Crop modelling and GHG measurement activities

The ClimaViet project team recently reviewed the crop modelling and GHG measurement activities at the Institute for Agriculture and Environment, Hanoi.

A half-day workshop was held at IAE on the 20th of January, 2015 with the scientific team coordinated by Dr. Mai Van Trinh, Director of IAE, to review the crop modelling and GHG measurement activities. As part of the ClimaViet project, IAE is trying to assess the impact of future climate change under different scenarios (2020, 2030, 2040) in Vietnam on rice yields in three provinces namely Nam Dinh (in Red River Delta) and Soc Trang and Tra Vinh (in the Mekong River Delta). The results from AQUACROP and DSSAT models provided some interesting outputs. In general rice yields and biomass will decrease with increase in salinity.

Nam Dinh, Vietnam: Measuring GHG emissions in rice fields. Photo: Trond Rafoss

Rice cultivation is considered to be one of the major sources of GHGs emissions in Vietnam,   to almost 58% of the total emissions from agriculture. This is also due to the use of high doses of nitrogen and other chemical fertilizers. The project team at IAE is measuring GHG measurements using close chambers under different agronomic conditions using organic and inorganic fertilizers dosages. Results will be finalized by June this year and disseminated to the MARD and other relevant agencies. Climate smart agriculture measures can help in reducing GHGs and at the same time give higher yields to farmers. More measurements are needed to standardize GHG emission values for different climate smart agriculture practices in Vietnam.

Two postgraduate and one doctoral student are being trained in the ClimaViet project to build the capacity on GHG measurements and crop modelling.

Photo: Minh Hoanggia