

The Economics of Ecosystems and Biodiversity for Agriculture and Food (TEEBAgriFood) aims at equipping decision-makers with the tools and information to recognise the value that ecosystems provide to food systems

TEEBAGRIFOOD  
THAILAND

# Assessing the true value of rice systems for people and planet

## Context & Focus

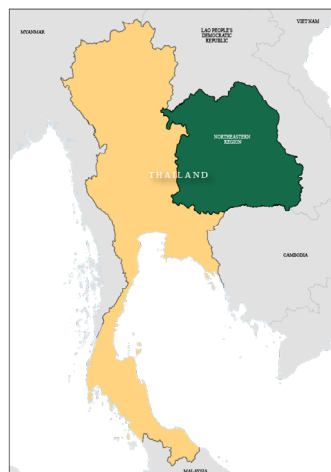
Half of Thailand's cultivated land is devoted to rice farming. Rice fields provide a complex livelihood system in which trees, crops and livestock are connected - but the intensification of rice production over the last 40 years has had significant environmental impacts. Climate change presents serious threats to the future cultivation of rice in Thailand, bringing changes in rainfall patterns and increasing temperatures, with critical impact on rice output in key areas.

The initial assessment, supported by the IKI Programme of the German government is focussed on assessing the potential future economic impacts of the expansion of organic rice cultivation area. A follow up assessment, supported by the European Union Partnership Instrument (EUPI) will focus on the economic impacts of adoption of the Sustainable Rice Platform (SRP).

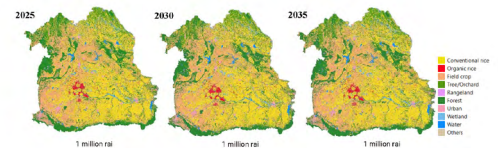
## Location

The focus area is the Northeastern region of Thailand. In this area, most rice fields are rainfed, allowing one crop of rice per year. The region is home to the most highly valued aromatic rice variety, known as Hom Mali.

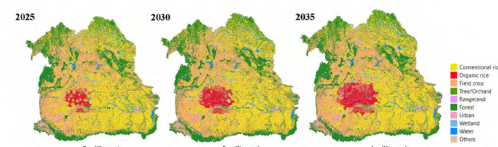
Currently, rice cultivation area covers 10.88 million ha of land. The Northeast region is home to 6.56 million ha of them and organic rice production accounts for 88,000 ha of land. The Government is promoting expansion through support for transition costs and marketing.



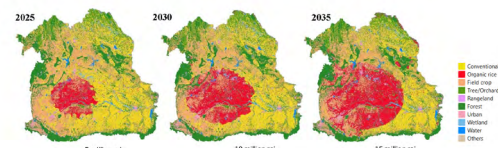
Scenario1. Organic rice expansion in BAU (One million rai)



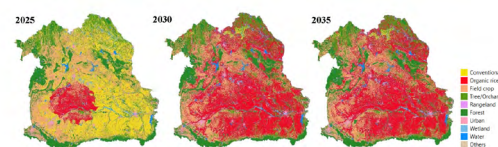
Scenario 2. Organic rice expansion under the One Million Rai Organic Rice promotion continued



Scenario3. Organic rice expansion under the enhanced organic rice promotion



Scenario 4. Organic rice expansion under the transformational change towards sustainability



Four scenarios were assessed in the initial project projecting increasing areas of expansion of organic rice

The focus of the initial assessment in Thailand is on the NE region. The focus area for the follow up assessment will include both NE and Central rice growing regions.

## - Facts & Figures -



Thailand trades rice to over

**150**  
countries

and is amongst the top 3 rice exporters



Thailand is

**self sufficient in rice**

and consumers place great importance on the flavour and texture of local varieties



**1 in 5**

Thai households produce rice



Thai rice farming households are mostly smallholders

**43%**

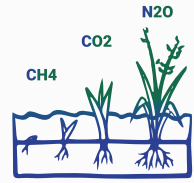
farm on less than 1.6 ha of land



Rice systems are

**dynamic ecosystems**

rich in biodiversity



Rice cultivation contributes

**7.5%**

to Thailand's overall GHG emissions, particularly methane.

## Method, Objectives & Impacts

TEEBAgriFood Thailand aims to incorporate the true values provided by nature, people and society into decision-making that transforms rice systems. In order to do this, a scenario modelling approach is used to examine the potential future impacts of land-use changes as a result of current organic rice expansion and sustainable agriculture policies. Expected outcomes:

1. Provide decision makers with holistic data on policy interventions linked to rice food systems:
  - Facilitate science-based policy decisions that reward responsible stewardship of natural, human, social and produced capital.
  - Compare plausible policy futures for organic rice systems in terms of natural, social, human and produced capital.
  - Evaluate the economic case for sustainable rice production as advocated under the SRP Standard.
2. Raise awareness on how valuing nature and people in food systems can serve national priorities and global commitments
  - Equip government staff at national and subnational level with the tools and information to recognize the value that nature, people and society provide to food systems
  - Conduct seminars and training sessions with agri-food businesses to show how including 'nature on their balance sheets' contributes to a thriving and sustainable business in future scenarios.

## TEEBAgriFood Business Track

TEEBAgriFood draft [operational guidelines for business](#) have been developed through the project by Capitals Coalition. A business roundtable was held on 25 November 2021 and business trainings started in March 2022. Participating businesses are able to apply a holistic capitals assessment of their operations as a practical way for businesses to understand and act upon their impact and dependency on natural, human, social, and produced capital.



Organic Jasmine Rice Farming, Thailand. Photo: Kachenpr.

Project Duration:

2017 – 2023

Research Institution:

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Khon Kaen University

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