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Development of representative network of Marine Protected Areas in the Russian Arctic

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The existing Marine Protected Areas (MPAs) in Arctic were designated via ad hoc step by step process. There are two related problems arise from such approach. The first problem is the bias in the representation of biodiversity towards some species or habitats that would result in a failure to protect other species that are often more in need of reservation. The second problem is a higher-than-necessary cost of achieving representative reserve systems, or, due to limited available resources, reduced likelihood of protecting many elements of biodiversity. High level of inter annual dynamics, high sensibility to climate changes, and the lack of data make protection of the Arctic ecosystem even more difficult task to be. Taking this into account, we have launched a project on scientific design of resilient and representative network of MPAs in the Russian Arctic. The objective of MPA network is to ensure adequate and fair representation of a suite of the biological and seascape diversity for the minimum cost taking into account the ongoing climate changes and social-economic development of the region. The key features of this approach are following: quantitative conservation goals, data on marine arctic species distribution and their habitats inventory, computer simulation techniques to identify sites need to be protected (Marxan software), collaborative work of key national and international experts, GAP analyses of existing MPA network, and transparent and quantitative results of the developed design. We expect that the conducted analyses will help us preparing recommendations for the development of resilient network of MPAs in the Russian Arctic for the government in 2016. We expect that this work can be transferred to the work of the Arctic council working group "Protection of the Arctic Marine Environment" (PAME) that has been tasked with looking into a framework for Arctic MPA networks.