risks worldwide, responsible for seven million deaths in 2012.

Effects on Acute Respiratory Infections

Ecosystems may affect air quality and have primarily beneficial outcomes for human health.

Opportunities for the health sector:

Use components of biodiversity (e.g. lichens) as bioindicators of human health stressors and in air and water quality mapping, monitoring & regulation



Burden of disease from Air Pollution – higher than previous estimates

- Outdoor air pollution → 3.3 million deaths/yr large proportion urban exposures
- Indoor air pollution → 3,5 million deaths/yr*— mostly from inefficient biomass/coal cookstoves









Air Pollution is responsible for a very large proportion of major NCDs*

Indoor Air Pollution

~50% of all pneumonia deaths among children under 5

~30% of all COPD (Chronic obstructive pulmonary disease) deaths

~18% of disease & deaths from ischaemic heart disease

Outdoor Air pollution

~22 % of disease & deaths from ischaemic heart disease

~15 % of deaths from pneumonia in children under 5

~5% of COPD deaths – (from ambient ozone pollution)



Air pollution also is a factor in: Cancers, Asthma (ozone), Cataracts, Adverse pregnancy outcomes, TB



Biodiversity and Health Linkages: **Physical, mental and cultural well-being**

Role of biodiversity:

Physical and mental health - Cultural/spiritual enrichment

Direct opportunities for the health sector:

Integrate 'value of nature' into health policy including mental health and non-communicable diseases

Increase opportunities for exposure to green spaces and microbial diversity as a preventive health strategy

Indirect interest of the health sector:

Promote protection of values, species and ecosystems



Linking Health, Biodiversity and Climate Change



Climate change, and all of its dire consequences for health, should be at centre-stage, right now, whenever talk turns to the future of human civilizations. After all, that's what's at stake. Important for the climate change community to recognize that human health and well-being are influenced by the health of local plant and animal communities, and the integrity of the local ecosystems



Paris Agreement

DECISION PREAMBLE: Also acknowledging the importance for Parties, when taking action to address climate change, to promote, respect and consider, in accordance with their respective obligations, *the right to health*, the rights of indigenous peoples...;

AGREEMENT PREAMBLE: Recognizing also that when developing policies and taking action to address climate change, Parties should promote, protect, respect, and take into account their respective obligations on all human rights, *the right to health*....;

ENHANCED ACTION PRIOR TO 2020: Recognizes the social, economic and environmental value of voluntary mitigation actions and their <u>co-benefits</u> for adaptation, <u>health</u> and sustainable development....;

There are also references within the text to several important articles in previous UNFCCC agreements, including **UNFCCC Article 1** (defining that concept of "adverse effects of climate change as *impacts on human health* and welfare, alongside socioeconomic systems and ecosystems), and **Article 4** (committing countries to assess the health implications of adaptation and mitigation policies). It also includes references to the **2010 Cancun agreement**, which identify health as a priority for adaptation, and the **2014 Lima Outcome document**, which calls for assessment of health co-benefits of mitigation policies.



Call for Broader Collaboration: WHO/CBD Liaison Group on Health and Biodiversity

Memorandum of Understanding

Between

the World Health Organization, acting through the Secretariat's Family, Women's and Children's Health Cluster (hereinafter "WHO") located at Avenue Appia 20, 1211 Geneva 27, Switzerland.

ano

the Secretariat of the Convention on Biological Diversity (hereinafter "SCBD"): located at 413 St-Jacques Street West, Suite 800 in Montreal, Quebec, HZY 1N9, Canada.

(each of WHO and SCBD hereinafter referred to individually as a "Party" and jointly as the "Parties")

WHEREAS

WHO and SCBD wish to strengthen their existing collaboration in:

- Raising awareness of the complex linkages between biological diversity, ecosystems and human health;
- 2. Leveraging scientific expertise and experience of WHO, SCBD and relevant partners on the scientific, technical and technological work of the SCBD and WHO regarding human health and biodiversity inter-linkages including, as appropriate, the implementation of the Strategic Plan for Biodiversity 2011-2020 adopted by Conference of the Parties to the Convention in Biological Diversity at its tenth meeting and noted with appreciation by the sixty-fifth session of the United Nations General Assembly, and any other area of mutual interest, in line with the objectives for sustainable development set out by the United Nations.

WHO is the directing and coordinating authority on international health work in the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based poticy options, providing technical support to countries and monitoring and assessing health trends.

SCBD was established by Article 24 of the Convention on Biological Diversity to support its goals: the conservation of biological diversity (biodiversity), the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of ennetic resources. SCBD is hosted by the United Nations Environment Programme (UNEP).

The liaison group will provide a platform to collaboratively:

- request expert advice and assistance
- exchange information and
- coordinate activities related to human health and biodiversity linkages.

The liaison group shall be comprised of a number of experts from organizations and institutions with demonstrated expertise in the areas of human health and biodiversity, as invited by WHO and SCBD.



THANK YOU!



The health and social benefits of Nature and biodiversity protection

27 Januari 2016 – Ignace Schops



Health and social challenges

The role of nature



Nature based solutions?!



A different point of view



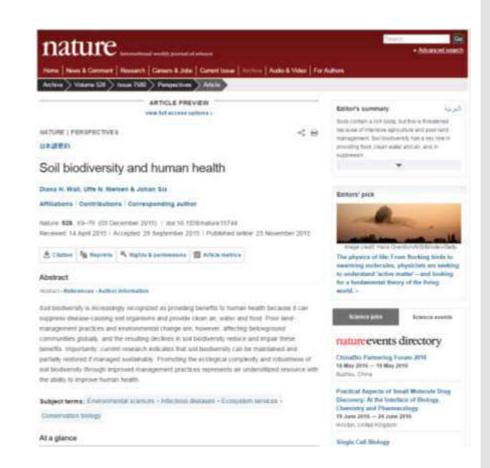
Find the difference





Soil biodiversity and human health

- Soil biodiversity is increasingly recognized as providing benefits to human health because it can suppress disease-causing soil organisms and provide clean air, water and food
- Diana H. Wall, Uffe N. Nielsen & Johan Six -Doi:10.1038/nature15744

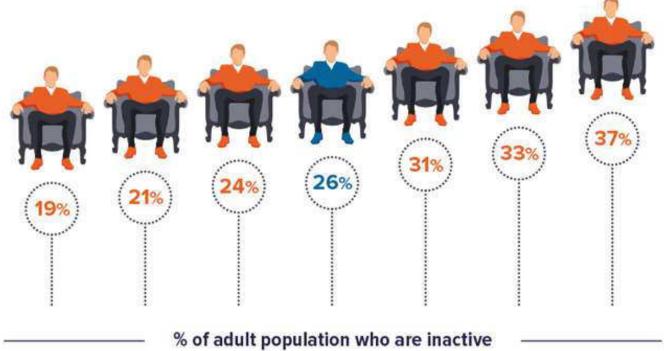


Impacts of biodiversity on the emergence & transmission of infectious diseases

- mounting evidence indicates that biodiversity loss frequently increases disease transmission
- Felicia Keesing, Lisa K. Belden, Peter Daszak, Andrew Dobson, C. Drew Harvell, Robert D.Holt, Peter Hudson, Anna Jolles, Kate E. Jones, Charles E. Mitchell, Samuel S. Myers, Tiffany Bogich & Richard S. Ostfeld. doi:10.1038/nature09575



Inactivity time bomb



Poland

Germany

France

European average

Spain

Italy

UK



Inactivity time bomb

There is a high cost to doing nothing

Lack of exercise contributes to diseases that cost Europe over 80 billion Euros every year



Total: €80.4bn

which is more than:



Global spending on cancer drugs

€75.3bn



Spanish healthcare budget

€64.5bn



Overseas development aid from EU countries

€55.1bn



EUROPARC Federation





Transboundary Protected Areas

Europe's Nature-Regional-Landscape Parks

Resource Efficiency

Young People

Green Infrastructure





Health and Protected Areas: Case Studies

We can all agree that physical activity and contact with nature is essential for human health, and that 'Green exercise' can make a significant and sustained contribution to good physical and mental health and well-being. However, as this is a relatively new field of work there has been a clear need to build the evidence base to demonstrate the public health benefits that Protected Areas provide.

EUROPARC Federation

Health Working Group www.europarc.org

HEALTH AND PROTECTED AREAS



Green

Promoting 'Green Health' in Scotland

Encouraging greater use of the natural environment for better health and quality of life in Scotland.



Outcomes

Existing the Electromeant send Health sectors through a publishment of a Green Electric Plattership and farming policy Attigracities

- Increased profile of the lamefits of Green exercise in the Health and Environment sectors
- Demonstration project showing how to maximize the health-promoting potential of environmental assets summanding healthcare settings

HEALTH AND PROTECTED AREAS



Walkability Project

Exercise Referral Scheme: Walkability Project uses group based walking to reduce sedentary behaviour, develop participants' fitness and improve health



METERS COATS
MATERIAL FAIR
AND
LIMBOURGES
LIKELET

Summary

As a facility count paracing faculity for the community, the freedomination Court Resource Apail, Authority facilities that have been been as the facilities and the small country of proventing a combine of polyto proventing a combine of polyto proventing a combine of polyto proventing and the country of the proventing and the country of the proventing and the country of the proposal of another proposal of the propo

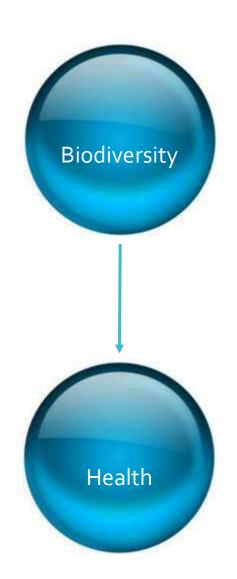
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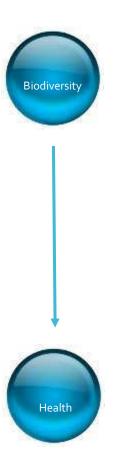
Scotland has a poor recent when it comes to public health, had on recent pears has disveluped a policy framework embracing the health sector to other his frampe the facility sector to other his frampe the littler gion.

The Green Exemple Partnership beings repetitor a complete disting you their planning Hould's Service comoperplannent the Mattonia Hould's Service.

Materia and the environment are accreasingly promised as a health resource and progress to a suitable of health extlicities is being made.

Correlation





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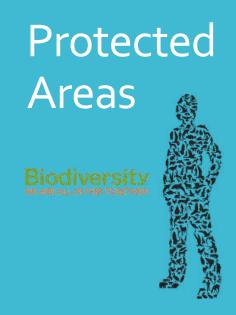
matural sciences are important contributors to biodiversity and health research and policy. Integrative approaches such as the Ecosystem Approach, Ecohealth and One Health unite different fields and require the development of mutual understanding and cooperation across disciplines.



Health Stream

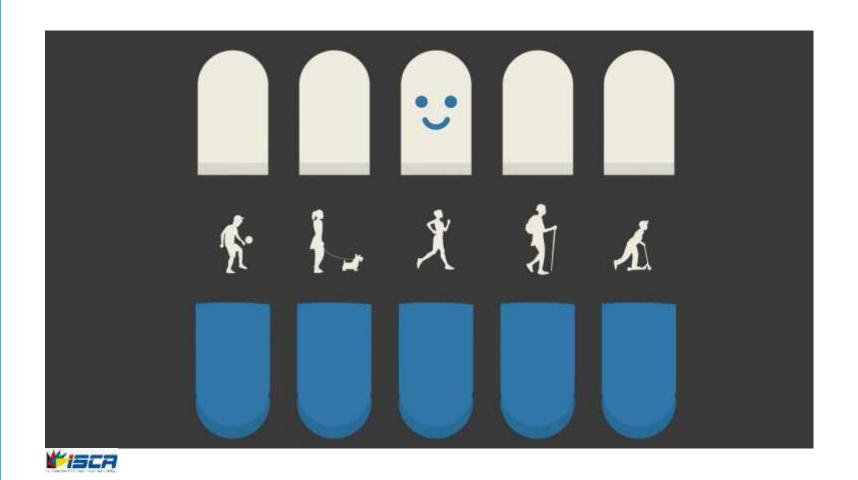
 Jonathan Patz, professor & director of the Global Health Institute - University of Wisconsin (US)

"It is my opinion that conservation and park management can save more lives, promote more health and deal with more ill health than the public health sector can achieve"



Protected Areas, the new Health Centers

Healthy parks, healthy people



Health and social challenges

The role of nature



Find the difference



A renewed focus on regional nature

Circular economy, regional products

Social inclusion & community engagement





145 destinations17 countries441.000.000€ invested72.000.000 visitors/year

Annual turnover: over 1 billion





THE HOGE KEMPEN NATIONAL PARK BELGIUM

- 6000 ha 6 local communities over 6000 species
- 1,2 million visitors per year (+47% r.t. 2005)

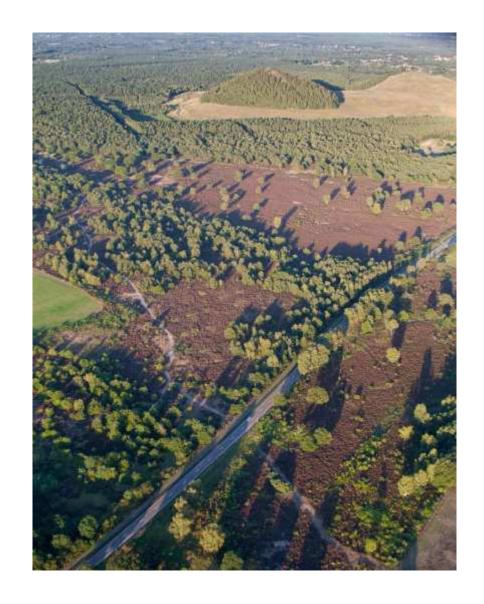
ECOSYSTEM SERVICES

- Annual turnover: 191 million euro
- 5000 jobs

SOCIAL COHESION & COMMUNITY ENGAGEMENT

- Identity

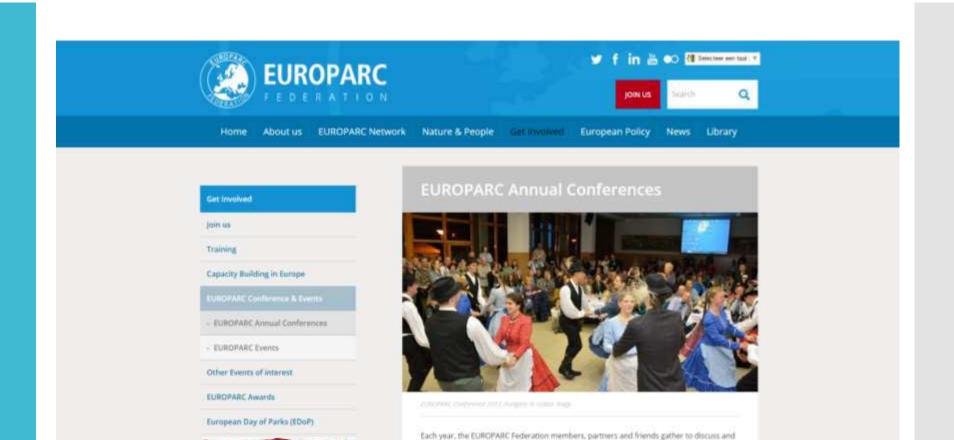
POSITIVE CORRELATION



"We are parks"

October 19-23

Jura Vaudois regional park Switzerland



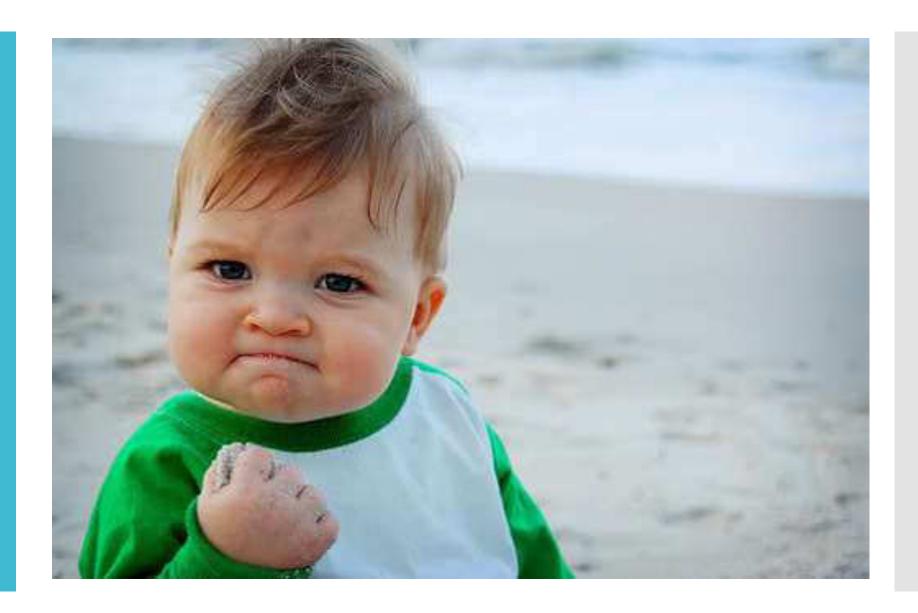
together. It is the heart of our network.

EUR PARC CONFERENCE 2016 debute the importance of Protected Areas in Europe and to meet, share news, experiences

and ideas. The conference is indeed one of the greatest events for the European network of Protected Areas where people from a diversity of countries, cultures, languages come

The EUROPARC conferences are highly appreciated by all those participating as well as the

The nature of healthy aging







































Health and social challenges in CEE and nature's contribution

















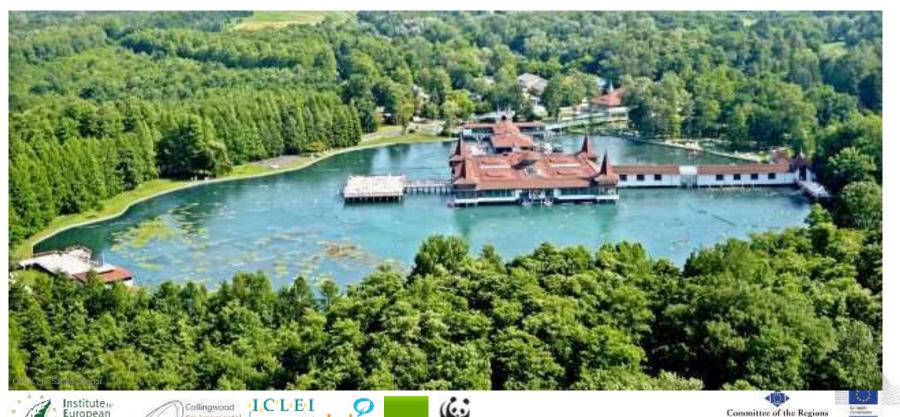




Health and social challenges in CEE and nature's contribution



Eating and living habits











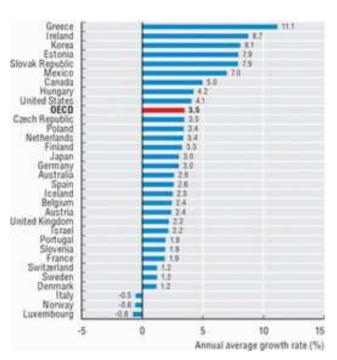




Health and social challenges in CEE and nature's contribution



Drug consumption



OECD, Growth in real per capita pharmaceutical expenditure, 2000-09











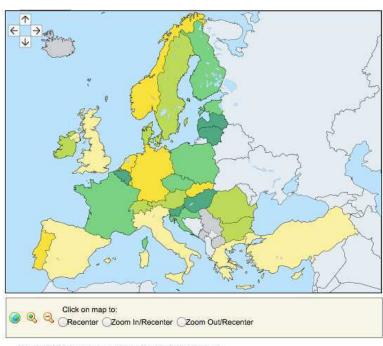




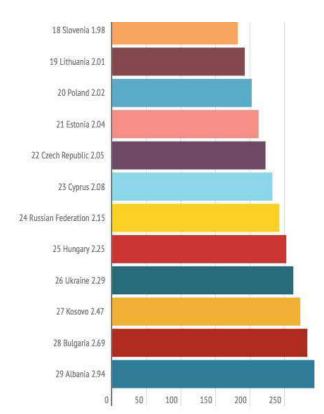
Health and social challenges in CEE and nature's contribution



General mood



© EuroGeographics Association for the administrative boundaries



The Happiness Research Institute

Suicidal rate

















Situation





















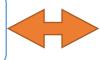




Needs, opportunities, enabling factors



Healthy society



Healthy nature

Integrate GI to sectors to counteract impacts affecting the poor and ageing society Integrate GI to sectors against obesity, stress and improve general mood

Counteract artificial/ unneeded markets

Incentivise sustainable markets

Raise public awareness of nature

Political will understanding and supporting health and nature

Policies, incentives and financing mechanisms ensuring healthy nature, soil, water, food and air

















What are we doing about this?



Healthy society



Healthy nature

Make nature cool

Integrate GI to sectors to cour prize against impacts affect sectors poor and ageir mprove society regrate GI to regreta GI to regrate GI to r

Counteract artificial/unnee ded markets

Incentivise sustainable markets

Raise public awareness on nature

Political will understanding and supporting health and nature

Address politicians Review MFF+CAP

Policies, financing mechanisms ensuring hear acure, soil, water, food and air

















Thank you! zolyomi@ceeweb.org www.ceeweb.org

















