



Backgrounder:

The approval of GM salmon:

In late 2013, the government of Canada (Environment Canada) approved the commercial development of genetically modified (GM) salmon. The approval was granted to AquaBounty, an American biotechnology company, which runs facilities in Prince Edward Island. AquaBounty is producing GM salmon eggs at a commercial scale, and shipping the eyed eggs to its facilities in Panama, where they grow to adult Atlantic salmon. If the GM salmon is approved for human consumption in Canada and the US, the company plans to ship the fish back to the North American market.

While the approval was granted to AquaBounty, its scope went beyond what the company requested (and what was assessed by government departments) in that it allows for the unlimited commercial development of GM salmon (both eggs and fish) on Canadian soil by any company in the future. If approved for human consumption (which is pending), GM salmon will be the first ever genetically modified food animal in the world.

What is the GM salmon:

The GM salmon, or "AquaAdvantage" salmon, is an Atlantic salmon which contains the genes of Chinook (Pacific) salmon, as well as the ocean pout. The insertion of these genes is designed to make GM salmon grow faster than convention salmon so that they can be raised to market size in less time. While the GM salmon are "triploid" fish – which means they are sterile, up to 5% will be able to breed with wild salmon, as well as trout species. This is the major cause for concern by conservation groups, particularly as wild Atlantic salmon are endangered in many regions.

The legal challenge:

In December 2013, EAC and LOS filed for judicial review of the Environment Canada decision for failure to comply with the Canadian Environmental Protection Act (CEPA), which requires that all new substances are assessed for toxicity to the environment. EAC and LOS are concerned that the toxicity of GM salmon was not adequately assessed when the approval was given. The groups are concerned that the GM salmon's ability to become invasive (through potential interbreeding with wild Atlantic salmon) constitutes toxicity to the environment.

Panama facilities:

AquaBounty's facilities in Panama, where the fish are grown to market size, has been fined by the Panamanian government for failure to comply with environmental regulations. Of these violations



includes the failure to treat waste water coming from the facility, and acquiring the proper permits. The plaintiffs are concerned that the Canadian approval is contributing to the downloading or transferring of ecological costs to other nations.

#### Public consultation:

Under Canadian law, no public consultation is required for the development of GM foods. However, under the CEPA, the government must provide notice of decisions to the public when exemptions are granted under the ACT (“waivers”). Through disclosure of documents through legal proceedings, EAC learned that Environment Canada in fact failed to publish notice of the approval waiver, thereby denying the public knowledge of its decision regarding the GM salmon.

This lack of public consultation is in stark contrast to the level of public input the US, where the FDA accepted submissions from the public on GM salmon.

In addition, as far as the plaintiffs are aware, no comprehensive aboriginal consultation has been conducted on GM salmon despite the importance of Atlantic salmon for many aboriginal communities, for food, social and ceremonial purposes.

#### Economic Impact

The economic benefit of AquaAdvantage salmon is accelerated growth rates allowing the fish to be brought to market in a shorter period of time resulting in lower costs for the grower. The conventional or existing salmon farming industry has stated that it can match the growth rates claimed by AquaBounty and the industry response to the GM salmon has been lukewarm. In addition, the growing viability of closed containment fish farming where the water temperature can be better controlled may further reduce any benefits from AquaAdvantage salmon. The controversy around GM salmon could harm the already embattled salmon farming industry.

[Available in French here.](#)