

Australia



1

Which bioeconomy-related policy strategies exist?

In Australia, there is no official national bioeconomy strategy but the government has provided political guidance and support in several thematic areas of the bioeconomy, specifically with regard to increasing the value added from agricultural, forest and marine resources. In terms of intervention focus, most bioeconomy-related policies can be characterized as R&D strategies. In 2013, the Australian government defined 15 strategic research priorities for the future, which also integrate key topics of the bioeconomy, for example in the areas of bioenergy, ecosystem monitoring and management, optimized food and health.

Biotechnology development has been especially encouraged by the national biotechnology policy (2000) and communication strategies raising the awareness of the importance and benefits of modern biotechnology for the agricultural sector (2008) and the industrial sector (2008). Moreover, in 2011 the Australian Government released two biorefinery scoping studies investigating the potential of tropical and temperate biomass value chains.

In the area of bioenergy development, several industry associations have published strategies and roadmaps¹¹ which, however, have not been officially adopted by public authorities. In 2011, the government agency Rural Industries Research and Development Corporation published a national

innovation strategy fostering bioenergy development (“**Opportunities for primary industries in the bioenergy sector- national RD&E strategy**”). In order to further guide and implement this innovation strategy, a work plan was elaborated under the same name in 2014. With a view to fostering research capacities in key knowledge areas, such as the biosciences and biotechnology, the government developed the 2011 “**Strategic Roadmap for Australian Research Infrastructure**”. Following the Research Investment Plan published in 2012, support for important research infrastructure was identified as a key element and continued in the framework of the “**National Collaborative Research Infrastructure Strategy (2013–2016)**”.

In 2015, the Minister for Industry and Science launched the “**National Marine Science Plan 2015–2025**”, which focuses on developing the value added of the “blue economy”, while protecting Australia’s oceans and marine resources.

Besides these national innovation strategies, South Australia has issued a regional bioeconomy strategy “**Building a Bioeconomy in South Australia 2011–2015**”.

¹¹ For example, “Bioenergy Australia Strategic Plan 2012–2015” (2012), “Bioenergy in Australia: Status and Opportunities” (2012), the “Australian Bioenergy Roadmap” (2008), or the “Clean Energy Australia Report” (2013).

2

Is the term “bioeconomy” or “biobased economy” used in the strategy documents?

Yes No

X

Although the term “bioeconomy” is used, for example by the Department of Industry and the public research organization CSIRO, the above-mentioned national research and innovation strategies do

not explicitly define or refer to bioeconomy. The South Australian bioeconomy strategy relates to the economic development opportunity arising out of biosciences.

3

Who is the author of the strategies?

The Rural Industries Research and Development Corporation, a national agency, authored the bioenergy innovation strategy and the associated workplan. The strategy and workplan are based on consultations across Australian government and regional agencies, industry and other stakeholders.

The National Marine Science Plan was prepared by the National Marine Science Committee, which includes Australian Government marine science agencies, representatives of state and territory governments, and marine science researchers and organizations.

The Strategic Roadmap for Australian Research Infrastructure and the corresponding funding program (collaborative research infrastructure strategy) were led by the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education.

The South Australian Government via its business catalyst BioSA defined the regional bioeconomy strategy.

4

What are the key goals of the strategies?

The Bioenergy R&D Strategy is largely focused on establishing value chains from sustainable biomass feedstock supply to suitable (nearby) bioenergy conversion paths. The Research Infrastructure Strategic Roadmap intends to increase the competitiveness of Australia’s researchers in core capability areas, e.g. -omics research, which have been identified as crucial to transforming Australian industries, to optimizing food and health and to becoming environmentally sustainable. Furthermore, the country should become an attractive destination for international research projects and collaborations.

food and energy security, protecting biodiversity, sustainable coastal urban development, climate variability, and marine sovereignty and security. It further specifically highlights the need to provide unbiased knowledge about economic development decisions for environmentally sensitive areas.

The marine science plan sets out how marine science capabilities can support the development of a sustainable blue economy¹². In this respect the plan highlights the most significant development and sustainability challenges for the blue economy, including

The South Australian strategy seeks to leverage local expertise in the biosciences to develop new markets and increase the region’s exports of innovative bioscience products and services. The bioscience sector is considered key to fostering innovation in several key sectors of the region, such as medical diagnostics, wine, agriculture and renewable energy.

¹² The plan defines Australia’s “marine estate” as Australia’s oceans, seas, seabed, coasts, close catchments, traditional sea country, and the living and non-living resources they contain within Australia’s full confirmed marine jurisdiction.

5

What are the priority areas of the strategies?

The national Bioenergy RD&E Strategy identifies three priority areas for innovation: feedstock identification and availability, supply logistics, and sustainability. The 2014 work plan builds on these work areas and addresses their convergence by adding a fourth priority: integrated supply chains and industry development, with a special focus on regional applications. Stakeholder consultations identified integrated supply chains as key to Australia providing a developmental pathway for many of the innovation activities foreseen in the strategy. Additionally, the 2011 Strategic Roadmap for Australian Research Infrastructure supported several bioeconomy-related facilities and networks, specifically in the fields of integrated biological discovery, biological collections, biotechnology for advanced materials and industrial purposes as well as next-generation biofuels.

The National Collaborative Research Infrastructure Strategy (2013), the subsequent funding program,

continues the support to many of these research facilities through to 2016. The Marine Science Strategy outlines so-called “10-year steps to success”. The priority research areas are: setting-up scientific decision-support tools for policy and industry; building an oceanographic modeling system; developing national marine baselines and long-term monitoring programs; industry and government partnerships; marine science training in order to become more quantitative and cross-disciplinary; investing in research vessels; carrying out marine eco-system exploration, mapping and monitoring; fostering national collaborations.

The South Australian Bioeconomy Strategy is clearly business-oriented and identifies three strategic elements of intervention. Firstly, ensuring access to risk capital. Secondly, providing critical infrastructure, e.g. for clusters. And thirdly, offering business development assistance and marketing assistance to new businesses.

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