

Honorable Minister Andrew Parsons
Department of Municipal Affairs and Environment
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Dear Minister Parsons:

Pursuant to s.107 of the Environmental Protection Act (EPA) I am writing to ask for an appeal of the decision to release the EA Reg. #1834 without a Land Based Feasibility Study as required under the EIS Guidelines and thus the Environmental Assessment Act and Regulations. Please see pages 14 and 15 of the EIS Guidelines here:

https://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/1834_final%20EIS%20guidelines.pdf
specifically:

“ 3.2 d) seafarm operation (**land-based versus marine-based**). “

The Act states:

Environmental Protection Act, 2002 Section 57 - Environmental Impact Statement
57. An environmental impact statement shall be prepared in accordance with the guidelines, and shall include,
a) a description of the undertaking;
b) the rationale for the undertaking;
c) **the alternative methods of carrying out the undertaking and alternatives to the undertaking;**

I submit as evidence government's decisions on this matter via the following letter dated Monday August 28 2018 found here:

https://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/1834_min_eis_acc_lett_28Aug18.pdf
and Sept 5 2018 found here:

https://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/1834_cab_eis_lett_5sept18.pdf

I ask the government to review this decision and demand that the company comply with the EIS guidelines and provide a full Land Based Feasibility Study. Such a study was not submitted to

government prior to the release of the project. This is in contravention of the Act and Regulations.

As further evidence, I submit below the list of totally land based salmon production projects announced globally over the last 18 or so months. I hope also, that you note that virtually none have, nor require, any government financial support.

NDB, AKVA, Parot, etc have all recently published land based vs open net open financial analyses and suggest that land based is a viable alternative to open net pen production.

A Particle List of Recent Land Based Salmonid Farms Globally

One of the biggest players expects 3-5 land based projects to be contracted to them to be built a year for the next few year based on current plans “in the pipe”. <http://salmonbusiness.com/graaakjaers-ambitions-in-norway-we-expect-3-5-projects-a-year/>

Akva and Billund, two of the largest RAS systems providers globally, can't keep up with orders and the growth rate. <http://salmonbusiness.com/akva-group-in-demand-order-backlog-rose-to-e145-million/>

Norway is charging/auctioning new salmon farming licenses at \$11.3M USD to \$13M USD per 780 mt standard license. Land based RAS licenses are FREE. Now, with a fee schedule like that, what method do you think the Norwegian environmental agencies have decided to promote....?

<http://salmonbusiness.com/grieg-edgy-as-marine-land-prices-converge/>

Norway

Salmon Evolution. Started construction 2018. 28,800mt in one phase.

<http://salmonbusiness.com/salmon-evolution-gets-green-light-for-land-based-fish-farm-the-largest-facility-of-its-kind-in-europe/>

Salmofarms. 5,000mt and then another 5,000mt in two phases. Started construction in 2018.

<http://salmonbusiness.com/yes-salmofarms-will-build-land-based-salmon-farm-in-norway-e52mn-project-to-get-under-way/>

Nordic Aquafarms. 2,000 mt completed, 4,200mt under construction in 2018 with plans for “additional rapid expansion beyond this”. http://www.nordicaquafarms.com/portfolio_page/fredrikstad-seafoods-proceeds-with-expansion-plans/

Salmo Terra 8,000 mt. Started in construction 2018. <https://www.kyst.no/article/slik-vil-salmo-terra-produsere-laks-paa-land/> and <https://www.graaakjaer.com/Nyhedsvisning-11/Graakjaer-and-Salmo-Terra-are-entering-into-a-partnering-agreement?Action=1&M=NewsV2&PID=36989>

Losna Seafoods. 7,000 mt. Starting construction 2018. <http://salmonbusiness.com/go-ahead-given-to-build-norways-largest-land-based-fish-farm-complex/>

Green Atlantic Salmon by INC. 1,000mt pilot project going to 10,000mt. INC group in Florø, through the newly started company Havlandet RAS Pilot Started 2018. <http://salmonbusiness.com/88e-mn-sought-for-hydrogen-plant-ras-combo/> and <https://ilaks.no/innovasjon-norge-stotter-pilot-anlegg-for-landbasert-produksjon-av-laks-med-15-millioner-kroner/>

Gigante Salmon 3 sites of 10,000 mt each. Starting construction in 2019.

<http://salmonbusiness.com/no-one-has-as-yet-managed-to-document-land-based-industrial-salmon-production-its-just-not-that-simple-and-therefore-must-be-taken-seriously/>

Many more are in the early planning stages and we see new ones announced almost weekly. Eg “Scheduling land-based fish farms in the billion-class at Nordmøre 6 august 2018“

<https://ilaks.no/planlegger-landbasert-oppdrettsanlegg-i-milliardklassen-pa-nordmore/>

USA

Nordic Aquafarms. Belfast Maine. 10,000mt growing to 33,000mt in phases. Started construction 2018.

<http://www.nordicaquafarms.com/>

Whole Oceans. Bucksport Maine. 5,000 growing to 30,000mt in phases costing \$250M USD in total. Started construction in 2018. <https://bangordailynews.com/2018/07/02/business/bucksport-salmon-farm-hires-production-officer-with-36-years-in-aquaculture/>

Atlantic Sapphire, Miami Florida. 10,000mt growing to 90,000mt on 3 phases. Phase 1 expected completion date is late 2018 or early 2019. <https://www.seafoodsource.com/news/aquaculture/atlantic-sapphire-building-usd-350-million-land-based-salmon-farm-in-miami>

Aquabank. Thought to be Virginia (but has not been disclosed yet), USA. 5,000mt growing to 10,000mt. Still in permitting phase. Construction estimated to start 2019.

<https://www.seafoodsource.com/news/aquaculture/aquabank-accelerates-plan-to-open-ras-atlantic-salmon-farm-by-2022>

Aqua MoAF Unannounced location (though to be near or be Virginia) 10,000 mt. No press release yet. Leaked during conference in 2018 – reported by Intrafish.

<http://www.intrafish.com/aquaculture/1411154/israeli-giant-aquacultures-big-money-is-in-land-based>

Aquabounty (GMO salmon). 1,200mt Indiana USA. Finishing construction in 2018.

<https://www.seafoodsource.com/features/genetically-modified-salmon-producer-aquabounty-advances-to-product-commercialization>

Superior Fresh. 55 mt in full production plus a million pounds of vegetables – aquaponics. First fish went to market 2018. <https://www.hatcheryinternational.com/news/north-americas-ras-guru-joins-land-based-aquaponics-farm-in-wisconsin-3193>

many other small facilities of under 200 mt annually.

Canada

Kuterra. BC. Recently sold after successful 3 year proof of concept. Now expanding to more than 1,000mt

Sustainable Blue, NS. Doubling to 500mt in 2018. Recently funded by an ACOA loan to double production.

Aquabounty (GMO salmon), PEI. 250 mt (1,200 mt in USA). Finishing construction in 2018.
<https://www.seafoodsource.com/features/genetically-modified-salmon-producer-aquabounty-advances-to-product-commercialization>

A few tiny ones in BC (less than 50 mt) eg <http://salmonbusiness.com/land-based-rainbow-trout-farm-proposed-in-british-columbia/>

Denmark

Landsandlaks. Expanded to 3,000mt during summer 2018. <http://salmonbusiness.com/atlantic-sapphire-nears-pivotal-danish-harvest/>

A group including: Royal Sashimi and Grakjaer Ten production plants in various stages.
(not salmon right now) 2,000mt and growing to 4,000 mt - 5,000 mt by 2020 AND
3,600 mt under construction <http://salmonbusiness.com/danish-company-opens-land-based-farm-plans-to-build-ten-more/>

Danish Salmon. Expanded to 3,000 mt summer 2018. <http://www.danishsalmon.dk/pres3.php?id=1#>

Skagen Aquaculture. 4,500 mt. Construction to be completed in 2019 on 1,500mt with two more identical plants having already gained required land and permits. <http://salmonbusiness.com/former-danish-lawyer-plans-e23mn-land-based-rainbow-trout-farm/>

Iceland

Akvafuture. An Avka subsidiary. 20,000 mt applied for, 200 mt in 2018 and 5,500 mt expected by 2019. <http://www.fiskifrettir.is//frettir/segr-bunad-akvafuture-uppfylla-allar-krofur/144168/>
<https://www.pressreader.com/uk/fish-farmer/20171107/282445644331182>

Matorka 1,500 mt with construction finishing 2018 for total of 3,000mt. <https://matorka.is/>
<https://www.undercurrentnews.com/2018/04/03/icelands-matorka-makes-success-of-pras-farm-plans-expansion/>

Ice Fish Farm 2,000mt. Obtaining permits. Construction hoping to start 2019.
<https://www.pressreader.com/uk/fish-farmer/20171107/282445644331182>

Samherji. 3,000 mt charr, 1,200 mt salmon. Plans to double over next 3 years.
<http://www.samherji.is/en/operations-in-iceland/fishfarming>

France

It is mostly trout in France. Several sites producing >5,000 mt each that have been doing so for many years. It is expanding.

Eg

Saumon De France (only open net pen farmer in France) is switching to RAS land based with a wind

farm and salmon farm combo by 2021, unannounced size. <http://salmonbusiness.com/la-vie-en-rose-frances-only-sea-salmon-farm/>

Start up. Still getting permits. Construction to start 2019. 1,200 mt <http://salmonbusiness.com/french-ponder-trout-ras-at-old-marine-harvest-site/>

Poland

Jurassic Salmon Operating since 2015 at 1,000 mt <http://jurassicsalmon.pl/en/>

Global Fish 550 mt expanding to 1,000 mt. <http://www.globalfish.pl/en/fresh-salmon.html>

Japan

“Soul of Japan” in Tsu City, Japan. Announced Oct 2018. Starts in 2019. Fish by 2020. RAS by AquaMaof Aquaculture Technologies Started by 8F Asset Management Pte, an asset management firm focused on impact investing, based and regulated in Singapore. 10,000mt \$163M USD <http://salmonbusiness.com/soul-of-japan-fully-integrated-salmon-farm-and-processing-plant-planned-for-2019/>

FRD Japan, out of Sataima Japan. First 30mt July 2018 and 1500mt by 2020. <http://salmonbusiness.com/japanese-frd-plans-tap-water-revolution-eyes-first-1500-t/>

Switzerland

Swiss Salmon. 600mt with fish in market August 2018 - going to 1,800mt by 2022 <https://swisslachs.ch/?lang=en>

Greece

Mainly trout with a few salmon in several companies and sites of 1,000 to 3,000 mt each.
eg

Italy

Mainly trout in several companies and sites of 1,000 to 3,000 mt each.
eg

South Africa

Cape Nordic Corporation. Salmon and trout mixed. 1,800 mt Started construction 2018. <http://salmonbusiness.com/new-land-based-farm-for-sea-trout-planned-in-south-africa/>

KSA

eg

UAE

Asmak. Abu Dabai. ~4,000 mt. Operational since 2016. <http://www.fao.org/in-action/globefish/fishery-information/resource-detail/en/c/338614/> and <http://gulfbusiness.com/uae-salmon-farms-big-catch/> and <https://uk.reuters.com/article/emirates-salmon/uae-firm-brings-salmon-farming-to-the-desert-idUKL5N0JB1E120131126>

Vikings Label. Dubai. 2,500 mt. Construction started 2018. <http://salmonbusiness.com/salmon-farmer-duo-set-sights-on-dubais-desert/>

Rumours of a 190,000mt facility yet to be officially announced. Dubai.

Qatar

Yet to be announced in the media, but a facility is being planned rumour has it.

Chile

Several small to medium scale. One started as far back as 2012. land based is now ramping up here as well. Eg

Bordemar-Tumbes SpA 3,000 mt Construction starting in 2018.
<https://www.fis.com/fis/worldnews/worldnews.asp?monthyear=7-2018&day=13&id=98297&l=e&country=0&special=&ndb=1&df=0>

China

Many projects started. Some huge ones.

Seafood Dragon. 2018 started construction of a 3,000mt facility with plans to expand rapidly to 20,000 mt. <http://salmonbusiness.com/norwegians-behind-land-based-ras-near-shanghai/>

Sometimes many small ones add up eg LSO salmon farms. 2013 start. Expanding ever since.
<http://asf.ca/norwegian-land-based-technology-being-transferred-to-china.html>

Russia

Ural Akva 10,000 mt in two phases of 5,000 each.

<http://www.intrafish.com/aquaculture/1229742/russian-start-up-touts-game-changing-tech-for-land-based-fish-farming> and <https://ilaks.no/johannes-med-storsatsing-pa-landbasert-i-russland-om-kona-finner-ut-hvor-mye-jeg-har-brukt-er-jeg-ille-ute/>

Spain

Norcantabric facility located in the northern province of Cantabria. Starting with fish in the water in 2019 and first harvest 2020/21. 3,000 mt in one phase.

<https://www.fishfarmingexpert.com/article/atlantic-salmon-to-be-farmed-in-northern-spain/>

Kind Regards;

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