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# Sustainable development in the Arctic region



IMARES

WAGENINGEN UR

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## Developing the Arctic in harmony with nature

As the sea ice recedes, the Arctic gradually becomes more and more accessible. The northern sea routes are already navigable in the summer, and the gas and oil reserves in the area are increasingly coming within reach. Economically, the warming of the Arctic area will open up major opportunities. The flipside of course is that these developments are taking place in a fragile natural environment. And the challenge is to find a way to combine economic benefits with the preservation of unique ecosystems.

### Projects

Together with our sister institutes within Wageningen UR (University & Research centre), IMARES has the type of in-house expertise and knowledge that is required for the sustainable development of the Arctic. This is proven via initiatives such as the *Green Shipping* programme, aimed at developing a tool to help maritime companies make the most environmentally sound and profitable choices during the design phase of their projects. We are also currently working together with the Dutch offshore industry on the development of an *Arctic Manual* for operations in this sensitive area. It involves a structured way of working in order that the right priorities are set for an ecosystem-based approach.

Together with Alterra, IMARES, part of Wageningen UR plays an important role in the *Building with Nature* programme for projects that deploy natural processes for infrastructure construction. This is mutually beneficial, with natural mechanisms contributing to infrastructure and people helping the environment by enhancing biodiversity. For example, *Building with Nature* provides the right tools to develop future Arctic ports in harmony with nature.

The oil and gas industry is aware that its activities increase the pressure on fragile ecosystems in the Arctic. A consortium of Norwegian oil and gas producers has therefore initiated a research programme entitled *Symbioses*. The goal is to provide an ecosystem model that can accurately portray the effects of a potential oil leak far below the water surface, so that all the measures required to prevent serious disruption of the ecosystem can be implemented in advance.

### The Wageningen approach

Striking the right balance between economic and ecological interests requires a great deal of expertise and Wageningen UR aims to take a leading role in this development. We stand ready to play an active part and support industry in ensuring it operates in a sustainable

manner, including in the regional and spatial development of the Arctic. Wageningen UR is prepared to take the lead in any relevant research that the situation calls for.

### Partners

- DRDC / Canadian Navy
- FOI / Swedish Navy
- Heerema Marine Contractors
- Royal Boskalis Westminster
- IHC Merwede
- Maritime Campus Netherlands
- TU Delft

*'The IMARES approach facilitates the sustainable deployment of economic activity in the Arctic region'*

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