

Tasmania's climate change action plan 2023-25

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1. Background

1.1 Climate change is a pollution problem: excessive greenhouse gases (GHGs) relative to the planet's waste absorption ability.

1.2 It is also a symptom of an even larger problem that ecological economists call 'overshoot': excessive raw material throughput relative to biocapacity (similar to planetary boundaries). Overshoot results in a reduction of natural capital and therefore biocapacity meaning throughput must be further reduced to be sustainable. Yet throughput keeps increasing.

1.3 System dynamics teaches us that we cannot fix one problem (climate change) in isolation without addressing all connected problems (operating within biocapacity and the nine planetary boundaries).

1.4 The IPCC's latest Working Group III 'Mitigation Report' found that population growth and economic growth were now the main drivers of climate change. We are unlikely to be able to decouple economic throughput from greenhouse gas emissions and environmental damage more generally. Climate scientists use the 'Kaya identity' to determine the relationships of drivers of GHG emissions. The Kaya identity can be written $F = P \times (G/P) \times (E/G) \times (F/E)$ where F is global CO₂ emissions; P is global population growth; G is global GFP; and E is global energy use.

1.5 Regardless of whether some decoupling is possible it is urgently necessary to ensure resource throughput is less than biocapacity – especially for a nation but perhaps for federated states as well. Obviously biocapacity and throughput need to be measured. The Global Footprint Network is one measurement methodology. It has found humanity is using resources as if we had 1.75 planets. Global degrowth is therefore needed and this will affect even Australian state governments – for example via trade disruption.

1.6 The Tasmanian government needs to ensure the state's economic throughput is less than its biocapacity rather than just focusing on GHG pollution. In short it should pursue sustainability if it wants to address climate change and related problems. It should lobby the other states and the Australian government to do likewise.

1.7 We have long been in a climate emergency (and, for instance, a biodiversity emergency; a general waste emergency; a housing emergency; a private-sector debt emergency; an aged-care emergency; a health-care emergency) and urgent and strong action is needed from all policymakers to avoid collapse. Collapse could involve the extinction of all, or most, humans. Current policies in Australia and elsewhere are woefully inadequate. Note that the

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1.8 The most effective climate change mitigation action from governments is likely to be a cap-auction-trade system as advocated by the late US economist Herman Daly and by A/Professor Philip Lawn at Torrens University, Adelaide, Australia¹. Legislation should put a cap on all domestic GHG emissions and the cap should reduce each year until net zero emissions are reached. This has some similarities to the Australian government's Safeguard Mechanism but covers all GHG emissions. Offsets should be avoided.

1.9 Once net zero emissions are reached – the timing in line with scientific advice – negative emissions will be needed: i.e., more GHGs sequestered than emitted until a safe level of GHGs is reached and therefore a safe climate.

1.10 Tasmania's current negative GHG emissions (if accurate) could become positive if it continues to pursue economic and population growth. The aim should be to advance general wellbeing via achieving a sustainable society, not increasing Gross State Product indefinitely as if that is physically possible (it isn't) and as if that would automatically advance general wellbeing (it won't).

1.11 State government policies that run counter to the well-established principles of ecological economics are likely to be harmful in the long run². Policies based on neoclassical economics will be suboptimal.

1.12 Since use of the atmosphere as a waste sink is a use of the global commons, a fair share of the commons for a nation should be based on its biocapacity and historical emissions rather than, say, its population. Otherwise, nations will not be encouraged to avoid overpopulation and nations that have a population and resource throughput in accord with their biocapacity will be unjustly disadvantaged.

2. Recommended actions for the Tasmanian government

2.1 Declare a climate emergency. This is decades overdue. I note the Tasmanian government says it has achieved 100% renewable electricity generation as well as net negative GHG emissions due to carbon sequestration by forests and land use changes.

2.2 Review the plan for 200% 'renewable energy' generation and the Marinus Link. Should Tasmania have a stand-alone electricity network instead? Which option is more likely to create a sustainable society rather than a growth-and-collapse society?

¹ See Lawn P (2016) *Resolving the Climate Change Crisis*, Springer.

² The principles are discussed in Lawn P & Williams SJ (2022) 'An introduction to Ecological Economics: Principles, Indicators, and Policy' in Williams SJ & Taylor R (eds) (2022) *Sustainability and the New Economics: Synthesising Ecological Economics and Modern Monetary Theory*, Springer, Cham, Switzerland.

2.3 Legislate a Tasmanian Human Rights Act³ with the right to a safe, clean and sustainable environment as the fundamental right upon which all other rights are based. Note that the Tasmanian government's State of the Environment Report was due in 2014, so is now more than eight years late.

2.4 Advise the Australian government that Tasmania wants a legislated cap on total GHG emissions as outlined above. A cap on GHG emissions, with annual reductions, is far more important than any other climate change measure. The legislated cap will necessarily provide the incentives and prices for low-emission technologies and behaviours.

2.5 Change the Department of State Growth into the Department of Sustainability. All government decisions should address the need for sustainable (limited) throughput, as discussed above. States and the Australian government should rapidly move to more self-sufficient economies on the likelihood that world trade will be constrained. Neoliberal globalism should be rejected. However, this should not be seen as isolationism but internationalism (assisting other nations via aid and cooperation rather than competition).

2.6 Measure the state's biocapacity and ensure economic throughput is less than biocapacity. In other words, the physical size of the economy will be limited by the state's physical resources and waste sinks. Under this scenario Gross State Product (GSP) will likely become relatively stable – a dynamic steady-state economy. Your modelling suggests GSP will be decoupled from GHG emissions and perhaps environmental destruction more generally. Real-world evidence says this will not happen.

2.7 Policy should be aimed at improving the per capita Genuine Progress Indicator (GPI) and other wellbeing measures rather than increasing GSP, real GSP or real per capita GSP. Hence per capita GPI should become one of a dashboard of metrics to measure genuine progress and wellbeing.

2.8 Advise the Australian government Tasmania wants to stabilise its state's population as quickly as possible. This could easily be done via net zero migration⁴. This will almost certainly increase the per capital GPI against a business-as-usual reference case.

2.9 Advise the Australian government you desire a federal job guarantee to eliminate involuntary unemployment.

2.10 Stop all subsidies that cheapen, and therefore promote, fossil fuels.

2.11 Promote non-fossil-fuel energy sources, remembering that solar, wind and energy storage are still mostly built using fossil-fuel energy.

³ Both the ACT (2004) and Queensland (2019) have a Human Rights Act in lieu of an Australian Human Rights Act.

⁴ Recent migration figures show that emigration of about 200,000 could be matched by immigration of 200,000. Or a smaller immigration cohort could give negative net migration to balance Australia's natural increase of about 125,000 per year.

2.12 Note that the quantum of economic throughput will be limited by the available non-fossil-fuel energy resources since all economic activity needs energy: all goods and services have embodied energy.

2.13 It is unclear how much non-fossil-fuel energy can be generated on a sustainable basis nationally and globally. This will limit sustainable economic activity and international trade. Hence the need for much more localism and self-sufficiency. For instance, it is not clear that the world can supply Tasmania with electric vehicles, photovoltaics and related technology indefinitely (they need to be regularly replaced).

2.14 Promote carbon sequestration projects, including agroforestry, and including the harvesting of structural wood for long-term carbon storage while also expanding forests.

2.15 Legislate 50% of the state (and marine areas) as nature reserves, ensuring that all habitats are protected.

3. Conclusion

3.1 We must stop destroying the natural environment

Governments should adopt an approach similar to the medical profession's injunction that a doctor should first and foremost do no harm. In the case of governments this should mean not increasing harm to the natural environment from which all wealth springs. In fact environmental repair is now necessary on a large scale. An economic system that thinks natural capital can be substituted by human-made capital or something else is delusional.

3.2 We must act urgently and growth economics makes things worse

The March 2023 IPCC Synthesis Report continues the trend of reporting that the climate emergency is more certain and dangerous than previous reports said. Action must now be much swifter and deeper than past reports suggested. Indeed, a paradigm shift is urgently needed away from growth economics. Even so, IPCC reports are often hamstrung by faulty mainstream economics and its cost-benefit analysis. Policymakers should always assume the risk is greater than these conservative reports allow and that economies cannot physically expand forever. Indeed global degrowth must happen – either voluntarily or, more likely, via ruthless natural forces.

3.3 We need to reduce our dependence on imports

The Tasmanian government should not exhibit hubris because of its low-emission hydroelectric electricity generation but should focus on its vulnerabilities due to reliance on imports from other Australian states and internationally. Such dependence needs to be methodically reduced as we witness an increasingly fragile trade system that is vulnerable in a GHG-constrained world.

3.4 Overriding focus should be on sustainability not just GHG emissions

Climate change cannot be separated from other existential threats so they must be analysed and solved together. Therefore Tasmania should pursue sustainability as a whole, via a

Department of Sustainability, not GHG reductions as a discrete problem when the problem is general overshoot.

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