

Press release

nova-Institut GmbH (www.nova-institute.eu)
Hürth, 18 July 2018



Aqua- and Mariculture for Future Food and Biomass Production

New concepts of sustainable aquaculture that dissolve the borders between land and ocean. The conference “Revolution in Food and Biomass Production (REFAB)”, Cologne, 1-2 October 2018 will show recent innovation concepts and technology developments towards the longevity and sustainability of this industry.

Confronted with the term “aquaculture”, most people think about salmon farming, silver shimmering fish swarms in cages. However, the ocean has much more to offer than traditional fish farming and, as of today, we use only a fraction of its potential. But, even within this fraction, many mistakes were made in the past with serious consequences for the ecosystem. These days, we are experiencing a change. Besides modern fish farming, the use of algae in human nutrition or combinations of fish farming and greenhouses play a major role. Options are manifold, but often only implemented rudimentarily yet. The REFAB conference will present four examples of modern aqua- and mariculture solutions.

Marine algae are one of the oldest known life forms on earth and it is estimated that they make up more than half of the yearly primary biomass production on earth. They are ‘pioneer organisms’ in converting CO₂ and solar energy into biomass. Algae are rich in polyunsaturated oil, proteins, vitamins and anti-oxidants. They bring us back to the origin of life offering a sustainable and healthy food alternative. Albeit being part of Asian nutrition for decades, scientists and industry work hand in hand on a sophisticated commercial exploitation of algae for food, feed, energy, chemicals and materials since years. The University of Wageningen in the Netherlands hosts Europe's leading algae research and education institute. Dr. Maria Barbosa, Director of Algae Parc, will provide insight in the potential of microalgae as well as in the latest developments in algae research and implementation.

Although lots of effort has been made to introduce algae and seaweeds for food, commercial products are rare. One pioneer example is SEAKURA – Sea for life from Israel offering a range of protein-rich seaweed products which contain high amounts of antioxidants and trace elements. Consumed as a side dish, as a supplement or used as an ingredient in pasta, sausages or spices, seaweed can enhance the nutritional value of our diet. Their controlled cultivation in land-based pools, by the so-called “Clean Sea” technology, avoids the usual contamination with ocean pollutants. How exactly? Marine biologist Yossi Tal will present the SEAKURA story live at the REFAB conference!

Nutrient cycles are one key element of sustainable agriculture. This principle is now also applied to fish farming. So-called aquaponics integrate hydroponic vegetable cultivation and aquaculture in a closed water cycle. Here, fish are kept in large water tanks whose water content is naturally enriched with nitrogen through the excretions of the fish. This water can be used in hydroponics systems to grow vegetables, leading to a natural supply with nutrients. At the same time, the plants purify the water, which can then be returned to the fish farm. In this way, the closed water circuit forms the heart of the system. But are Aquaponics really a solution for local supply of fresh fish? João Cotter from Aquaponics Iberia will investigate this question and elaborate on the cause for the initial rise and fall of the Aquaponics technology and the currently ongoing resurgence in this particular field.

But aren't oceans offering us far more than the traditional fish, algae and crustaceans? Isn't it at least an exciting mind game to think about life on water, all the way up to fully established cities? What sounds like a sci-fi scenario concerns people all around the globe: while start-ups plan new offices on ships off the west coast of the USA and areas such as French Polynesia are considering to move entire cities to floating islands, there are more specific concepts that transfer food production to a kind of floating platform. Smart Floating Farms (Spain) combines different modular technologies such as hydroponics, aquaculture and solar energy to enable "on-site" food production in growing cities despite ever decreasing land availability. "Smart Floating Farms" can be one piece for discovering the oceans as a new habitat.

These and more projects and prominent companies will be presented at the conference "Revolution in Food and Biomass Production (REFAB)", 1-2 October in Cologne, Germany. A total of 50 speakers and 30 exhibitors will show the future of food and biomass production (www.refab.info). The programme is available online: www.refab.info/programme. Attractive early bird opportunities are available until End of August. Don't miss the chance to experience the future of the marine farming.

VISUALS / BILDMATERIAL (free for press purposes, please include the source):

news.bio-based.eu/media/2018/06/REFAB_poster_A4_RGB.jpg : The Future of farming?
(Source: nova-Institut)

news.bio-based.eu/media/2018/06/refab_Portico.png : Cornerstones of Revolution in Food and Biomass Production (Source: nova-Institut)

news.bio-based.eu/media/2018/07/Large-Algae-Growing-Ponds-Credit-Konaq-Creative-Commons.jpg : Large Onshore Algae Growing Ponds - Credit-Konaq (Creative Commons)

news.bio-based.eu/media/2018/07/Offshore-Floating-Aquatic-Farm-Credit-Smart-Floating-Farms.jpg : Offshore Floating Aquatic Farm - Credit-Smart Floating Farms

news.bio-based.eu/media/2018/07/Photobioreactor-for-Producing-Algae-Credit-Bianca-Cantua-ria-Batista-Creative-Commons.png : Photobioreactor for Producing Algae-Credit-Bianca Cantuária Batista (Creative Commons)

news.bio-based.eu/media/2018/07/Red-Algae-Bioreactor-Credit-CaptainHaddock-Creative-Commons.jpg : Red Algae Bioreactor in the mountains – Credit-CaptainHaddock (Creative Commons)

Responsible for the content under German press law (V.i.S.d.P.):

Dipl.-Phys. Michael Carus (Managing Director)

nova-Institut GmbH, Chemiepark Knapsack, Industriestraße 300, DE-50354 Hürth (Germany)

Internet: www.nova-institute.eu – all services and studies at www.bio-based.eu

Email: contact@nova-institut.de

Phone: +49 (0) 22 33-48 14 40

nova-Institute is a private and independent research institute, founded in 1994; nova offers research and consultancy with a focus on bio-based and CO₂-based economy in the fields of food and feedstock, techno-economic evaluation, markets, sustainability, dissemination, B2B communication and policy. Every year, nova organises several large conferences on these topics; nova-Institute has 30 employees and an annual turnover of more than 2.5 million €.

Get the latest news from nova-Institute, subscribe at www.bio-based.eu/email