

Student 3 - Low Merit

The context relates to aquaculture in the Marlborough Sounds.

Consequences on people: Aqua farming is a growing employer in the Marlborough Sounds... Businesses like King Salmon NZ, has farms in Tory Channel and employ people out on the water and also in the processing plants. Aqua industry is important for the region's economy because it employs a lot of people... [1] (A simple flow diagram was included but it lacked specific context evidence.)

Consequences on the environment: Aqua farming has impacted the coastal marine environment. Mussel farms are seen from the inter-island ferry in Tory Sound and some people think this is ugly and a blot on the landscape but their environmental impact is fairly limited.

Mussel farms are fairly temporary, being made mostly of lines of ropes and floats... Mussels are native to this area and live off single cell algae and plankton and do not require additional food to be added to the ecosystem [2]. There could be an impact from the large numbers of mussels in an area but because of the high tidal change the water and the fact that mussels filter water, the water quality in the Sounds is maintained.

Salmon farms have more serious impacts. The salmon are fed fish meal which is imported and contains proteins, vitamins and carotene which can seep into the surrounding marine life. The feeding times increase the reliance of other animals e.g. seals, on the salmon, the risk of disease is high and the fast swimming salmon have eroded the sea bed...[3]

Processing of fish products has also led to some waste being dumped in to the sea... Increasing the number of salmon and mussels in the area changes the balance and this can attract more of some fish and fewer of others e.g. blue cod...

Sustainable use of the environment: Some forms of aquaculture are more sustainable than others... protection of the environment is essential for long term aquaculture... An action group Guardians of the Sounds has been set up to ensure that any future development of the Sounds is sustainable. Other organisations involved in research and monitoring of aqua farming are DOC, Ministry for the Environment, NIWA, Green Peace, local councils etc. using a range of laws e.g. RMA... [4]

NIWA is involved in research to find out the best numbers and sizes of farms that can be supported by the Sounds environment. This involves finding out how much food is needed by the salmon and that this doesn't affect any other sea life... amount of discharge... impact on water flow... This information is critical to the future sustainability of aquaculture in the Marlborough Sounds by focusing on the wider impacts... [5]

The mussel farms have limited environmental impact partly due to the sustainable farming practices adopted, they limit noise emission, use recycling and do beach clean ups. These activities focus on the wider environment and not just the immediate mussel farming area which helps to ensure the health and productivity of the Marlborough Sounds... I think that mussel farming is a sustainable use of the Marlborough Sounds [6].