

A microscopic view of cells, possibly bacteria or yeast, illuminated by a bright blue light source. The cells are clustered in the upper left quadrant, with a bright blue glow emanating from them. The background is dark blue and black, with some faint, scattered particles.

# FROM SCIENCE TO VALUE CREATION

**Akvaplan**  
 **niva**



Photo: Lars Olav Sparboe

Akvaplan-niva is a research and consultancy company in the NIVA-group (Norwegian Institute of Water Research) with its main office and laboratories in Tromsø, Norway. Our aim is to contribute to increased value creation and environmentally safe business operations by providing consultancy, guidance and recommendations based on latest scientific findings. We take on commercial contracts both from the public and private sector, as well as focusing on R&D projects funded by Norwegian and international research councils, innovation foundations and private companies. Our scientists provide a variety of assessments and monitoring services, designed to meet national and international regulations, standards and expectations on all water related activities.



Photo: Marianne Hopland Steene

## OUR RESOURCES

Akvaplan-niva has 110 employees, of which half hold a PhD degree. Seven of our employees have positions as Associated Professors at universities in Norway and abroad.

Our research infrastructure includes 3 laboratories. The laboratories work closely with the researchers and consultants to satisfy the needs of our clients and the research projects.

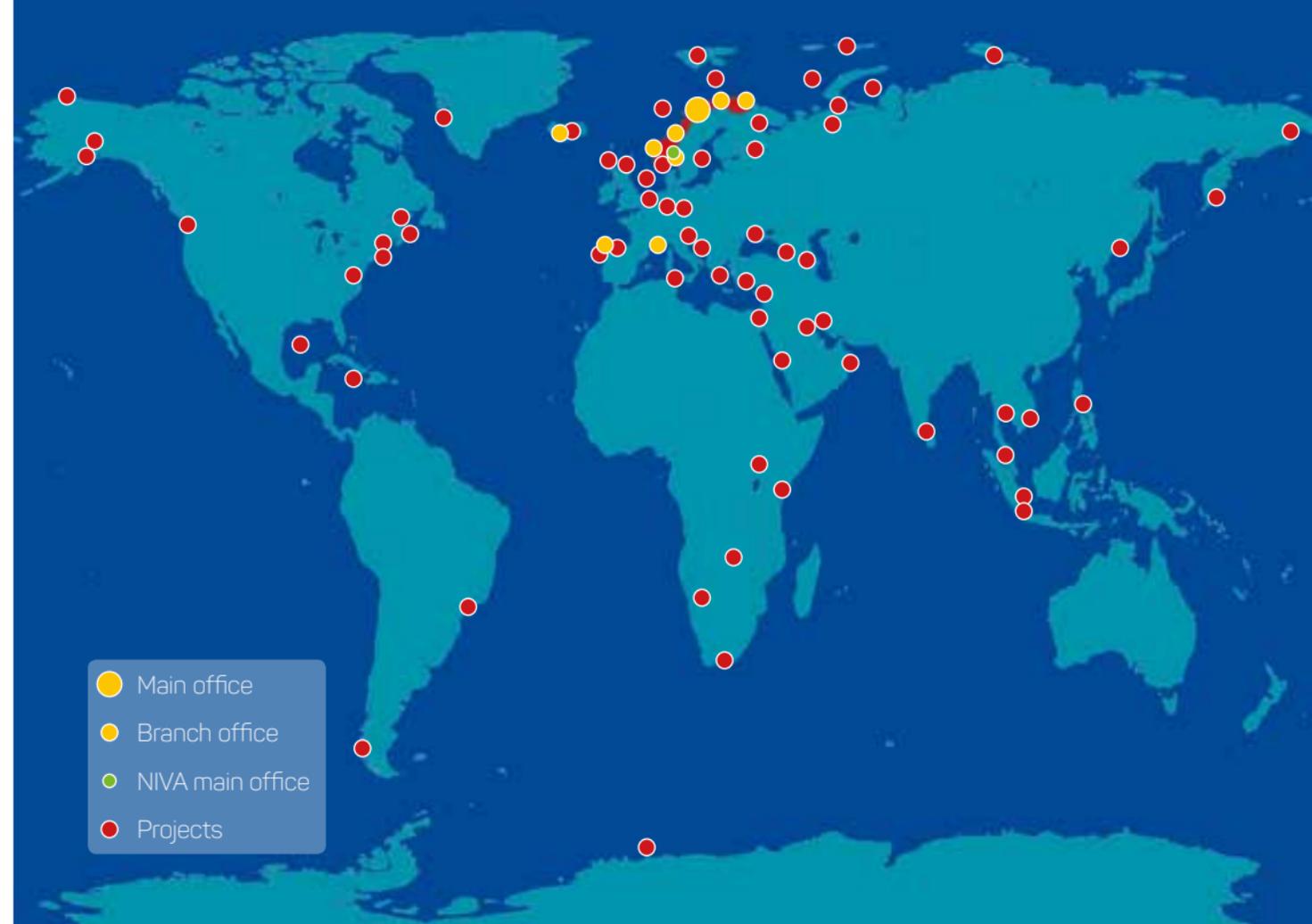
The Akvaplan-niva laboratories include an accredited laboratory for studies on marine biodiversity and taxonomy of benthic animals, a specially designed laboratory for low temperature experimental eco-toxicological studies on arctic organisms and an accredited chemical laboratory for the analysis of petroleum related products, organic environmental pollutants, fat/lipids, sediment, biological materials and water, as well as offering a range of geochemical sediment analysis.

## OFFICES AND PROJECTS

In addition to the main office in Tromsø, Akvaplan-niva has branch offices in the Norwegian cities Alta, Kirkenes, Trondheim, Bergen and Oslo. Our offices abroad are located in Iceland, France, Spain and Russia.

Akvaplan-niva has collaborated with scientific and governmental institutions in Russia since the beginning of the 1990s. Initially the Murmansk Marine Biological Institute of the Russian Academy of Sciences was our main partner, later we also worked with a number of other partners, but with a focus on Northwest Russia and St. Petersburg.

The areas of cooperation are research and consultancy within marine and freshwater ecosystems, environmental monitoring and impact assessment, aquaculture development, and shipping analyses. Our collaborative projects have been from the Pasvik river in the west, all of the Barents Sea to Vladivostok in the east. The Barents Region and Kara Sea have been the main focus for our joint activities with Russian colleagues, and our joint goal has been to contribute to a "Barents Environmental Standard". In this connection we have worked closely with the Arctic Monitoring and Assessment Program (AMAP) and the Barents Secretariat. In addition, we have carried out a number of joint studies on biodiversity, environmental risk and impact assessments financed by Norwegian, Russian and international oil and gas industry. Since 2006 a daughter company in Murmansk – Akvaplan-niva Barents Ltd, has been in operation.



## STRATEGIC AND PROJECT PARTNERS IN RUSSIA (1991-2016)

### **Russian Academy of Sciences and Federal Agency of Scientific Organizations:**

- Kola Science Centre:
  - Murmansk Marine Biological Institute, Murmansk
  - Institute of North Industrial Ecological Problems, Apatity
- Karelian Research Centre:
  - Institute of Biology, Petrozavodsk
  - Northern Water Problems Institute, Petrozavodsk
- Arkhangelsk Science Centre of the Ural Branch:
  - Institute of Ecological Problems of the North
- Komi Science Centre of the Ural Branch:
  - Institute of Biology
- St Petersburg Science Centre:
  - Zoological Institute
  - Centre for Ecological Safety
- Southern Science Centre, Rostov-on-Don
- Shirshov Institute of Oceanology, Moscow

### **Ministry of Nature Resources and Environment:**

- Gramberg All-Russian Scientific Research Institute for Geology and Mineral Resources of the Ocean (VNIIOkeangeologia), St. Petersburg
- Arctic and Antarctic Research Institute (AARI), St. Petersburg
- Typhoon, St Petersburg and Obninsk
- Rosgeologia (Sevmorgeo), St. Petersburg
- Zubov State Research Institute of Oceanography (SOI), Moscow
- Russian Research Institute of Environmental Protection (VNIIPriroda), Moscow

### **Federal Agency of Fisheries:**

- Russian Research Institute of Fisheries and Oceanography (VNIRO), Moscow
- Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), Murmansk and Arkhangelsk
- Berg State Research Institute of Lake and River Fisheries (GosNIORH), St Petersburg

**Ministry of Education and Science:**

- Lomonosov Moscow State University
- Gubkin Russian State University of Oil and Gas, Moscow
- St Petersburg State University
- Petrozavodsk State University (PetrSU)
- Northern (Arctic) Federal University named after M.V. Lomonosov (NarFU), Arkhangelsk
- Murmansk Arctic State University
- Murmansk State Technical University

**Ministry of Transport:**

- Central Marine Research and Design Institute (CNIIMF), St Petersburg

**Non-governmental organizations:**

- Russian Geographical Society
  - Murmansk regional branch
- World Wide Fund for Nature, Russia
  - Barents Sea Office, Murmansk

- Association Murmanshelf, Murmansk
- Association Sozvezdiye, Arkhangelsk

**Private research institutes and companies:**

- Gazprom VNIIGAZ, Moscow
- Arctic Research and Design Centre, Moscow
- Institute of Ecological Research and Project Planning, Moscow
- Marine Research Centre, Moscow
- System Development Agency
- EcoProject, St Petersburg
- Nenets Information Analytic Centre, Naryan-Mar
- EcoNord, Naryan-Mar

Our cooperation with Russian partners has been possible through support of authorities at federal and regional level (Nenets, Komi, Arkhangelsk, Murmansk, Karelian).



Main services:

- **site surveys, feasibility studies and master plans**
- **advice on biological, technical and economic aspects of aquaculture**
- **design of hatcheries, production facilities, and research stations**
- **management consultancy**
- **certification and technical inspections of production facilities**

## AQUACULTURE SERVICES

The aquaculture department at Akvaplan-niva provides a range of consultancy and laboratory services. These include environmental monitoring, impact and risk assessments, aquaculture design and management consultancy, R&D on new aquaculture species as well as a number of accredited environmental and technical inspections.

Our aquaculture services include the whole life cycle of farmed fish from strategic environmental assessment to fish farm design, to environmental monitoring and adjustments to regulatory regimes. We assist our customers in reaching quality and economically optimal production.

Akvaplan-niva has undertaken more than 2000 aquaculture site surveys Norway, Greece, Turkey, the Philippines, Chile and the Red Sea. From this our staff has knowledge on a variety of marine and freshwater species from cold and warm water regions.

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## AQUACULTURE R&D

At Akvaplan-niva, nothing is closer to our core than aquaculture research. We conduct R&D for private companies and governmental agencies with focus on new aquaculture species, new and improved production technology. Our aim is to ensure that the aquaculture research we deliver is of the highest scientific quality, but at the same time brings to light important issues in relation to aquaculture production. Our aquaculture research ensures that the aquaculture industry around the world has access to the latest vital information ensuring a profitable and sustainable production.

We provide aquaculture research in the following areas:

- **Developmental biology**
- **Growth physiology**
- **Improved production regimes**
- **Aquaculture production**
- **New and improved production methods**

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## MARINE ENVIRONMENT

Akvaplan-niva delivers risk and impact assessments for industrial activities that can impact the marine environment like offshore oil and gas activities, shipping, mining and aquaculture. We also deliver these services for infrastructure projects like roads, airports, quays and harbors.

Akvaplan-niva specialists hold more than 30 years of experience in providing services within:

- **Strategic Environmental Assessments**
- **Environmental Impact Assessments**
- **Environmental monitoring**
- **Environmental sensitivity and vulnerability analyses**
- **Contingency, recovery- and rehabilitation plans**

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Photo: Guttorm N. Christensen

## COAST AND FRESHWATER

The Coast and Freshwater department provide services related to assessments of water quality, biodiversity, habitat status, and impact on coastal and freshwater ecosystems from pollution and other disturbances. We classify water quality in accordance with the European Union Water Framework Directive, and biodiversity and habitat status are evaluated in accordance with national guidelines.

We design and carry out investigations for clients from private companies and government bodies that need information on the potential local impacts of building projects or emissions sources.

Main services:

- **Baseline studies**
- **Impact assessments**
- **Environmental classification**
- **Biodiversity and habitat status**
- **Mapping of emission and wastewater planning**
- **Hydro-physical modelling**

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## ARCTIC R&D

Science-based knowledge is of vital importance for a sustainable management of marine resources and ecosystems. Our Arctic R&D team work interdisciplinary to enhance an increased understanding of human impact, environmental variability and climate-driven change in the Arctic. Through this, the department contributes to a wide variety of environmental initiatives to assess and protect the Arctic environment. To ensure that our advisors remain updated on the latest research development, the department works in close collaboration with other departments at Akvaplan-niva as well as collaborates with external partners. This network extends across universities, government agencies and private research institutes.

Our research infrastructure includes accredited laboratories for benthic sorting, identification and chemical analyses and a specially designed laboratory for low temperature experimental studies on Arctic organisms.

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The main areas of expertise in the department are:

- **Biological diversity**
- **Physical oceanography**
- **Climate and ecosystems**
- **Petroleum and the environment**
- **Ecotoxicology**



## ARCTIC FRONTIERS

Akvaplan-niva has for 10 years collaborated with a range of partners from business, science and government on organizing a conference for the discussion on pan-Arctic development. This conference, Arctic Frontiers, is arranged annually in Tromsø, The gateway to the Arctic. The conference runs for a week in January, attracting 1500 -2000 delegates from academia, politics, business as well as environmental and indigenous NGO's.

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