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## **‘Draft Northern Territory Circular Economy Strategy 2022-2027’ submission**

The Arid Lands Environment Centre (ALEC) is Central Australia’s peak community environmental organisation that has been advocating for the protection of nature and growing sustainable communities in the arid lands since 1980. ALEC actively contributes to the development of waste policy through regulatory reform, written submissions, community education and advocacy. ALEC has had a long engagement with waste issues, for example, having operated the Bowerbird Tip shop between 1999 and 2007, as well as having produced television ads promoting the Northern Territory Government’s container deposit scheme in 2016.

ALEC welcomes the opportunity to comment on the Northern Territory Government’s ‘Draft Northern Territory Circular Economy Strategy 2022-2027’.

ALEC’s submission will focus on priority areas for the Territory’s Circular Economy Strategy, such as that: it is holistic and ambitious; it results in emission reductions; manufacturing, built environment, transport and recycling industries are supported; plastics are managed holistically; and, hazardous, mining and legacy waste are included as key areas.

### **1. Introduction**

ALEC is supportive of the Northern Territory Government’s decision to develop a Circular Economy Strategy. If done effectively, this approach has the potential to move past the ‘take-make-waste’ linear model and contemporise the Territory’s relationship with waste towards re-use, recycling and remanufacture. In shifting away from an extraction dependent approach, this model provides a pathway forward where resources are viewed as finite, with existing (and future) waste viewed as an opportunity rather than only a burden. This shift brings with it significant opportunity for improving social, environmental and economic outcomes across the Northern Territory.

Australia and the Territory have much to gain from fully adopting the principles of a circular economy. Australia currently: is the largest material user per capita in our region and second largest in the OECD; has the second highest material footprint in the OECD, but the third lowest material productivity in the OECD, with AUD \$1.80 of economic activity generated for every kilogram compared to the OECD benchmark of AUD \$4.09; has the lowest manufacturing self-sufficiency in the OECD, where manufacturing makes up only 6% of Australia’s economy and 3.8% of the Northern Territory’s, compared to the

OECD average of 16%<sup>1234</sup>. In short, across Australia valuable resources are not managed efficiently or effectively, which is compounded by Australia's limited capacity in manufacturing. A circular economy is an opportunity to be more self-sufficient as well as restructure the economy around efficient and sustainable resource extraction and use. Re-use, recycle and remanufacture is an economic, as well as environmental opportunity for Australia.

The Northern Territory joins New South Wales, Victoria, Queensland, Tasmania, South Australia, Australian Capital Territory and Western Australia in modernising its approach to waste and sustainability and focusing on a circular economy.

## **2. Priority areas for the Territory's Circular Economy Strategy**

### **a. Ensure that the Circular Economy Strategy is holistic and ambitious**

ALEC supports the three principles outlined in the Draft Strategy:

1. Designing out waste and pollution;
2. Keeping products and materials in use for as long as possible;
3. Regenerating natural systems.

This aligns with the principles outlined by the Australia Circular Economy Hub<sup>5</sup>. However, the outputs that proceed these principles in the draft strategy are narrow and primarily focus on waste and recycling initiatives. It is far from the economy-wide impact that a circular economy strategy can foster. For example the NSW Government has funded 'NSW Circular' whose mission is explicit in delivering a zero carbon economy in NSW, or in Victoria which legislated in December 2021 the *Circular Economy (Waste Reduction and Recycling) Act 2021*, which embeds a new waste regulator, new minimum standards, mandatory reporting, four waste streams, and decisions about energy and waste. NSW and Victoria have supported these policy initiatives with hundred million dollar programs. Whilst the Northern Territory has different population and financial constraints, its strategy must prioritise all three principles that are outlined above as well as universal circular economy goals<sup>6</sup>. The opportunities are vast for the Northern Territory in integrating these three circular economy principles into the wider economy.

In addition to these holistic and ambitious principles, it is vital that in application the circular economy is relevant for urban, regional and remote communities. This should be an inclusive strategy that provides opportunity for communities across the Territory, not just in its urban centres. ALEC notes the major issues and challenges that exist in managing waste in regional and remote areas of the Northern Territory. This Circular Economy Strategy should also seek to manage these ongoing issues, in addition to pursuing other opportunities in alternative industries.

In pursuing a holistic and ambitious approach to the Circular Economy Strategy, there are also opportunities for greater connectivity between different policy areas. For example there are opportunities to integrate existing policies and objectives within the 'Waste

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<sup>1</sup> OECD.Stat, [https://stats.oecd.org/Index.aspx?DataSetCode=MATERIAL\\_RESOURCES](https://stats.oecd.org/Index.aspx?DataSetCode=MATERIAL_RESOURCES). Accessed 10th February 2022.

<sup>2</sup> OECD, Material productivity. doi: 10.1787/dae52b45-en. Accessed 11th February 2022.

<sup>3</sup> Stanford, J, 2020. 'A Fair Share for Australian Manufacturing: Manufacturing Renewal for the Post-COVID Economy'. The Centre for Future Work at the Australia Institute.

<sup>4</sup> Department of Industry, Tourism and Trade. 'Gross state product'. Northern Territory Government. Accessed 14th February 2022.

<sup>5</sup> Australian Circular Economy Hub. '

<sup>6</sup> Ellen MacArthur Foundation. 'Universal Circular Economy Policy Goals'. Accessed 10th February 2022.

Management Strategy for the Northern Territory 2015-2022', 'Northern Territory Climate Change Response: Towards 2050', 'Northern Territory Electric Vehicle Strategy and Implementation Plan 2021-2026' or the 'Northern Territory Renewable Hydrogen Strategy' amongst others into the principles, policies and plans of the Territory's circular economy. In addition there is opportunity for the Circular Economy Strategy to influence other areas undergoing regulatory reform such as around mining activities<sup>7</sup> and GHG Emissions Offsets Policy<sup>8</sup>.

**Recommendation 1:** The Circular Economy Strategy is aligned with national and international principles and policy goals, and these are applied to and are relevant for urban, regional and remote areas. The Circular Economy Strategy is integrated across key policy areas in the Northern Territory.

#### **b. Ensure the Circular Economy Strategy results in emissions reduction**

Adopting a circular economy is a major opportunity to reduce emissions in the Northern Territory and align its economy with its net-zero emissions target by 2050. In the Territory, 44% of emissions are produced by the energy sector, 20% agriculture, 34% land use, land use change and forestry, 1% waste and 1% industrial processes<sup>9</sup>. While transitioning to 100% renewable energy is critical, it needs to be supported by a holistic plan to reduce emissions across other sectors. A circular economy is that opportunity. It recognises the need to better manage and extend the life of resources, reduce emissions in non energy generation sectors, whilst emphasising the need to accelerate the shift towards renewables. It is an opportunity to expand and create new and more sustainable economies across the Territory.

The Draft Circular Economy Strategy mentions that one of at least three key principles of the NT's circular economy is to 'design out waste and pollution'. ALEC would like to emphasise the obvious, the expansion of one Australia's largest gas basins in the Beetaloo sub-basin is incompatible with the principles of a circular economy<sup>10,11</sup>. In addition, the opening up of the Barossa gas field, which has unusually high levels of carbon, which would make the gas project the 'dirtiest in Australia and potentially the world', is incongruent with a circular economy that is focused on emissions reduction<sup>12</sup>. These activities undermine the good work that can be achieved through the adoption of a circular economy, and would be akin to greenwashing. The Northern Territory Government must be honest and acknowledge its intention around gas expansion as part of its circular economy plan.

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<sup>7</sup> Department of Environment, Parks and Water Security & Department of Industry, Tourism and Trade. 'Regulation of mining activities: environmental regulatory reform'.

<sup>8</sup> Department of Environment, Parks and Water Security. 'Greenhouse Gas Emissions Offsets Policy'. Accessed 14th February 2022.

<sup>9</sup> Department of Environment and Natural Resources, 2020. 'Northern Territory Climate Change Response: Towards 2050'. Northern Territory Government.

<sup>10</sup> Geoscience Australia. 'Gas: Australia Energy Commodity Resources 2021'. Commonwealth Government of Australia.

<sup>11</sup> Scientific Inquiry into hydraulic fracturing in the Northern Territory: Final Report, 2018, p.85. 'Chapter 6: Onshore shale gas industry in Australia and the Northern Territory'.

<sup>12</sup> Robert, J, 2021. 'IEEFA Update: Santos won't solve the problem of Barossa LNG with carbon capture and storage'. Institute for Energy Economics and Financial Analysis. Accessed 10th February 2022.

ALEC fully supports the Territory Government in its strategic decision to adopt a circular economy. However, ALEC reiterates its opposition to gas expansion in the Northern Territory. To achieve the intended goals of the Circular Economy Strategy, an expansion of gas production cannot be realised.

**Recommendation 2:** The Northern Territory Government makes clear its objective around emission reduction through its adoption of a circular economy strategy. These commitments should be aligned with the Territory's net-zero emissions by 2050 target.

**c. Promote manufacturing, built environment, transport and recycling industries that are aligned with circular economy principles**

ALEC supports the expansion of manufacturing, built environment, transport and recycling industries in the Northern Territory. There are significant opportunities to grow and transition these sectors, whilst also operating more sustainably. For example, ALEC notes the recent announcement by Federal Environment Minister Susan Ley to fund a \$7.2 million materials recovery facility in Katherine, which supports both job opportunities as well as better management of resources<sup>13</sup>. There are substantial opportunities that exist in the reuse, recycle or remanufacture of:

- **Food and organics:** 38% of municipal waste in Alice Springs is food and organic waste<sup>14</sup>. There are significant opportunities to divert this waste to create alternative industries such as compost. The Alice Springs Food Organics Garden Organics Community trial in 2021 met all its objectives and was met with 'great support for the service. A recommendation will be made to Council to consider expanding the FOGO service to all households within the municipality'<sup>15</sup>. There are 80 organic waste processing facilities in NSW, with huge potential for expansion there<sup>16</sup>. There is also considerable potential for the Northern Territory.
- **Textiles:** globally textile recycling rate is only 13%, despite textiles accounting for 20% of global wastewater pollution, 2-8% of global carbon emissions and placing a huge demand upon water resources<sup>17</sup><sup>18</sup><sup>19</sup>.
- **Plastics:** Australia's capacity to recycle and deal with plastics needs to expand by 400% to meet its 2025 National Packaging Targets<sup>20</sup>. NSW already has 17 plastic recycling and remanufacturing facilities which employ 85000 people and accounting for 10% of Australia's manufacturing activities<sup>21</sup>. Are there similar opportunities in the Northern Territory?
- **Solar panels.** Australia is a world leader in solar, which by 2035, will result in up

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<sup>13</sup> Fitzgerald, R, 2022. 'Katherine gets \$7.2m for recycling facility but kerbside sorting still years away'. ABC. Accessed 14th February 2022.

<sup>14</sup> Alice Springs Town Council, 2021. 'FOGO Evaluation Report: Food Organics Garden Organics Community Trial'.

<sup>15</sup> Ibid, p.2.

<sup>16</sup> NSW Environment Protection Authority, 2019, p.127. 'NSW Waste Sector Volume II: Situational Analysis'. PWC.

<sup>17</sup> United Nations Environment Programme, 2018. 'Putting the brakes on fast fashion'. Accessed 10th February 2022.

<sup>18</sup> Graham, R, 2019. 'Australia recycles paper and plastics. So why does clothing end up in landfill?'. The Guardian.

<sup>19</sup> Kant, R, 2012, p.23. 'Textile dyeing industry: An environmental hazard'. Natural Science, Vol. 4.

<sup>20</sup> Department of the Environment and Energy, 2019. 'Sustainable Resource Use, Recycling Market Situation: Summary Review' The Commonwealth of Australia.

<sup>21</sup> NSW Department of Planning, Industry and Environment, 2020. 'Cleaning Up Our Act: Redirecting the Future of Plastic in NSW Discussion Paper, March 2020'.

to 100,000 tonnes of solar panels that will need to be recycled or disposed<sup>22</sup>. What opportunities are there for the Territory around solar recycling?

- **Lithium ion batteries:** '[In Australia] in 2016, 3,300 tonnes of lithium ion battery waste was generated but only 2 % of this was collected and exported for offshore recycling. Lithium ion battery waste generation is forecasted to grow to between 100,000 to 188,000 tonnes by 2036...[failure to recycle these commodities] constitutes a future (2036) economic loss to the Australian economy due to the estimated potential recoverable value of between AUD \$813 million and \$3 billion based on current day commodity prices'<sup>23</sup>
- **E-waste:** Australia is amongst the largest generators of e-waste per capita in the world. E-waste is often filled with valuable metals. For example, 41 mobile phones can yield as much gold as one tonne of ore<sup>24,25</sup>.

In addition, with the growth of renewables there is significant opportunity to support green manufacturing to complement industries that already exist or are emerging. These could include:

- Green hydrogen;
- Green aluminium;
- Green cement;
- Green steel.

A circular economy strategy can identify and recognise the industries that are best and most appropriately suited to the Northern Territory context. In addition, comprehensive planning can ensure that supply chains are altered to better support Territory industries in releasing a circular economy.

**Recommendation 3:** The Northern Territory Government identifies and develops comprehensive plans for the key industries that are to be prioritised and supported as part of the circular economy strategy. These industries are appropriate to the Territory context and align with circular economy principles.

**d. Ensure the Circular Economy Strategy creates a holistic plan for plastics that includes a problematic single use plastic ban**

ALEC supports a proposed ban on Problematic Single-Use Plastics by 2025. There is widespread support amongst the community for this, and leadership already shown at the local level, with Katherine Town Council banning 'single use plastic products at all Council facilities from 1 January 2021' and Alice Springs Town Council 'support[ing] the elimination of SUPs – such as cups, straws, cutlery, and take away food containers – from its services, programs, events and facilities, including permit holders using Council land or facilities'<sup>26,27</sup>. Macro and micro plastics are a huge threat to sea and terrestrial life, with growing impacts on humans<sup>28</sup>. ALEC supports a circular economy strategy that creates a holistic plan for plastic management across the Northern Territory.

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<sup>22</sup> UTS Institute of Sustainable Futures and Equilibrium, 2020. 'Scoping study for photovoltaic panel and battery system reuse and recycling fund'.

<sup>23</sup> King, S, Boxall, N, and Bhatt, A, 2018, p.iii. 'Lithium battery recycling in Australia, CSIRO Report.

<sup>24</sup> OECD, 2019. 'Going Digital: Shaping Policies, Improving Lives'.

<sup>25</sup> Zeng, X., Mathews, J. A., & Li, J, 2018. 'Urban Mining of E-Waste is Becoming More Cost-Effective Than Virgin Mining'. *Environmental Science & Technology* 52(8).

<sup>26</sup> Katherine Town Council. Ban of single use plastics'. Accessed 11th February 2022.

<sup>27</sup> Alice Springs Town Council, 2020. 'Single Use Plastic Information Session'. Accessed 11th February 2022.

<sup>28</sup> Centre for International Environmental Law. 'Plastic and Human Health: A Lifecycle Approach to Plastic Pollution'. Accessed 14th February 2022.

We note the white elephant around developing a comprehensive plan for plastics within a circular economy strategy, is the Government's support for a petrochemical precinct at Middle Arm, converting gas into plastics, paints, detergents and fertilisers.

**Recommendation 4:** Develop a holistic strategy for plastics management in the Northern Territory which includes a ban on Problematic Single-Use Plastics by 2025.

**e. Ensure that hazardous waste, mining and industrial waste and legacy waste is prioritised and included within the Circular Economy Strategy**

It is critical that hazardous waste, mining and industrial waste and legacy waste is included as a priority of a circular economy strategy in the Northern Territory. Managing these waste areas directly align with the principles proposed in the Circular Economy Strategy.

Effective and sustainable management of resources and landscapes reduces environmental and economic risks and liabilities. For example, the bill to rehabilitate legacy mines in the Northern Territory is in excess of a billion dollars<sup>29</sup>. Legacy mines such as Rum Jungle, Redbank and Mount Todd stand out as scars upon the Territory's landscape. The ongoing issues related to the McArthur River Mine provides a current day example of the regulatory failures of mining in the Northern Territory, where rehabilitation for the site could cost up to \$1 billion alone, with monitoring and maintenance required for 1000 years after the end of extraction<sup>3031</sup>.

Comprehensive reform and plans around hazardous waste, mining and industrial waste and legacy waste should be central to this circular economy strategy. A circular economy should promote opportunity in existing and emerging sustainable industries (see section 2C), as well as mitigate risk from damaging and potentially destructive industries. Best-practice regulation of high-risk activities such as those around hazardous waste and mining is in long-term economic, social and environmental interests of the Northern Territory. A greater focus on hazardous waste management should not result in the Territory becoming a dumping ground for hazardous materials nationally. Instead, it is prudent to raise the bar on regulatory management of hazardous and mining waste and ensure there is alignment with best practice standards nationally. There should also be alignment between the Strategy's position on hazardous and mining waste and circular economy principles.

**Recommendation 5:** Hazardous waste, mining and industrial waste and legacy waste is prioritised as part of the Circular Economy Strategy and aligns with best-practice national standards.

Kind regards,

Alexander Vaughan



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<sup>29</sup> Department of Industry, Tourism and Trade. 'About legacy mines'. Accessed 14th February 2022.

<sup>30</sup> Mineral Policy Institute. 'Calls to halt McArthur River mine operations over safety and remediation concerns'. Accessed 14th February 2022.

<sup>31</sup> Northern Territory Environment Protection Authority, 2018. 'Additional Information to the Environmental Impact Statement (EIS) Following the draft EIS and Supplement McArthur River Mining Pty Ltd Overburden Management Project'