

Corrupting the environment?

Our mismanagement of the environment is a form of corruption. Global change is a reality. "Our world is changing faster than at any time in human history, as a result of our own actions" (Juniper). In this article, we will focus on some of the detrimental anthropogenic changes to Earth systems.

We are over-utilising the natural resources of Earth. Our 7.4 billion consumers use too many resources too fast to replenish on human time-scales. Water, energy and land are in such a demand that future wars will be about their accessibility and utilisation.

Although 71% of Earth's surface is covered by water (an estimated 1.386 billion cubic kilometres), 97.5% of that is saltwater. Of the freshwater, 99.7% is trapped in ice or groundwater, with only 0.3% available in rivers and lakes. That translates into about 90 000-100 000 cubic kilometres of readily accessible liquid freshwater – while global freshwater use already exceeds 4 000 cubic kilometres per year.

We use 10 times more wood than what is sustainable. More than half of the world population live in cities, voraciously consuming natural resources. There are already 28 megacities with populations in excess of 10 million people.

CLIMATE CHANGE

Since industrialisation, we have been polluting the environment at an ever-increasing rate.

Our use of ozone-depleting chemicals, such as chlorofluorocarbons, has damaged the Earth's protective ultraviolet-blocking "sunscreen" layer. Namibians are particularly vulnerable to the harmful effects of ultraviolet rays reaching earth's surface, such as skin cancer.

We have added so much carbon dioxide and other greenhouse gases to the atmosphere that it has "thickened" the natural "blanket" that traps heat within the atmosphere. This imbalance in Earth's radiative balance causes an increase in surface and atmospheric temperatures, leading to a wide range of climatic changes.

Though world leaders have agreed to implement measures for keeping global atmospheric temperature increase to below 20C compared to pre-industrial times (Paris Agreement, 2015), it is unlikely that this target will be met. Namibia, with its arid and variable climate, will be hard hit by climate change – we are already seeing some of the effects. In addition to increased va-



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riability and climatic extremes, the increase in temperature will cause an increase in evapotranspiration and thus drying out of the soil and less moisture available for plant growth.

Thermal expansion of the oceans, together with melting ice-sheets and glaciers, threaten our main harbour, Walvis Bay.

GOODS AND SERVICES

Our activities cause the deterioration or destruction of ecosystems, and with that the goods and services that we receive from these ecosystems. One example is the forests of the world – the lungs of Earth. Logging and conversion to other land uses are damaging these areas and their capacity to produce oxygen.

Fragmentation of habitats are just as damaging. Animals and plants are trapped in areas too small for their survival and we build barriers, like roads and fences, which prevent them from migrating to or expanding into other suitable habitats.

In addition, our unthinking behaviour allows alien invasive species to establish themselves and threaten indigenous species. One conspicuous example is the *Prosopis* thickets along many Namibian river courses.

To stop environmental corruption, we have to live sustainably and assume responsible stewardship of Earth's resources. We need to reduce consumption, re-use and recycle waste more efficiently and change our mindsets to use more renewable energy, such as solar power for heating, washing and cooking.

The challenge is to maintain or increase living standards without increasing consumption, waste and pollution. We have to do more with less and think out of the box.

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