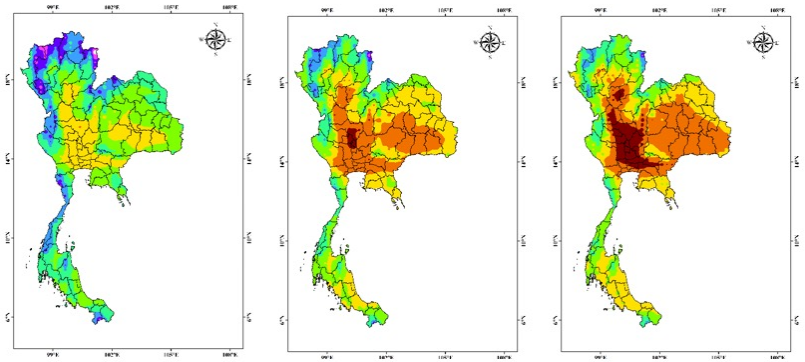
Thai Rice NAMA Project

Rice Farming and Climate Change in Thailand

Climate change will lead to changing weather patterns and temperature in Thailand. The agricultural sector **is highly vulnerable.**

- Increased number of **hot days** above 35°C.
- **Dry seasons** will get drier, **wet seasons** will get wetter
- Increased seasonality and **weather extremes**



Baseline max. Temperature (1975-2004) | **Tmax RCP4.5 (2049)** | **Tmax RCP8.5 (2049)**

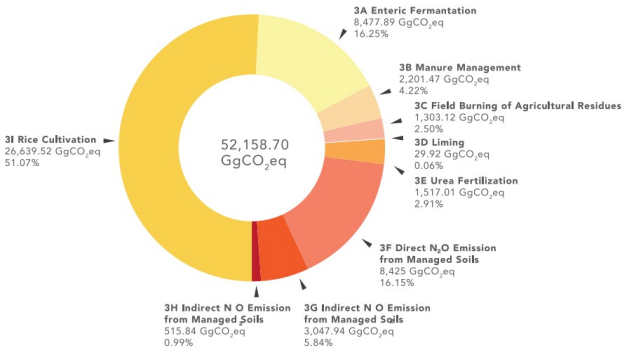


Figure 2-6: GHG emissions in Agriculture sector 2016

Agriculture is a critical **contributor to GHG emissions**

Second largest emitting sector after energy in Thailand with **Methane** from rice production as the driving force

- CH4 emissions (anaerobic decomposition in flooded paddy)
- Excessive fertilizer application (NO2)
- Straw & stubble burning (CH4)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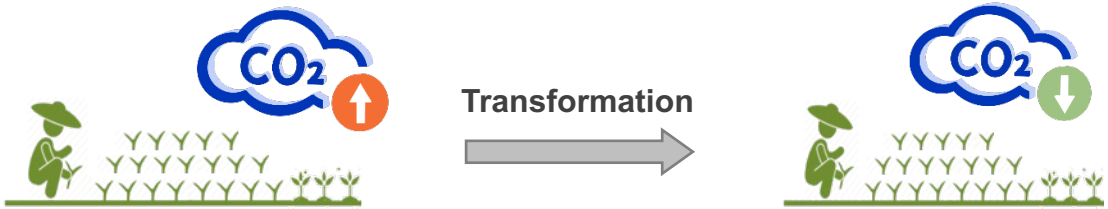
Overview of Thai Rice NAMA

THAI RICE NAMA | ชาวนารักโลก

Project Objective

To achieve transformational change through a shift from conventional to low-emission farming



- Farmers reduce GHG emissions and realize co-benefits by adopting SRP Standard/GAP++
- Mitigation services are provided to the market and help farmers to adopt low-emission technologies
- Transformation is supported through market linkages and financial services

Financial supported by German, United Kingdom, Denmark Governments and the European Commission

NAMA Facility

14.9 Million Euro

Implemented and Managed by

Project Target and Mitigation Potential

THAI RICE NAMA | ชาวนารักโลก

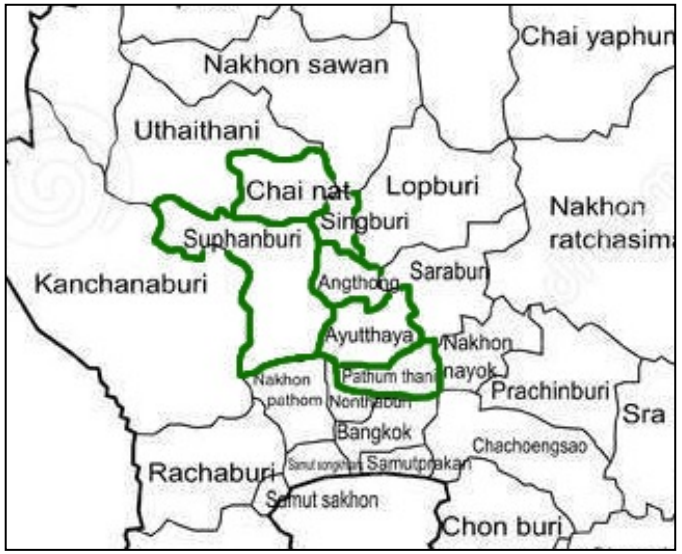
100,000 farmer households in six provinces in the Central Plain

Rice farming areas of approximately 450,000 hectares

Total annual rice production of around 4 million tons

Reduce GHG emissions by 1.73 million tCO2eq over 5 years of project implementation

6 Provinces: Central Plain of Thailand



Chainat, Angthong, Pathum Thani, Singburi, Ayutthaya, and Suphanburi

* Average yield is 4.375 ton/ha and 100% adoption rate

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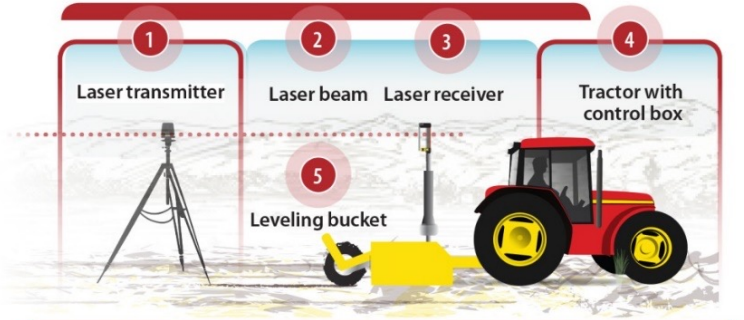
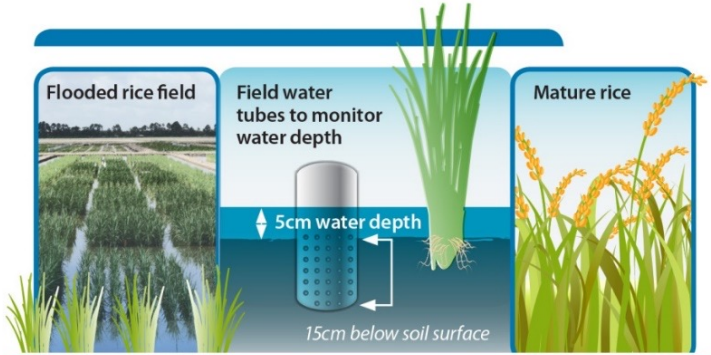
Thai Rice NAMA Mitigation Technology

THAI RICE NAMA | ชาวนารักโลก

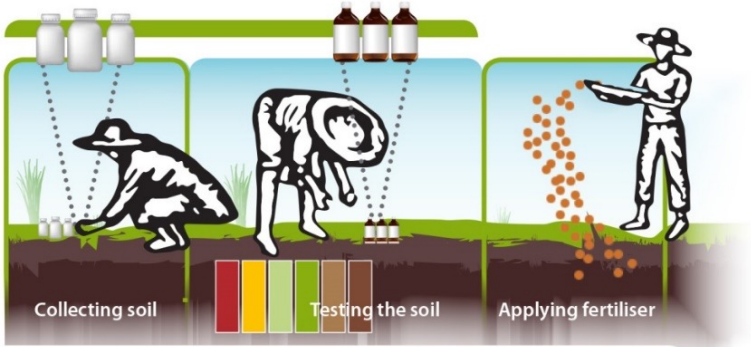


Laser Land Levelling

Straw and Stubble Management



Alternate Wetting and Drying



Site-specific Nutrient Management

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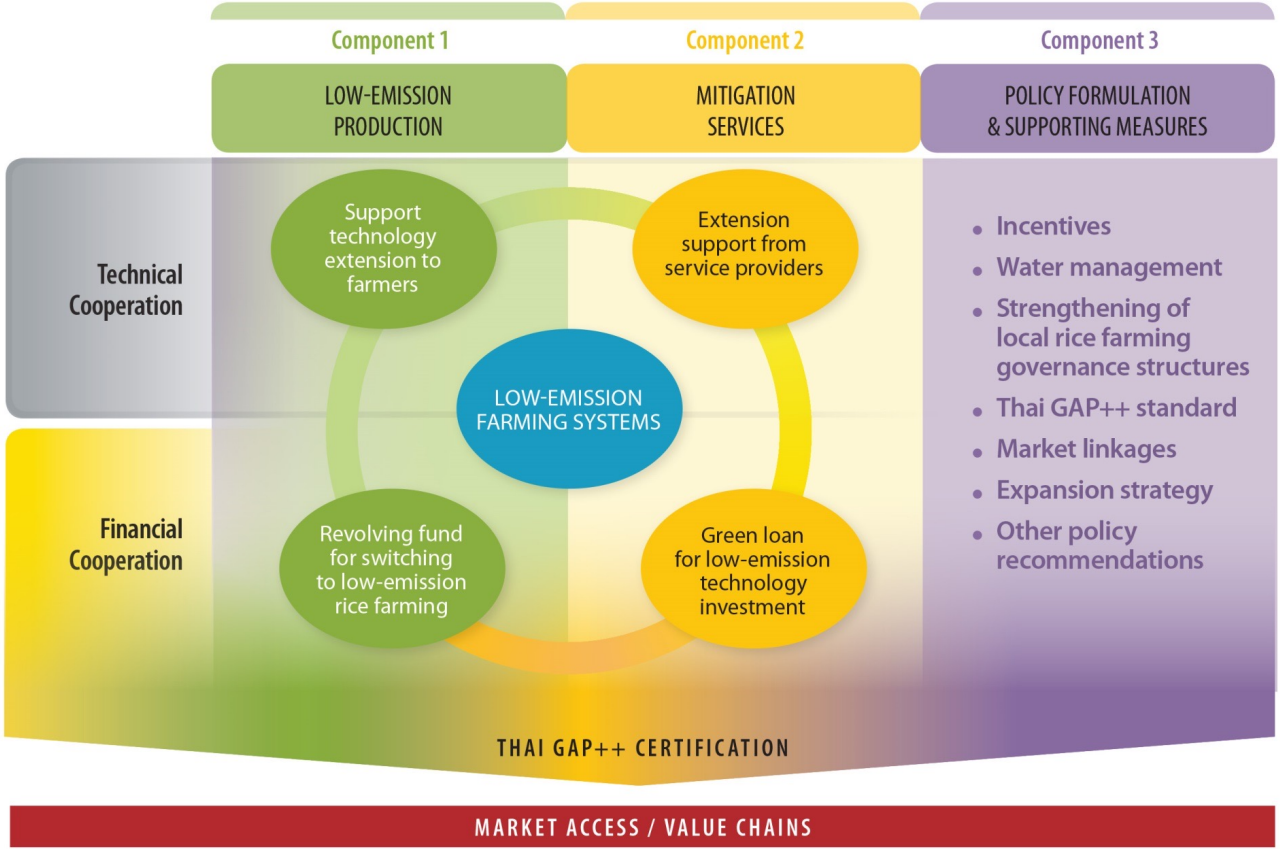
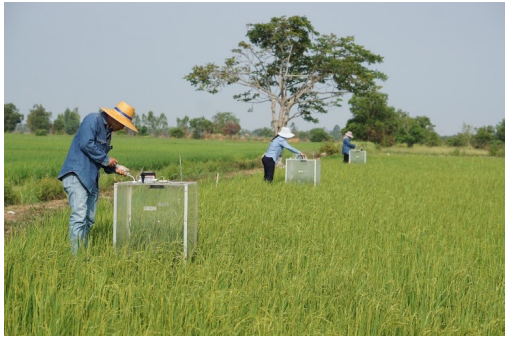
Thai Rice NAMA Intervention Strategy



Highlights and Achievements 2018 - 2022

- **25,000 farmers benefitted**: from extension activities, capacity building activities and financial mechanism
- **Reduced GHG emissions of 305,000 tCO2eq** (by end of 2021)
- **Establishment of MRV System**: on-ground measurement of GHG and capacity development
- **Thai GAP++ / SRP Standard**: coordinated with national bodies and supported the successful approval and adoption by ACFS in 2022



Project Idea “GCF Thai Rice: Strengthening climate-smart rice farming in Thailand”

GCF Thai Rice

The **objective** of the project is to shift smallholder rice agriculture in Thailand onto a **low-emission, climate-resilient development trajectory**. The project promotes the adoption of innovative climate technology and aims at upscaling and extending the Thai Rice NAMA.

Adaptation benefit: Reduction of climate **vulnerability** for **250,000 smallholder farmers** and 1,250,000 household members in **15 provinces.**

Mitigation benefit: Reduction of GHG emissions by **at least 4 mio. tons of CO2eq** and additional 11.94 million tons of CO2 equivalent from NSP farmers over the project lifespan.

Co-benefits
20% yield increase
20% farmer income increase

Volume
Up to € 40m GCF funding
Up to € 62m Co-financing

Project Duration
5 years

Project Rationale: Thai Rice NAMA to GCF Thai Rice

GREEN CLIMATE FUND

- ✓ Carry forward the momentum from the Thai Rice NAMA project
- ✓ Extend the scope of the project to include adaptation objectives next to mitigation goals
- ✓ Ensure a sustainable exit strategy of the Thai Rice NAMA

Thank you!