

PAN-EURASIAN EXPERIMENT (PEEX) OVERVIEW

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The Pan-Eurasian Experiment (PEEX) is a multidisciplinary, multi-scale research project aimed at resolving the major uncertainties in Earth System Science and global sustainability issues concerning the Arctic and boreal Pan-Eurasian regions as well as China. The vision of the PEEX is to solve interlinked global Grand Challenges influencing human well-being and societies in northern Eurasia and China. The PEEX vision includes establishing and maintaining long-term, coherent and coordinated research activities and continuous, comprehensive research and educational infrastructures across the PEEX domain.

PEEX will develop and utilize an integrated observational and modelling framework to identify different climate forcings and feedback mechanisms in the Northern parts of the Earth system, and therefore enable more reliable predictions of future regional and global climate. Because of the already observable effects of climate change on society, and the specific role of Arctic and boreal regions in this context [1], PEEX emphasizes the need to establish next-generation research and research infrastructures in this area. PEEX will provide fast-track assessments of global environmental change issues for climate policy-making, and for mitigation and adaptation strategies for the Northern Pan-Eurasian region. PEEX is built on the collaboration between European, Russian and Chinese partners, and is open to a broader collaboration in the future [2] (www.atm.helsinki.fi/peex).

[1] Kulmala M. et al., *Boreal Env. Res.*, 16, 337-362, (2011).

[2] Lappalainen H.K. et al., *J. Geography, Environment, Sustainability*, 2(7), 13-48, (2014).