



for a living planet

Brünnich's
Guillemot.

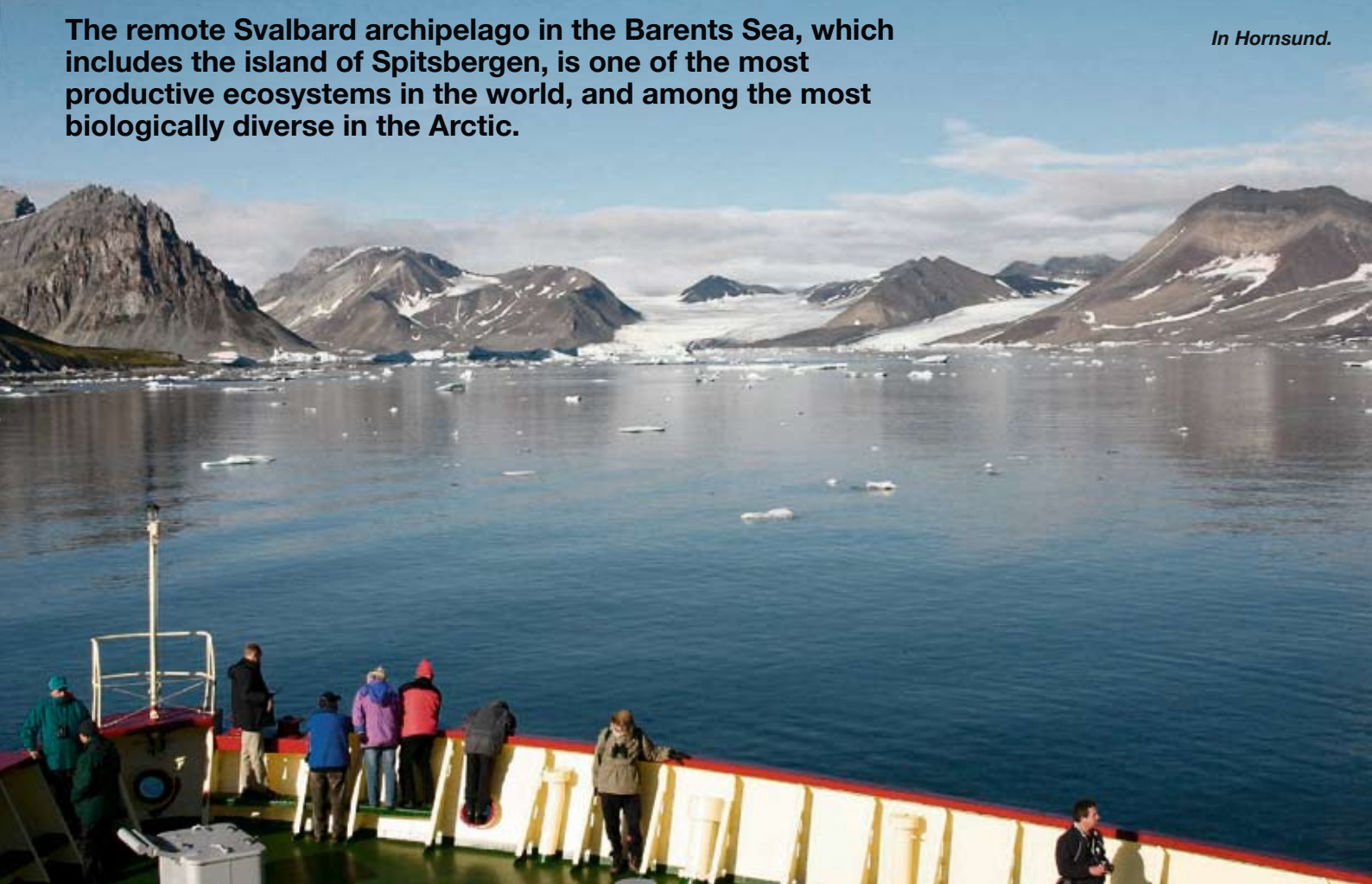


The Svalbard archipelago in the Barents Sea

AN ARCTIC PARADISE

The remote Svalbard archipelago in the Barents Sea, which includes the island of Spitsbergen, is one of the most productive ecosystems in the world, and among the most biologically diverse in the Arctic.

In Hornsund.



Photos: Miriam Geitz

Svalbard, and the seas and sea ice around it, are home to polar bears, seals, walrus, arctic fox, and Svalbard reindeer. Millions of seabirds breed here every summer, and the seas contain some of the largest fish stocks in the world as well as a number of whale species. Svalbard is also rich in historical sites from the early days of polar exploration, whaling and mining.

However, despite its remoteness, the islands are not immune to environmental threats.

Climate change is the greatest long-term threat to the Arctic, and has already begun affecting natural ecosystems and traditional ways of life at an alarming rate. Air and water temperatures are

increasing on Svalbard, glaciers are shrinking and there is less sea ice around the archipelago.

Oil and gas exploration is a new threat: some 25 percent of the world's unexploited oil and gas reserves lie in the Arctic, some in the waters around Svalbard. Depleted reserves elsewhere in the world, coupled with high oil prices mean oil companies now see the Arctic as ripe for exploitation. With development will come a growing risk to biodiversity from increases in shipping to the potential for oil spills.

Illegal fishing is threatening the long-term survival of fish stocks, while damaging chemicals, used in everyday goods around the world, are now turning up in arctic



Tufted saxifrage
(*Saxifraga cespitosa*).

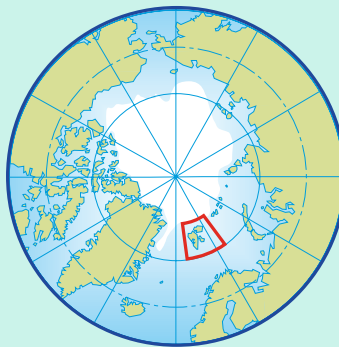
wildlife, such as the polar bear.

Tourism too can threaten this fragile environment. Cruise tourism and day trips by ship have become increasingly popular, and unless their impact on the environment is limited, they will add to the existing stresses to these high arctic ecosystems.



Near Alkefjellet.

SAVING SVALBARD'S TREASURES



-  **National park**
-  **Nature reserve**
-  **Protected site**
-  **Bird sanctuary**

0 50 100 km

Map adapted from original by Norwegian Polar Institute

FORLANDET NATIONAL PARK

NORDVEST-SPITSBERGEN NATIONAL PARK

INDRE VIJDEFJORDEN NATIONAL PARK

OSSIAN SARS NATURE RESERVE

NORDRE ISFJORDEN NATIONAL PARK

SASSEN-BÜNSOW LAND NATIONAL PARK

NORDENSKIÖLD LAND NATIONAL PARK

SØR-SPITSBERGEN NATIONAL PARK

Nordaus

Barentsøy

SØRAUST NATURE

Bjørnøya

BJØRNØYA NATURE RESERVE

Walrus (*Odobenus rosmarus*).

Svalbard is a refuge for walrus, ringed seals, bearded seals, beluga whales and other marine mammals. During the short and productive summer season, they can feed off the bounty of the Arctic Ocean relatively undisturbed. However, invisible stresses, such as toxic pollution and climate change, or noise and disturbance from increased shipping traffic or seismic activities from oil exploration, can affect wildlife.



Photo: Mikael Gætz

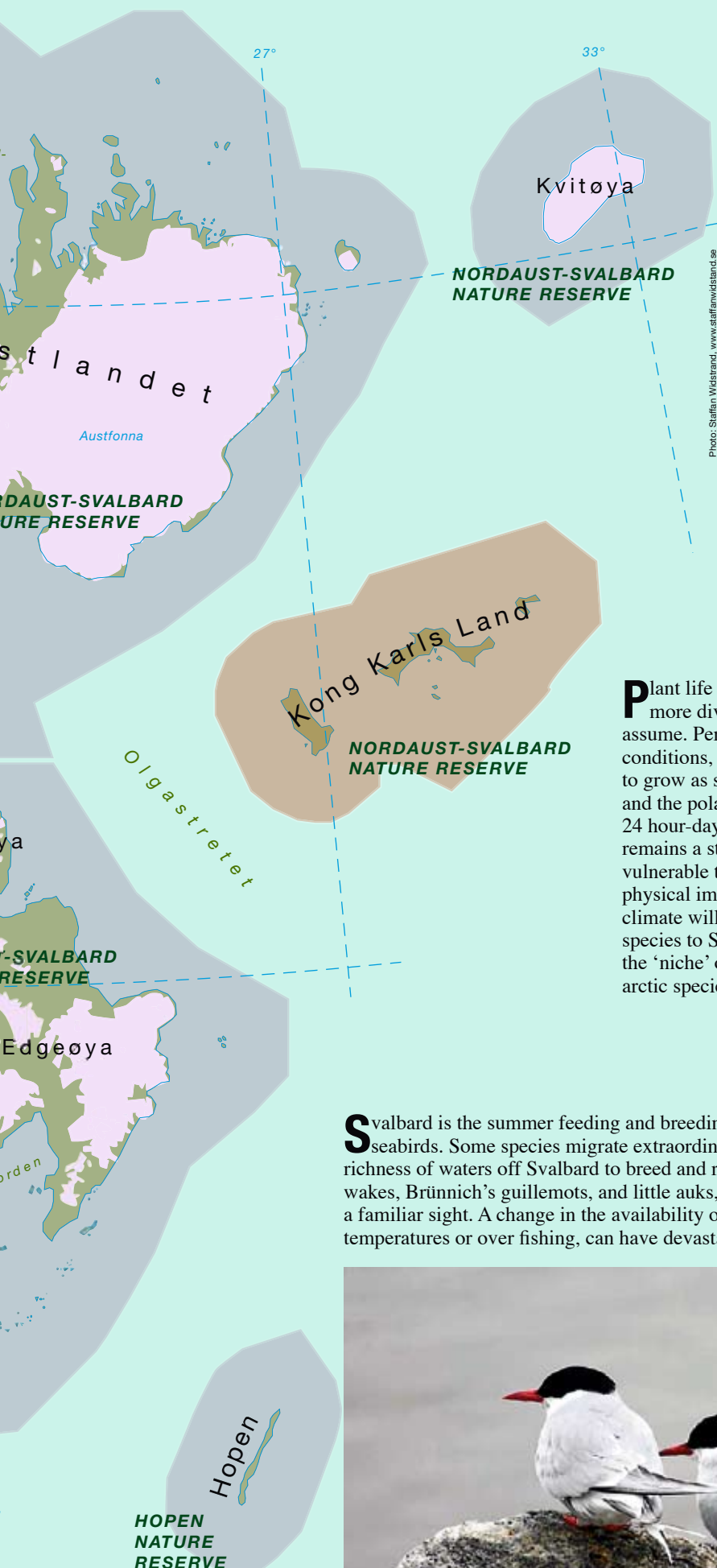


Photo: Staffan Widstrand, www.staffanwidstrand.se

Polar bears are marine mammals and dependent on sea ice for food. There are about 3,000 polar bears in the Barents Sea region, a number that is likely to decrease considerably in the next 50 years as the climate warms and melts the sea ice.

Plant life on Svalbard is much more diverse than one might assume. Perfectly adapted to harsh conditions, delicate plants begin to grow as snow and ice recede and the polar summer brings 24 hour-daylight. But survival remains a struggle; vegetation is vulnerable to trampling and other physical impacts. A warming climate will also bring new species to Svalbard, and reduce the 'niche' occupied by existing arctic species.



Photo: Miriam Geitz

Svalbard poppy (*Papaver dahlianum*).

Svalbard is the summer feeding and breeding ground for many millions of seabirds. Some species migrate extraordinary distances to take advantage of the richness of waters off Svalbard to breed and raise young. Most common are kittiwakes, Brünnich's guillemots, and little auks, but arctic terns (pictured) are also a familiar sight. A change in the availability of food as a result of warmer ocean temperatures or over fishing, can have devastating effects on bird colonies.



Photo: Miriam Geitz

Arctic tern (*Sterna paradisaea*).

THREATS

CLIMATE CHANGE: The biggest threat facing Svalbard and the Arctic is global climate change. The average temperature in the Arctic is rising at twice the rate of the rest of the world. The Arctic Ocean is projected to be ice-free in summer by the end of this century.

OVER FISHING: Illegal and unmanaged fishing is a threat to the rich fishing grounds of the Barents Sea and Svalbard. While there is evidence that this activity is common to all parts of the Barents Sea, the situation in the international waters between Svalbard, Norway and Russia is worse; a free-for-all that has the potential to cause enormous long-term damage to fish stocks.

OIL AND GAS DEVELOPMENT: Oil and gas exploration is increasing in the southern Barents Sea between Svalbard and Norway. A number of licenses for exploratory drilling around Svalbard have also been applied for but so far denied. However, economic and political interests are driving the quest for 'black gold' and Svalbard's waters and coastlines remain threatened. With oil and gas exploration comes increased shipping and the risk of oil spills and pollution. Invasive species can also cause damage as they can enter the ecosystem from ships' ballast water.

TOURISM: Cruises and other tourism activities account for a large part of

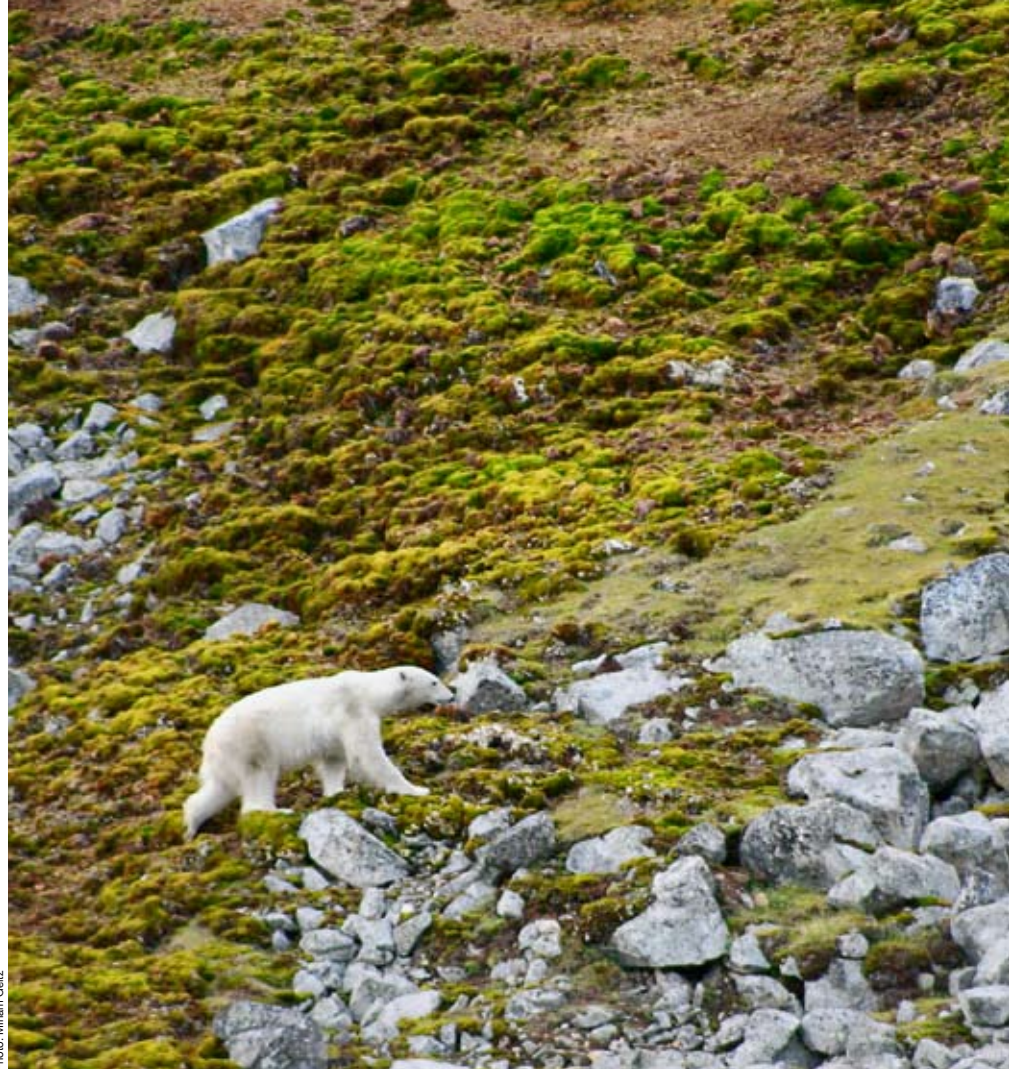


Photo: Miriam Geitz

human activities on the islands. So far, these activities leave few traces behind. For this to remain the case, cruise tourism in particular must be conducted properly in the long run.

For tourists to be able to come and enjoy the unique natural and cultural values that Svalbard has to offer, tour operators, tourists, visitors and locals must minimise their impact.

How can you help?

Think about your impact on the environment:

As a consumer of resources, you can take action by

- reducing energy use, eg turning off lights and stand-by functions on electrical appliances, and buying energy efficient electrical appliances.
- switching to green energy companies or to exclusively renewable energy companies, eg buying electricity from alternative sources like wind or biomass.
- buying fish from certified fisheries, eg The Marine Stewardship Council.

For more information, visit www.panda.org and www.panda.org/arctic

As a tourist in Svalbard, consider the environmental profile of your cruise or tour operator. For a cruise or day trip, look for:

- activities in small groups because they give you a better experience and reduce the risk of damage to vegetation and disturbance to wildlife.
- knowledgeable guides because a good guide will teach you about the unique features of Svalbard and how they can be protected.
- the fuel used for your ship; marine gasoil is less damaging to the environment than heavy fuel oil if there is an oil spill.

On Svalbard, you can choose to travel with a tour operator organized in the Association of Arctic Expedition Cruise Operators (AECO). This industry-initiative works towards good environmental practise by its members, and thus less risk and impact on Svalbard's environment. AECO has also developed specific visitor guidelines.

■ WWF is one of the world's largest independent conservation organisations, with more than four million individual members and projects in about 100 countries. The WWF International Arctic Programme was established to coordinate and run the organisation's conservation efforts in the arctic region. The Barents Sea and Svalbard are a priority area for WWF's work to address the threats from climate change, over fishing and oil and gas

For more information on WWF's work on Svalbard and in the Arctic:



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