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Biogenic feedbacks on the atmospheric concentrations of greenhouse gases: overview of the GREENCYCLES network

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GREENCYCLES is a Marie Curie Research Training Network focussed on the roles

of global biogeochemistry for climate change. The project aims to reduce uncertainties associated with biogenic feedbacks on global environmental change and foster the education of the next generation of Earth system scientists. GREENCYCLES young scientists are offered a unique environment bringing together key European research modelling teams with complementary expertise in coupled Earth System, oceans, field-based understanding of the terrestrial and oceanic processes, and space-based observations. To improve the understanding of the important biogeochemical processes that control the concentrations of anthropogenic greenhouse gases, the network is spread across six key science objectives, each involving different individual research projects undertaken by Early-Stage Researchers (ESRs) and Experienced Researchers (ERs):

1. Quantify feedbacks in the global carbon cycle

2. Determine the effects of changing land use on climate

3. Improve understanding of natural sources of CH_4 and their responses to human activities

4. Quantify impacts of climate change and climate variability on fire-induced emissions of greenhouse gases

5. Quantify impacts of climate change on terrestrial and oceanic biogenic emissions of aerosols and chemically active gases, and their effects on tropospheric chemistry

6. Quantify impacts of vegetation and climate changes on atmospheric dust, and its feedbacks on CO_2 and climate.

An overview of the research and training progress to date will be presented.