

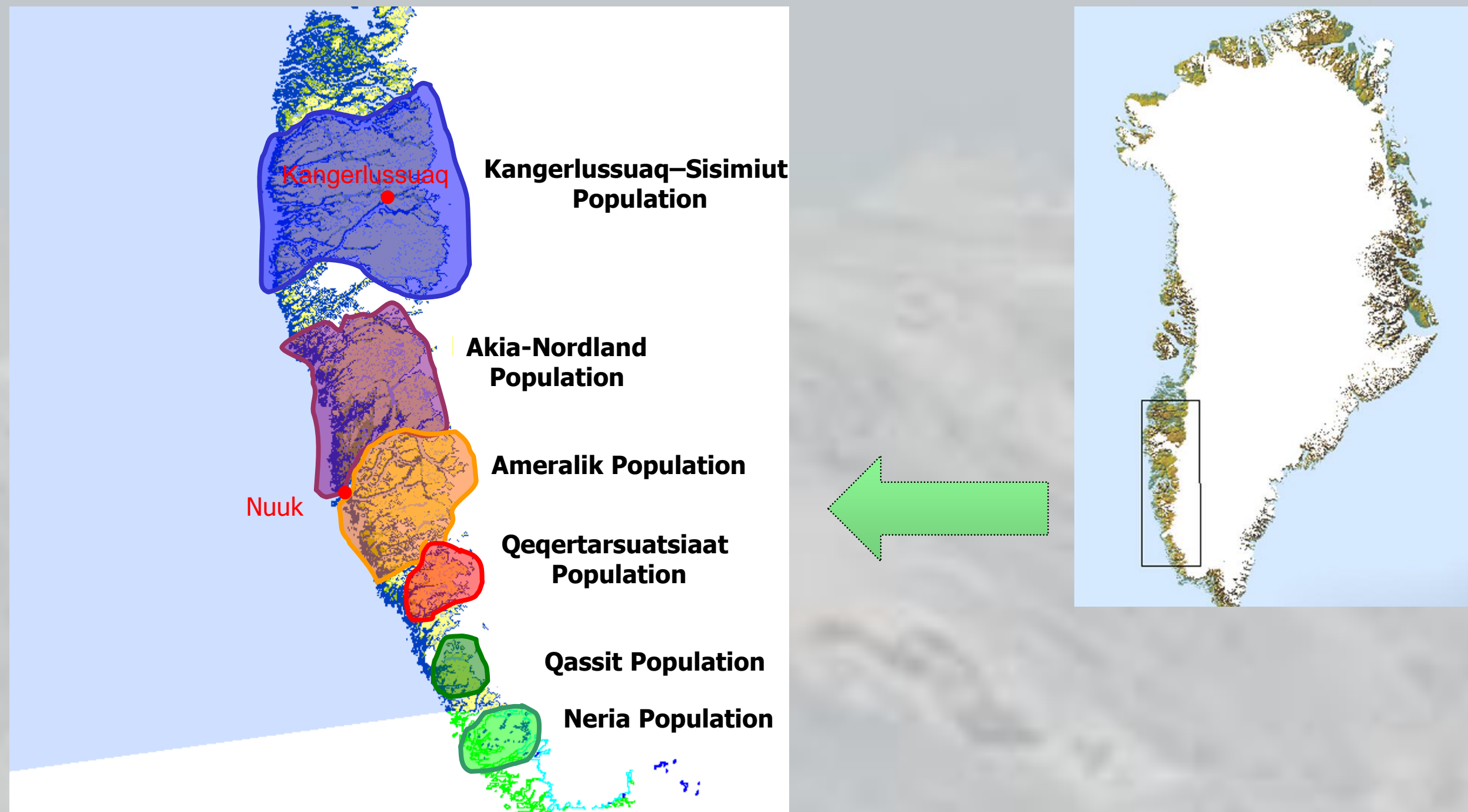


Spatial distribution of caribou harvest in West Greenland

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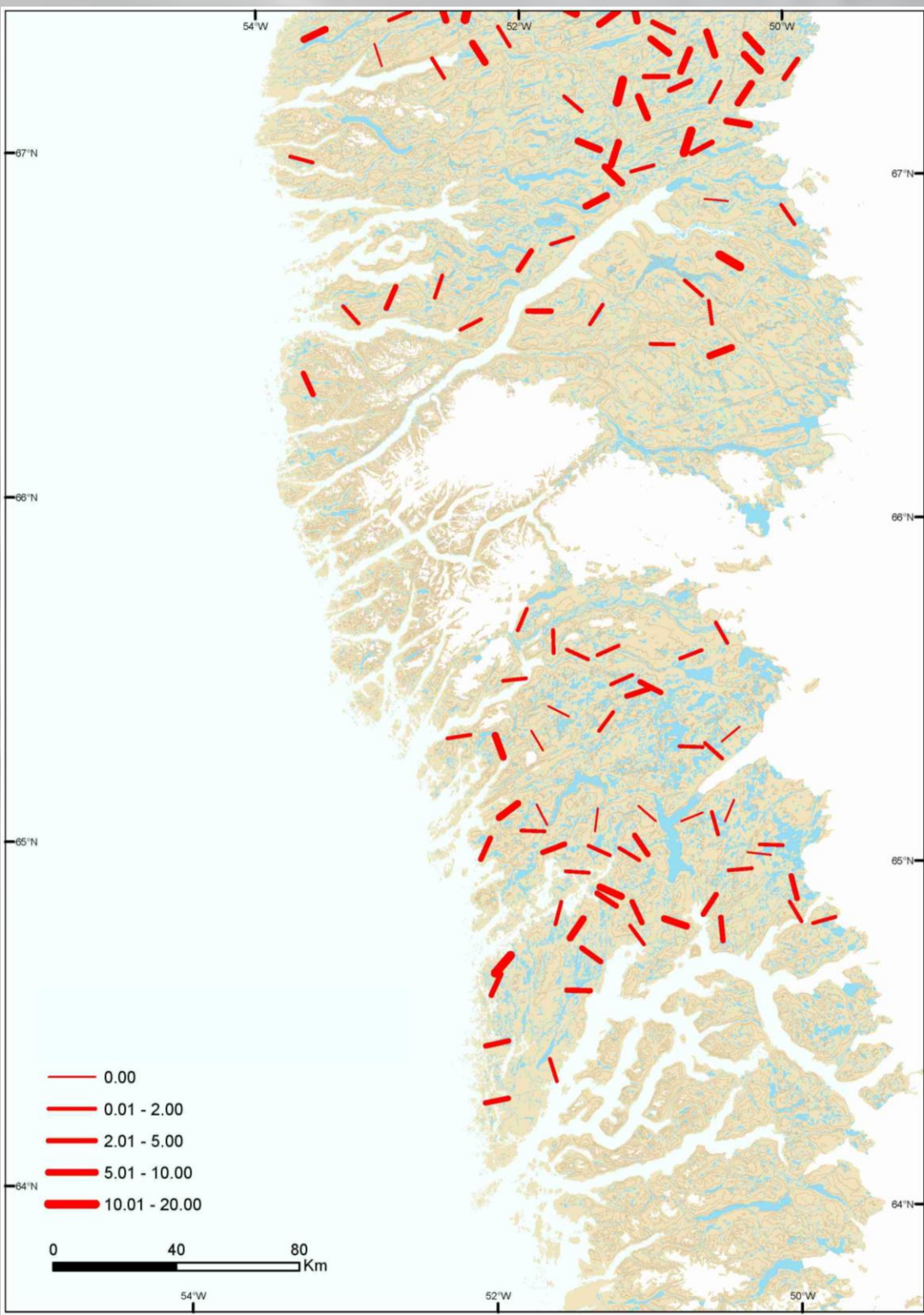


Greenland caribou are distributed throughout West Greenland with the greatest abundance, ca. 140 000 since year 2000, occurring in South West Greenland. These are separated by natural boundaries, e.g., glaciers and fjords, into several more or less discrete populations, which are also used as management units.

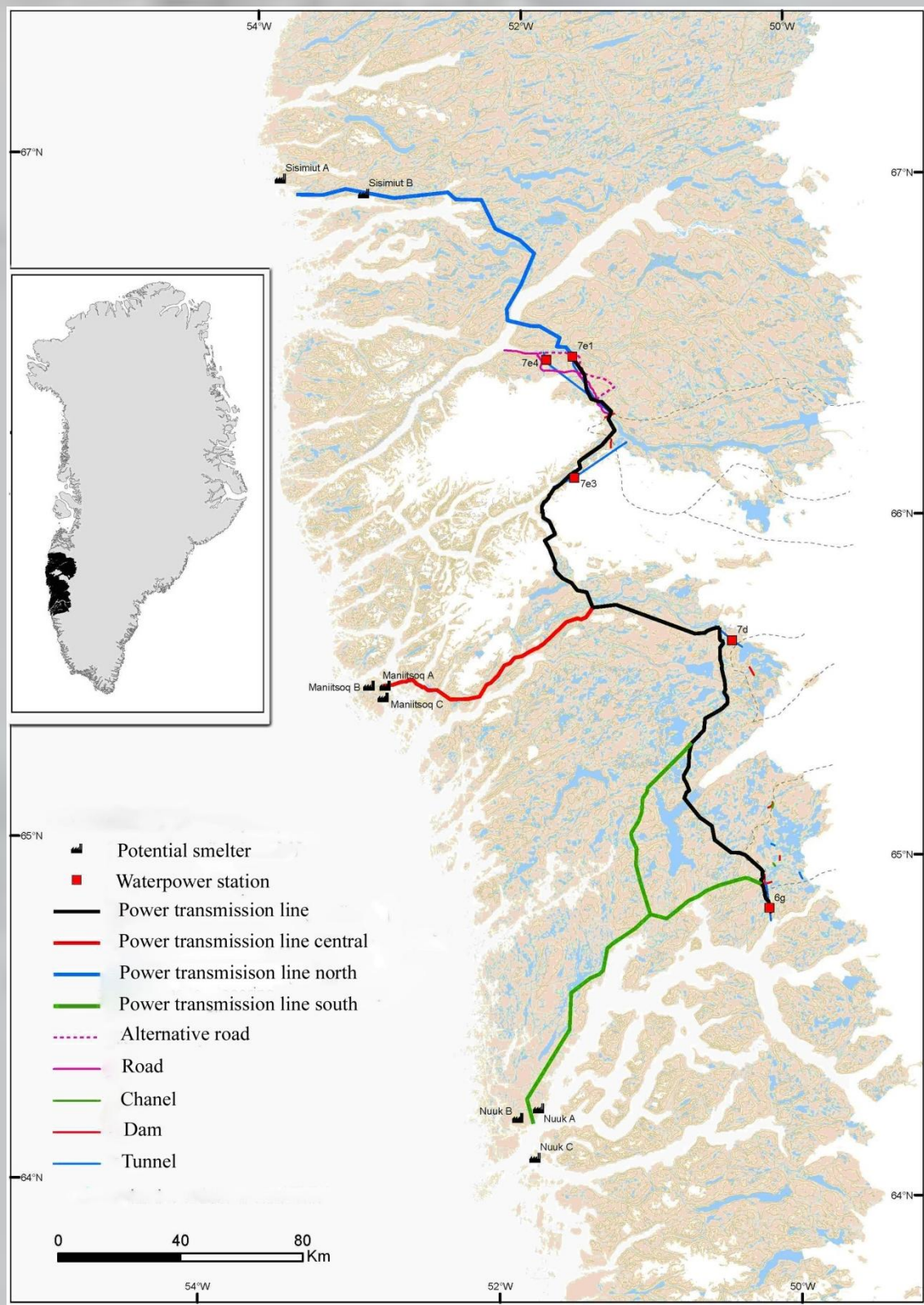


Map of West Greenland caribou management units.

The central portion of South West Greenland, located just north of the nation's capital city, is home to one of Greenland's largest caribou populations. This area may soon experience extensive industrial development in a hitherto relatively pristine landscape. An aluminium smelter has been proposed, with accompanying roads, harbours, hydropower plants and extensive transmission lines. Further, the possible establishment of an iron ore mine will require road, bridge and pipeline construction. The proposed developments could alter caribou habitat or caribou use of the area and create easier human access to remote areas, which could affect hunter behaviour.



Data from aerial survey of caribou March 2005. The thickness of the line indicates the density of animals.

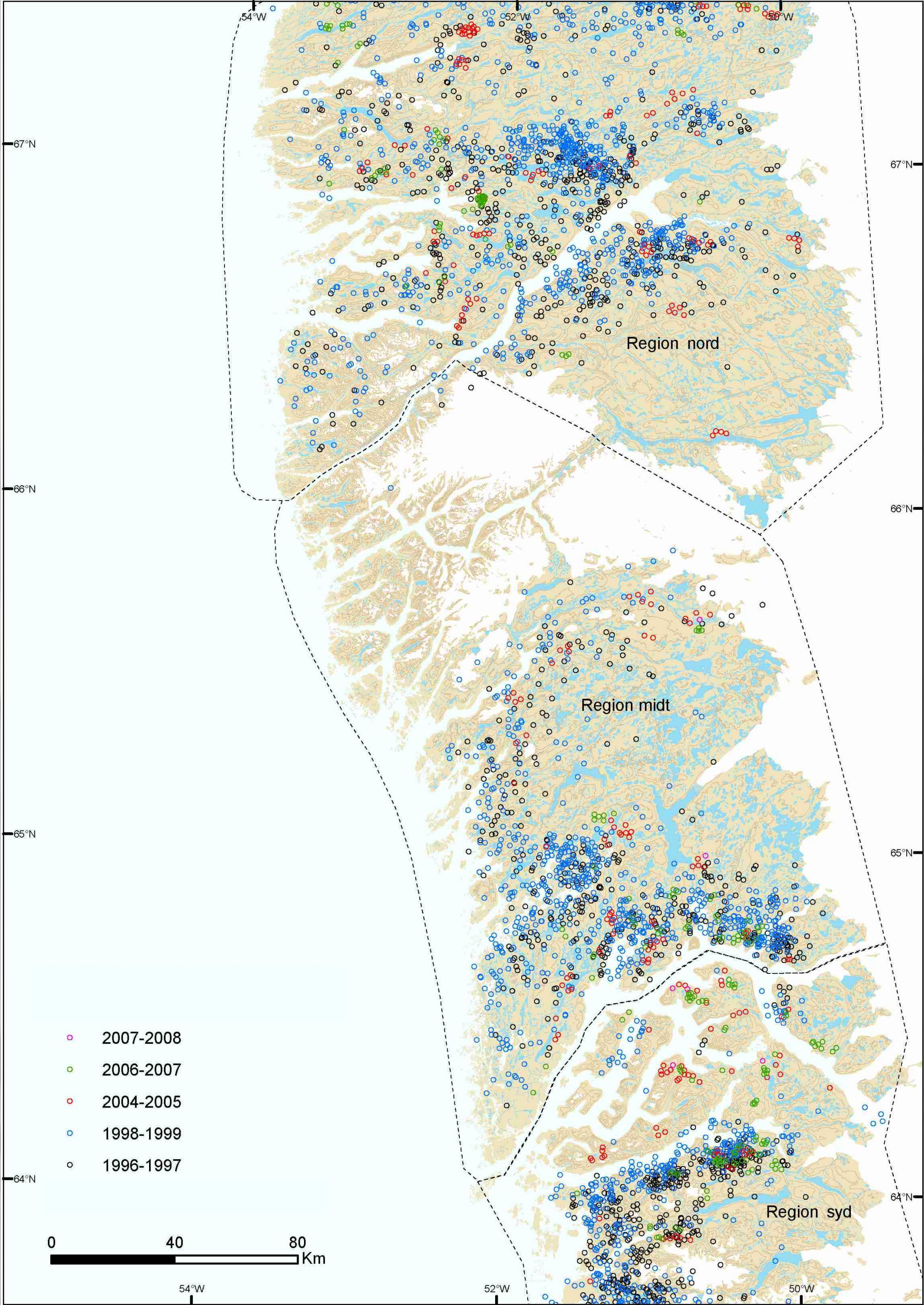


Map showing proposed constructions following an aluminium smelter. The most likely scenario is a smelter placed in Maniitsoq and this includes the central (black) and the east west (red) power lines only.



The cultural importance of the caribou hunt to Greenlanders cannot be minimized, and both professional and sport hunters participate. Hunters must report their bag to renew licences, and the information gathered includes sex, age, rump fat depth and location of kill.

Based on hunter's reports, we analyzed the spatial distribution of current hunting and other recreational activities to aid assessment of the possible effects on caribou during the construction and operational phases of mining activities, hydropower production and high voltage transmission lines.



Locations where caribou were reported shot in the autumn harvests from 1997 to 2008. Data includes the catch from professional and sport hunters. In recent years hunters often neglect to indicate on their reports the geographic location for animals caught. We estimate that only 2-5% of reports for the current annual catch include this information.

Mapping the hunting activity is an important parameter, when assessing the possible effects of future constructions on recreational activities. Basic knowledge about caribou distribution in different seasons in the area is still fragmentary. To assess the impact of the proposed industrial development, this study will be used in conjunction with both satellite telemetry (examining caribou movement and activity) and a caribou calving grounds study in spring 2009.

