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Ecological determinants of health

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Sustainable Development Goals provide a framework for ecological determinants of health

The United Nations Agenda 2030 describes itself as a guide for all humanity to ensure our on-going flourishing on planet earth. Australia's Foreign Minister Julie Bishop agreed to the Agenda in September 2015, together with 192 other leaders.

Agenda 2030 includes 17 Sustainable Development Goals (SDGs) and 169 targets for all nations. Aims of the agenda include:

- Eradication of poverty and hunger in all forms and dimensions
- All people enjoy prosperous and fulfilling lives
- Economic, social and technological progress in harmony with nature
- Planet earth is protected from degradation.¹

Common development goals and indicators for all nations recognise our common humanity, shared planet, and the need for every country to develop in ways that ensure sustainability of human cultures and societies. The SDGs build on the Millennium Development Goals which contributed to significant improvements in global health, through the goals for reducing child mortality, improving maternal health and combatting HIV/ AIDS, malaria and other diseases.²

SDG 3 is to ensure healthy lives and promote wellbeing for all at all ages, and provides a focus for health care services. However social determinants of health will be improved through achieving the SDGs for education, work, reduced inequalities, strong institutions and clean water and sanitation, and the overall premise of Agenda 2030, that no one is left behind. While all SDGs assume that we have access to the earth's ecological resources, ecological determinants of health are particularly visible in the goals of sustainable consumption and production (SDG 12), combatting climate change (SDG 13) and sustainable use of land ecosystems (SDG 15).

Indigenous peoples globally have contributed to the development of the SDGs, because SDGs are imperative for indigenous people's livelihoods. Indigenous peoples are particularly concerned with the SDGs for preventing hunger, protecting life on land and water; reduced inequalities and partnerships for the goals.¹

Australia's progress towards SDGs

Each nation is assessed annually on progress towards the SDGs, using standardised indicators for each target and goal. Progress towards each SDG is shown in a dashboard such as Figure 1. SDGs are coloured green, yellow, orange and red showing how near the country is to achieving the goal by 2030.

Figure 1 Australia's SDG Dashboard 2018



³Sachs J et al. *SDG Index and Dashboards Report 2018*: Bertelsmann Stiftung and Sustainable Development Solutions Network; 2018

Australia is currently not on track to achieve any of the SDGs. Our position in the world has declined since establishment of the Agenda 2030, as we were ranked 18th at the first assessment in 2015, while by 2018 we were ranked 37th.³ Australia has tasked the Department of Foreign Affairs and Trade to implement our commitment to the SDGs, suggesting that sustainable development is regarded as an issue of foreign affairs, rather than a responsibility of all branches of government.⁴

Australia does poorly on SDG 2, to end hunger, improve nutrition, and promote sustainable agriculture because of:

- poor nutrition manifesting as high rates of obesity. Countries with over 25% of people obese are rated poorly on this goal, and 28% of Australians are obese.
- Australian agriculture uses large amounts of fertiliser, with poor soil nitrogen management contributing to unsustainable agricultural practices.

SDG 7 is affordable and clean energy. Australia is rated poorly because of high CO₂ emissions per unit of energy and low levels of renewable energy, with only 8.4% of our electricity from renewable sources. Countries producing over 20% of their energy from renewable sources are achieving this target. The best performing country is Iceland, which uses renewable sources for 78% of energy needs.

Our vast e-waste production, at over 10kg per person per year, brings us down on SDG 12, responsible consumption and production. We are also ranked down because of levels of sulphur dioxide emissions through burning coal and other industrial activities, and reactive nitrogen footprint, a consequence of high levels of fertilizer use.

SDG 13 is climate action. We do very poorly in all the indicators, including:

- carbon emissions, which are 16t per person with the threshold for sustainability being less than 2t per person. We need to reduce emissions by 88% to achieve this indicator;
- imported carbon emissions, a measure of consumption for which carbon emissions were generated in another country;
- our high levels of climate change vulnerability, through the inadequacy of our planning systems to account for climate change.

SDG 14 is ocean sustainability; and our poor ranking reflects over 62% of Australia's fisheries being over-exploited or collapsed. We achieve targets in ocean biodiversity and marine protected areas but this is not enough to counter the over-exploitation of fisheries.

Our rate of land clearing and forest loss lowers Australia's performance on SDG 15, protection, restoration and promotion of sustainable use of land ecosystems. Australia has one of the highest rates of clearing in the world with 7.6% of our forests lost each year for pastoralism and agriculture. This is one SDG where our performance is rapidly deteriorating.

SDG 17 is partnerships for the SDGs. Australia's aid budget is only 0.2% of GDP, far short of the agreed target of 0.7%. We also perform poorly on financial secrecy, another indicator in which our global ranking is deteriorating.³

Thus Australia as a nation is neither developed nor just. There is much to do to improve the lives of Australians and the sustainability of our livelihoods. Overall Australia is scoring in the lowest 2.5% in 8 of the 17 SDGs,³ and our SDG performance has similarities to our poor performance on the Closing the Gap scorecard for reducing Indigenous disadvantage.

Indigenous peoples and SDGs

SDGs provide an historic opportunity for Indigenous peoples to be actively involved in the global development agenda.

Indigenous peoples are crucial agents of change.

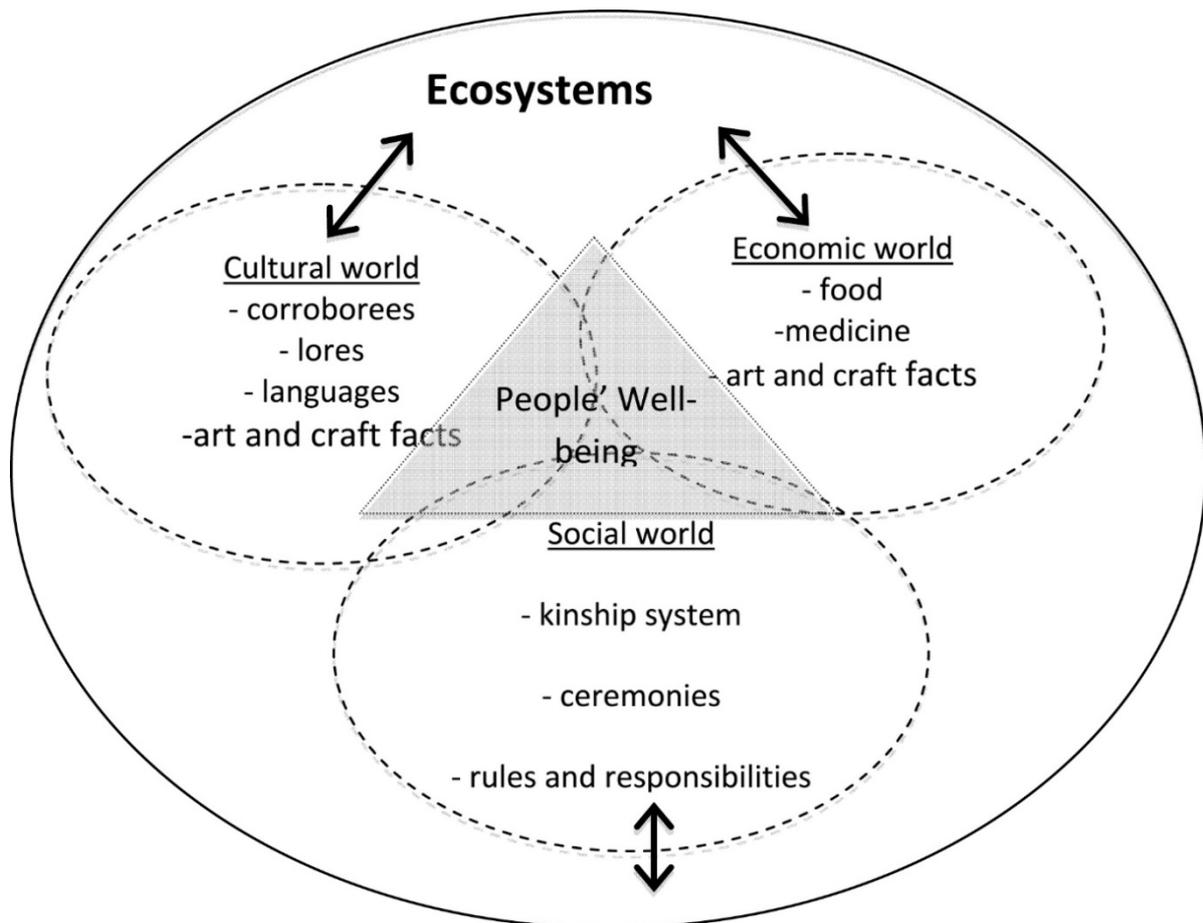
- Many indigenous peoples' livelihoods are less engaged in the neoliberal capitalist global economy (although almost all are enmeshed).
- Many indigenous peoples hold traditional knowledge about sustainable land and sea management and the languages to communicate their knowledge.
- Indigenous aspirations and traditional ways of life are fundamental for sustainable development.⁴

On the other hand, indigenous peoples are among the poorest of the poor in:

- Education
- Poverty
- Hunger
- Climate change vulnerability.⁴

Sustainability is fundamental to cultures of many indigenous peoples; but the Western sustainability discourse has often focused on environmental or economic sustainability and overlooked cultural sustainability.⁵ Sustainable development in Australia demands attention to the contribution of Aboriginal and Torres Strait Islander people, through sustainable research, and recognition of Aboriginal and Torres Strait Islander people's diversity and understandings of sustainability.³ This is shown in the integrated model of indigenous economy, social world and ecosystems, from Sangha, Le Brocque (6).

Figure 1: An Integrated Model of Indigenous Economy, Social World and Ecosystems



Each component has perforated boundaries to represent to and from relationship with ecosystems (e.g. people obtain food from their country but also have responsibilities to look after).⁶

Aboriginal and Torres Strait Islander Australians and the SDGs

The National Aboriginal Health Strategy states:

"Aboriginal culture is the very antithesis of Western ideology. The accent on individual commitment, the concept of linear time, the switch in focus from spiritual to worldly, the emphasis on possession and the pricing of goods and services, the rape of the environment, and above all, the devaluing of relationships between people, both within families and within the whole community, as the determinant of social behaviour, are totally at variance with the fundamental belief system of Aboriginal people."⁵

"Health" to Aboriginal peoples is a matter of determining all aspects of their life, including control over their physical environment, of dignity, of community self-esteem, and of justice.

It is not merely a matter of the provision of doctors, hospital, medicine or the absence of disease and incapacity.⁷

The focus of Australia's health care systems on clinical services for Aboriginal and Torres Strait Islander Australians has lost sight of Aboriginal and Torres Strait Islander perspectives of health.⁸

SDGs and Ecological determinants of health

SDGs provide a human-centred framework for development that may assist Australia in both sustainable development and its obligations to Aboriginal and Torres Strait Islander people. The ecological determinants of health are at this nexus through recognition of the fundamental importance to health of:

- clean water and air
- safe food supply
- species and genetic diversity
- fertile soil
- stable climate
- safe levels of solar radiation
- waste detoxification⁹

Beyond these basic ecosystem functions, Indigenous health includes relationships with community and Country, so when we listen to Indigenous peoples, the links between social and ecological determinants may be clearer.⁵

Conclusion

The ecological fallacy involves drawing conclusions about individuals based on the groups to which they belong.¹⁰

There is another ecological fallacy, which is that we are living in a progressive and healthy society. The reality is that our daily livelihoods are reducing the ecological wealth of planet earth that sustains us.¹¹

Australia's achievement of SDG commitments will require significant changes to our current development pathways, which have based on colonising and exploiting the land and Aboriginal and Torres Strait Islander people. There is a need to better respond to the concerns of Aboriginal and Torres Strait Islander people and value more diverse conceptions of what health and livelihood mean.¹² The SDGs – to which we are already committed – provide targets for social renewal and sustainable development, taking account of ecological determinants of health.

Recommendation

That Australia fully commit to achieving our SDG commitment, through whole of government leadership; national policy and planning; social accountability; bipartisan support; and commitment to the needs of Aboriginal and Torres Strait Islander peoples.⁴

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Presenter

Rosalie Schultz is a member the NT Branch and Environment and Ecology Special Interest Group of the Public Health Association of Australia, as well as a member of Doctors for the Environment Australia and affiliated with the Centre for Remote Health, Flinders University. Rosalie studied medicine in Perth, then discovered the attractions of rural and remote health practice, and interest in Aboriginal people and their knowledge and ways of knowing. Her experience and expertise include clinical and public health aspects of communicable and non-communicable disease; injury prevention and safety promotion; cultural safety, white privilege and racism; community development, ecohealth, one health and planetary health. As a rural GP and public health physician,

Rosalie recognises climate change is the greatest threat to health and is already increasing morbidity and mortality from communicable and non-communicable disease and injury, and mental health issues. Rosalie's research in rural Australia explores the knowledge and wisdom of Aboriginal Australians, and opportunities for two way learning that recognise and build on Aboriginal expertise, particularly in caring for Country. She is interested in promoting health and wellbeing based on ecological knowledge, and appreciating and responding to ecological grief.