Characterization of methane source using vegetation index and precipitation derived from satellite

Jonggeol Park and Sooyoung Park
E-mail : amon@rsch.tuis.ac.jp

KEY WORDS : Methane sources, EVI, precipitation, landcover

ABSTRACT : In order to investigate the CH4 sources, we used SCIAMACHY data to investigate the changes in the CH4 concentration time series during nine years. As assuming that CH4 does not emit in the sea, the increase in CH4 concentration of sea areas is caused by the flowing CH4 emitted in land. The difference of land and sea methane concentration is the emission of land CH4 concentration. According to the land CH4 emission concentration, the high CH4 emission concentration areas are not only in paddy fields (80ppb/year) but also broadleaf evergreen areas in South America and Central Africa(50- 80ppb/year).we compared the CH4 emission concentration and vegetation Index. If it assumes that CH4 is emitted by photosynthetic activity of vegetation then we can explain the changes in CH4 emission concentration and EVI changes of paddy field and cropland areas. But, there were not much changes in EVI of BEF so it could not explain the ch4 emission concentration changes.The tendency of the methane emission concentration change of South American BEF and change of precipitation amount is coincided. As a result, the amount of CH4 from anaerobic bacteria is higher than vegetation activity in BEF.

presenters Preference between oral and poster presentation : Poster