The Sustainable Development Goals, forests, and the role of Australian Forestry

The United Nations (UN) member states adopted the Sustainable Development Goals (SDGs) in September 2015 as part of a UN General Assembly resolution on the 2030 Sustainable Development Agenda. The 17 SDGs and their associated 169 targets constitute a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity (UNDP undated). Most of the targets are to be achieved by 2030, although some were to have been achieved by 2020.

The SDGs, which seek to balance the three dimensions of sustainable development (i.e. economic, social and environmental), supersede the eight Millennium Development Goals adopted to support the 2000 United Nations Millennium Declaration (UNGA 2000). They complement other commitments, such as those made by nations in the Paris Agreement on climate change and the Convention on Biological Diversity.

The SDGs address some of the world’s most pressing problems, including hunger, poverty, gender inequality and inequality in general, climate change, biodiversity loss, deforestation, and the unsustainable use of natural resources. By their short timeframe, they acknowledge the urgency with which these problems must be resolved (or at least ameliorated).

None of the SDGs related to the natural-resource base have clear, quantifiable targets. For example, SDG 15.2 (the main forest target) comprises the following: ‘By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally’. The targets have related indicators (agreed to in 2017), which vary in their quantifiability—for example, indicator 15.1.1 is ‘forest area as a proportion of total land area’, and 15.2.1 is ‘progress towards sustainable forest management’. Most countries conduct regular reviews of their progress towards the SDGs—in the case of Australia, indicators are reported through the Australian Government’s Reporting Platform (Australian Government undated). Moreover, Australia’s State of the Forests report, which has been published every five years since 1998 (e.g. Montreal Process Implementation Group for Australia and National Forest Inventory Steering Committee 2018), provides data directly to the SDGs (Read & Howell 2019).

A World Forests, Society and Environment (WFSE) project published what it characterised as a ‘systematic scientific assessment of potential and anticipated impacts of efforts to achieve the SDGs on forests, related socio-economic systems and forest-related development’ (Katila et al. 2020).

Table 1 presents the 17 SDGs and, for each SDG, our summary of the main conclusions drawn in the WFSE assessment (with each SDG addressed in separate chapters in Katila et al. 2020) and in the 2018 State of the World’s Forests report produced by the Food and Agriculture Organization of the United Nations (FAO 2018). The table is intended to be illustrative rather than comprehensive, and it undoubtedly contains debatable elements. Nevertheless, it provides a compelling case for a strong – and in some cases vital – role of forests in achieving all the SDGs; it also makes clear that efforts to achieve many of the SDGs have wide-ranging implications for forests.

Coinciding with the time horizon of the SDGs, the UN General Assembly proclaimed the period 2021–2030 as the Decade on Ecosystem Restoration (UNGA 2019), which ‘is a rallying call for the protection and revival of ecosystems all around the world, for the benefit of people and nature’ (UNEP and FAO undated). At the very least, the Decade is a marketing opportunity for encouraging governments, the private sector and communities to invest much more heavily in restoring degraded forest landscapes as a way of improving livelihoods, combating climate change and delivering ecosystem services, thus assisting efforts to achieve the SDGs. Globally, nations have set a goal (through the Bonn Challenge and the New York Declaration on Forests) of restoring at least 350 million ha of degraded forest landscapes by 2030. This could cost USD 1 trillion or more; nevertheless, the benefit-to-cost ratio has been estimated conservatively at 10–37 (Mills et al. 2020).

Forest landscape restoration is only one aspect of the forestry endeavour but it alone will generate a huge need for high-quality science. As signalled by the SDGs, the next decade will be crucial for the future of humanity. Considerable improvements are projected by 2030 in some human development indicators; for example, under Shared Socioeconomic Pathway 2 (SSP2), the number of undernourished people is projected to decline from 800–900 million in 2010 to 300–500 million in 2030 (although this would still be short of the SDG target of zero undernourished people by 2030) (UN Environment 2019). But many key environmental targets are seriously in jeopardy: for example, the projected increase in global warming under SSP2 is 4°C by 2100, which is more than double the aim stated in the Paris Agreement of limiting global warming to less than 2°C by 2100 (UN Environment 2019). Moreover, the continued deterioration of the environment would undermine any gains in human development indicators.

Averting catastrophic environmental and hence developmental outcomes will require a concerted and efficient global effort, and high-quality science has a vital role to play. This

---

1SDG 15 (‘Life on land’) is to ‘protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss’ (UNGA 2015).

2The WFSE is an endeavour of the International Union of Forest Research Organizations.

3SSP1 = ‘sustainability (taking the green road)’; SSP2 = ‘middle of the road’; SSP3 = ‘regional rivalry (a rocky road)’; SSP4 = ‘inequality (a road divided)’; SSP5 = ‘fossil-fuelled development (taking the highway)’ (see Riahi et al. 2017). The Intergovernmental Panel on Climate Change will use these scenarios in its Sixth Assessment Report on climate change, due in 2021/2022 (O’Neill et al. 2020).
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|------------------------------------------------|--------------------------------------------------------------------------------|
| 1. End poverty in all its forms everywhere | • Forests and trees are sources of income and livelihoods and for rural populations, particularly Indigenous peoples, those living close to forests, and those who use trees outside forests  
• Forests and trees provide safety nets and sources of subsistence goods that would otherwise have to be purchased  
• The role of forests in reducing long-term poverty is multidimensional and affected by factors such as insecure tenure and inadequate rights to make use of forest products  
• Forests can mitigate the vulnerability of the poor to environmental shocks — if the poor have access to forest products and ecosystem services | • More secure property rights and social protection in the form of cash transfers could support forest conservation  
• Policies designed to reduce vulnerability to disasters could promote the expansion of forest cover  
• If poverty alleviation strategies continue to be based on infrastructure and agricultural development, conflicts will arise with forest conservation and sustainable management  
Source: Lawlor et al. (2020) |
| 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture | • Forests contribute directly to food security by providing food and dietary diversity, supplying wood energy for cooking food, and enhancing the resilience of the ecological and social systems surrounding agriculture  
• Trees are often more resilient to adverse weather conditions than agricultural crops, and forest-based food items contribute to household resilience by serving as an important safety net in times of crisis and emergencies  
• About 2.4 billion people rely on woodfuel for cooking and water sterilisation  
• Forest ecosystem services can enhance agricultural and fishery production through water regulation, soil formation, protection, nutrient circulation and biodiversity conservation  
• Forest biodiversity is integral for nutrition and the ability to grow and harvest diverse crops | • Agricultural expansion to global food security would largely be at the expense of forests  
• A business-as-usual approach to food production would cause ongoing deforestation and consequent loss of ecosystem services vital for food production  
• Investments in small-scale and sustainable farming would help conserve forests and better integrate trees into landscapes  
Source: Sunderland et al. (2020) |
| 3. Ensure healthy lives and promote wellbeing for all at all ages | • Exposure to green spaces, including urban forests and forests in general, provides benefits for mental, social and physical health  
• Reducing deforestation can reduce harm to human health via improved quality of water, soil and air and reduced exposure to some infectious diseases, the conservation of traditional and future medicines, and the provision of other ecosystem services (e.g. climate regulation)  
• Worldwide, 350 million people within or close to forests depend on them for subsistence and income; of those, about 60 million people (including Indigenous communities) are wholly forest-dependent (McFarlane et al. 2020)  
   • For forest-associated groups, forests are a source of nutrient-rich foods  
• Forest plant biodiversity represents an important repository of potential pharmaceutical drugs, often identified via their traditional use (McFarlane et al. 2020)  
• The World Health Organization attributes the premature deaths of over 4 million people a year to exposure to household air pollution from burning solid fuels  
• Forest fires can have major impacts on air quality and hence human health | • Short-term economic and human health gains from deforestation (e.g. for food production) would be offset by increased health risks for humans  
• Universal access to sexual and reproductive healthcare services would help decrease demographic pressure on forests  
• Increasing access to green space and biodiverse environments to improve mental and physical health in (especially) urban populations may assist the development of urban forests  
• Protecting the natural pharmacopoeia in forests could assist efforts to conserve forests and increase benefits for forest owners  
• Addressing household-associated air pollution by replacing woodfuels with other means could reduce associated unsustainable forest harvesting  
• Improving the health and wellbeing of Indigenous and other forest-adjacent communities would have a positive impact on forests because of their role in forest stewardship  
Source: McFarlane et al. (2020) |
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------|
| 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | The use of forests, woods and trees for outdoor learning is growing, particularly in North America, Scandinavia and western Europe | Inclusive education that builds and reinforces positive attitudes towards forests, as well as relevant knowledge and competencies, and that helps individuals and communities feel or stay connected to forests, will foster and sustain pro-forest behaviours. |
| 5 Achieve gender equality and empower all women and girls | Women are heavily involved in forest work such as collecting woodfuel, medicinal plants and other non-wood forest products, and food for family consumption. | The integration of Indigenous knowledge into formal and non-formal education about forests would help improve forest management and also contribute to the empowerment of Indigenous peoples in their rights and interests associated with forests. |
| 6 Ensure availability and sustainable management of water and sanitation for all | Forests and trees are integral to the water cycle: they regulate streamflow, support groundwater recharge and, through evapotranspiration, contribute to cloud generation and precipitation. | Increased access to forest-related education and training, including for women and members of Indigenous communities, would contribute to the sustainable management and use of forests. |
| 5 | Women are heavily involved in forest work such as collecting woodfuel, medicinal plants and other non-wood forest products, and food for family consumption. | The welfare and dignity that achieving SDG 5 would bring to forest peoples and livelihoods is essential for ensuring better-managed and sustainable forests. |
| 5 | Women are heavily involved in forest work such as collecting woodfuel, medicinal plants and other non-wood forest products, and food for family consumption. | The gender-neutral framing of some SDG goals undermines efforts towards achieving the outcomes called for in SDG 5. |
| 6 | Forests and trees act as natural purifiers, filtering water and reducing soil erosion and sedimentation of water bodies. | Well-intentioned gender programs could backfire, causing adverse effects on forests and forest peoples, if they lack cognisance of context and power relations. |
| 6 | Over 75% of the world's accessible freshwater comes from forested watersheds; over half the Earth's population is dependent on these areas for water. | SDG targets 6.1 and 6.2, concerning water and sanitation provision, will have relatively little impact on forests except through a demand for hydrological ecosystem services. |
| 6 | Trees and forests use water to grow, and therefore fast-growing species will use water more quickly. | Target 6.3, on improving water quality, may increase the use of forestry in the treatment of wastewater. |
| 6 | Target related to water resource management may affect forests through water-efficiency considerations that may restrict forest plantations in water-stressed areas and integrated water resource management, which might drive a more integrated view of catchments and their management. | Alignment between SDG 6 and forest policies must be guided by a shared understanding of the complex relationships between water and forests and their impacts on both forest-dependent peoples and the communities downstream, and possibly downwind. |

Source: Kanowski et al. (2020) Source: Amezaga et al. (2020) Source: Arora-Jonsson et al. (2020)
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------|
| 7 Ensure access to affordable, reliable, sustainable and modern energy for all | ● Woodfuel plays a critical role in ensuring access to affordable, reliable and modern energy by providing basic energy services to about 2.4 billion people worldwide | ● Achieving SDG 7 through large-scale hydro and agricultural commodity-derived biofuels would threaten forests and forest-based livelihoods |
| 7 Promote sustainable, inclusive and productive employment and decent work for all | ● At least a further 88.5 million people use woodfuel as their main source of heating | ● Promoting a transition to sustainable forest-based clean energy would generally support the achievement of this and other SDGs (Jagger et al., 2020) |
| 8 Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation | ● Forests contribute to affordable and clean energy through the sustainable use of traditional woodfuels, processed woodfuels, liquid biofuels and biopower; the latter three of these will likely play an increasing role in energy service provision (Jagger et al., 2020) | ● Significant trade-offs exist in the pursuit of development where growth policies focus on sectors that compete with forestry for space and resources, such as agriculture, energy and mining. |
| 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | ● Worldwide, the number of small and medium-sized forest enterprises is estimated at 45 million, including formal and informal enterprises (informal enterprises are those entities not registered with a local authority and not paying taxes) | ● Nevertheless, synergies between SDG 8 and forests exist where sustainable development is explicitly sought in the forest sector, focusing on tree plantations, timber and non-timber forest products from natural forests, ecotourism and ecosystem services. |
| 9 ● Wood is a widely available construction material with lower embodied energy than other materials such as concrete and steel, and can contribute to infrastructure and associated temporary constructions | ● The implementation of SDG target 9.1 and its corresponding indicators (road, infrastructure and transportation expansion) would lead to irreversible and widespread forest degradation and deforestation. |
| 9 ● Technological developments will lead to the increased use of wood as part of the bio-economy | ● The planned expansion of hydropower and the associated construction of dams, roads and transmission lines threatens large areas of forest |
| 9 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | ● Small-scale industry expansion and access to information and communications technology would have diverse consequences for forests and livelihoods, depending on how they are applied (Tomaselli et al., 2020) | |
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------|
| 10 Reduce inequality within and among countries | Many marginalised local communities, smallholders and Indigenous people live in remote forest areas and lack access to infrastructure and economic opportunities | • Considerable synergies and complementarities can be found between the SDG 10 targets and the goals of environmental justice, which comprise three interrelated dimensions: representational, recognition and distributive justice |
|                                   | • Supranational policies addressing illegal logging by cutting off markets for illegally harvested timber, and private certification of sustainable forest products, serve as forms of forest governance that bypass the state and may reinforce or create new forms of distributive injustice (Basnett et al. 2020) | • However, the disjuncture between SDG 10 and environmental goals within the SDGs may undermine efforts to promote environmental justice |
|                                   | • Supranational policies addressing illegal logging by cutting off markets for illegally harvested timber, and private certification of sustainable forest products, serve as forms of forest governance that bypass the state and may reinforce or create new forms of distributive injustice (Basnett et al. 2020) | • Trade is not included in SDG 10; this is an important gap because markets for forest products can drive forest resource extraction, exacerbating inequalities among actors in supply chains |
|                                   | • If SDG 10 addresses structural inequalities, it is also likely to support distributive, representational and recognition justice for forest-dependent populations | Source: Basnett et al. (2020) |
| 11 Make cities and human settlements inclusive, safe, resilient and sustainable | Access to urban forests and trees provides opportunities for a range of possible activities, and many types of user can benefit. For example, children living in areas with good access to green spaces have been shown to have 11–19% lower prevalence of obesity compared with those with limited or no access | • The strategic inclusion of urban and peri-urban forests in city agendas and planning could help manage potentially adverse effects, emphasising the role forests play in delivering ecosystem services to urban and rural people and fostering productive rural–urban relationships |
|                                   | • However, there is evidence of widespread inequitable access to urban green spaces around the world (Schwarz et al. 2015, cited in Devischer et al. 2020) | • SDG 11 shows synergies with all the other SDGs, creating opportunities for human health and wellbeing, green justice, resilience and adaptive capacity in and around cities. These synergies could also benefit forest communities by reducing pressure on forest resources |
|                                   | • The presence of trees on public streets has been shown to decrease the occurrence of crime, thus increasing the safety of open and green spaces | • The benefits that greener and more resilient cities have for forests and forest-dependent livelihoods will largely depend on integrated governance and territorial planning | Source: Devischer et al. (2020) |
| 12 Ensure sustainable consumption and production patterns | Since 2000, the global forest sector has achieved more resource-efficient production by promoting wood-based panels that substitute sawnwood | • Although SDG 12 targets and indicators make no direct reference to forests or forest communities, achieving the targets would result in positive contributions towards forest conservation and will support forest-dependent livelihoods—for example, preventing food waste and losses would reduce the conversion of forests to agriculture |
|                                   | • The paper recovery rate more than doubled from 24.6% in 1970 to 56.1% in 2015, demonstrating that most paper now goes through recycling, although significant room for improvement still exists in some countries | • The efficiency-based approach mostly implied in the SDG 12 targets could have negative impacts on forest-based livelihoods, for example by excluding small-scale producers from value chains if they are unable to comply with the criteria of sustainability standards |
|                                   | | • SDG 12 could contribute to creating enabling conditions for advancing a more responsible and sustainable supply of timber and other forest commodities, also linked to more responsible demand |
|                                   | • An increasing number of private-sector companies are voluntarily committing to excluding deforestation from their supply chains—the number of companies with zero-deforestation commitments is estimated to have increased from 566 in 2016 to 718 in 2017 | • The overall benefits of SDG 12 to the long-term sustainability of forests and forest livelihoods are limited to slowing down impacts, rather than reversing unsustainable trends |
|                                   | | • The main players for achieving SDG 12 targets with positive outcomes for forests comprise national governments, large companies and consumers involved in global value chains | Source: Schroder et al. (2020) |

(Continued)
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|------------------------------------------------|--------------------------------------------------------------------------|
| 13 Take urgent action to combat climate change and its impacts | | ● Forests absorb roughly 2 billion tonnes of carbon dioxide equivalent each year |
|                                   | ● Deforestation and other land-use activities account for just under one-quarter of global greenhouse gas emissions |
|                                   | ● Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) is recognised in the Paris Agreement as a climate-change mitigation action |
|                                   | ● Pledged funding for REDD+ is well behind the projected needs to reduce deforestation (Tumhout et al. 2017, cited by Louman et al. 2020) |
| 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development | | ● Mangrove forests play a vital role in coastal protection, fisheries, and associated local livelihoods |
| 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | | ● The world’s forests store an estimated 296 gigatonnes of carbon in above- and below-ground biomass |
|                                   | ● Tropical forests alone host at least two-thirds of terrestrial species, and other types of forest are species-rich ecosystems in their own contexts |
|                                   | ● The world’s forest area decreased from 31.6% of the global land area in 1990 to 30.6% in 2015, but the pace of loss has slowed in recent years |
| 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels | | ● The decentralised, participatory approaches associated with community forest management contribute to this goal |
|                                   | ● Research on peace and armed conflict reveals highly variable effects on forests and people (McDermott et al. 2020) |
|                                   | ● Conflict may prevent the conversion of forests to agriculture, or drive illicit crop production; it may foster migration into or out of forested areas (McDermott et al. 2020) |
|                                   | ● Laws in many countries favour the political elite, large-scale industry actors and international trade; thus, the focus of SDG 16 on the rule of law risks reinforcing existing inequalities |
|                                   | ● The impact on forests and people of achieving justice under the banner of SDG 16 will depend on the degree to which SDG 16 implementation conceptualises and acknowledges the full assemblage of actors and institutions beyond the state, and whose justice is served or undermined |
|                                   | ● The goals of SDG 16 may best be served by legal reforms that strengthen local rights to land and resources and by greater involvement of non-state actors and institutions at multiple scales—from traditional governance systems to global-scale initiatives Source: McDermott et al. (2020) |
| Sustainable Development Goal (SDG) | Existing role of forests (FAO 2018 or as cited*) | Potential impacts of SDGs on forests and forest-related livelihoods and economies |
|-----------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------|
| 17 | Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development | ● Many public–private and civil–society partnerships are promoting the sustainable management of forests to deliver public goods |
| | | ● Funding for forests from official development assistance and other sources has trended upward since 2000, providing reason for cautious optimism (Humphreys et al. 2020) |
| | | ● Successful attainment of SDG 17 is essential for implementing the other 16 SDGs, all of which depend on secure means of implementation and durable partnerships |
| | | ● Innovative partnerships have been created to promote sustainable development involving intergovernmental organisations, the private sector, research institutes, non-governmental organisations and grassroots organisations |
| | | ● However, such partnerships exist within a neoliberal global economic order in which there are net financial flows from the Global South to the Global North that negate financial flows for sustainable development |

* The points made in this column, and the numbers contained therein, are all from FAO (2018) (including citing other works) unless otherwise indicated.

Source: Humphreys et al. (2020)
includes forest science, especially given the importance of forests in achieving and informing the SDGs (Table 1) and the potential impacts of global trends, such as climate change, on forests.

*Australian Forestry* publishes new and significant scientific and technical papers with implications for Australia, the Indo-Pacific region and globally on topics related to forest research, management, policy, products and services. Robust, peer-reviewed scientific inquiry is a vital part of an open, tolerant society and essential for humankind in combating the existential economic, social and environmental threats we face. *Australian Forestry*, therefore, is committed to the rational and rigorous examination of all aspects of forests, including the range of contributions that forests make to the SDGs, and to playing a crucial role in the evidence-based improvement of forestry in Australia and the rest of the Indo-Pacific region. The forest science/eco-nomics/management community has a responsibility to make a constructive and credible contribution to informing and achieving the SDGs.1 We encourage this community to make full use of the journal towards this end.

**Disclosure statement**

No potential conflict of interest was reported by the author(s).

**References**

Amézaga J, Bathurst J, Iroumé A, Jones J, Kotru R, Bhatta LD, Springgay E. 2020. SDG 6: clean water and sanitation – forest-related targets and their impacts on forests and people: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 178–205.

Arora-Jonsson S, Agarwal S, Pierce Colfer CJ, Keene S, Kurian P, Larson AM. 2020. SDG 5: gender equality – a pre-condition for sustainable forestry: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 146–177.

Australian Government. Undated. Australian government’s reporting platform on the SDG indicators [online]. [accessed 2021 Apr 1]. Available from: www.sdgdata.gov.au

Bassett BS, Myers R, Elias M. 2020. SDG 10: reduced inequalities – an environmental justice perspective on implications for forests and people: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 315–348.

Devischer T, Konijnendijk C, Nesbitt L, Lenhart J, Salbitano F, Cheng ZC, Lwasa S, Van den Bosch M. 2020. SDG 11: sustainable cities and communities – impacts on forests and forest-based livelihoods: In: Katla P, Pierce-Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 349–385.

FAO. 2018. The state of the world’s forests 2018 – forest pathways to sustainable development. Rome (Italy); Food and Agriculture Organization of the United Nations (FAO). Licence: CC BY-NC-SA 3.0 IGO.

Fries DA, Aung TT, Huxham M, Lovelock C, Mukherjee N, Sasmoto S. 2020. Life below water – impacts on mangroves: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 445–481.

Humphreys D, Singer B, McGinley K, Smith R, Budds J, Gabay M, Bhattachar J, De Jong W, Nevring H, Cross C, et al. 2020. SDG 17: partnerships for the Goals – focus on forest finance and partnerships. In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable Development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 541–576.

Jagger P, Ballis R, Dermawan A, Kittern N, McCord R. 2020. SDG 7: affordable and clean energy – how access to affordable and clean energy affects forests and forest-based livelihoods: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 206–236.

Kanowski P, Yoo D, Wyatt S. 2020. SDG 4: quality education forests – the golden thread: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 108–145.

Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G. 2020. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press. doi:10.1017/9781108765015.

Lawlor K, Sills E, Atmadja S, Lin L, Songwathana K. 2020. SDG 1: no poverty – impacts of social protection, tenure security and building resilience on forests: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 17–47.

Louman B, Keenan RJ, Kleinschmidt D, Atmadja S, Stote AA, Nanthumombo I, De Camino Velozo R, Morales JP. 2020. SDG 13: climate action – impacts on forests and people. In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 419–444.

McDermott CL, Acheampong E, Arora-Jonsson S, Asare R, De Jong W, Hirons M, Khatun M, Menton M, Nunam F, Poudyal M, et al. 2020. SDG 16: peace, justice and strong institutions – a political ecology perspective: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 510–540.

McFarlane RA, Barry J, Cissé G, Gisalson M, Gruca M, Higgs K, Horwitz P, Nguyen GH, O’Sullivan J, Sahu S, et al. 2020. SDG 3: good health and well-being – framing targets to maximise co-benefits for forests and people: In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 72–107.

Mills A, Christophersen T, Wilkie ML, Mansur E. 2020. The United Nations Decade on ecosystem restoration: catalysing a global movement. Unasyla. 252:119–126.

Montreal Process Implementation Group for Australia and National Forest Inventory Steering Committee. 2018. Australia’s State of the Forests report 2018. Canberra (Australia); Australian Bureau of Agricultural and Resource Economics and Sciences. CC BY 4.0.

O’Neill BC, Carter TR, Ebi K, Harrison PA, Kemp-Benedict E, Kok K, Kriegler E, Preston BL, Riahi K, Sillmann J, et al. 2020. Achievements and needs for the climate change scenario framework. Nature Climate Change. 10:1074–1084. doi:10.1038/s41558-020-00952-0.

Read S, Howell C. 2019. National ‘state of the forests’ reporting in Australia. Australian Forestry. 42:53–55. doi:10.1080/00049188.2019.1601827.

Riahi K, Van Vuuren DP, Kriegler E, Edmonds J, O’Neill BC, Fujimori S, Bauer N, Calvin K, Dellink R, Fricko O, et al. 2017. The shared socio-economic pathways and their energy, land use, and greenhouse gas emissions implications: an overview. Global Environmental Change. 42:153–168. doi:10.1016/j.gloenvcha.2016.05.009.

Sayer J, Sheil D, Galloway G, Riggs RA, Meggett W, MacDicken KG, Arts B, Boedhilharsono AK, Langston J, Edwards DP. 2020. Life on land – the central role of forests in sustainable development. In: Katla P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable Development Goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 482–509.

---

1 In submitting manuscripts to the journal, authors may indicate those SDGs for which their work is most relevant; doing so will assist editors to track the scientific effort in support of the SDGs.
Schöder P, Antonarakis AS, Brauer J, Conteh A, Kohsaka R, Uchiyama Y, Pacheco P. 2020. SDG 12: responsible consumption and production – potential benefits and impacts on forests and livelihoods. In: Katila P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 386–418.

Stoian D, Monterroso I, Current D. 2020. SDG 8: Decent work and economic growth – potential impacts on forests and forest-dependent livelihoods. In: Katila P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 237–278.

Sunderland TC, O’Connor A, Muir G, Nerfa L, Rota Nodari G, Widmark C, Bahar N, Ickowitz A. 2020. Zero hunger – challenging the hegemony of monoculture agriculture for forests and people. In: Katila P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 48–71.

Tomaselli MF, Timko J, Kozak R, Bull J, Kearney S, Saddler J, Van Dyk S, Wang G, Zhu X. 2020. SDG 9: industry, innovation and infrastructure – anticipating the potential impacts on forests and forest-based livelihoods. In: Katila P, Pierce Colfer CJ, De Jong W, Galloway G, Pacheco P, Winkel G, editors. Sustainable development goals: their impacts on forests and people. Cambridge (UK): Cambridge University Press; p. 279–314.

UN Environment. 2019. Global environment outlook – GEO-6: healthy planet, healthy people. Nairobi (Kenya): UN Environment. doi:10.1017/9781108627146.

UNDP. undated. What are the sustainable development goals? [online]. United Nations Development Programme (UNDP). [accessed 2021 Apr 7]. Available from: www.unDP.org/content/UNDP/en/home/sustainable-development-goals.html.

UNEP and FAO. undated. About the UN Decade [online]. United Nations Environment Programme (UNEP) and Food and Agriculture Organization of the United Nations (FAO). [accessed 2021 Mar 23]. Available from: www.decadeonrestoration.org/about-un-decade.

UNGA. 2000. Resolution adopted by the general assembly on 18 September 2000: a/RES/55/2. United Nations Millennium Declaration. New York (USA): United Nations General Assembly (UNGA).

UNGA. 2015. Resolution adopted by the general assembly on 25 September 201570/1. Transforming our world: the 2030 Agenda for Sustainable Development. New York (USA): United Nations General Assembly (UNGA).

UNGA. 2019. Resolution adopted by the general assembly on 1 March 2019 United Nations Decade on Ecosystem Restoration (2021–2030). New York (USA): United Nations General Assembly (UNGA).

A. D. Sarre
Managing Editor
Australian Forestry
ed.austforestry@gmail.com

S. M. Davey
Chair
Australian Forestry Editorial Board