

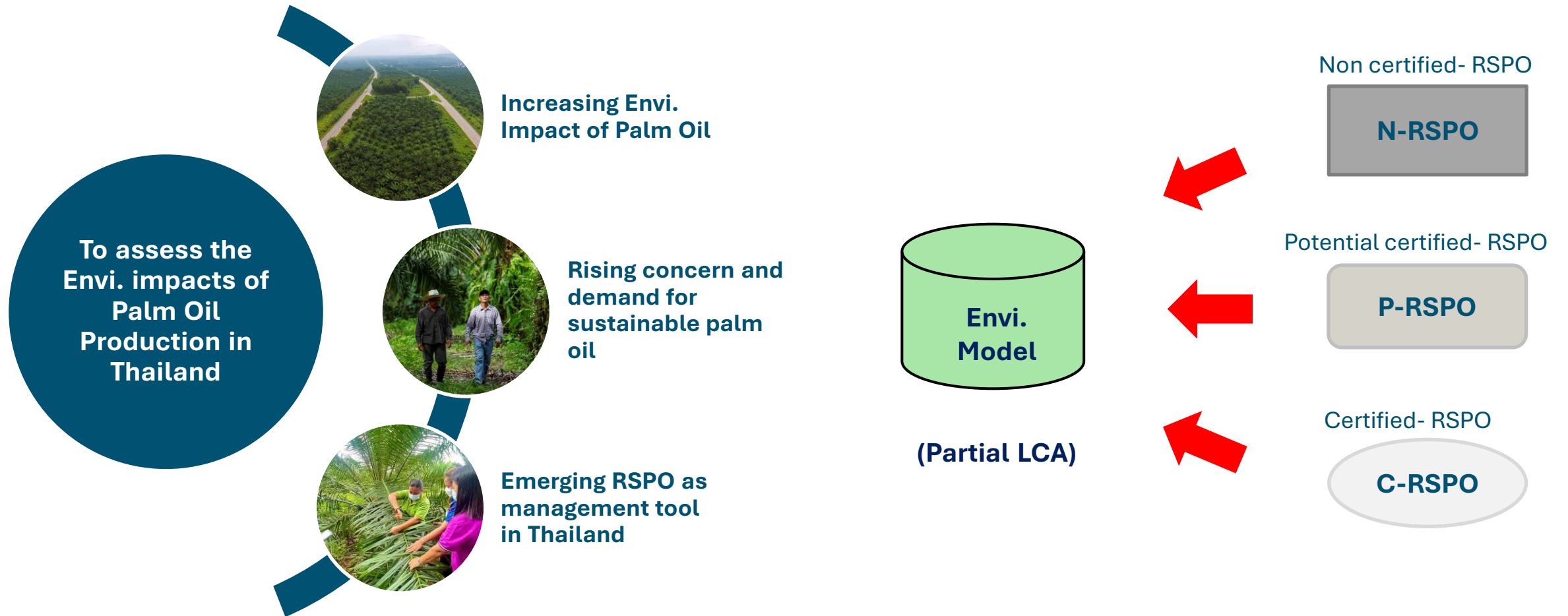
Greenhouse gas emissions and other environmental impacts of palm oil production in Thailand: From research to action

Kanokwan Saswattecha, PhD

3rd webinar: Greenhouse gas emissions and climate change within the context of agriculture | 28th March, 2024



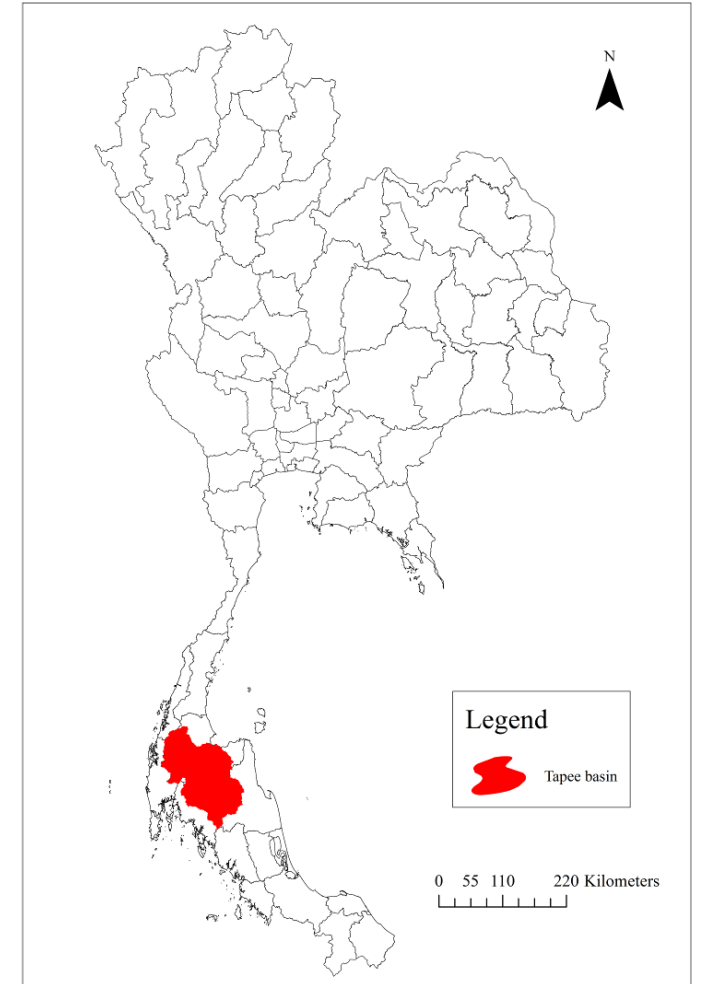
Rationale and Research Objective (in 2014)



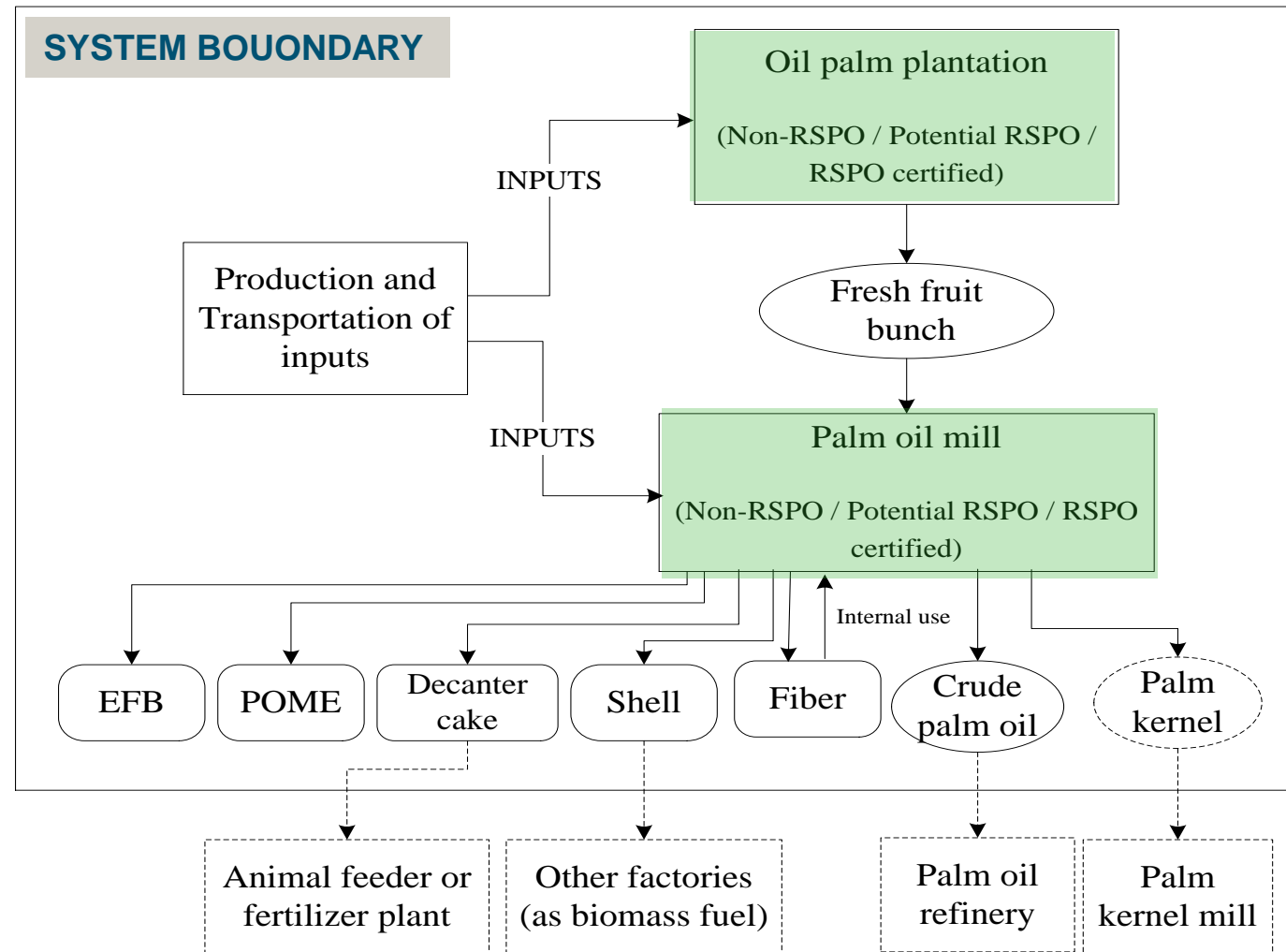
Study Area

Tapi River Basin

- > 60% of palm oil in Thailand is produced from this basin
- Mainly covers Surat Thani (70% of the basin), Nakhon Si Thammarat (17%) and Krabi (13%)
- RSPO certification scheme
 - N-RSPO case = 36 mills producing CPO, 60% of the Basin;
 - P-RSPO case = 8 mills producing CPO, 29% of the Basin;
 - C-RSPO case = 4 mills producing CPO, 11% of the Basin



Environmental Impact Model



where:

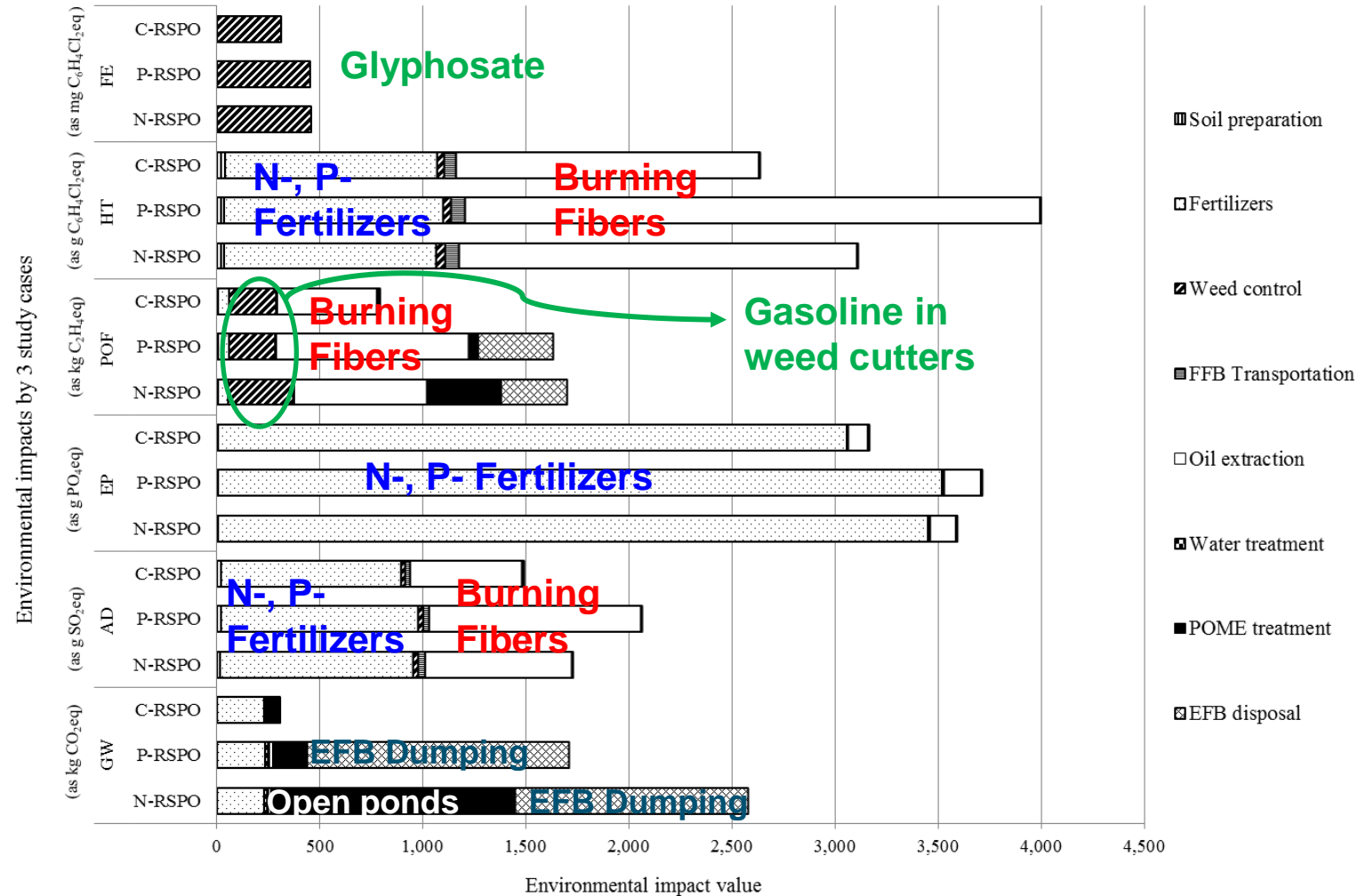
Product

Waste

Aggregated Environmental Impact

(unit/ton CPO)

- 5 activities largely contribute to the environmental impact; 1) Burning fibers, 2) Using fertilizers, 3) Wastewater and EFB management, 4) Gasoline use in weed cutters and 5) Glyphosate
- Certified RSPO producers cause the lowest environmental impact per ton of CPO



Key challenges of palm oil sector in Thailand

Independent oil palm smallholder farmers

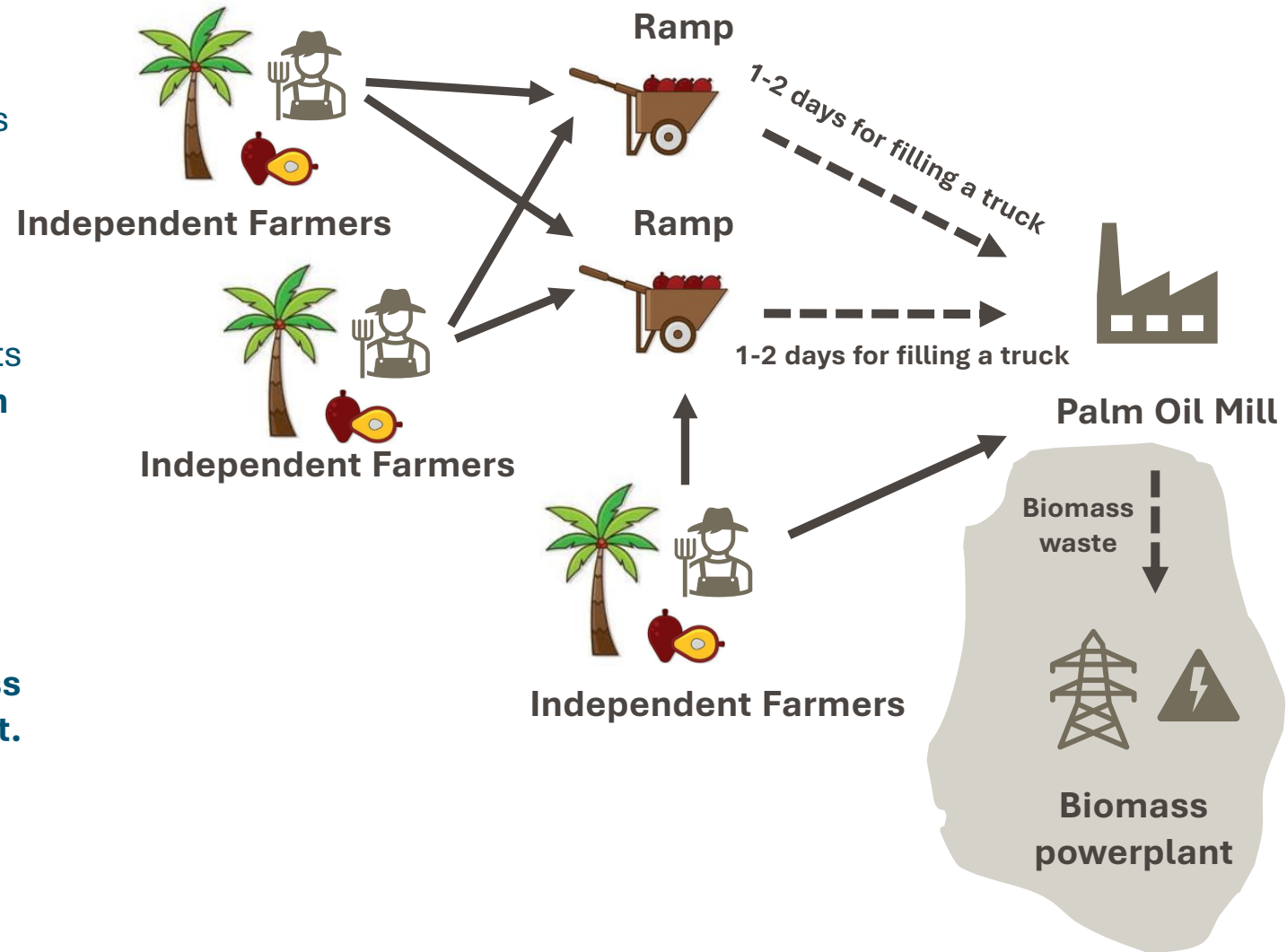
- Low access of quality oil palm seedlings
- Low implementation of good agriculture practices
- Harvest unripe fruits with low oil content

Ramps or collecting points

- Water addition to increased FFB weight that affects FFB quality **Getting better due to registration and inspection by the Thai government**

Palm oil mills

- Purchase of unripe fruits still, causing low oil extraction rate and **high biomass waste**. **Biomass has turned into power due to RE policy support.**
- Wastewater management... **most (but not all) palm oil mills has installed biogas capture treatment due to CDM**



How RSPO can improve Thai Palm Oil Industry

1. RSPO can play a role in improving sustainable palm oil production for the domestic market

- Supporting smallholders to access to information
- Delivering the knowledge in simple and attractive ways

2. We urgently need to improve collaboration along the value chain

- Linking certified growers/producers to the buyers (create the market access)
- Coordination along the value chains, in particular ramps

3. RSPO certification alone will not work in Thailand

- Thailand does not aim for the export. Interventions from the Thai government in term of policy and plans are very necessary.



Sustainable and Climate-friendly Palm Oil Production and Procurement | SCPOPP



giz Deutsche Gesellschaft
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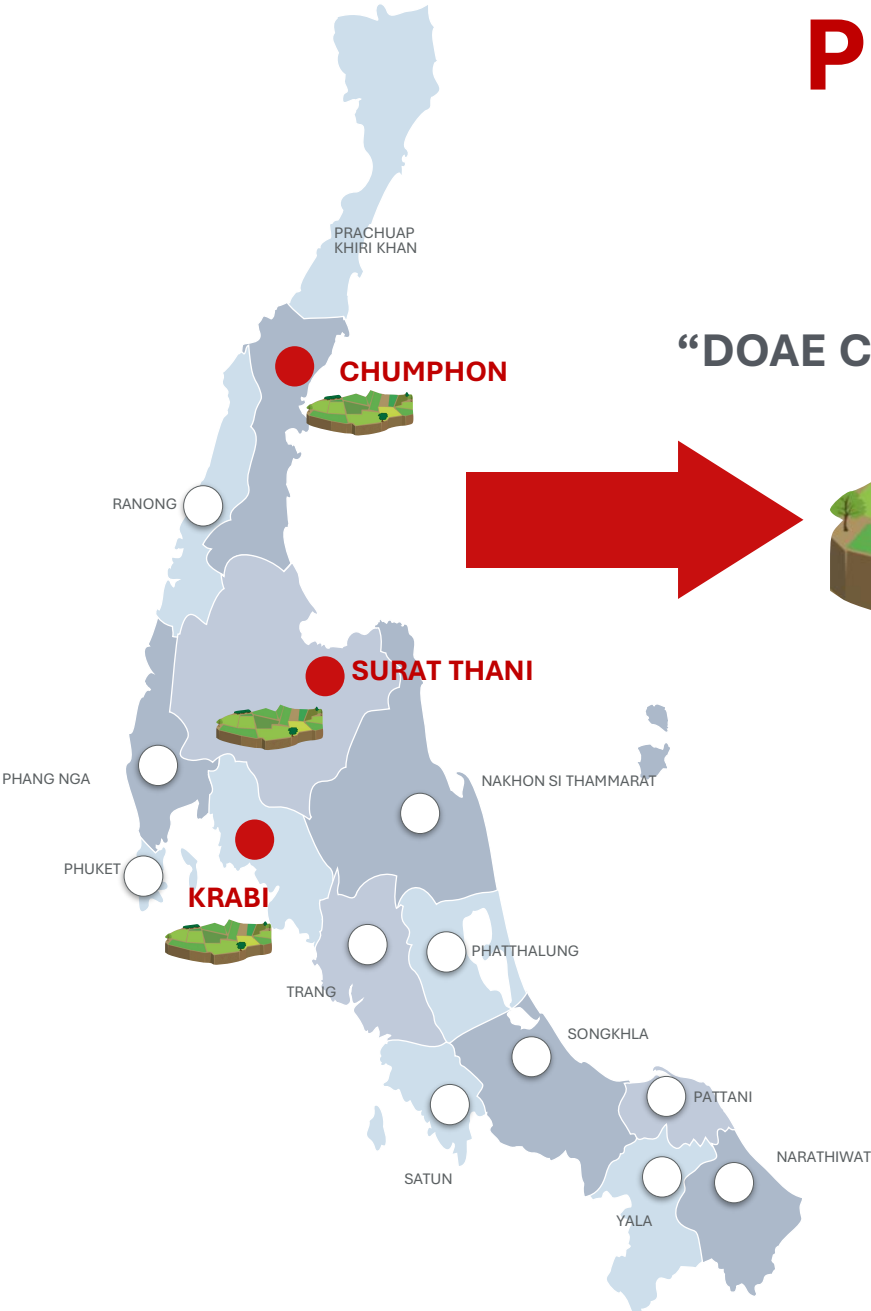
On behalf of:



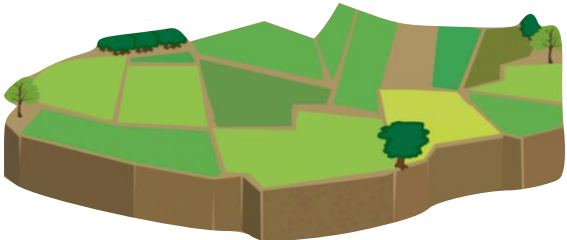
Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany

Project pilot areas



“DOAE Collaborative Farming Scheme”



65 smallholder groups



3,400 smallholders



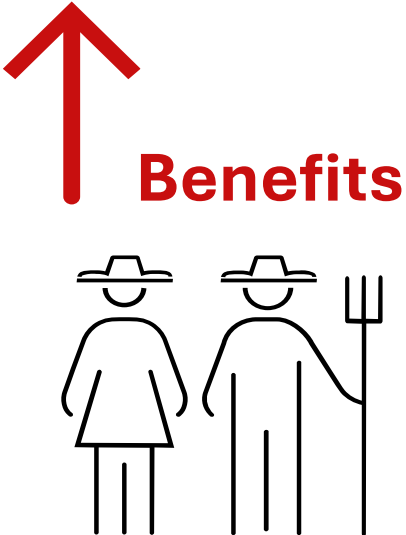
13,000 ha



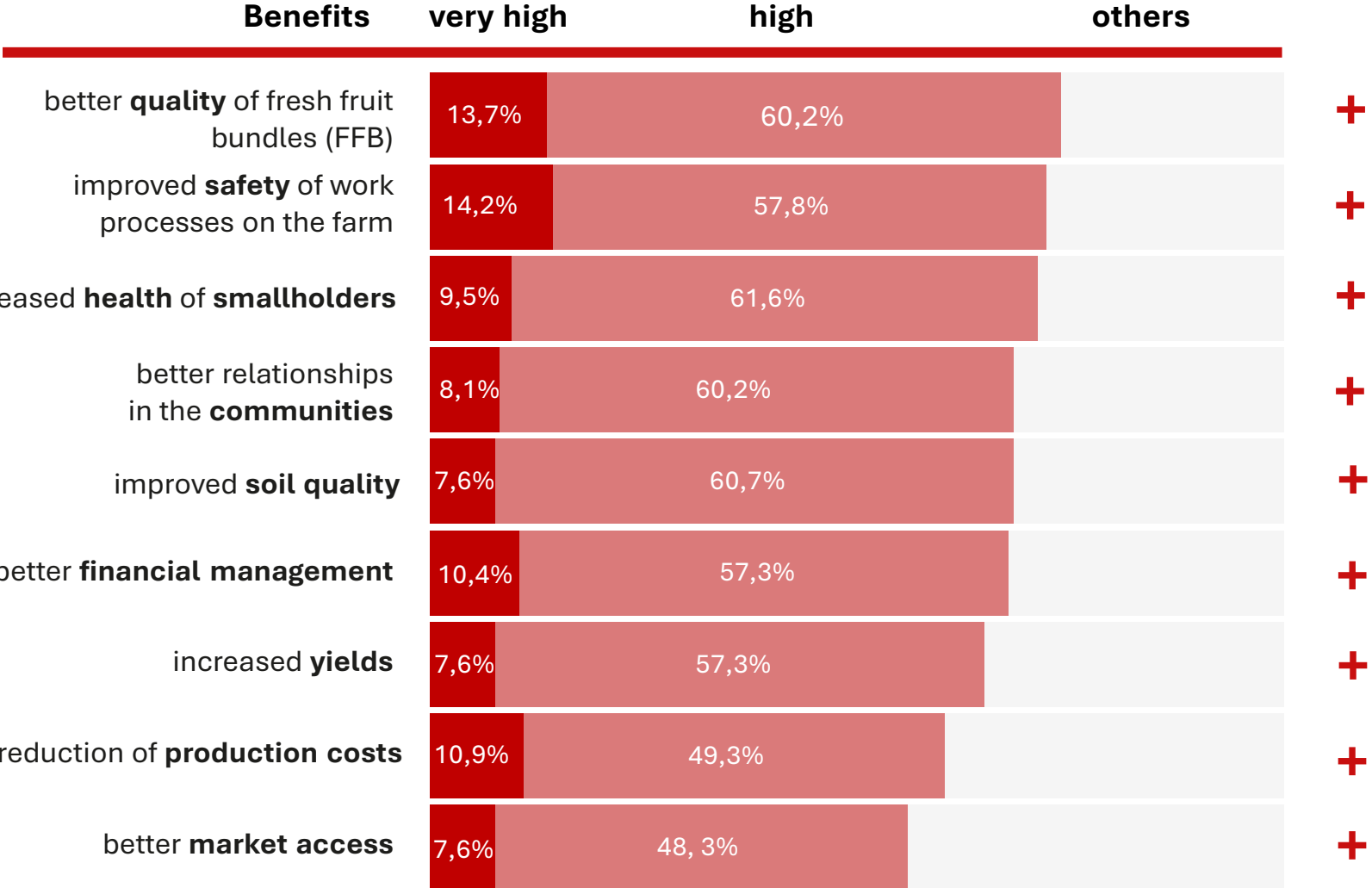
19 palm oil mills

Smallholder Training Program

survey result of smallholders after their participation in the trainings (May, 2022)

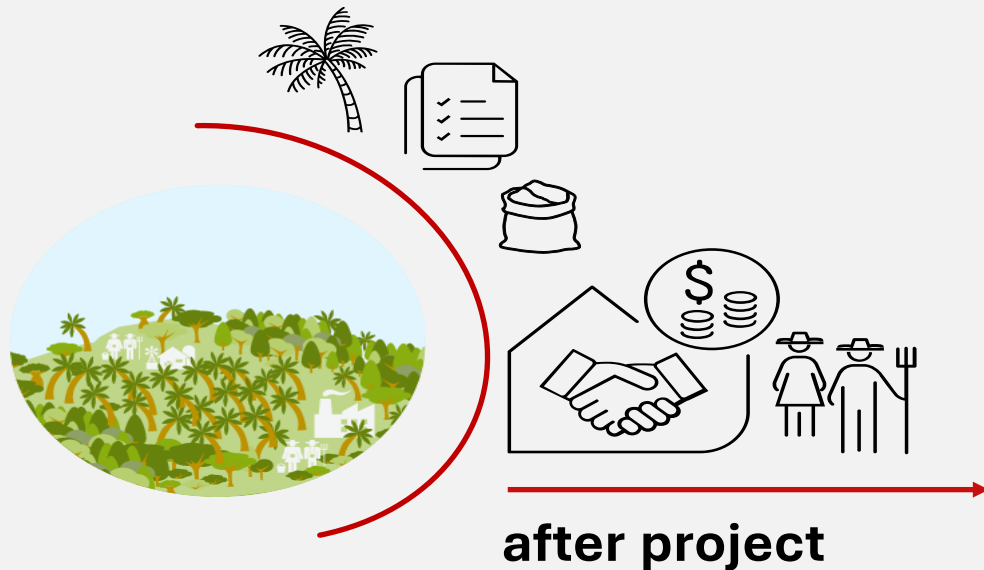


3,400
trained
smallholders



The incentive mechanism is laid down in the Partnership Agreement to motivate and promote farmer adoption

The incentive mechanism consists of financial and non-monetary incentives, including **better prices for FFB**, **sale of fertilizers at wholesale prices**, free training courses to prepare for RSPO certification, sale of smallholder credits after achieved RSPO certification, free return of empty fruit bundles to smallholder that can be used for mulching and composting, fast and free soil tests, etc.



Thailand 11 MoUs signed

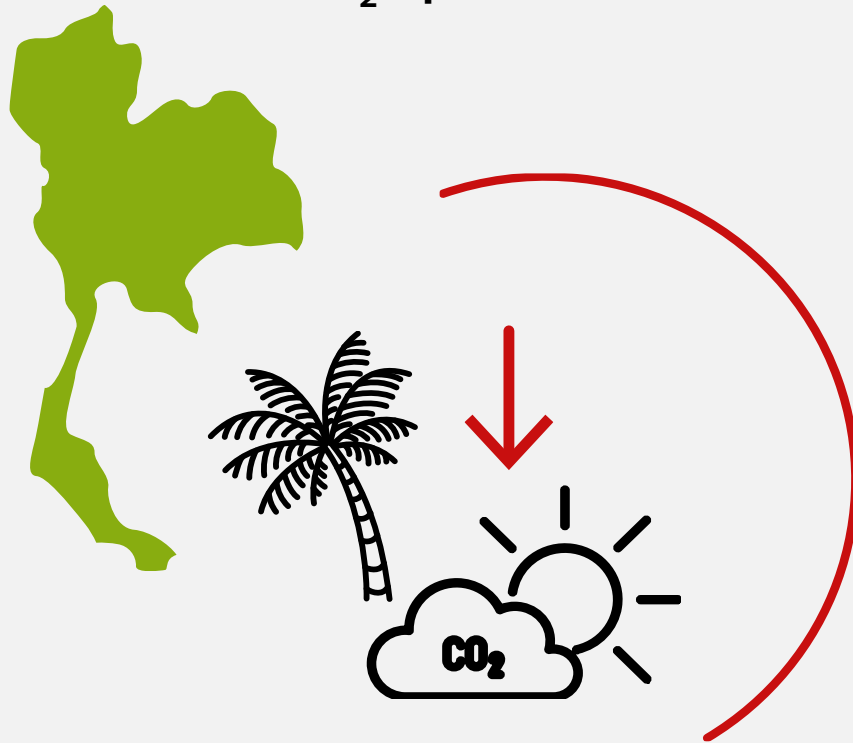
- 9 MoUs between 9 farmer groups and 5 palm oil mills
- **1 Partner with RSPO for increasing demand on sustainable palm oil** and support on smallholder engagement
- **1 Partner with Global Green Chemicals (GGC) for smallholder inclusive business**

On October 31st of 2022, **Thailand Sustainable Palm Oil Alliance (TSPOA)** was launched to promote consumption and production of sustainable palm oil (or RSPO certification)

Greenhouse gas emissions from oil palm cultivation are reduced in the project regions in Thailand

18,000

tCO₂eq of GHG



“**Low-carbon measures**” include:

1. **Harvesting ripe fruits**
2. **Effective fertilizer management**
3. Usage of empty fruit bunches
4. Intercropping System
5. Planting cover (legume) plants

On February 20 of 2023, **Department of Agriculture** launched a working committee to implement “**Low Carbon in Crop Production**”, including oil palm, sugar cane, rubber, mango

The jurisdictional approach is a key element for upscaling sustainable palm oil production and has a high potential for application after project completion

Study result on

“Jurisdictional Approach (JA)”

recommended that the JA should be piloted in “Suratthani Province”

In March 2021, study result was discussed with key stakeholders in Suratthani



On August 19th of 2022, the district government in **Surat Thani** agreed with the **RSPO** to pilot a jurisdictional approach in two districts of them.