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Promoting to nature: a solution for human health, development well-being

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Urbanisation: a growing phenomenon

A complex socio-economic process based on:

- the transformation of rural areas into urban areas (expansion of cities),
- the displacement of rural populations to urban areas [1,2].

In 2050, 68% of the world's population is expected to be **urban** (6.7 billion people) [1].

- ➔ **Changes in people's habits and life dynamics** that could have **deleterious physical, mental or social consequences for humans** [1].
- ➔ **Urban areas:** higher risk of depression, anxiety disorders, psychosis, schizophrenia, dementia or hyperactivity problems [5,6,7,8,9].
- ➔ **Possible explanation :** urban dwellers are less exposed to natural areas and therefore benefit less from nature and its emotional, cognitive and behavioural benefits [5,10].

The cities :

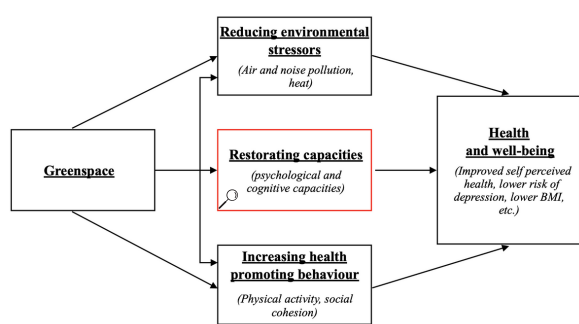
Development and innovation hubs, better access to educational, medical and social services, etc.

favourable to the development of people of all ages

⚠️ Air and noise pollution, heat islands, sedentary lifestyle, overstimulation, etc. [2,3,4].



The health benefits of nature



In this **biopsychosocial model**, Markevych et al. [11] described **three potential mechanisms for the benefits of nature** on people's health.

- ➔ **Contact with nature** could therefore **promote well-being and health** through these three potential pathways.

The restorative effect of nature

Stress Reduction Theory (TRS) [12]

- Older theory with a **psycho-physiological** point of view.
- Nature: **decreased physiological activation** in stressed and unstressed individuals (lesser effect).
- Automatic response to exposure to nature linked to the importance of natural places in human evolution [13].
- Condition: to be beneficial the environment must be perceived as safe by people [14].

Attention Restoration Theory (TRA) [15]

- **Urban environments:** many stimuli are the cause to depletion of directed attention capacities (impacts other cognitive functions (e.g. working memory) and mood (irritability)).
- In contrast, **natural environments** are considered **restorative** and allow people to restore their resources to **"function" properly**.
- A restorative environment has four characteristics: **being away of the quotidian, being rich and coherent, promoting fascination and being compatible with expectations**.

The benefits of nature: health, psychological and cognitive aspects

In the short term

- improving mood
- improving self-esteem
- reducing stress/anxiety
- reducing ruminations
- promotes recovery from a stressful event
- promoting a state of relaxation (increased parasympathetic activity)

Different means of exposure



- improving attentional capacity
- improving working memory capacity

- enhancing well-being
- promoting self-fulfilment
- promoting health and helping to control non-communicable diseases (e.g. mental illness)

- Promoting the cognitive, social, language, motor and emotional development of children
- limiting the cognitive decline in elderly people

- Promoting self-regulation
- reducing behavioural difficulties in children and adolescents
- reduces ADHD symptoms

In the long term

Conclusion and perspectives

- ➔ Nature is a **"fundamental need"** for humans [16].
- ➔ The restorative effect of nature is **"robust and generalisable"** [13] as this effect would be identifiable regardless of the study population, duration, means of exposure, or type of natural environments [17].
- ➔ **Contact with nature:** beneficial effects on individuals in a wide range of domains, from daily life to schooling, work and medical care.

City dwellers are **less** in contact with **real nature**, so they regularly use **substitutes** (photographs, videos, virtual reality) [18].

However, **mediatised nature**, however effective it may be, **does not completely replace 'real' nature** [19].

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