

## A Particle List of Recent Land Based Salmonid Farms Globally

Rabobank now estimates 700,000mt of production is in various stages of financing and development. More than \$3.6B USD in projects have been announced.



Norway is charging/auctioning new salmon farming licenses at \$17,000 to \$36,000 CAD per metric ton. <https://www.fiskeridir.no/Akvakultur/Tildeling-og-tillatelser/Auksjon-av-produksjonskapasitet/Auksjon-juni-2018>

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/>

They are also trying to impose a new 40% tax like they now have on petrol vehicles. This is disguised as a luxury tax but is actually an environmental tax. Total taxes on net pens will be 66% if this new tax is approved. It was for gas cars. <https://www.fiskeridir.no/Akvakultur/Tildeling-og-tillatelser/Auksjon-av-produksjonskapasitet/Auksjon-juni-2018>

While full of misleading errors and omissions to hide how far behind we are and already dated in terms of validity (and 6 months late being published), DFO admits Canada has now become laggards in the RAS race while instead promoting open net pens. See <http://dfo-mpo.gc.ca/aquaculture/publications/ssat-ets-eng.html#toc-1>

### 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/](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.graakjaer.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/>

OFS Maloy, Sogn og Fjordane, 15,000 metric tons. Tech from NIRI and stocking in 2019. <https://www.undercurrentnews.com/2019/01/04/norwegian-firm-given-nod-for-15000t-land-based-salmon-farm/>

Blom Fioskeoppdrett. Bergen Norway, 20,000mt. Planning started 2019. <https://salmonbusiness.com/blom-fiskeoppdrett-aiming-for-new-20000-tonne-a-year-land-based-salmon-farm/>

Ecofisk. In Espevik, Norway. 40,000mt in 8 stages of 5,000mt each. Starting in 2020. <https://salmonbusiness.com/former-fisheries-minister-involved-in-land-based-fish-farming-project-in-rogaland-will-produce-40000-tonnes-of-salmon-in-old-quarry/>

Hardanger Storsmolt in Simadal in Eidfjord municipality in Hordaland. 20,000mt shifting gradually to totally land based production. <https://ilaks.no/i-dette-området-planlegges-det-bade-produksjon-av-smolt-og-matfisk-pa-land/>

Kobbevik and Furuholmen Oppdrett (KFO) in Hordaland. 10,000mt. Construction started 2019. <https://ilaks.no/kobbevik-og-furuholmen-oppdrett-har-fatt-konsesjon-til-a-produsere-10-000-tonn-matfisk-pa-land-pa-fitjar/>

Gaia Salmon. Galtneset in Træna. 7,200mt Permits acquired in 2019. <https://ilaks.no/nova-seas-klage-avvist-landbasert-oppdretter-kan-etablere-anlegg-pa-traena/>

Smart Salmon Group, Smørhamn in Sogn og Fjordane, 2020. Western Norway 5,000mt. Revised plan from smolt for net pens to totally landbased as a phase in.

<https://salmonbusiness.com/brothers-eye-up-10000-tonnes-land-based-salmon-farming-operation-in-brittany-france/>

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. Starting construction 2020.

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

Nordic Aquafarms. Humbolt, California. 50,000mt. 2020 spring.

<https://bangordailynews.com/2019/02/10/news/midcoast/company-behind-proposed-belfast-salmon-farm-planning-a-2nd-facility-in-california/>

<https://salmonbusiness.com/nordic-aquafarms-to-huge-indoor-fish-farm-in-california/>

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 to 220,000mt in 3 phases. Phase 1 expected completion date is early 2020. <https://www.seafoodsource.com/news/aquaculture/atlantic-sapphire-building-usd-350-million-land-based-salmon-farm-in-miami>

<https://salmonbusiness.com/atlantic-sapphire-doubles-up-on-land-to-expand-production-capacity/>

Aquabanq. Millinocket Maine. 3,600mt growing to 10,000mt. Construction to start 2019.

<https://salmonbusiness.com/third-player-enters-the-ring-to-join-maines-land-based-salmon-farming-boom/>

Pure Salmon. 20,000mt. Tazewell County, Virginia. 2019 <https://salmonbusiness.com/land-based-salmon-farming-company-announces-major-new-sites-in-us-france-and-italy/>

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>

Global Fish (an F8:Aqua Moaf 50:50 JV). 20,000mt. No location announced.

<https://www.undercurrentnews.com/2018/11/08/pe-fund-plans-global-roll-out-of-industrial-scale-ras-salmon-facilities/>

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

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

Superiour 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>

Finger Lakes Fish. 400mt. First fish sold Sept 2019. <https://www.rastechmagazine.com/new-york-ras-facility-earns-bap-certification/>

many other small facilities of under 400 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.

RC Organic Northern, 400mt. 2020. New Brunswick. <https://www.cbc.ca/news/canada/new-brunswick/aquaculture-salmon-atlantic-effluent-discharge-disease-environment-1.5394506>

Aquabouty (GMO salmon), PEI. 250 mt (1,200 mt in USA). Finishing construction in 2018. <https://www.seafoodsource.com/features/genetically-modified-salmon-producer-aquabouty-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/>

## **Sweden**

Smogenlax. Town of Gothenbeg, 4,000mt. Started construction of biogas, amriculture tanks etc in 2019. <https://salmonbusiness.com/project-aims-to-produce-4000-tonnes-of-land-raised-salmon-a-year-in-sweden/>

Light House Finance. Sotenës, southern Sweden. 100,000mt. Construction stats in 2021 with first fish 2023. <https://salmonbusiness.com/swedish-100000-tonnes-a-year-land-based-salmon-farm-aims-to-start-production-by-2023/>

## Latvia

Aquaculture Management & Holding Co -- which will trade under Aquabanq in the UK, 5,000mt. <https://www.undercurrentnews.com/2018/02/19/ras-veteran-backing-latvian-steelhead-project-using-tech-he-created/>

## Finland

Arctic Ocean owned by Jutland Invest. Kirkenese Finnmark. \$346.8M USD 30,000mt. Construction starts in 2020. <https://ilaks.no/fronter-landbasert-milliardprosjekt-i-finnmark-jeg-forstar-at-det-fort-kommer-en-rekke-sporsmal-opp-nar-vi-flagger-en-stor-investering/>

## 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/segir-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/>

Landeldi 6,000mt salmon. Started construction in 2019. <https://www.undercurrentnews.com/2019/05/24/icelands-latest-land-based-salmon-project-seals-land-deal/> Heading to 15,000mt. <https://www.undercurrentnews.com/2019/07/22/icelands-latest-land-based-salmon-farm-eyes-15000t-potential-smolt-space/>

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

Smart Salmon Group, Brittany, 10,000mt. 2020. <https://salmonbusiness.com/brothers-eye-up-10000-tonnes-land-based-salmon-farming-operation-in-brittany-france/>

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/> Now merging with aquaponics and expanding:

<https://www.undercurrentnews.com/2019/07/29/salmon-farmer-backed-by-french-cosmetics-giant-snaps-up-trout-operation/>

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

Pure Salmon, F8 Asset Management 10,000mt. Starting end 2020. Boulogne-sur-Mer, a major fishing port on the Northern coast of France. <https://salmonbusiness.com/land-based-salmon-farming-company-announces-major-new-sites-in-us-france-and-italy/> and <https://salmonbusiness.com/eus-largest-ras-salmon-farm-to-be-built-in-france/>

## **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/>

Grieg Parent Company, Mt Fuji, 6,000mt 2020. Norway-based Proximar Seafood is owned by Grieg Kapital and Kvasshogdi as well as Espen Aubert’s investment company, Daimyo. <https://salmonbusiness.com/grieg-backed-land-based-site-to-farm-6000-tonnes-of-salmon-at-mount-fuji/>

Kotoura Grand Salmon from Tottori Prefecture 2017. 600mt. <https://www.seafoodsource.com/news/aquaculture/ras-salmon-projects-crowding-into-japan>

## **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.

Pure Salmon. 10,000mt. Olbia in the north of Sardinia, Italy

<https://salmonbusiness.com/land-based-salmon-farming-company-announces-major-new-sites-in-us-france-and-italy/>

## **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/>

West Coast Salmon. 4,000mt. ZERO EFFLUENT DISCHARGE. 47.4M Euros. Starts construction

2019. <https://salmonbusiness.com/4000-tonne-a-year-salmon-salmon-planned-in-south-africa/>

Pure Salmon/8F Assess management. 20,000mt \$250M USD Started construction 2019.

<https://salmonbusiness.com/20000-tonne-land-based-salmon-farm-planned-for-lesotho/>

## **KSA**

Vikings Label (owner Lukas Havn), 5,000mt expanding to 10,000 Starting in 2020.

<https://www.undercurrentnews.com/2019/08/20/aquanor-2019-innovation-award-receives-record-number-of-applicants/> <https://www.undercurrentnews.com/2019/08/26/5000t-capacity-just-the-beginning-for-80m-saudi-salmon-ras-farm/>

## **UAE**

Asmak. Abu Dhabi. ~4,000 mt. Operational since 2016. [http://www.fao.org/in-](http://www.fao.org/in-action/globefish/fishery-information/resource-detail/en/c/338614/)

[action/globefish/fishery-information/resource-detail/en/c/338614/](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. 5,000 mt. Construction started 2018. [http://salmonbusiness.com/salmon-](http://salmonbusiness.com/salmon-farmer-duo-set-sights-on-dubais-desert/)

[farmer-duo-set-sights-on-dubais-desert/](http://salmonbusiness.com/salmon-farmer-duo-set-sights-on-dubais-desert/) <https://salmonbusiness.com/the-vikings-bringing-land-based-salmon-to-the-desert-we-are-on-schedule-and-aim-to-start-construction-at-the-end-of-this-summer/>

Fish Farm, Jabel Ali. 200mt <https://salmonbusiness.com/akva-land-based-help-desert-salmon-farming-to-become-a-reality/>

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

<https://salmonbusiness.com/salmon-farm-planned-for-saudi-arabias-futuristic-500-billion-megacity/>

Main site is doubling production in 2019. <https://gulfnews.com/business/farmed-salmon-to-go-on-sale-as-uae-ramps-up-food-security-plan-1.63101079>

## **Qatar**



Yet to be announced but a facility is being planned rumour has it.

## **India**

India Omega Aqua. 2 times 20,000mt rainbow RAS farms using Sterner tech from Norway.  
<https://salmonbusiness.com/sterner-to-deliver-multiple-ras-plants-for-indian-land-based-fish-farms/>

## **Vietnam**

SEA Aquaculture 10,000mt. <https://www.undercurrentnews.com/2019/11/08/israeli-investors-plan-10000t-salmon-ras-operation-in-vietnam-with-local-partner/>

## **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 4,000 mt going to 24,000mt by year 3. 150M USD Construction starting in 2019. <https://salmonbusiness.com/former-ewos-executives-behind-chiles-first-land-based-salmon-farm/>

## **China**

Many projects started. Some huge ones.

Shangdong Oriental 2000mt expanding since 2012. <http://dfo-mpo.gc.ca/aquaculture/publications/ssat-ets-eng.html#toc-1>

Nordic Aquafarms Partners (Nordic, Akva, etc), 8,000mt. 2020, \$500M NOK. <https://ilaks.no/skal-bygge-8-000-tonns-matfiskanlegg-i-kina/>

CP, various cities, 30,000-50,000mt. <https://www.undercurrentnews.com/2019/11/01/cp-mulls-china-ras-salmon-shrimp-expansion/>

Pure Salmon (owned by 8F), which will see 100,000t produced across five different sites. In China, 8F is looking to build 20,000t sites in Beijing, Chengdu, Shanghai, Guangzhou and Shenzhen. <https://www.undercurrentnews.com/2019/09/30/8f-fundraises-for-china-portion-of-1-6bn-pure-salmon-ras-plan/>

Seafood Dragon. Shandong Ocean Oriental Sci-Tech 70M euros. 3-4,000mt in phase one by 2019 going to 20,000mt by 2023/2024. 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/>

M-5 Ural, Vologda region, tech by Aqua Maof, 2,500mt going to 7,500mt.

<https://salmonbusiness.com/israeli-aquatech-firm-confirms-2500-tonne-ras-salmon-farm-in-russia/>  
<https://salmonbusiness.com/russian-firm-to-build-land-based-salmon-farm-north-of-moscow/>

## **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/>

## **Brunei**

Pure Salmon, 8F group, 10,000mt. To start in 2020. \$180M USD.

<https://www.fishfarmingexpert.com/article/pure-salmon-to-begin-brunei-ras-within-nine-months/>