

Annex I

Mineral and Energy Resources Exploration and Development

Oil and Gas – Country-specific Information

Canada

Many of the Arctic areas that have potential for hydrocarbon development are located near or at the coast (e.g., Mackenzie Delta), in coastal waters (e.g., Beaufort Sea, Arctic Archipelago) or in deeper offshore waters (e.g., Baffin Bay). The effects associated with routine activities will, in many cases, be localized around a drill site or production well or along a pipeline route.

As of 2014, the only gas production within the range of polar bears in the Canadian Arctic is from the Ikhil field in the Mackenzie Delta. Gas is produced from two wells and delivered through a 50-km pipeline to Inuvik, where it is used for power generation and heating.

While it has seen little oil and gas production to date, the Canadian Arctic holds potential for considerable development of oil and gas, much of which lies within the range of polar bears. An increase in level of activity is anticipated in the coming years in both the Beaufort Sea/Mackenzie Delta and the High Arctic islands. This activity will likely occur both onshore and in the adjacent seabed.

Greenland

Since the 1970s there has been exploration for oil and gas in Greenland. In addition, there have been a number of substance-related environmental studies of mining related environmental studies undertaken by the Greenland Institute of Natural Resources (GINR) and former National Environmental Research Institute (DMU), now the National Centre for Environment and Energy (DCE). Since 2007, the Institute of Natural Resources and DMU / DCE initiated three polar bear studies associated with Strategic Environmental assessments.

There has been geological fieldwork on land in both West Greenland and East Greenland. In West and East Greenland, seismic surveys were conducted on Nuusuaq-peninsula and Jameson

in the 1980s and in the 1990s. Additionally, there have been extensive geological and geophysical studies carried out in areas offshore of West Greenland from Melville Bay to Kap Farvel and in marine areas of North Greenland and East Greenland.

As of 2014, there are 23 active exclusive licenses to explore and exploit hydrocarbons in marine waters off West Greenland and East Greenland. Additionally, there are 22 prospecting non-exclusive licenses. It is expected that in the coming years, exploration will continue in Greenland both onshore and offshore. According to the Greenland field rules, there is a reporting obligation if polar bears die in a conflict. For oil and gas, there are no records of such conflicts. To avoid potential conflicts with bears, strategic environmental assessments of areas must be initiated, among other things, to identify particularly sensitive areas for wildlife.

When a company is planning its activities, it must submit a contingency plan describing how it intends to tackle and deal with conflicts with bears. If a polar bear is euthanized in self-defense, the police and the Ministry of Fisheries, Hunting and Agriculture should be notified. During 2014 work was conducted on a project which includes reviewing the existing guidelines for the monitoring of oil spills in relation to environmental effects.

Norway

As of 2014, Norway has no oil or gas production within the range of polar bears. Currently, the gas and oil fields in production or under development in the Barents Sea are Snøhvit and Goliat off the coast of northern Norway.

Exploration is ongoing in the Southern Barents Sea within areas that the government has opened for the industry to explore and develop, and the activity has increased in later years. Several potential oil and gas fields have been discovered in the southern part of the Norwegian Barents Sea shelf.

In the northern part of the areas that have been opened for exploration, sea ice sometimes persists when close to its annual maximum. Requirements are set to ensure that exploration

does not pose a significant risk to the marginal ice-zone or polar bears. Areas in the range of polar bears in the northern part of the Barents Sea are not opened for petroleum exploration.

United States

The U.S. Fish and Wildlife Service (Service) administers an Incidental and Intentional Take Program that allows managers to work cooperatively with oil and gas operators and others to minimize potential impacts of activities on polar bears. Polar bears are protected from take, including disturbance, under the Marine Mammal Protection Act (MMPA); however, recognizing that some take may occur unintentionally, the law does allow for incidental (non-intentional) take of small numbers of polar bears during specified activities. Incidental take authorization has been sought by the oil, gas and mining industries, as well as for military, construction, and research activities. At present, regulations for incidental take related to oil and gas activities are in effect in the Beaufort Sea region until 2016 and in the Chukchi Sea region until 2018. The Service is currently analyzing a petition to promulgate incidental take regulations for the Beaufort Sea from 2016-2021.

Under the Incidental and Intentional Take Program, oil and gas operators, or any other citizen or group covered by incidental take regulations, may apply for a Letter of Authorization (LOA), which, if granted, allows them to incidentally “take” polar bears, as defined in the MMPA, during the course of their activities. Most “take” that result from industry interactions with polar bears is limited to short-term changes in bear behavior, e.g., a bear may avoid or investigate an area of industry activity. The LOAs include measures to minimize such impacts, e.g., by properly managing “attractants” such as food and garbage, or by placing a “no activity” buffer zone of one mile around any known dens.

Additionally, intentional harassment, or deterrence, authorization may be sought in instances when there may be a need to deter bears from human areas. An example of this type of take is the North Slope Borough’s (NSB) Polar Bear Patrol Program. The NSB’s program works with coastal communities to deter bears. A similar program exists in the oil field areas. The Service

also provides guidance to industry for development of plans of cooperation with affected communities.

For both incidental and intentional take activities, the Service includes monitoring and reporting requirements in the LOAs issued to applicants. Results from these efforts provide a basis for evaluating current and future impacts of activities on bears

Currently, oil and gas exploration, development and production activities do not threaten polar bears in Alaska due, in part, to mitigation measures imposed on oil and gas industry. It will be important to continue this program in the future.