Environmental Issues in the Australian Environment.
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1. Land Use

Australia's lands are generally of low nutrient status and have thin, salt-laden soils and low physical relief. Much of Australia has been extremely geologically stable for millions of years (Sutton 2000). Consequently, disturbance of these fragile soils with modern farming activities used in cropping, combined with prolonged drought periods, leads to substantial soil loss which we cannot afford.

About a third of Australia's agricultural production comes from the tiny amount of farmland that is irrigated. Irrigation and excessive clearing have allowed higher flows of water into salt-laden subsoil layers that mobilise the salt, causing dryland salinity (Hamblin 2001). Dryland salinity could take a third of Western Australia's wheat country out of production and the trends are very worrying in much of the rest of the country.

2. Inland Waters

Australian waterways have a very high level of inter-annual variability. Clearing of riparian (riverside) vegetation has led to substantial increases in gully erosion and increased sediment loads in the many creeks and river systems.

“Diffuse-source pollution and especially soil loss from catchments contribute to the widespread nutrient enrichment and turbidity of inland waters. Soil washed into rivers and reservoirs is a source of nutrients for decades into the future. Nutrient enrichment and reduced stream flow due to over-extraction of water have increased the frequency and extent of toxic blue-green algal blooms, with some reservoirs being unsuitable for recreation or drinking-water supply over 25% of the time” (Ball 2001).

Contamination of inland waters by heavy metals, chemicals and pathogens is thought to be localised; however, there is no reliable information to support this assumption. There is evidence of pesticide contamination of rivers and streams draining cotton and rice-growing areas in New South Wales. It is likely that other waterways in Australia are affected, but no recent information exists on the extent or impact of pesticide contamination of other areas (Ball 2001).

Acidification is an emerging issue in some catchments where increasing trends in water acidity and the area of land affected by soil acidity have been found.

3. Atmosphere

Australia has the highest per capita greenhouse gas emission of any country in the world. The Australian government has not yet committed to the ratifying the Kyoto protocol.

4. Ozone

UV exposure in tropical regions of Australia has increased by 20% as a result of the simultaneous depletion of ozone and the decrease in cloud cover. At mid-latitudes, no significant net increases per year were found because of increasing levels of cloud cover but clear day levels of UV radiation rose. Figure 5 shows ozone thinning over the past 20 years and its effect on Australia.

5. Smog in Australian Cities

Photochemical ozone depletion continues to be a significant issue in Australia’s larger cities, although the problem has been steadily improving since the early 1980s.

6. Biodiversity

Australia has one of the highest levels of endemism in the world and has the highest level of endemism for non-fish vertebrate species as shown in Figure 10. The major threat to biodiversity is the clearing of native vegetation, which is occurring at alarming rates in north-eastern Australian range-lands.

7. Reference