

GC33F-01: A 10-year Retrospective of NASA's Contribution to NEESPI Science: What We Have Learned on Climate-Ecosystem-Society Interactions in Northern Eurasia

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The Northern Eurasia Earth Science Partnership Initiative (NEESPI) has produced over 1500 scientific papers based on 170+ projects with international teams from over 200 institutions in 30 countries. This overview will provide a summary of the achievements in the NASA component of this large international initiative during the last 10 years. It will cover various NEESPI sectors, including the Arctic, the boreal systems of Siberia and Far East, the dry lands of Central Asia and ecosystems of Eastern Europe. The emphasis will be made on what we have learned from the NEESPI studies supported by the NASA Land-Cover/Land- Use Change Program. It will include examples of forest and agricultural changes, implications to carbon and hydrologic cycles, changes in environmental pollution, urban changes and impacts on society. The presentation will illustrate land-use changes during the last couple of decades and describe impacts of land-use change in the Arctic, where land use practiced by indigenous people is giving way to intensive exploitation of the land for commercial and industrial uses. Fields abandonment and more recent returning agricultural practices in mid-latitudes will also be discussed. The presentation will be based on the results from the NEESPI Synthesis projects supported by the NASA LCLUC program and the material described in the books published by international NEESPI teams.