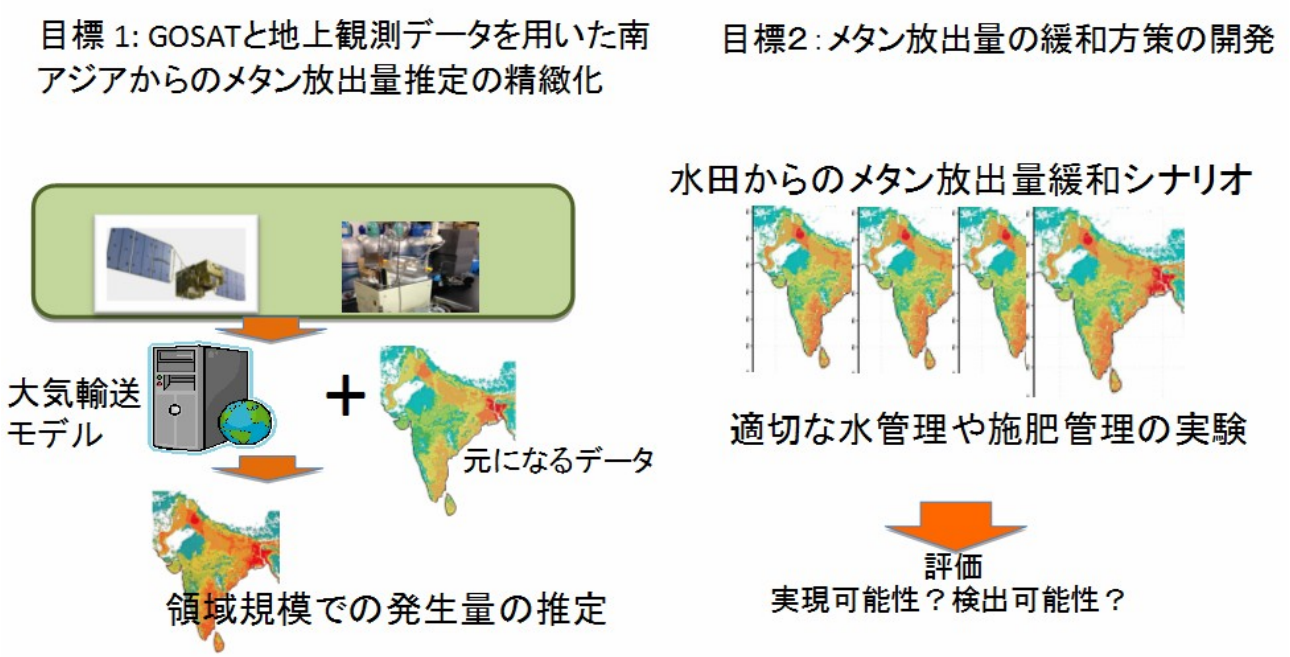
Study on atmospheric minor species using satellite observations

Sachiko HAYASHIDA [Environmental Sciences Course]



Concept of AMASA project

My main research interest is studying Earth atmospheric minor species. Nitrogen and oxygen together account for approximately 99% of the global atmosphere as dry air. The remaining 1% includes many other types of gases known as atmospheric minor species. Carbon dioxide and methane are well known as important anthropogenic greenhouse gases, while ozone and nitrogen dioxide are also known to be atmospheric pollutants. While they are present in very low quantities in the atmosphere, they exert a large impact on the environment. I analyze such trace components using data from satellite observations. Investigating atmospheric minor species is not limited to atmospheric pollutants in a narrow sense but is relevant to studies of greenhouse gases. Since 2015, I have been leading a research project as a representative, 'Atmospheric Methane from Agriculture in South Asia (AMASA)' project that is a project of the Ministry of the Environment's Environment Research and Technology Development Fund. See also the AMASA project website(http://www.ics.nara-wu.ac.jp/lab/ertdf/).

Keywords : satellite observation, atmospheric minor species, greenhouse warming gases, ozone, global warming, atmospheric pollution