

Student 4 - High Achieved

The context relates to aquaculture in the Marlborough Sounds.

[1]

A map to show how and why people use the Marlborough Sounds environment

The Sounds have sheltered waterways, bays and coves, pristine waters and lots of marine life, make it a good location for aqua farming. There is high tidal change which is perfect for mussel farming as they filter 360 litres of water a day, and places with really deep water 45-80m which is good for salmon farming.

Costs of setting up mussel farms are relatively low as they are just buoys and ropes in the water. Salmon farms are more costly as they need netted fish tanks and a permanent floating pontoon for machinery and workers accommodation.

The Sounds are sheltered from Cook Strait, so the climate is reliable and there isn't too much wind. This is another reason why aqua farming began in 1960's and has been successful ever since. There are over 560 mussel farms in the Sounds, most in Pelorus. Recently King Salmon have wanted to expand their operations to a total of 9 salmon farms within the Sounds. This environment is great for growing mussels and salmon, it is a profitable business selling products that New Zealand is famous for, King Salmon and Greenshell™ Mussels.

Access is easy as farms can be reached by boat from Picton: the main port, workers can commute easily every week. They can then be taken to the packaging plants in Picton and Havelock and then distributed around New Zealand and the world by sea or air freight (Picton and Blenheim).

KEY
 --- Ferry
 ● Salmon farms
 Land
 * mussel farms

Consequences for people

The consequences of aqua farming for people...local residents have been opposedThey see them as an eyesore and harmful to the local marine life. They have even started up a support group Guardians of the Sounds who have the motto, "Save our Sounds" to oppose expansion of aquaculture [2]. On a more positive note, the aqua farms have provided people with jobs... at a time when the region was suffering high unemployment. The farms now cover an area of about 4000 ha. and each mussel farm is about 1-20ha. People working on a mussel farm mostly work one week on and one week off.

Many tourist operators focus on the mussel farms as they operate tours and trips to see the farms in action and to taste and buy the products...

Consequences for the Environment

The impacts of mussel farms are considerably less than that of salmon farms. Mussel farms are temporary. They are made up of lines of ropes... Floats are attached to them and are all most people see. There isn't a permanent house or building...Mussels have minimal impact on the local marine life as they would naturally grow in the Sounds anyway and are part of the natural ecosystem. They could be considered beneficial to the marine environment as they filter the water [3].

I think that aquaculture in the Marlborough Sounds can be sustainable for future generations. It will depend on mussel and salmon farms continuing to manage their farm to protect the Marlborough Sounds environment...

Mussel farms already operate pretty sustainably... and the environmental impact they have is very limited. Mussel farms have a water monitoring system that ensures no toxins from the farms go into the surrounding water. This monitoring system also detects oil spills or toxic runoff from the land [4]. The ropes ensure that there is no dredging or disturbance of the sea floor and the farm can be removed leaving the environment in its original state, showing no harm to the environment [5]. The MD Council has been consulted to choose the best sites that will have minimal impact on people and the environment.

Salmon farms do adopt sustainable farming practices but could do more to secure the future of the Sounds. The salmon farms are less sustainable as they feed imported food to the fish.