

Environmental and Ethical Aspects of Sustainable Mining in Greenland - DTU Orbit (12/08/2016)

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The increased use of scarce metals in combination with climate changes pave way for extensive extraction of mineral resources in Greenland. The focus of this study is on environmental ethical aspects of mining activities in a vulnerable and unspoiled arctic nature. Mining can have several economic and social benefits for Greenland. On the other hand, the environmental impacts from mining are well known. Through DPSIR (Drivers, Pressures, States, Impacts, Responses) and Stakeholder analysis, we assess how future mining in Greenland can be sustainably implemented. The analysis revealed that numerous stakeholders have to be taken into consideration with a wide range of different interests. The DPSIR analysis clarified the availability of various potential political responses that could affect the drivers, pressures, states and impacts of mining mainly focused on implementation of effective environmental regulation strategies. Our findings revealed different environmental ethical dilemmas of which the most critical is how Greenland can open up for mining, gain economical revenue while averting destruction of unspoiled regions and aesthetic impairment. We recommend strict environmental legislation involving use of the "polluter pay principle", continuous monitoring of pollution and establishment of an industry-funded catastrophe trust fund. These initiatives can ensure economic benefits while environmental impacts remain negligible.

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