WHY WE NEED FORESTS AND NATIVE VEGETATION FOR OUR HEALTH

FACT SHEET



Our forests and native vegetation like grasslands, wetlands and woodlands are vital to our well-being.

They provide a wide range of benefits to support our health and the environment in which we live. Consequently, destruction of these natural ecosystems through land clearing harms human health. These health impacts are outlined in a related <u>DEA fact sheet</u>.

HEALTHY PEOPLE DEPEND ON TREES

- Trees provide oxygen: it takes about thirty mature trees, on average, to produce the amount of oxygen we each breathe every year (Nowak et al., 2007).
- They absorb carbon dioxide, thereby protecting us against climate change. For example, Australia's old growth mountain ash forests are the most carbon dense in the world, holding

carbon in the trees and vegetation, as well as the soil *(Keith et al., 2009)*.

- They purify our air, trapping pollutants like nitrogen dioxide and microscopic particles that harm our health.
- They absorb and redistribute water maintaining the water cycle. Trees access water deep in the ground and hold the moisture in their canopies.
- They absorb sunlight and emit heat, creating thermal currents,

that take moisture from the leaves up into the atmosphere where it condenses as rain. When trees are removed, heat is reflected rather than absorbed, which means less moisture evaporates into the atmosphere and, in the long run, less rain falls.

- They increase rainfall and improve water quality, greatly reducing the cost of expensive water treatment when they're part of healthy intact forests surrounding water catchment areas. This is very important for people living in cities as well as rural areas. For example, a major reason that Melbourne has some of the world's best quality drinking water is because of its forest catchments which are largely protected.
- Trees and native plants can prevent soil loss and flooding if left undisturbed.

NATURE'S PANTRY AND MEDICINE CHEST

- Forests and native vegetation are a rich food source.
- They are also a source of bioactive compounds, some of which are important as current and potential future medicines.
- They are important for the survival of pollinators like bees.

Bees and other insects fertilise crops and are therefore essential for production of much of the food we eat.

For example, leptospermum, or 'tea tree' is a critical habitat for bees. Bees can also provide honey which has anti-bacterial properties that are useful in health care such as wound healing (Wound Practice and Research, 2011) and soothing night time cough when children have a viral illness (Cohen et al., 2012).



HIGH QUALITY GREEN SPACES AS A PRESCRIPTION FOR MENTAL HEALTH

- Spending time in forests can lower stress and lift mood. (Townsend et al., 2010).
- Spending time in a forest lowers blood pressure and the stress hormone cortisol (Mao et al., 2012) as well as stimulating natural killer cells which are important in fighting infection and inflammation in the body (Environmental Health Preventative Medicine, 2010).
- Forests and other natural environments provide a place for us to reconnect with nature and engage in healthy outdoor physical activity.
- For indigenous people, natural landscapes are integral to cultural and spiritual wellbeing.

NATURAL ENVIRONMENTS PROVIDE VALUABLE PLACES FOR EDUCATION AND WORK

- Children benefit from learning in a natural outdoor environment with improvements in social skills, resilience and confidence in addition to academic outcomes (Malone & Waite, 2016).
- Forests and natural environments provide healthy long-term jobs for those working in environmental education, scientific research, health care and tourism.

REFERENCES

Cohen, et al. Effect of honey on nocturnal cough and sleep quality: a double-blind, randomized, placebo-controlled study. Paediatrics. 2012; 130(3): 465-71

Keith H, Mackey B and Lindenmayer D. Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests. PNAS. 2009. Available at: http://www.pnas.org/content/106/28/11635

Li Q. Effect of forest bathing trips on human immune function. Environmental Health Preventative Medicine. 2010; 15:9-17 Malone K and Waite S.

Student outcomes and natural schooling. 2016. Available at

:https://www.plymouth.ac.uk/uploads/production/document/path/6/6811/Student_outcomes_and__natural_schooling_pathways_to_impact_2 016.pdf

Mao G et al. Effects of short-termforest bathing on human health in a broad-leaved evergreen forest in Zhejiang Province, China. Biomedical and Environmental Sciences. 2012;25(3):317-324.

http://www.besjournal.com/Articles/Archive/archive/No3/201207/P020120712518655780873.pdf

Nowak DJ, Hoehn R, Crane DE. Oxygen production by urban trees in the United States. Arboriculture & Urban Forestry 2007; 33(3): 220–226.

The Wound healing and Management Node Group. The use of medical-grade honey in wound care. Wound Practice and Research. 2011; 19(3): 171-173

Townsend M, Weerasuriya School of Health and Social Development, Deakin University. Beyond Blue to Green: the benefits of contact with nature for mental health and well-being. 2010. Available at: <u>https://www.deakin.edu.au/ data/assets/pdf_file/0004/310747/Beyond-Blue-To-Green-Literature-Review.pdf</u>

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