

# HOW LAND CLEARING HARMS OUR HEALTH

## FACT SHEET



Forests and native vegetation like grasslands, wetlands and woodlands are vital to our wellbeing.

They provide a wide range of benefits to support our health and these are outlined in the related [‘Why we need forests and native vegetation for our health’ DEA fact sheet](#). Consequently, destruction of these natural ecosystems through land clearing harms human health.

In Australia, we are currently seeing an explosion in land clearing.

We have lost nearly 40% of our forests, and much of the remaining native vegetation is highly fragmented. Importantly, very little old growth forest remains (*Bradshaw 2012*).

This forest destruction and land clearing is occurring for various reasons including agriculture, logging for woodchips and timber, mining and urban development.

The greatest current threat is clearing for agriculture and rates have risen rapidly in the past 10 years.

Eastern Australia is considered a global deforestation hotspot, the only one in the developed world, with some estimating Australia will be likely to lose 3 million hectares of trees in the next 15 years.

## SIX WAYS IN WHICH LAND CLEARING HURTS OUR HEALTH

### 1. CLIMATE DESTABILISATION

- Clearing of forests destroys a vital carbon sink and thereby contributes to climate change, which is the biggest threat to human health this century.
- The health effects of climate change are both direct and indirect and occur in concert with the health harms outlined below. These climate related health impacts are outlined in DEA’s [Climate Change and Health in Australia Fact sheets](#).
- It was a reduction in land clearing in Queensland between 2004 and 2012 that allowed Australia to meet its international commitment to the Kyoto agreement on climate change. Unfortunately, when the Newman government came to power in 2012, land protection was eroded and clearing escalated.
- Currently, the land sector in Australia contributes about a quarter of human-induced greenhouse gas emissions through activities such as land clearing and forest management.
- Some researchers have found that restoring trees to parts of Australia would reduce surface temperatures by up to 1.6°C and that replanting trees could increase summer rainfall by 10% overall and by up to 15.2% in the southwest (*McAlpine et al. 2016*).
- They also found that soil moisture would increase by 20% in replanted regions and that more trees reduced the overall climate-induced warming from 4.1°C to 3.2°C between 2050 and 2100. Thus, restoring landscapes can help mitigate further climate change impacts.

## 2. DISRUPTS THE WATER CYCLE EFFECTING WATER SUPPLY AND QUALITY

- Excessive clearing increases run-off and leads to the pollution of rivers and oceans.

This can increase the risk of pathogens entering water supplies causing outbreaks of algal blooms which can lead to the production of dangerous toxins.

These toxins may enter our food chain or interfere with recreation. For example, algal blooms in the Victorian lakes system over summer can mean swimming is not possible in parts of the lakes and fish from the lakes may not be safe to eat.

- Recent research has suggested that the intensity and duration of droughts may have increased in south-eastern Australia as a result of large-scale clearance of native vegetation (*Taylor, 2009*).
- Drought affects human health by putting food and water quality and quantity at risk as well as creating mental stress for rural communities as they watch their farms and rivers perish.

As vegetation is cleared and changes occur in the water table, increased salinity can follow. This reduces soil and farm productivity, which in turn has implications for healthy sustainable food production.

Land clearing in Queensland is one of the major threats to the Great Barrier Reef which is an important source of food and medicines and a place of enormous cultural, recreational and scientific value.

Sediment from run off smothers corals, polluting and clouding sea water and restricting the growth of light-dependent plants and animals.

Increased nutrients stimulate algal growth on reefs and in reef waters, increase the occurrence of coral disease, and may influence crown-of-thorns starfish outbreaks (*ISRS 2004*).

## 3. INCREASES THE RISK OF AIR POLLUTION

- Land clearing can result in erosion and worsening air

quality as wind-blown dust enters the atmosphere.

- This can lead to eye and throat irritation and worsening of respiratory problems such as asthma.
- When land is cleared, the air purifying effect of trees and vegetation is removed. This is especially important around schools and residential areas because children's developing lungs are vulnerable to poor air quality.
- Dust storms can spread organisms that are harmful to health. For example, a listeria outbreak in early 2018 which caused deaths and miscarriage was traced back to dust storms increasing the coverage of a rockmelon crop with the bacteria (*Jasper, 2018*).

## 4. LOSS OF BIODIVERSITY THAT SUPPORTS HEALTH

- Human health is dependent on healthy, intact and biodiverse ecosystems.

Biodiversity is the extraordinary variety of living things and includes plants and animals.

Human resilience in the face of sudden and catastrophic shifts to the planet's life-support systems relies on biodiversity (*DEA, 2014*).

- Land clearing is a major source of suffering, injury and death to native animals.

It is estimated that some 50 million mammals, birds and reptiles are likely to be killed annually because of land clearing in Queensland and New South Wales alone (*Finn & Stephens, 2017*).

- Currently, over one third of all medicines known to humans have been derived from nature.

The predicted loss of species caused by deforestation and climate change may include plants and animals whose potential medicinal and nutritional value is yet to be determined.

For example, the milk of Tasmanian Devils has been found to contain compounds that may provide the key to antibiotic resistance, a major threat to human health and yet the habitat of Devils is currently being lost to deforestation for mining and logging (*Wahlquist, 2016*).

## 5. LOST OPPORTUNITIES FOR IMPROVED WELLBEING AND MENTAL HEALTH

- Widespread loss of biodiverse green spaces can lead to poorer wellbeing as opportunities to lower stress, reconnect with nature and engage in physical activity outdoors are lost.
- Our national parks and state forests provide important places for people to enhance their overall health and connect with one another and the great outdoors.
- Indigenous people have important connections to undisturbed landscape for their cultural wellbeing. Destruction of natural places causes them distress and erodes mental health.

## 6. LOSS OF OPPORTUNITIES FOR NATURE-BASED EDUCATION, OCCUPATIONS AND PROFESSIONAL DEVELOPMENT

- Further destruction of forests and native habitats through land clearing removes opportunities for nature-based learning for young people.
- Long term jobs in eco-tourism, health provision and research into the natural world will be compromised if forests and other native habitats are not given the protection they need.

## WHAT CAN BE DONE?

Doctors for the Environment Australia recognises the complex interaction between human health and our natural environment and therefore the impact that environmental degradation, particularly the loss of biodiversity, is having, and will continue to have, on human health and social stability. DEA's [biodiversity policy](#) elaborates on this important issue.

The devastating result of widespread and escalating land clearing throughout Australia is a crisis of species extinction (*DEA, 2018*). When coupled with climate change and associated damage to our precious river and marine ecosystems, this is set to compromise the health of both rural and urban communities in far reaching ways. We urge policy makers to act urgently to curb the destructive practice of land clearing for the sake of our health.

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