Impacts of Belt and Road in the Arctic

Infrastructure expansion and energy exploitation in the Arctic under China's Belt and Road Initiative (BRI) could affect climate as well as key ecosystems (see *Nature* **569**,5; 2019). These huge projects risk accelerating carbon release by inducing permafrost thaw (see, for example, M. Turetsky *et al. Nature* **569**, 32–34; 2019).In our view, international monitoring of the situation is necessary so that such changes can be incorporated into holistic climate-change assessments.

Almost one-quarter of the world's gas and oil reserves are in the Arctic, earmarked for development in China'sUS$1.3-trillion BRI. The initiative has allocated$12.1 billion to the flagship Yamal liquefied-natural gas project, $25 billion to a 4,857-kilometre oil pipeline between eastern Siberia and the Pacific Ocean, and $6.1 billion to a 762-kilometre Moscow–Kazan high-speed railway. It seeks to expand Arctic shipping along the northern sea route between China and Europe and to build bases in Greenland.

Global warming and permafrost melt have already destabilized existing infrastructure, including the railway from Beijing to Lhasa. Extraction and use of raw materials will further exacerbate carbon emissions, requiring new mitigation measures.

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