

Short Term Actions

To be taken within the next 2 years. Build supply chain, biomass production, and domestic market demand.

RESOURCING: Infrastructure Access and Support

H ACTION 1

Biorefinery Hubs and Production/Manufacturing Co-location

H ACTION 2

National Algae Biomass Registry

H ACTION 3

Mapping of Current and Potential Processing and Manufacturing Sites

REGULATIONS: Regulatory Streamlining and Permitting

H ACTION 4

Industry Coordination and Representation

H ACTION 5

Algae-specific Policy and Regulatory Development

COLLABORATION: Coordinated and Integrated Research

H ACTION 6

Support Market-aligned R&D and Funding Mechanisms

H ACTION 7

Map the Research Landscape

COLLABORATION: Market Expansion and Consumer Awareness

M ACTION 8

Stakeholder Landscape Map

M ACTION 9

Integration of Algae into Existing Products

M ACTION 10

Map Domestic and International Market Gaps

H High Priority

M Medium Priority

Medium Term Actions

Within a 2- to 5-year timeframe, and establishment of pilot-scale and large-scale commercial operations.

RESOURCING: Centralisation of Bioprocessing Facilities

H ACTION 1

Expand Pilot-scale Infrastructure

H ACTION 2

Develop a Virtual Biorefinery Roadmap

RESOURCING: Workforce and Capacity Building

M ACTION 3

Geographic Workforce Planning

M ACTION 4

Algae Specific Workforce Training

REGULATION: Policy, Regulation and Governance Stability

H ACTION 5

Establish Algae as National Priority in RDC

H ACTION 6

Standalone Advocacy Body

COLLABORATION: Market Expansion and Australian Branding

M ACTION 7

Consumer and Stakeholder Profiling

M ACTION 8

Develop a National Traceability Framework

H High Priority

M Medium Priority

Long Term Actions: Global Expansion

Dynamic pillars requiring ongoing assessment and explores future opportunities and strategic directions for the algae industry.

MARKET COMPLIANCE & STANDARDS

H ACTION 1

Develop Algae Standards

H ACTION 2

Reducing Regulation Fragmentation

H ACTION 3

Harmonisation of Global Certification

STRENGTHEN DOMESTIC SUPPLY CHAIN

H ACTION 4

Investment in Domestic Infrastructure

H ACTION 5

Strengthening Regional Innovation Hubs

H ACTION 6

Establish Cold-chain Supply

MARKET DEVELOPMENT AND INTERNATIONAL PARTNERSHIPS

M ACTION 7

Build International Partnerships

M ACTION 8

Leverage Australian Branding Position

H High Priority

M Medium Priority

Australia wide

In Australia there are over 30 universities and Publicly Funded Research Organisations (PFROs) including The CSIRO, research organisations and state government sectors that are researching algae’s broad potential to address sustainability challenges across food, energy, environment, and climate. Their work spans fundamental science through to applied innovation, with a strong focus on industry collaboration to drive development of implementable solutions.

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2

Publicly Funded Research Organisations:
Commonwealth Scientific and Industrial Research Organisation (CSIRO), and Australian National Algae Culture Collection (ANACC)
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2

Federal Departments:
Department of Agriculture, Fisheries and Forestry (DAFF), and Dept. of Climate Change, Energy, and Water (DCCEEW)
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4

Other organisations (including but not limited to):
Marine Bioproducts Cooperative Research Centre (MBCRC), Fisheries Research and Development Corporation (FRDC), AgriFutures, and the Australian Sustainable Seaweed Alliance (ASSA)

Northern Territory

- 

1

University and Research Organisation:
Charles Darwin University
- 

1

Government Department:
Department of Agriculture and Fisheries

Queensland

- 

4

Universities and Research Organisations:
Queensland University, Southern Queensland University, Griffith University, James Cook University
- 

1

Government Department:
Dept. of Agriculture and Fisheries (DAF QLD)
- 

3

Nutraceuticals companies
- 

2

Agriculture/Aquaculture companies
- 

2

Remediation and Carbon Capture company

Western Australia

- 

2

Universities and Research Organisations:
Murdoch University, and The University of Western Australia
- 

1

Government Department:
Dept. of Primary Industries and Regional Development (DPIRD WA)
- 

1

Material Production company
(textiles or materials e.g. bioplastics)
- 

1

Nutraceuticals company
- 

2

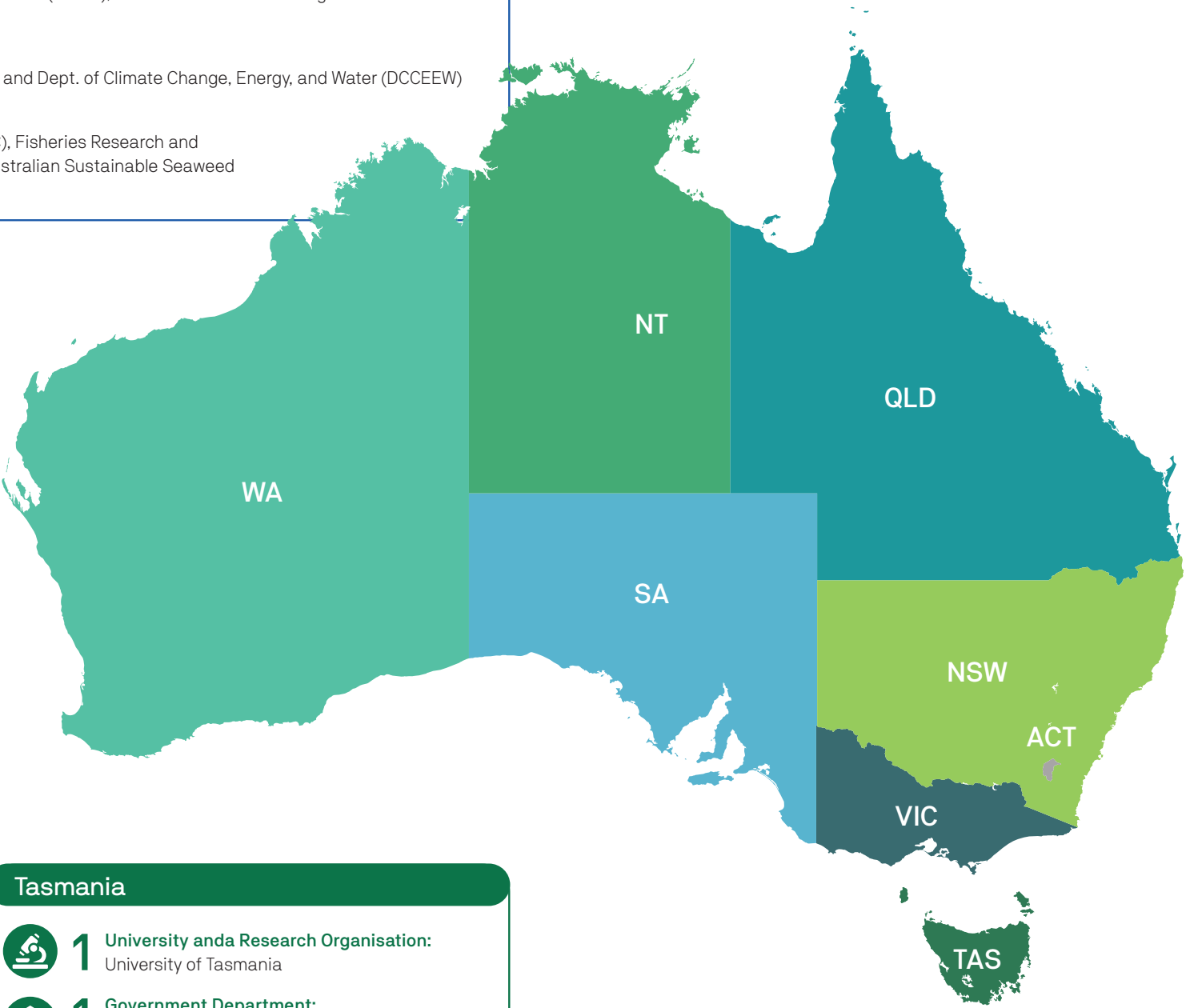
Agriculture/ Aquaculture company
- 

1

Food and Beverage company
- 

1

Remediation and Carbon Capture company



New South Wales

- 

7

Universities and Research Organisations:
University of Technology Sydney, University of Sydney, University of Wollongong, University of New South Wales, Southern Cross University, Newcastle University, Macquarie University
- 

1

Government Department:
Dept. of Primary Industries (DPI NSW)
- 

8

Nutraceuticals companies
- 

1

Agriculture/Aquaculture company
- 

3

Food and Beverage companies
- 

3

Remediation and Carbon Capture companies
- 

4

Material Production companies
(textiles or materials e.g. bioplastics)

South Australia

- 

2

Universities and Research Organisations:
– University of Adelaide
– Flinders University
- 

2

Government Departments:
Primary Industries and Regions SA (PIRSA), and South Australian Research and Development Institute (SARDI)
- 

1

Agriculture/Aquaculture company

Tasmania

- 

1

University anda Research Organisation:
University of Tasmania
- 

1

Government Department:
Dept. of Natural Resource and Environment Tasmania (NRE TAS)
- 

2

Agriculture/Aquaculture companies
- 

2

Food and Beverage companies
- 

1

Remediation and Carbon Capture company

Australian Capital Territory

- 

1

Government Department:
Environment, Planning and Sustainable Development Directorate (EPSDD ACT)

Victoria

- 

5

Universities and Research Organisations:
University of Melbourne, Deakin University, Monash University, La Trobe University, Royal Melbourne Institute of Technology
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3

Government Departments:
Dept. of Energy, Environment and Climate Action (DEECA), Department of Jobs, Skills, Industry and Regions (DJSIR), Agriculture Victoria (Ag Vic)
- 

4

Nutraceuticals companies
- 

1

Agriculture/Aquaculture company
- 

1

Food and Beverage company

Note: This map presents Universities, PFROs, Government Departments, other organisations, and companies within the algae sector by state. Companies either self-identified into these sectors, or data was obtained from online information; the above is not exhaustive.



A jobs and skill system that is predominately designed for the **major cities**



Differing skills needs to **metropolitan areas**



Thin markets and **higher cost of delivery**



Industry transition and transformation for mining, agriculture and energy sectors

Algae biomanufacturing offers a strategic opportunity for regional economies.

With 66% of the rural workforce in mining and agriculture, many possess trade skills suited to transitioning into the algae sector.



Algae production supports locally tailored industries.

This leverages existing regional expertise while creating new high-skilled roles in biotechnology and clean manufacturing, aligning with the NSW Regional Roadmap.

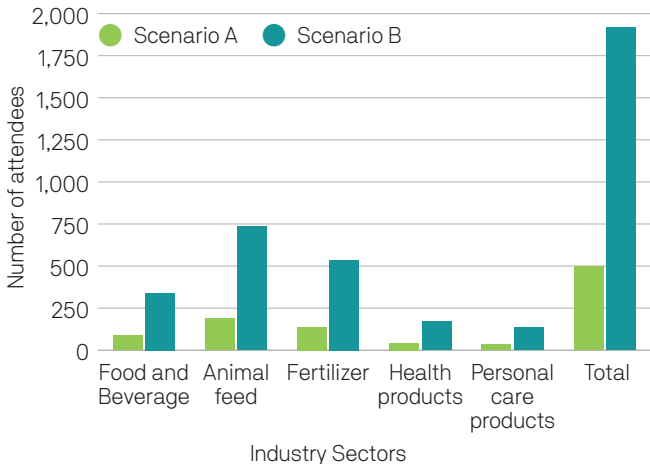


Issues predominantly felt in all of Regional Australia

Issues predominantly felt in only selected parts of Regional Australia

1,900

Total potential new full-time
equivalent positions created



Desirable, Feasible, Viable (relative 1-10)

