

# **Towards Tier 3 emission inventories in the agricultural sector - A case study on CH<sub>4</sub> and N<sub>2</sub>O emissions from Rice production in Vietnam**

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GHG inventories are important for climate policy. For the agricultural sector, the IPCC defines a Tier system to be followed for UNFCCC reporting. The simplest and most commonly used Tier 1 approach is based on default emission factors, while the most complex and rarely used Tier 3 approach is based on the best available science using process models. Here we present ongoing work on using the LandscapedDNDC process model to calculate CH<sub>4</sub> and N<sub>2</sub>O emission inventories for agricultural rice production in Vietnam. The work focuses on the integration and associated uncertainties of available data products, ranging from high resolution Earth observations to coarse resolution regional statistics. In order to promote the use of Tier 3 to a wider community, despite the increased complexity, we also present the development of a model user interface, which is available online and aims to reduce the barrier to applying the Tier 3 method.

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