

## Environmental Services for the Petroleum Industry

Akvaplan-niva (Norway) and subsidiary company Akvaplan-niva Barents (Russia) offer a wide range of environmental management tools to the international petroleum industry. Services provided include environmental monitoring, design of surveys and guidelines, impact assessments and risk analyses, oil spill contingency planning, sensitivity mapping and research services.

### Environmental and hydrographic monitoring

Since 1989, we have carried out more than 60 major baseline and monitoring surveys of offshore oil and gas fields in temperate and arctic regions, of land-based LNG terminals and ship loading areas. Akvaplan-niva's staff and in-house laboratories are accredited for field sampling, sample analysis and data interpretation in environmental surveys.

### Impact and risk assessments

Akvaplan-niva carries out Environmental Impact Assessments (EIA) and Risk Analyses (ERA) in connection with offshore drilling activities, shipping, construction of pipelines, decommissioning, harbours and onshore terminals. We also carry out pre-entry surveys (general environmental appraisals and resource surveys) to support the evaluation of potential oil fields or exploration regions.

### Environmental effects of oil activities in cold climates

Akvaplan-nivas research activities are aimed at improving knowledge and understanding of the impacts of petroleum activities on arctic marine ecosystems. We work closely with scientists from the Norwegian Institute for Water Research (NIVA) and with various Russian institutes. The results from these studies are used in EIA's and ERA's, and to improve environmental management tools. Our in-house research facilities include analytical laboratories (effect parameters, lipids, hydrocarbons, etc.), an arctic ecotoxicology laboratory, and a climate room for holding arctic animals and carrying out experimental work at low temperatures.

### Oil spill cleanup and assessments

Identification of sensitive areas and vulnerable resources is a major concern in EIA, ERA and oil spill contingency planning, cleanup, and effect monitoring.

Akvaplan-niva provides assistance at all levels, including sensitivity indexing and mapping, contingency planning, and environmental damage and recovery assessments.

### Environmental guidelines

The company designs customized monitoring programmes for single fields and larger regions, both in shallow and deep (>1000m) marine and coastal areas. Akvaplan-niva's broad experience with environmental monitoring in tropical, temperate and arctic environments is also used to assist petroleum companies and authorities in developing guidelines and regulations.

### International development

Akvaplan-niva provides assistance to developing countries strengthening their capacities in environmental management and oil spill contingency planning. We also assist with the development of new assessment techniques, conservation strategies, and the harmonisation of procedures for international EIA's and coastal zone management planning.



### Integration of aquaculture and petroleum activities

Fish farming is also a main activity of Akvaplan-niva. We are experienced in developing profitable and sustainable aquaculture activities based on the utilisation of cooling water effluents from land-based petroleum installations.

