GLOBAL GOAL SCENARIOS

Rapid SDG progress possible

The Sustainable Development Goals elegantly capture humanity's shared aspirations, but it's at the national level where the rubber hits the road. Progress is possible across multiple goals but challenges to comprehensive achievement remain.

Brett A. Bryan, Michalis Hadjikakou and Enayat A. Moallemi

The Sustainable Development Goals (SDGs) may be uncontroversial and globally agreed, but the hard work now falls to nations to implement actions to achieve them within the 2030 timeframe. Few countries have a clear idea of the global goals' meaning at the national level, or if achievement is possible and if so, how. Writing in *Nature Sustainability*, Cameron Allen and colleagues[1] report on a detailed sustainability assessment of future scenarios for Australia's progress towards the SDGs.

The SDGs cover a broad spectrum of concerns spanning people and nature[2]. These include goals about human development and progress, for example, poverty, hunger, health, education, gender, inequality, clean water, energy, employment, economic growth, industry and infrastructure. They also include environmental goals such as sustainable communities, responsible consumption and production, climate action, biodiversity and land conservation. The human condition has substantively improved over past centuries alongside a burgeoning global human population, with increased life expectancy and education, and reduced child mortality, hunger and poverty. However, this progress has come largely at the expense of vast resource use and environmental degradation, including disruption of the global climate[3]. With tensions between development and environment, and complex trade-offs inherent in the SDGs[4], achieving all these goals at once is profoundly challenging. Allen et al. show the intricacies of achieving the SDGs at the national level, using Australia as a case study.

Integrated modelling that captures the effects of complex societal, economic and environmental interlinkages across sustainability goals and target indicators is instrumental for policy assessment. This modelling allows researchers to understand systems involving multiple SDGs and the co-benefits and trade-offs of policy interventions. It also uncovers potential unintended consequences. Allen and colleagues used the integrated SDGs

(iSDGs) model by the Millennium Institute[5] to capture these complex dynamics in their integrated assessment of Australia's futures against the 17 global goals.

Allen and colleagues define future scenarios for Australia based on two deeply uncertain aspects of the future — inequality and resource-use intensity. Scenario names make plain the policy direction: 'Growth at All Costs', 'Green Economy', 'Inclusive Growth' and 'Sustainability Transition'. They map these four and a 'Business-as-Usual' (BAU) scenario against the global Shared Socioeconomic Pathways, creating sets of policies. These policies are detailed at the national level and aligned with global scenarios. The scenarios and policies follow expected trends and assumptions in key external drivers of (un)sustainability. The researchers calibrate the iSDGs model for Australia, including scouring published and grey literature for bespoke data to populate the many parameters demanded by the model over time. Under the hood, the tailored iSDG Australia model quantifies Australia's future sustainability performance across 52 targets and 97 indicators of the 17 SDGs.

They find that BAU visions of the future become bleaker and more dire, reflecting a continuation of the lack of progress towards the global goals to date[6,7]. Their BAU trajectory estimates a progress of 40% towards overall SDG achievement in Australia, with better performance on socioeconomic goals such as education, health and clean water. This is not surprising for a developed nation, albeit one with considerable regional and income inequalities. The environmental performance in this scenario is woeful, particularly against the responsible consumption and production, climate action and life on land goals. Worryingly, these results are consistent with current national policy trends (which prioritize economic productivity over the environment) and align with other reports showing Australia slipping down the global sustainability rankings, particularly due to climate change inaction and biodiversity loss[8].

In terms of future scenarios, Growth at All Costs performed poorly (42% overall progress towards SDG achievement) and Inclusive Growth did only slightly better (47% progress) compared to the BAU. Notably, economic targets appear worse in these two growth-focused scenarios than in the other two environment-focused scenarios. The Green Economy (with 63% progress) performed well across economic and social targets and very well on the environment, because green policy intervention benefits crossed over to society and the economy. The Sustainability Transition scenario, with its wellbeing-centric policy focusing on poverty, inequality, climate, water, energy, consumption and governance enabled greatest and fastest SDG achievement (70% progress), nicely balanced across all three areas.

Overall, less than half of the 52 targets were met even under the best-case Sustainability Transition scenario (and less than one-third under BAU). Several social targets were met, but only very few environmental and even fewer economic ones. This raises serious concerns for the sustainability of Australia's environment as well as its ability to contribute towards global environmental and economic goals. Environmental targets are minimum standards — biophysical thresholds which delimit our safe operating space, that cannot be substituted. If not met, we risk severe and potentially irreversible disruption to environmental processes such as dangerous climate change and ecosystem collapse[9].

Allen et al. show that Australia as a nation can make significant progress towards the SDGs quickly, but even with the best conceivable policy portfolio it falls well short by 2030. This toughest 'last mile' of broad SDG achievement is currently a science and policy blindspot for nations. We just do not yet know how to get there, or even if it is possible. For Australia, navigating the last mile will demand a qualitative change — a shift in mindset from transition to transformation — in research,

innovation, technology and policy across multiple sectors of the economy and environment.

For other countries, Allen et al. provide a great example of the quantitative scenario assessment of future national-scale progress toward sustainability necessary to support decision-making. Nations provide a practical scale of governance where sustainability policy can be effectively designed and implemented. And for them, one size most certainly does not fit all. National-level integrated modelling spanning the SDGs is crucially important for identifying the specific policy portfolios most likely to progress each country furthest towards balanced SDG achievement and ensuring that we leave no-one behind. ❐

Brett A. Bryan ⓘD*, Michalis Hadjikakou ⓘD and Enayat A. Moallemi
Centre for Integrative Ecology, Deakin University, Burwood, Victoria, Australia.
e-mail: b.bryan@deakin.edu.au

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