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Pierrick Chalaye, John S Dryzek

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# Political institutions in the Anthropocene

Pierrick Chalaye and John S. Dryzek

Human institutions developed during the unusually stable Holocene epoch of the past 12,000 years. Its successor is the Anthropocene, the emerging epoch in which we live, defined by human activity decisively affecting the parameters of the Earth system as a whole. As a result of human actions and interventions, the global environment will become more unstable and susceptible to potentially catastrophic state shifts. Our established human institutions must now adapt to Anthropocene conditions or be discarded. Existing dominant practices and institutions (such as states and markets) suffer from pathological path dependencies. They generate forms of feedback that reinforce their own indispensability but are themselves insensitive to the condition of the Earth system. This chapter explores what can be done, in Australia, the only continent in the world to be governed by a single (albeit federal) state.

## What does the Anthropocene require of Australia's political institutions?

- ◆ The key antidote needed for established institutions to adapt their behaviours is ecological reflexivity (**Dryzek and Pickering, 2019**). Reflexivity means the capacity of an institution, structure, or set of ideas to reflect on its own performance and core commitments, and if necessary, transform itself in response. Ecological here means openness to feedback on the condition of the Earth system, and the capacity to anticipate and forestall potentially catastrophic state-shifts in that system.
- ◆ Ecological reflexivity is the first virtue needed for social institutions in the Anthropocene. It cannot be reduced to sustainability or more effective environmental policy, but requires instead deep recognition, reflection and response.
- ◆ Recognition means listening for changes in socioecological systems, monitoring human impacts on those systems and anticipating changes and impacts in the future.
- ◆ Reflection means learning from past success and failure, the capacity to rethink core values and practices and envisioning possible futures.

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- ◆ Response means the rearticulation of core aims, values, and discourses, and reconfiguration of functions and practices.
- ◆ Reflexive institutions need to demonstrate that democracy and justice can be preserved (and advanced) in the Anthropocene. The contours of both democracy and justice will need to be re-thought.
- ◆ Planetary justice must also be addressed because of the inequality of suffering that follows from an unstable Earth system.

Before proceeding, we note that ecological reflexivity is not necessarily served equally well by different kinds of democracy. A deliberative approach that emphasises meaningful communication encompassing citizens and leaders about matters of common concern might on the face of it be expected to do better than approaches that stress majority rule or the reconciliation of different interests, because individual and collective reflection is one of its defining features. But even that would need to be demonstrated rather than asserted.

Aggregate indicators of environmental performance suggest that Australia starts from a particularly low point in comparison with other developed countries. On greenhouse gas (GHG) emissions per capita ([Environmental Performance Index, 2017](#)), Australia is equal worst of 180 countries surveyed by the World Economic Forum in 2020 (alongside eight petrostates). The OECD concluded in 2019 that the state of Australia's biodiversity is 'poor and worsening' ([2019](#)). But it is not obvious that countries performing much better than Australia in terms of such summary indicators could be judged any better in terms of the overall demands of the new epoch on all states. Therefore, we need to dig more deeply in this Anthropocene audit of Australia.

## Recent developments

The first component of reflexivity is the 'recognition' of impacts, especially an acute sensitivity to destructive changes that may be irreversible. On the face of it, climate change in particular has been widely recognised in Australian politics (as it has been in most other countries) – although a significant minority who deny evidence of adverse climate change remain politically powerful. Recognition of other aspects of instability in the Earth system fares less well. Biodiversity per se is weakly conceptualised as an issue in Australia, although particular cases of sensitive biodiversity loss (such as the bleaching of the Great Barrier Reef, land clearance and catastrophic losses of wildlife and habitats in bushfires) are more likely to be acknowledged. Awareness of ocean acidification, land system changes and biochemical flows (phosphorus and nitrogen) is even less well developed.

Before the fact, many media commentators characterised the May 2019 election as a 'climate election'. But to what extent did this prove true? The unexpected win for the Liberal-National Coalition hinged on its strong performance in coal-producing rural electoral districts in Queensland, suggesting that inaction on climate change and support for expanded investment in coal worked in its favour. Matters played out very differently in urban electoral districts. Notably, in Warringah in Sydney, coal and climate change contributed to the defeat of former Prime Minister (PM) and leading climate change denier Tony Abbott (Coalition) by Zali Steggall (Independent) ([Crowley, 2021](#)).

In fact, a case could be made that the 2019 election led to no gains in reflection at all. Instead, it further solidified the pre-existing societal polarisation on climate issues between youth, urban residents and women – generally supportive of climate action – on the one hand; and older, male and rural Australians, who are more sceptical, on the other (Colvin and Jotzo, 2021). In conventional electoral politics, climate change is seen as a venue where partisan advantage can be sought or lost, rather than as a collective problem to be solved, suggesting there is something very wrong with Australia’s adversarial party system when it comes to both the reflection and response aspects of reflexivity.

Climate change turned out to play a bigger and more positive role in the May 2022 federal election. It was one of the keys to the success of the six ‘Teal’ Independents and three Greens in lower house seats, and one independent in the Senate (see Chapter 5). All except one of these candidates unseated Liberals.

Shortly after the 2019 election, instability in the Earth system made itself felt in a big way with the unprecedented destruction and unhealthy air quality that persisted for months in several major cities caused by the 2019–2020 summer bushfires. But the Coalition government and its supporters did everything they could to dampen or suppress recognition of any link between the bushfires and climate change. National MPs, and some Liberals, instead blamed arson and increasing fuel loads, the latter allegedly resulting from the active role of the Greens in preventing hazard-reduction burns and land-clearing, even though the Greens had never been in government in any of the most affected states (Mocatta and Hawley, 2020).

From March 2020 onwards, the bushfire crisis was soon displaced from the public agenda in the COVID-19 pandemic, which further aided governmental suppression of environmental concern. Rather than the ‘build back better’ themes used by governments elsewhere, the Morrison Coalition government argued for a ‘gas-led recovery’, renewing its commitment to fossil fuels, ostensibly as a way to respond to the socioeconomic consequences of the COVID-19 pandemic. The shift placed Australia among the least green countries in this respect (O’Callaghan, 2021).

Changes in the structure and organisation of the federal government, as well as in the way portfolios are interpreted, have further impeded recognition and reflection. In the 2019 government reshuffle, Morrison separated the environment and energy portfolios. Responsibility for climate change is now largely under energy, but this did not resolve earlier failures to integrate climate concerns into energy policy (OECD, 2019 and IEA, 2018). In 2021 Environment Minister, Sussan Ley, announced that she had no responsibility for climate change mitigation (that is, reduction of emissions), only for resilience and adaptation (responding to the effects of climate change) (Murphy, 2021). Resilience might sound as though it could contribute to reflexivity, but it is an elastic concept that can also be interpreted as the ability to absorb punishment while maintaining unchanged the essential structure of social, economic and political systems.

Between 2021 and 2024 Grant King, a former head of natural gas firm Origin Energy and of the Business Council of Australia, was head of the Climate Change Authority (CCA), confirming the Morrison government’s concern to slow or impede recognition of a climate crisis and Earth system instability. King’s background was in the gas industry, and he was known for his criticism of investment in renewable energy. This is not an isolated case. Since 2013, the Commonwealth government has allocated key government positions to fossil fuel advocates. As a result, key climate and energy institutions set up before 2013 have been:

- ◆ either dismantled, as with the Australian Climate Commission
- ◆ deflected from their original mission, as with CCA, or
- ◆ marginalised and under-resourced, as with the Australian Renewable Energy Agency (ARENA), and the Clean Energy Finance Corporation (CEFC) ([Climate Action Tracker, 2020](#)).

The net consequence has been to promote what is called ‘carbon lock-in’ – that is, solidifying the reliance of the political economy on fossil fuels. Lock-in is the antithesis of reflexivity.

In line with this failure on climate issues, the Coalition government actively tried to suppress recognition of environmental damage on other fronts. A particularly prominent example was Australia’s intense and ongoing lobbying of UNESCO on the status of the Great Barrier Reef, which in 2021 succeeded in preventing the Reef from being classified as ‘endangered’, forcing UNESCO to reverse a previous decision that was based on science rather than lobbying ([Morrison et al., 2020](#)).

Multiple reports have exposed a major decline in Australia’s biodiversity and ecosystem integrity as well as the inadequacy of its environmental legal framework under the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*. A 2020 Independent Review of the *EPBC Act* conducted by Professor Graeme Samuel identified numerous weaknesses and failures to protect biodiversity, but received minimal response from the government that commissioned it. The most obvious issues are the weakness of environmental impact assessments and the numerous exemptions for industry sectors (like native forest logging) from complying with them. But this has led to no reflection on institutional weaknesses, let alone any response in the form of proposals to strengthen environmental protection.

One reform that has been attempted (in amendments to the *EPBC Act* introduced to Parliament in 2020) is to fully delegate the approval of development projects to states. Labor, the Greens, and some independents are opposed to this ‘single touch’ change (also previously known as ‘one-stop-shop reform’), and it is still pending at the time of writing. The government’s intent is to reduce environmental obstacles to economic development. However, the result may not necessarily be bad for reflexivity, if the states are run by environmentally more progressive governments than at federal level. As of 2023 that has mostly been the case.

Most states and territories have not suppressed ecological concerns to the same extent as the Commonwealth government. For instance, despite the many problems with such a target (for example, its (over)reliance on carbon dioxide removal and offset techniques, such as mass tree planting and carbon capture devices), all states and territories have adopted a net zero GHG emissions target, including a legislated one in Victoria, where a 2017 Act specified net zero by 2050, before the federal government reluctantly and ambiguously embraced net zero by 2050 in 2021. In 2022, the new federal Labor government legislated net zero by 2050 and a 43 per cent reduction of GHG emissions compared to 2005 levels by 2030. However, in general, these targets and environmental policy in states and territories are still far from adequate, considering the depth of negative environmental change in Australia ([Ward et al., 2021](#)). This is especially the case when targets are not accompanied by policies that would make them plausible, and conflict with federal government practice. After the 2022 federal election, Labor Resources Minister Madeleine King continued to insist that new fossil fuel projects were necessary for the economy. In July 2022, PM Albanese agreed, arguing further that Australia should continue to develop coal exports because they yielded less emissions than alternative sources in other countries. All this suggested that symbolic commitments with no adequate policies that could achieve them would continue to dominate.

However, 2023 did see the most important federal climate legislation for over a decade (though that is a very low bar). The *Safeguard Mechanism (Crediting) Amendments Act 2023* required 5 per cent per year reductions to 2030 in GHG emissions for 215 major polluters. The Act was passed with support from independents and (reluctantly) the Greens – Greens leader Adam Bandt described dealing with the Labor government as ‘like negotiating with the political wing of the coal and gas corporations’ ([Guardian, 2023](#)). The Greens had unsuccessfully sought a commitment from Labor to ban new coal and gas projects.

With a continent-wide government, and unique eco-systems of its own, Australia has numerous advantages that could help it to respond positively to the challenges posed by the Anthropocene. In terms of ecological reflexivity, Australia is at a crossroads. On the one hand, the country has obvious current strengths – such as a deep socioecological history, a flexible federal system, and relatively strong though recently weakened environmental science institutes. There are also many opportunities to respond to ecological challenges – such as a great potential for developing renewable energy, an international context that pushes Australia towards climate action and has made some states fairly committed to renewable energy.

However, these strengths are counterbalanced by multiple and often structural weaknesses that undermine Australia’s capacity to be ecologically reflexive. Australia is still moving towards a future that largely turns its back on ecological issues, a course that has not changed in recent decades. For example, recent cuts to environmental science programs, the anti-environmental radicalisation of parts of the media and political parties, and the lack of reflection on the ecological dimension of the COVID-19 crisis are all indicators that Australia does not intend to conceptualise ecological issues as opportunities to rethink its institutions or the principles that guide them.

## Strengths, weaknesses, opportunities and threats (SWOT) analysis

Current strengths	Current weaknesses
<i>Identity and environmental issues</i>	
<p>While not always drawn upon in public policy, Australia has a deep socioecological history embodied in the worldviews and knowledge systems of Aboriginal and Torres Strait Islander peoples. Fire management is a well-known case in point, but other areas such as agriculture (<a href="#">Pascoe, 2014</a>), water and land management (<a href="#">Gammage, 2012</a>), and the rights of nature are also prominent examples. Government support comes in ‘Caring for Country’ Indigenous land management programs.</p>	<p>A significant part of the Australian political class, associated with a wing of the Liberal Party and the National Party, holds a strong ideological position (described by <a href="#">Dryzek, 2021</a> as ‘grey radicalism’). As a matter of core identity, this view rejects climate change and environmental concerns. Consequently, its exponents cannot be reached by economic (let alone environmental) argument and evidence. The power of grey radicalism impedes reflexivity, even getting to the point of denying recognition of environmental problems. Grey radicalism also rejects any relevance for Indigenous knowledge systems.</p>

<i>Institutions and agenda-setting</i>	
<p>A federal structure allows states/territories to initiate some environmental reforms and ‘path-find’ new solutions. States have generally been in advance of the federal government in responding to climate change.</p>	<p>Australia scores among the lowest countries in the OECD on the health of its ecosystems, forest management, fish stocks, climate mitigation, air pollution (<a href="#">Environment Performance Index 2020</a>; <a href="#">Climate Council, 2019</a>). It also scores among the highest on materials and resources consumption per capita (<a href="#">OECD, 2021</a>). Despite this, there is no federal willingness to recognise the severity of problems or to initiate structural cross-sectoral reforms on these key issues. And there is only a limited response capacity at the state and territory level. Policy-making has often been ‘disjointed’ (<a href="#">Warren et al., 2016</a>).</p>
<p>Australia has made some very limited progress in creating supplementary subnational governance structures that fit with ecosystem boundaries and bring together federal and multiple state governments to focus on making ‘holistic’ policies – notably in the Murray-Darling Basin Authority (MDBA) and the Great Barrier Reef Marine Park Authority (GBRMPA).</p>	<p>The boundaries of state and territories were mainly drawn in an imperial age, and thus are chiefly straight lines ‘dividing the cake’ of a whole continent in arbitrary ways. The MDBA and GBRMPA remain weak, vulnerable to subversion by ‘vested interests’ and, in the case of the MDBA, domination by conflict between state governments.</p>
<p>The courts have also shown some signs of forcing government to anticipate the consequences of its decisions more effectively. A notable 2021 decision of the Federal Court found that the federal minister for the environment had a duty of care to protect all young people threatened by climate change (though this decision was overturned in 2022).</p>	<p>A great deal of environmental policy depends on the detailed regulatory decisions of governments, which Australian courts in the ‘Westminster system’ and ‘common law’ tradition have been reluctant to overturn (see <a href="#">Chapter 3</a>). Therefore, there are limits to what the courts can do.</p>
<i>Environmental science</i>	
<p>Leading scientific institutions such as the Commonwealth Scientific and Industrial Research Organisation (CSIRO) provide Australia with significant scientific capacity to recognise environmental problems and chart complex ecological transitions – for example, see <a href="#">CSIRO (2015)</a>.</p>	<p>Significant cuts in governmental funding have weakened Australia’s scientific capacity, particularly in climate change and adaptation programs, and especially affecting CSIRO’s scientific work (<a href="#">OECD, 2019</a>).</p>
<i>Media landscape</i>	
<p>Social media now offer alternative platforms through which relatively diverse opinions can be expressed. This change has limited the negative impact of misinformation and related controversies, especially those fuelled in and by News Corp and other extreme conservative media (<a href="#">Stutzner et al., 2021</a>). However, social media too can spread and amplify misinformation, such as climate change denialism (see <a href="#">Chapter 9</a>).</p>	<p>Australia has a highly concentrated media landscape. Murdoch’s News Corp owns more than 60 per cent of daily newspapers by circulation (including <i>The Australian</i> and the <i>Herald Sun</i>) – see <a href="#">Chapter 8</a>. Until a seemingly coordinated change of position in late 2021, opposed by some of its most prominent columnists, it has consistently fuelled denial of climate change. It still supports the coal and other fossil fuel industries and excoriates environmentalists.</p>

<i>Discourse and framing</i>	
There have been times in the past (notably under the Hawke government) when a positive-sum framing of environmental issues enabled cooperation encompassing a broad range of interests. For example, this period produced the Ecologically Sustainable Development process (1990–1991) and the establishment of Landcare (in Victoria 1986, nationally 1989). Historically, Australia was a pioneer in environmental conservation and has, at times, experienced strong coalitions on key socioenvironmental issues, such as Landcare.	A toxic and long-standing ‘jobs versus environment’ framing of environmental issues has been amplified by the adversarial two-party system. This false trade-off has prevented the emergence of a cross-sectoral and cross-party discourse on reconciling job creation and environmental protection via ecological modernisation. Many different environmental issues get systematically distorted through the prism of this framing.
<i>International context</i>	
As long as Donald Trump was president, Australia had some cover for its failure to act on climate change in particular. Since 2020, the Biden presidency has exhorted Australia to do more on reducing GHG emissions. If taken at face value, the 2015 Paris Agreement on climate change means that thermal coal has no economic future, so the Australian coal industry (which until recently accounted for a third of world coal exports) may be forced into decline.	The Australian government has been at best a passive (often even the ‘least progressive’) actor in current international environmental governance. Since 2019 it has been dragged reluctantly into compliance with emerging international norms and trade conditions.
<b>Future opportunities</b>	<b>Future threats</b>
<i>Identity and environmental issues</i>	
First Law (also known as the Law of ‘country’), which conditions relationships between humans and between humans and non-human beings, is being incorporated into some local governance mechanisms on an experimental basis, as in the Kimberley region (Poelina, Taylor and Perdrisat, 2019). Expansion of this idea could heighten how receptive governance systems are to signs from the Earth system.	Persistent influence from the discourse of grey radicalism could further polarise public debate. It may prevent Australia from recognising, reflecting on and responding to the intensity of ongoing ecological changes (for example, changes to fire regimes or biodiversity collapses).
<i>Institutions and agenda setting</i>	
Even states governed by the Coalition show some degree of recognition of the need to act on climate change, biodiversity conservation and renewable energy. Others are more advanced. For instance, the Australian Capital Authority (ACT) and Tasmania are already 100 per cent powered with renewable energy. And all state governments at least recognise the need to move to renewables in due course, unlike the Commonwealth (Climate Council, 2019). In addition, major banks and corporations have increasingly become insistent on the need to act on climate change and sometimes other environmental issues included in Environmental and Social Governance (ESG) indicators (Ramsay and Freeburn, 2021). This suggests governance leadership is moving from the public to the private sector.	COVID-19 overshadowed environmental concerns in 2020–2021, and the Australian government did not interpret it as a systemic issue related to degraded human-nature relationship (O’Callaghan, 2021). To tackle issues such as climate change and biodiversity, the Commonwealth government remains solely committed to, even expanding, a flawed system of grants and subsidies. In practice, these have proved open to gaming, abuse or even deliberate misdirection (for example, massive funding to the Great Barrier Reef Foundation). Limited (if any) positive outcomes have been demonstrated for conservation.



<i>Environmental science</i>	
Australia's scientific institutions could have their funding restored and better engage in international (for example, UNFCCC, IPCC) and national governance bodies and institutions (for example, Australian Energy Regulator).	Further budget cuts in socioecological science would be particularly detrimental both for mitigating ongoing structural ecological changes or adapting to them.
<i>Media landscape</i>	
Other highly concentrated media landscapes have not proven fatal to climate change coverage. In the UK, the power of the Murdoch media empire did not prevent significant progress on climate change under successive Conservative governments since 2010. In 2021, News Corporation in Australia pivoted to at least recognise the reality of climate change. Could News Corporation change further in Australia, especially on the passing of Rupert Murdoch, and under any new generation of leadership?	Governmental attempts to 'regulate' the content of social media in response to legitimate concerns over misinformation could restrict the diversity of views expressed in these spaces. The Murdoch media empire may seek to replicate the success of its Fox News network in the USA – which used extremist programming to 'weaponise' grey radicalism (as part of culture war discourse), SKY News has already followed this approach in its 'Sky After Dark' evening programming.
<i>Discourse and framing</i>	
Australia can be inspired by the many places where ecological modernisation has already occurred, notably in Europe. Voters and politicians may recover their own temporary domestic experience with this discourse in the Hawke era (Curran, 2015). One possible central framing is the idea that Australia could be a 'renewable energy superpower', popularised by Ross Garnaut (2008), author of the landmark <i>Climate Change Review</i> .	The climate denialism narrative stresses that Australia should be 'proud' of its current efforts to tackle climate change relative to other nations (Murphy and Morton, 2021). This stance could become more pervasive and extend to other issues, further contributing to failure to recognise the need to act against catastrophic governmental failure.
<i>International context</i>	
UK and EU carbon tariffs (placed on goods whose embedded emissions would be taxed if they were produced in the country or Union in question) could induce Australian producers to reduce emissions. (In 2021, Minister for Energy and Emissions Reduction Angus Taylor declared the Australian government's opposition to such mechanisms, impeding the progress of a UK–Australia free trade deal.) Responding to the signals of the Paris Agreement, financial institutions are no longer funding coal projects. China's actions restricting imports of coal (in response to Australia aligning more with a USA-lead anti-China defence stance) could force the curtailing of coal mining in Queensland and elsewhere.	International environmental governance continues to have weak compliance mechanisms (compared to trade and finance governance). It also tends to focus on climate change and does not necessarily insist on the multi-faceted aspects of environmental change. Biodiversity loss, reef destruction, forest change (for example, in the fire regime but also structural changes in ecosystems), and water management are all interrelated issues.

## The electoral politics of climate change

We have already suggested that there is something wrong with Australia's party system when it comes to processing issues, such as climate change. Here we go deeper into the recent history of this issue in electoral politics. In the mid-2000s both major parties accepted the need to do something on climate change mitigation. Indeed, both proposed an emissions trading scheme to curb GHG emissions at the 2007 election. Although the then Liberal PM John Howard was actually a climate sceptic, he reluctantly accepted the need to follow what seemed to be shifting public opinion in favour of action.

The newly elected Labor government under Kevin Rudd then introduced legislation for a Carbon Pollution Reduction Scheme (CPRS), with emissions trading at its heart, and in 2009 it seemingly had secured the support of the Liberals, now led by Malcolm Turnbull. The Greens were opposed, holding out for more ambitious GHG pollution reduction. However, in just over a year Turnbull quickly fell victim to a party caucus coup organised by the right wing and climate-denial wing of the Liberals (see [Chapter 13](#)). His replacement as leader was the virulent climate change denier Tony Abbott, meaning the tenuous bipartisan consensus of 2007 disintegrated, and the CPRS failed. Rudd then essentially withdrew from the fray. From that time on the parliamentary Liberal Party has been committed to inaction on climate change. (Their Coalition partners in the National Party represented regional rural areas in the main and were dominated by MPs who were climate change deniers.) Even when Turnbull returned to the leadership of the Liberals (becoming PM) in 2015–2018, it was on the condition that he accept the position of the far right on climate change, irrespective of his personal views on the issue ([Mazengarb, 2020](#)). In government, the Liberal Party leadership has generally paid lip service to the existence of climate change. But the Coalition government's only policy response has been a manifestly ineffective 'direct action' system of subsidies and grants for projects that would notionally reduce emissions. Then, 2021 saw a chaotic and internally divisive formal embrace by the government of the net zero by 2050 target for GHG emissions, but the symbolic commitment was accompanied by no signs that this would lead to any change in policies. It is conceivable that the symbolic commitment alone may further solidify the reluctance of financial institutions to back fossil fuel projects.

Within the Labor Party, Rudd's failure on climate change was arguably a contributing factor to his loss of credibility and so eventual demise as leader (see [Chapters 6 and 13](#)). His successor Julia Gillard faced her own problems. Needing the support of the Greens to govern after a very close 2010 election in the House of Representatives, her government introduced, and parliament passed, a carbon tax – even though she had promised before the election that this would not happen. It was misrepresented by the Coalition as 'a great big tax on everything', who promised its repeal at the next election in 2013, which they won. Thus, the only demonstrably successful GHG mitigation measure ever implemented at the Commonwealth level was duly repealed, and climate change had claimed its second, or perhaps third, party leader. The 2019 election, widely billed as a climate election, ironically led to the defeat of Tony Abbott (no longer leader of his party) in his electorate of Warringah, largely because of his locally unpopular position on climate change. But the results in coal-producing electorates in Queensland were widely credited with ensuring the survival of the Coalition government. Matters changed considerably in 2022 when the Coalition lost seats to Teal Independents in part because of its extreme position against climate action (see [Chapter 5](#)).

Considering the three components of ecological reflexivity, at some level there is widespread (but not universal) recognition that climate change is a problem that needs to be addressed. Reflection, if it does happen, is largely a matter for the individual politician. There is nothing institutionalised

in electoral or party politics to embody such reflection – such as a parliamentary committee for the planetary future, or mandated consideration of existing ‘State of the Environment’ reporting. Reflection on the condition of the Earth system plays a much smaller role than contemplation of how climate change can be used to electoral advantage, or in intra-party manoeuvring – as when the Liberal Party’s extreme right wing first ousted Malcom Turnbull as their leader. Response is also constrained by the way that the adversarial game for short-term advantage between and within parties dominates any consideration of what kind of policy might be most effective.

It would be tempting to conclude that the dismal history of the electoral politics of climate change in Australia shows that adversarial party politics cannot be conducive to ecological reflexivity. But this cannot be the whole story, because the equally adversarial system of the UK has managed to produce a cross-party consensus on the severity of climate change and the need to act – although one that falls short in its contemplation of change to the basic structure of the political economy. With all main parties in the UK generally supportive of climate policy, the country is recognised as a comparative leader in this arena. What then makes the difference? Part of the story may be that the coal industry has a presence and power in Australia that is missing in the UK, where the industry was dismantled under Conservative PM Margaret Thatcher in the 1980s – though as a union-busting exercise, which only as a by-product makes her an accidental environmental hero. The other and perhaps more important part of the comparative story may be that the UK is not a settler society with factions of dominant parties committed to a grey radical identity of the kind that was described earlier.

## Biodiversity

Australia plays an important role in global biodiversity. It is a megadiverse country, which means that the majority of known species living in Australia are unique to the country (for example, 87 per cent of its mammal species or 93 per cent of its frog species). However, Australia’s biodiversity is declining rapidly. Australia has one of highest extinction rates in the world and increasing numbers of species (for example, koalas) and ecosystems (for example, the Great Barrier Reef and Murray Darling floodplain forests and wetlands) are classified as endangered. This is primarily because of habitat destruction and fragmentation, invasive species (for example, feral cats), pollution, climate change, changes in fire regime, drought and overconsumption of resources (notably water).

In Australia’s regulation apparatus, land-based threatened species are supposed to be the most protected entities. Yet since 1999, 85 per cent of them experienced significant habitat loss. More than 90 per cent of total habitat loss was not referred to or submitted for any assessment, despite a requirement to do so under Commonwealth environment laws. Many ecosystems are collapsing due to climate change and changes in fire regimes that have not been seriously addressed. For instance, large-scale conversion of alpine forest to shrubland was caused by repeated fires from 2003–2014. With such a record, and without commensurate governmental action, Australia is not far from being a global pariah for biodiversity.

Within this overall failure there are nonetheless some notable initiatives and programs on biodiversity conservation in Australia. These have included:

- ◆ Australia’s marine protected area system, which covers 7.4 per cent of the Australian marine environment and is the second largest in the world

- ◆ Indigenous Protected Areas, which cover 36 per cent of Australia's total protected areas, including some that are formally owned by Traditional Custodians (for example, the recent landmark case of the Daintree tropical rainforest in Queensland)
- ◆ Caring for Country programs, which aim to provide Indigenous-led conservation programs and replace the employee/consultant regime with a regime based on self-determination
- ◆ Landcare programs, which try to reduce the environmental impact of farming practices
- ◆ the Atlas of Living, a citizen-science program on biodiversity data
- ◆ strategies for combatting invasive species, which have received long-term political and financial support.

However, all these initiatives (apart from the last) do not benefit from continued political and financial support by the government, in particular at federal level. They fall far short of the necessary recognition of biodiversity in holistic, systemic terms. Australian biodiversity policy remains not only weak (not very protective), but fragmented (across states), underfunded, and poorly implemented (Ward et al., 2019). There are many concerns here, including a lack of independent and transparent scientific advice and decision-making power in relation to development projects. The cumulative impacts on biodiversity are not considered, and many key biodiversity threats are excluded from regulatory frameworks – for instance, land clearing and climate change are not recognised as 'matters of national significance'. For threatened ecosystems to be protected under the *EPBC Act*, they must often meet limited and restrictive 'condition thresholds' (for example, minimum size of the area). And there is little evidence that major assessment reports on biodiversity have had any influence on biodiversity policy.

The review of the *Environment Protection and Biodiversity Conservation (EPBC) Act* presented by Graeme Samuels in 2020 can be seen as a landmark when it comes to recognition of systemic failings on the biodiversity front, but it led to little reflection on the systemic causes of these failings. Reacting to Samuels, the federal government has proposed a minimal set of changes, which includes systematically incentivising biodiversity offsets rather than applying a precautionary approach to avoid biodiversity destruction. Offsets are essentially licences to behave badly, with compensatory remediation to be applied somewhere else. They do not reduce the net level of biodiversity destruction. In addition, the review proposed an Environment Assurance Commissioner, but the role would be a toothless one, because they would not be allowed to investigate outcomes. As a result, none of the key factors contributing to systemic biodiversity loss has been seriously addressed.

The situation worsened after 2019, with the Morrison government trying to roll back environmental regulation. At the international level, unlike many other countries, Australia has neither committed to 'net biodiversity loss' targets, nor pledged to reverse biodiversity loss in the near future. Furthermore, Australia's 'Strategy for Nature', which is supposed to implement the Convention on Biological Diversity (CBD), has not been linked to a specific action plan with measurable targets and goals, as is the case for other countries such as France, Germany or Aotearoa-New Zealand.

Finally, an essential aspect of ecological reflexivity is the ability to rethink the relationship between humans and non-humans. However, in Australia, this relationship is primarily characterised by a discourse that presents a misleading antagonism between valuable 'natural' elements that should be protected, and 'resources' that are considered unlimited and can therefore be extracted or exploited. This dichotomy is a major obstacle to effectively recognising and responding to the structural sources of contemporary biodiversity declines, both tangible or material losses (for example, pollution, habitat destruction) and intangible or immaterial losses (for example, the values placed on non-humans).

## From government to polycentric governance?

If electoral and party politics are failing to confront the Anthropocene effectively at the federal level in particular, is there any kind of politics that might fill the gap? At the global level, persistent failure to reach an effective multilateral agreement on climate change has led to a proliferation of independent governance initiatives. They have ranged from voluntary carbon markets to international networks of cities sharing technology and emissions reduction commitments, as well as product certification schemes, and transnational social movements (such as transition initiatives) promoting low-carbon local economies. Some of these initiatives have involved cooperation across national or subnational governments. Some involve corporate actors, and others environmental non-governmental organisations (NGOs). Some initiatives involve all three. They are celebrated as constituting what Ostrom (2019) calls ‘polycentric’ or what Hoffmann (2011) terms ‘experimental’ governance.

Can we discern any signs of such a response to persistent failure on the part of the federal government occurring within Australia? Hajer (2011) applauds a polycentric ‘energetic society’ within the Netherlands, involving experimentation, networking, and learning, so the idea can apply at the national level. And it is also true that if we were to look to polycentrism (rather than federal government policy) in our search for ecological reflexivity, there are some relevant initiatives, including:

- ◆ Regional Forest Agreements (RFA). These have a somewhat chequered history. They began over 20 years ago as cooperative alternatives to impasse in forest governance, seeking agreements across traditionally hostile interests, such as timber corporations and environmentalists, but also involving input from scientists, local communities and Traditional Owners. They have struggled in the face of those interests on different sides who do not believe that any reconciliation of positions is possible.
- ◆ The large banks (NAB, Westpac, ANZ, Commonwealth) have all seen the writing on the wall when it comes to coal, with first ethical investors and now increasingly investment markets as a whole asking about ESG commitments. The big banks are less willing to finance large new thermal coal projects (especially when, like the Carmichael coal mine, they are locally contested). Large corporations have also announced ambitious climate change intentions. In 2021, mining giant BHP committed to net zero emissions by 2050 – however, the Minerals Council of Australia to which BHP belongs remains obstructive.
- ◆ The adoption of net zero emissions targets for GHGs has proven much easier at the state level than at the federal level.
- ◆ Some smaller jurisdictions, such as the ACT and Tasmania, have led the way in securing 100 per cent of their electricity from renewable sources – although in Tasmania this has been enabled by hydroelectric power, which has brought its own forms of environmental destruction.
- ◆ Local and state jurisdictions are more likely to adopt and implement some forms of rights for non-human nature – notably, the Victorian Environmental Water Holder (VEWH), created in 2011 to hold water rights in Victorian streams (O’Donnell and Talbot-Jones, 2017).
- ◆ The national policy vacuum created by the abolition of the National Water Commission in 2005 is being partially filled by private initiatives. For example, in 2020 Watertrust Australia was established with tens of millions of dollars in funding from the Myer Foundation, the Ian Potter Foundation and other private sources. Its mission is to develop a cooperative and deliberative approach to the management of Australia’s water resources.

- ◆ Local governments have in many cases recognised the urgent need to adapt to the consequences of climate change (such as increased fire dangers, more flooding and faster coastal erosion).

Even taken together, these sorts of initiatives do not add up to an adequate national response to environmental degradation in Australia. But how do they look in terms of progress towards ecological reflexivity? If they are to make any progress in this respect they would need to be joined in a system of experimentation and learning, as opposed to being just sporadic innovations that come and go without much connecting. This is a demanding requirement, but again we can see intimations in the global governance of climate change, where disparate polycentric innovations are increasingly linked to the more centralised United Nations Framework Convention on Climate Change (UNFCCC) process in what Bäckstrand et al. call ‘hybrid multilateralism’ (2017).

What Australia currently lacks is the integrated capacity and will at federal government level to play a role analogous to that of the UNFCCC in hybrid multilateralism, or the supportive national government in the Netherlands case, meaning that the coordination and learning would itself need to be organised from the bottom up. The Watertrust initiative noted above could help perform this function on water governance – but ecological reflexivity in the Anthropocene demands a whole of governance approach that would span across all ecological, social and economic sectors.

Learning in any such coordinated system would also benefit from what Braithwaite (2007) calls ‘nodes of contestation’ where critics can highlight problems. Otherwise, the system could slip into the easy complacency of mostly symbolic actions, such as commitments to net zero issued with no feasible plan of how they will be achieved. Such announcements may be reassuring, but they do not go far enough. Contestation here could come from social movement activism, environmentalist groups, and Indigenous organisations, among others. By providing grist for deliberation, such contestation would also be good for the deliberative aspect of democracy. Deliberation is also necessary as a mode of conflict resolution across deep difference of the sort that has undermined the potential of RFA.

## Conclusion

No country’s institutions are ready for the Anthropocene, but Australia is especially challenged. On many individual fronts, such as climate change, biodiversity loss and water management, there are few mechanisms to facilitate the country’s overall ability to listen to, reflect upon and respond effectively to structural socioecological changes. All of this is before we get to consider the interlinked character of these different aspects of environmental change, which requires thinking in more holistic Earth system terms. There are some positives: Australia’s deeper socioecological history, the fact that states, territories, and even banks and corporations are compensating for federal failure on some issues, the massive potential for renewable energy and significant scientific expertise. All of these could help Australia’s democracy respond to the challenges posed by the Anthropocene. But it is an uphill struggle that starts from a low base.

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