



# Is sustainability ethically realistic?

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Enhancing Education, Training and Communication Processes for Informed  
Behaviors and Decision-making Related to Ionizing Radiation Risks

Ethics is usually made up of several philosophical thoughts:  
consequentialism,  
utilitarianism,  
deontology,  
teleology and  
environmental ethics;  
for the health professions, bioethics is usually the key set of  
guidelines; these are often contradictory.

An early philosopher, John Stuart Mackenzie defined ethics  
as to do with *what is right for conduct*.

# *Ethics*

‘ethics [usually treated as plural] 1.the moral principles governing or influencing conduct. 2 [usually treated as singular] the branch of knowledge concerned with moral principles.’ [OED]

**Utilitarianism** has a fundamental principle: an action is right if it tends to promote happiness and wrong if it tends produce the reverse of happiness—not just the happiness of the performer of the action but that of everyone affected by it.

Such a theory is in opposition to *egoism*, the view that a person should pursue self-interest, even at the expense of others. It is also counter to any ethical theory that regards some acts or types of acts as *right* or *wrong independently of their consequences*. Peter Singer states that it applies to all sentient beings.

**Consequentialism** may be seen as a subset of Utilitarianism. It is the view that the value of an action derives entirely from the value of its consequences.

This is in stark contrast with both the view that the value of an action may derive from the value of the kind of character whose action it is (courageous, just, temperate, etc.), which is a form of virtue ethics and with the view that its value may be intrinsic, belonging to it simply as an act of truth-telling, promise-keeping, etc. This latter is to be found in deontological ethics.

*Bioethics:*

There are four in Beauchamp & Childress'  
model



**Autonomy:**

the absence of *Informed* Consent renders agreement void.

## **Beneficence:**

is demonstrated by using energy sources that are renewable, such as sunlight, wind, water, thermal, but not by non-renewable fuels

## **Non-maleficence:**

The 'Climate sceptics' deny that the human generation (*anthropogenetic*) of carbon dioxide, other gases and particulates is responsible for global warming.



This heavy smog looks man-made

## **Justice:**

can be shown to be present by equal treatment and management of human conditions.

This is denied by the universal lack of potable water, food and the rise of pauperism

## **Confidentiality:**

is shown by the irregular sharing of data of all kinds, and by omitting some information, internationally.

National defence is often given as an excuse for ignoring any ‘need to know’.

The same excuse is given to protect commercial interests.

## **Veracity:**

which is closely allied to Autonomy, and requires that not only as much information is shared as possible,

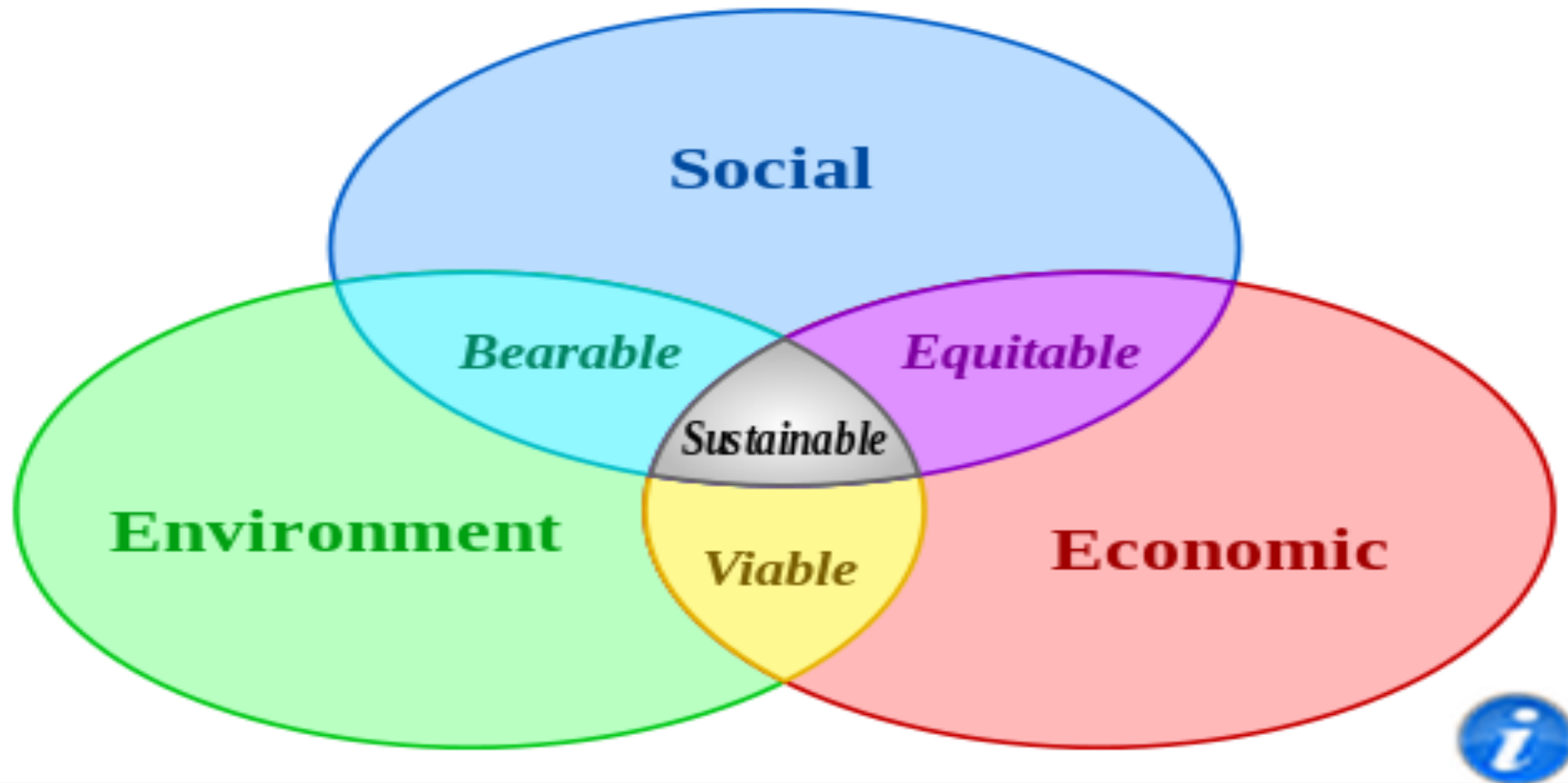
*and that it is true.*

James Mackintosh, (1765-1832):

“The [House of] Commons, faithful to their system, remained in a wise and masterly inactivity.”



# Viability, Bearability and Equity= Sustainability?



Venn diagram of sustainable development:  
at the confluence of three constituent parts<sup>[9]</sup>

## Australian Government –sustainability

equipment- energy efficiency

design for office and public buildings

advice & information

‘reducing your environmental impact’

chemical reference guide

water accounting-economic, social,  
environmental

water efficiency; reduce large buildings use by  
30%-40%

water efficiency; make and use more efficient  
machinery

‘Your Home’- comfortable, healthy. Less  
expensive; more environmentally friendly.

Several Departments are associated with these aims.

The environment may be categorised in a number of ways, not the least, in the developed world, in economic terms.

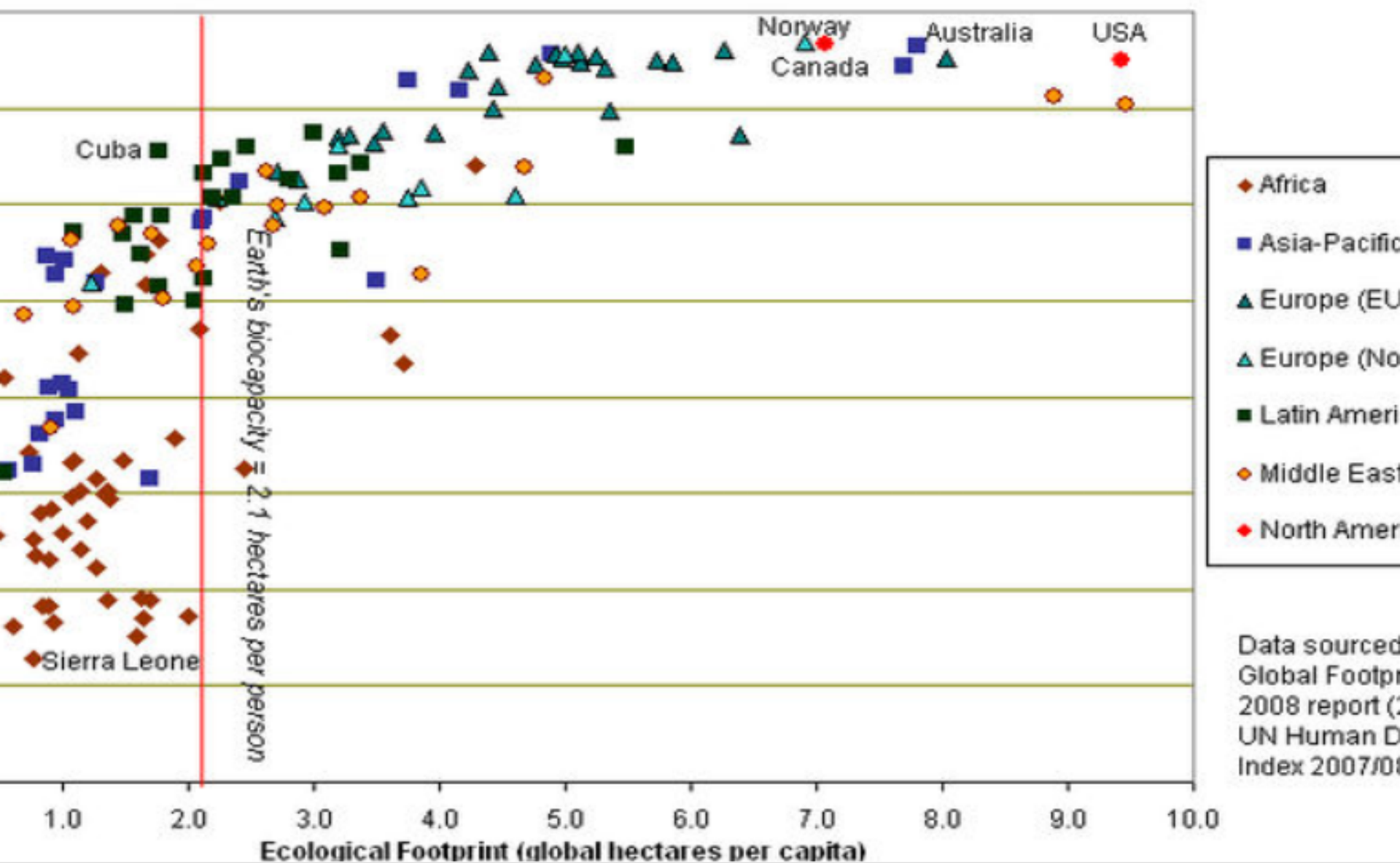
However, ecology and environment seem more appropriate, when we are dealing with ethics.

The Ecology and Ecological footprint is described:

“The scientific study of the processes influencing the distribution and abundance of organisms, the interactions among organisms, and the interactions between organisms and the transformation and flux of energy and matter.”

There are a number of non-statistical measures  
used to demonstrate  
    'happiness',  
        'wellbeing' and  
            the 'carbon footprint'.

# Human Welfare and Ecological Footprints compared



Again, though, we have a serious, if not fatal condition: many of the resources that are being ‘sustained’ are finite and running out.

These are  
**water** (“The amount of moisture on Earth has not changed. The water the dinosaurs drank millions of years ago is the same water that falls as rain today.”);  
**food**;  
**potassium** (“Potassium salts are necessary to the life of all and animals.”); and  
**fossil fuels** and their effects on air quality.

Bringing fresh water  
to parched places.


In the outback, we're using advanced filtration  
technology to turn 10,000-year-old groundwater into  
fresh drinking water. And scarcity into abundance.

Imagination at work

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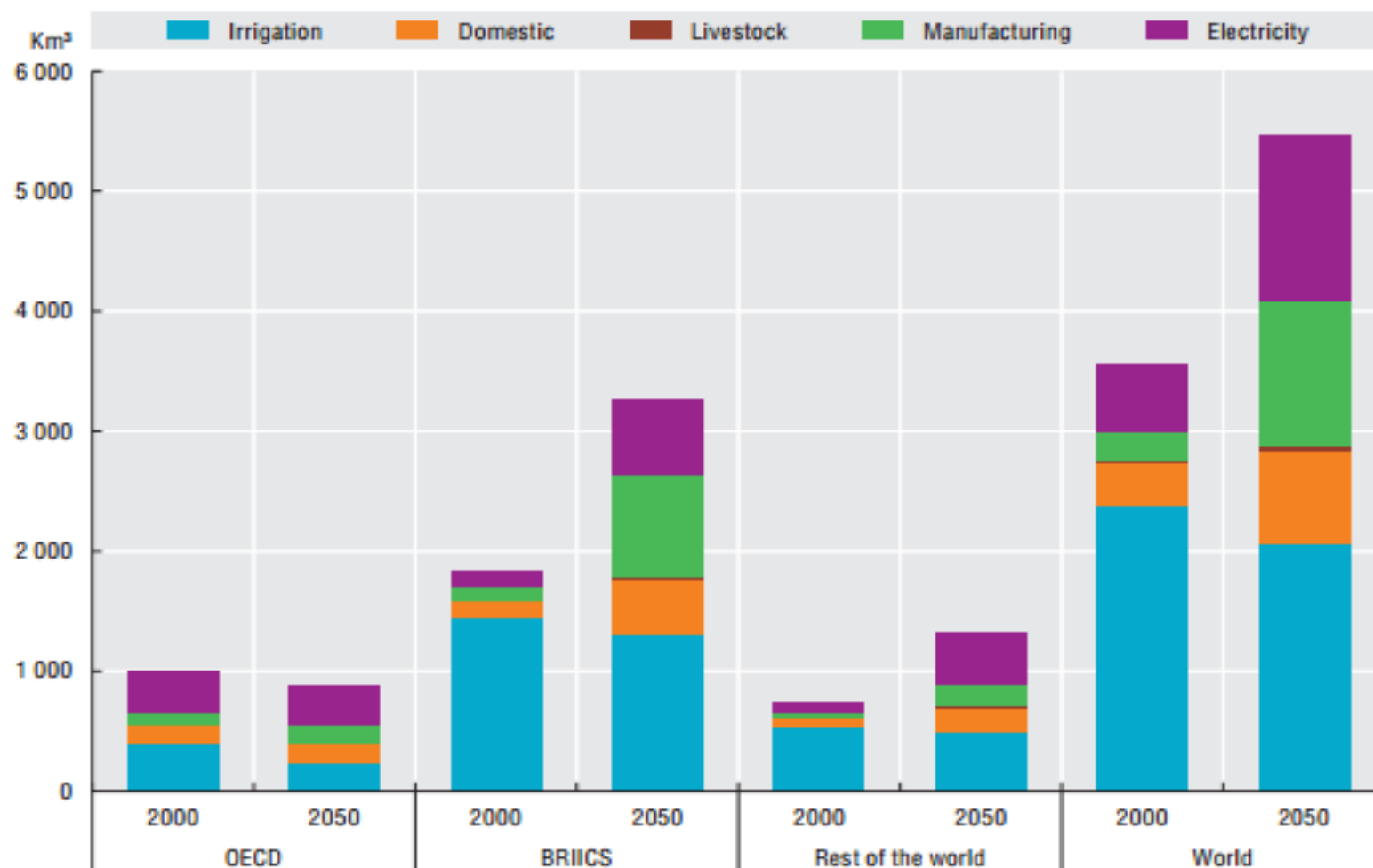
“In most highly urbanised areas of the world water supply can no longer be secured from the immediate vicinity ...increasing the dangers of pollution and reduction of water quality. These will become particularly apparent in drought years up to the point of causing shortages of good quality water”.

The World Bank, *Water and climate change: Understanding the Risks and Making Climate-Smart Investment Decisions*, 2009

If this quotation has any meaning in the wider sense, please consider the Sahel, which is an area running across the central parts of the African continent, and has produced a desperate situation with insufficient water of any quality.

The OECD has also forecast water needs to 2050.

Figure 0.3. **Global water demand: Baseline, 2000 and 2050**



Note: This graph only measures "blue water" demand (see Box 5.1) and does not consider rainfed agriculture. The country groupings BRICS and RoW are explained in Table 1.3 in Chapter 1.

Source: OECD Environmental Outlook Baseline; output from IMAGE.

Because food for humans and animals depends largely on the availability and quality of water, there is no need to explore these finite resources in any detail.

One asset that cannot be plundered much more is potassium (K), or potash. This is a finite mineral, and humans waste it with a remarkable nonchalance. ‘Women and men excrete 85% of the K renally and 15% faecal’.

Brasnett RA, Potash, *Mining Engineering* 55.6 (June 2003)

**Fossil fuels** have an interesting history, in the USA at least, and this cartoon is remarkably poor in prognostication.



'Old King Coal' guards his crown from the clutch of 'oil for fuel'. From the US magazine *Puck*, 1932.



SMH,  
23/05/14

# Australia among minority of nations with rise in deaths from air pollution

It is a grisly statistic, and it comes with a cost.

The number of deaths related to air pollution in Australia has increased significantly, when most of the world's big economies have reported a decline.

A new report from the Organisation for Economic Co-Operation and Development, called *The Cost of Air Pollution: Health Impacts of Road Transport*, shows Australia has failed to halt the dangerous rise in air pollution. It estimates the economic cost of that failure has run into the billions.

The report shows that between 2005 and 2010, the number of

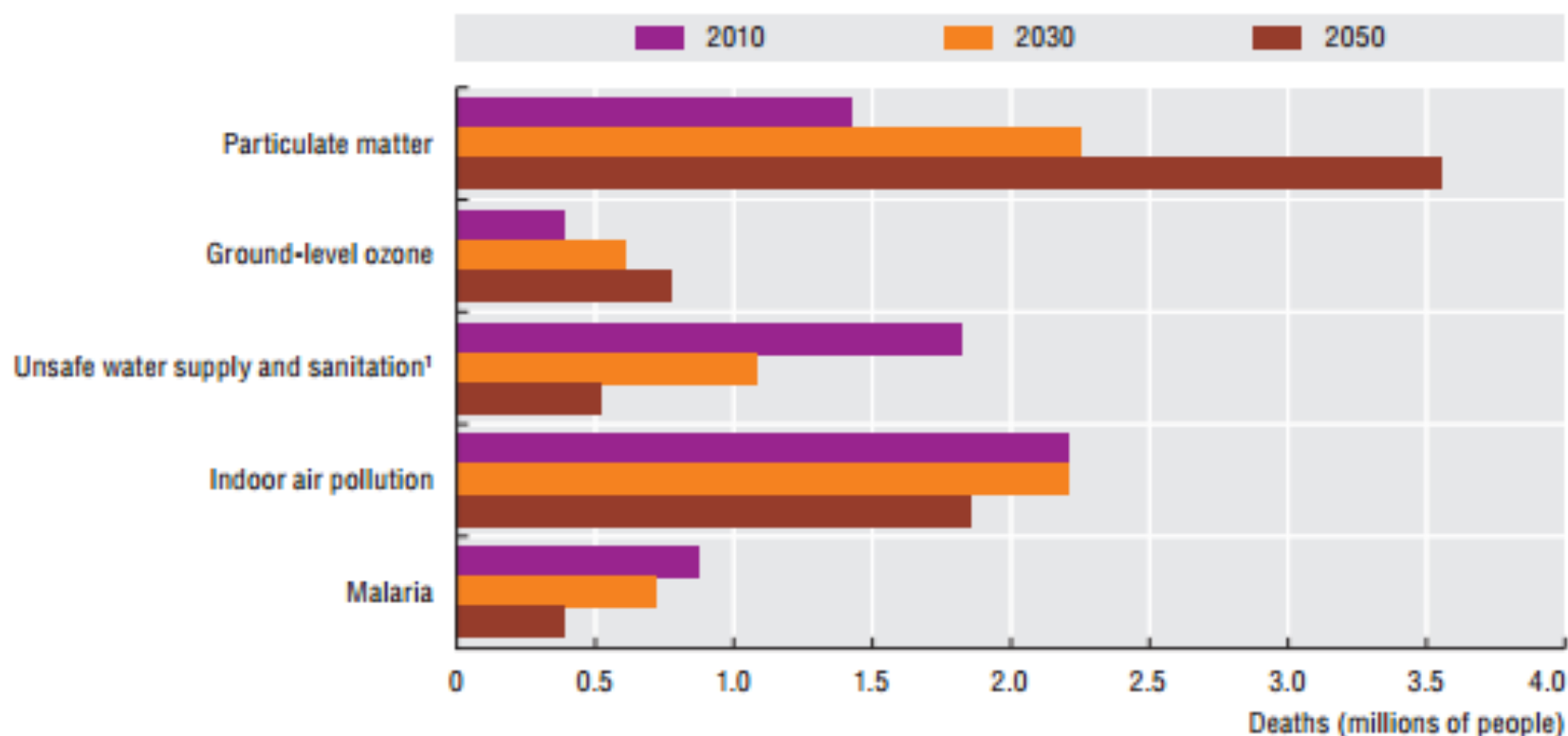
deaths from air pollution in Australia jumped from 882 to 1483, a 68 per cent increase.

The pattern is similar for the number of "years of life lost" due to air pollution. It also shows Australia is in a minority of countries where this happened.

Of the 34 OECD countries, 20 had a reduction in pollution-related deaths in that five-year period. Australia was in the minority of 14 countries that had an increase in death rates. The health impacts of local air pollution, particularly from road transport, were "much larger than previously thought."


Gareth Hutchens

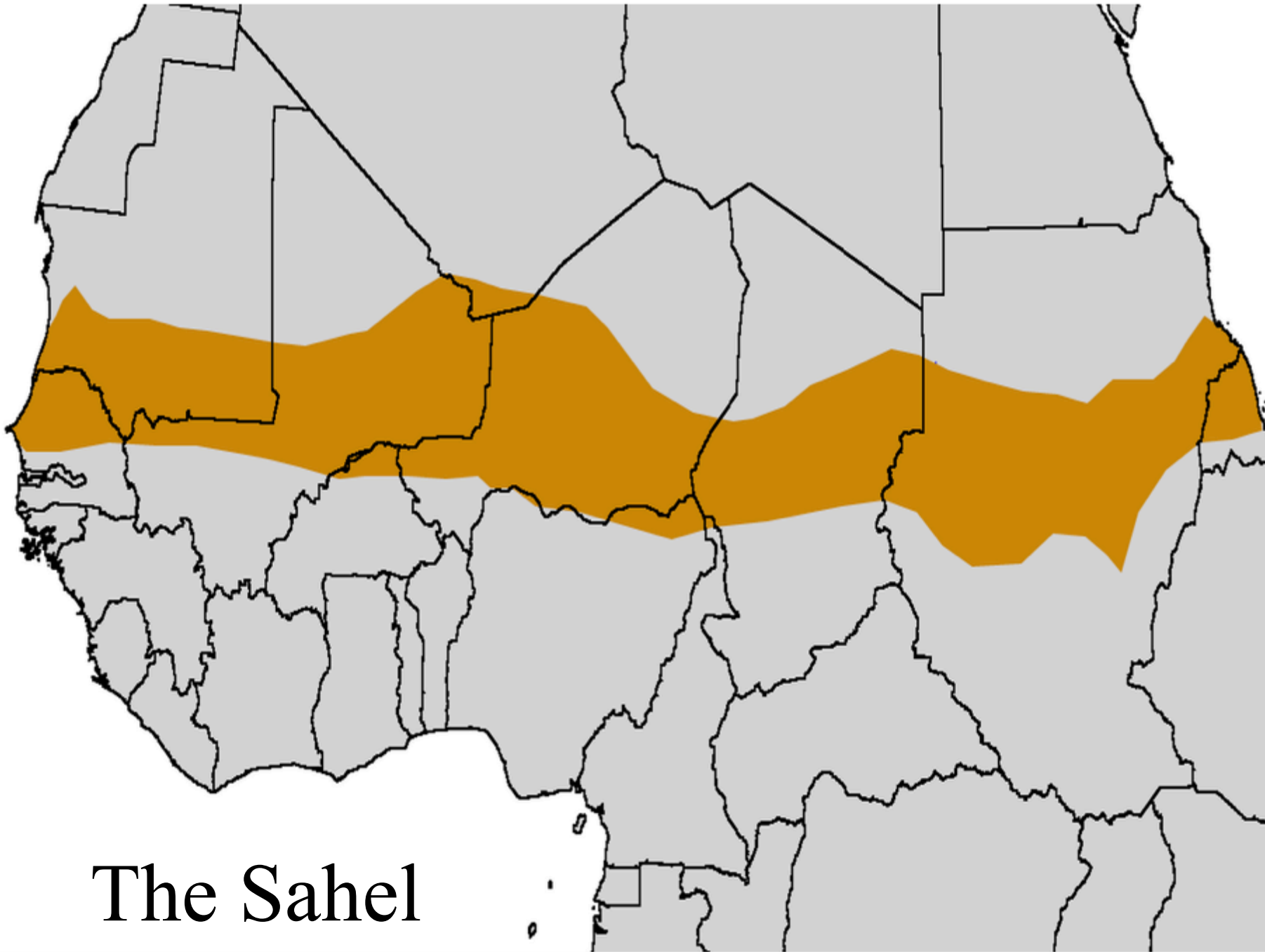
Figure 0.4. **Global premature deaths from selected environmental risks:  
Baseline, 2010 to 2050**



1. Child mortality only.

Source: OECD Environmental Outlook Baseline; output from IMAGE.

StatLink  <http://dx.doi.org/10.1787/888932571855>



The Sahel

There is world-wide failure to implement the use of tidal, wind, solar, geothermal and other natural sources of power.

Many efforts are tokenism.





## Winding down?

**24,000** people are estimated to work in the

**2020** the year by which Australia has committed to meet a minimum 5 per

**\$14.5b** is the estimated value of large-scale renewable energy projects that will proceed until the end of the

**\$11b** is the amount by which the \$14.5b investments will be reduced if renewable energy target is repealed

By 2600, the world population would be standing shoulder to shoulder and the electricity consumed would make the earth glow.

Stephen Hawking, *The Times*, 17 February 2001.





*Macropus giganteus*

Science is supposed to explain how nature is, not make judgements about whether it is right or moral or relevant to a value system.



An ideology may be composed of four characteristics:

- it must have power over cognition;
- it must be capable of guiding one's evaluations;
- it must provide guidance towards action, and;
- 
- it must be logically coherent.



Anamorphic projection – It's not **what** you see, but **where** you stand, even ideologically.

This challenge is seen by most as a passing phase, cyclic, tolerable, manageable but not fatal. It all depends on where one is standing, because that will always blur and distort one's view.