How sustainable are different kinds of Aquaculture?

**The Bass:** Is a type of fish that is different in other locations. In the United States they have a variety of hybrid stripped brass, which are a cross between striped bass and white bass. The hybrid stripped brass has improved characteristics over both purebreds which include, a better chance of resistance to disease, better survival, and generally greater resilience against variable environmental conditions. This makes the hybrid striped bass an ideal applicant for aquaculture! There have been a few concerns about the sustainability of where the fish are feed. Although, they require a decent amount of protein, so they keep maturing, but it doesn’t compare to the extensive amounts that is required to feed salmon. Bass are usually farmed away from open waters to prevent an easy escape and to prevent the potential spread of diseases.

**The Cod:** We here in British Colombia have a variety of pacific cod and grey cod. Pacific cod are caught are caught as part of a multi-species groundfish fishery in British Columbia. Out of the 68 species, 16 were found to be sustainable. In 2012, BC landed $104.2 million worth of non-hake groundfish. Pacific halibut, sablefish and rockfish account for 83% of the value of the landings. A lot of these fish are exported to countries including the US, Japan, the UK and Russia. The technique that we use to catch cod is called bottom trawls. Bottom trawls are not great to use because they have the potential to cause large amounts of habitat damage due to them dragging across the ocean floor. Many of the species targeted in BC are found in areas of hard substrate which are more susceptible to damage than areas of soft substrate. Bottom trawls are banned in areas where sponge reefs exist.

**Herring**: A specific type of herring is the Pacific Herring and they can actually be found in multiple area of British Colombia, such as the Central Coast, Prince Rupert, Haida Gwaii, and West Coast Vancouver Island. Most of our herrings are exported to Japan and China. Pacific herring have a short lifespan and high reproductive rate. A main concern for people is the fishing rate because several stocks have only been recently rebuilt, and the rebuilding was slow. In BC we use the methods purse seines and gillnets, which beneficially do not make contact with the ocean floor, so not marine life is hurt.

A**quaculture** refers to the **raising of aquatic animals/organisms in controlled environments** for a purpose. The breeding, rearing and harvesting of these plants and animals can take place in different environments such as ponds, rivers, lakes, the ocean and man-made “closed” systems on land.

Here in British Columbia, Aquaculture is very important because it helps our economy out, for example, it is a good source of income for some people. Although, as the demand for fish increases it will add more stress to aquaculture and cause environmental problems.

In BC we farm quite a bit of fish but farming fish has its negative impacts. Fish farms consists of large amounts of fish in a small area and when these fish go the bathroom or die, they are released into our local water sources, which pollutes and contaminates our water. Another issue with farmed fish is that, fish that are in the oceans, lakes and rivers eat plants and/or smaller fish. However, in fish farms they are fed ground up smaller fish that are usually caught in open water. Also, due keeping fish in close corners this increases the chances of disease. If one fish gets sick with a contagious virus, then it is likely to transfer to other fish in the farm.

Overall, I would say aquaculture is not sustainable because there are many downfalls that can affect us and our wildlife.