



**MAINSTREAM
AQUACULTURE**

Aquaculture Feeding the Future

WORKSHEET

YEAR 9-10

This resource has been developed by:



 **Seafood Careers Australia**



FRDC
FISHERIES RESEARCH AND
DEVELOPMENT CORPORATION

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“MainStream Aquaculture operates the world’s largest Barramundi hatchery, using an intensive barramundi farming system” (MainStream Aquaculture, 2024)

Intensive farming means that there is a higher fish stocking density in tanks or ponds compared to extensive systems where fish are dispersed over larger areas. Intensive systems provide precise control over environmental parameters like water quality, temperature, and oxygen levels, ensuring optimal conditions for fish growth.



Scan the QR code or click on the link to learn how MainStream Aquaculture’s aquaculture system is contributing to sustainable barramundi production on a global scale. After watching the video, record your answers to the questions in the spaces below.



➤ **Mainstream Aquaculture**
(4:53)
<https://www.youtube.com/watch?v=52s09yrbzZs&t=31s>

Image credit: FRDC



a) What is a notable advantage of this type of aquaculture as mentioned in the video?

- 1. It requires a large amount of land and water.
- 2. It is less efficient than traditional agriculture.
- 3. It can produce a lot of fish from a small environmental footprint.
- 4. It relies heavily on external sources of water.

b) Describe how MainStream Aquaculture uses resources efficiently in their production system.

c) Explain how this production method could meet global preferred futures regarding the social, economic, or environmental sustainability of barramundi production.

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Scan the QR code or click on the link to read and view the source material about sustainability initiatives adopted by MainStream Aquaculture.

Record notes about the social, economic, and environmentally sustainable advantages of this production system in the space below.



➤ **Mainstream Aquaculture - Sustainability**
<https://www.mainstreamaquaculture.com/sustainability/>



- d) Prepare and present a one-minute persuasive speech convincing other students about the advantages of intensive aquaculture systems as a means of sustainably feeding a growing population and protecting ocean ecosystems.

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Answers

- a) 3
- b) Suggested answers include: MainStream Aquaculture is effective at converting finite natural resources into a finished product, making it very efficient at producing protein for human consumption sustainably.
- c) Suggested answers include: the adoption of sustainable barramundi production methods aligns with global preferred futures by promoting social equity, economic prosperity, and environmental stewardship. The aquaculture industry can play a crucial role in shaping a more sustainable and resilient future for barramundi production worldwide through responsible practices and innovation.
- Examples of social sustainability:** Job creation, greater availability of nutritious food for consumers
- Examples of environmental sustainability:** Resource efficiency, habitat protection
- Examples of economic sustainability:** Greater productivity on farms, increasing overall profitability
- d) Student answers will vary.

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AUSTRALIAN CURRICULUM CONTENT

Year 9-10

Analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises (**AC9TDE10K04**)

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (**AC9TDE8K01**)

Analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments (**AC9TDE10K01**)

References

- Fisheries Research and Development Corporation. (2022b). Mainstream Aquaculture. In [www.youtube.com https://www.youtube.com/watch?v=52s09yrbzZs&t=31s](https://www.youtube.com/watch?v=52s09yrbzZs&t=31s)
- MainStream Aquaculture. (2024). Sustainability. MainStream Aquaculture. <https://www.mainstreamaquaculture.com/sustainability/>

ATTRIBUTION, CREDIT & SHARING



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