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Reindeer (*Rangifer tarandus*) migrate across the Hardangervidda plateau in search of food all year around.



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# Hardangervidda NORWAY

Hardangervidda, located in southern Norway, is the largest mountain plateau in northern Europe and is a popular area for hiking, hunting and skiing. The famous explorers Nansen and Amundsen even trained here for their expeditions to the Poles. This largely intact plateau hosts the largest wild reindeer (*Rangifer tarandus*) population in Europe, which migrates across the plateau in search of food and suitable calving grounds. The reindeer population (estimated at 9,000 to 12,000 individuals) is important not only for its ecological value, but also for its economic and recreational value for hunters, hikers and landowners. A loss of this herd would have a negative impact not only on the ecosystem, but also on the people that depend on it for their livelihood.

In the winter, the reindeer rely greatly on lichens as a food source, which they reach by digging through the snow. In the summer, they depend on lush summer pastures to be able to feed their

calves and to fatten themselves up before the long winter. Changes in the availability and quality of winter and summer grazing pastures can therefore greatly affect the reindeer population. In addition, a warming climate can increase insect harassment, which reindeer are increasingly suffering from in the summer. Human disturbance, such as the building of recreational cabins, roads and power lines, snowkiting and hunting, can also limit or prevent reindeer from accessing important grazing and calving areas.

Scientists are working with the national park to monitor the reindeer populations and their environment, looking at the quality of summer and winter grazing pastures and calving grounds. To this end, ECO-POTENTIAL uses satellite imagery, GPS collar data and data gathered in the field. Such data can then be used to predict changes in the reindeer population and to support its management.



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Cairns like this one mark the tourist paths which are frequented by tourists for hunting, fishing, skiing and hiking. Hardangervidda is a popular tourist destination for locals and overseas visitors alike.



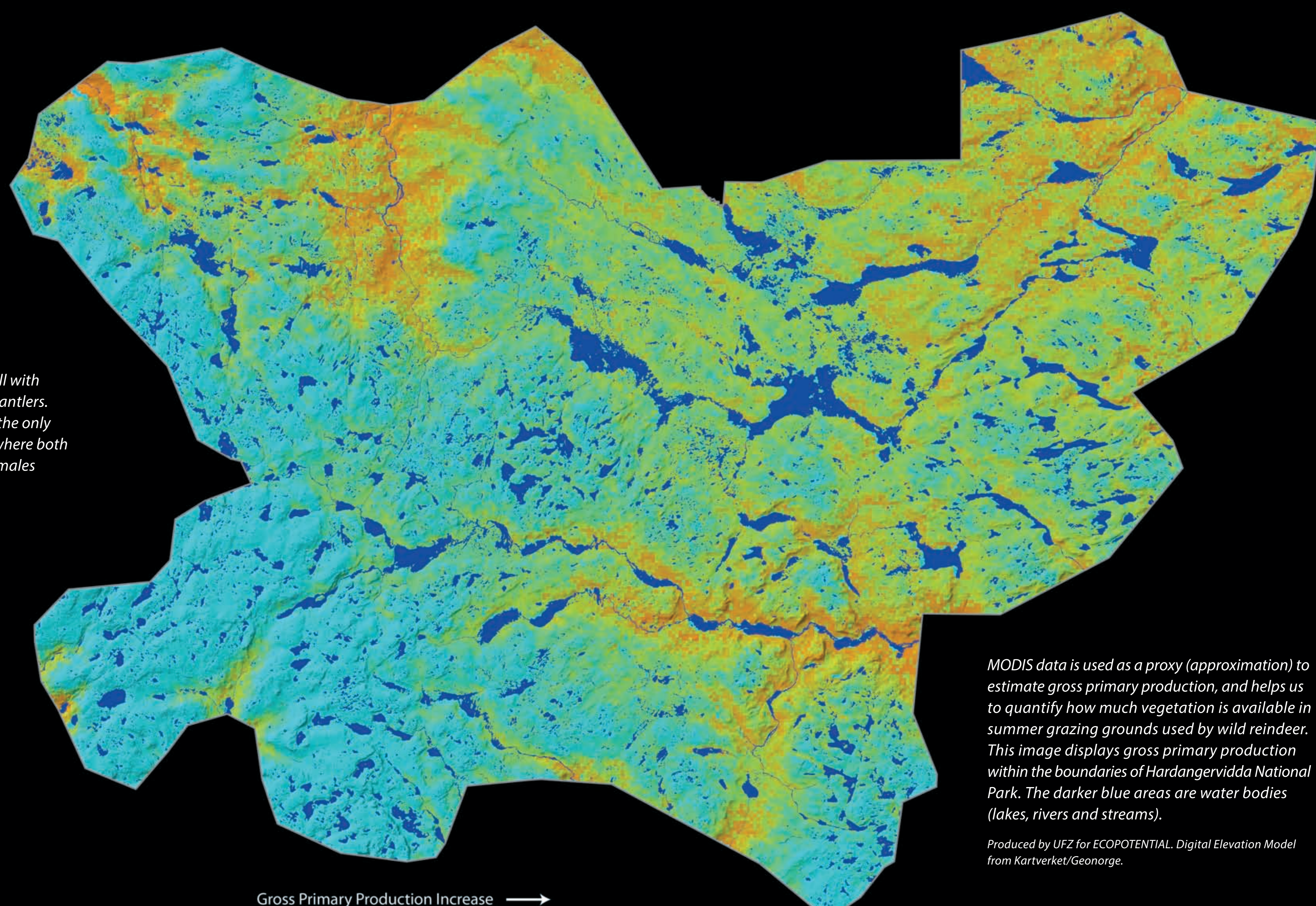
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A reindeer bull with a large set of antlers. Reindeer are the only type of deer where both males and females grow antlers.



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Lichens are an important food source for reindeer in the winter, when other vegetation is scarce.



MODIS data is used as a proxy (approximation) to estimate gross primary production, and helps us to quantify how much vegetation is available in summer grazing grounds used by wild reindeer. This image displays gross primary production within the boundaries of Hardangervidda National Park. The darker blue areas are water bodies (lakes, rivers and streams).

Produced by UFZ for ECO-POTENTIAL. Digital Elevation Model from Kartverket/Geonorge.



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