

TEEB AgriFood Thailand

Measuring what matters in sustainable rice production



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Sustainable Rice Platform

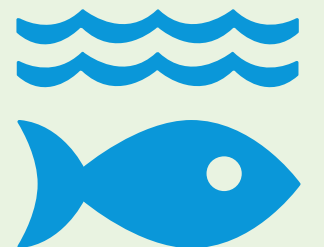
Sustainable Methods

- Good Agricultural Practices
- Organic rice practice
- Sustainable rice



Sustainable Rice

- Health
- Ecosystem
- Environment
- Livelihood





Analysis of policy gaps and options for assessment



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assessment



To calculate overall impact of SRP standard for sustainable rice cultivation in Thailand in terms of impact on natural, human, social and produced capitals.

Incentives



Set of incentives in order to change to sustainable rice.

Indicators



To expand the focus from productivity, livelihood development, and growth, to integrate a balanced holistic of indicators on environmental sustainability and public health and wellbeing.

To calculate overall impact of adopting SRP standard for sustainable rice cultivation in Thailand



Produced capital



Human capital



Natural capital



Social capital

Policy Questions

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assessment



The Economics of Ecosystems & Biodiversity

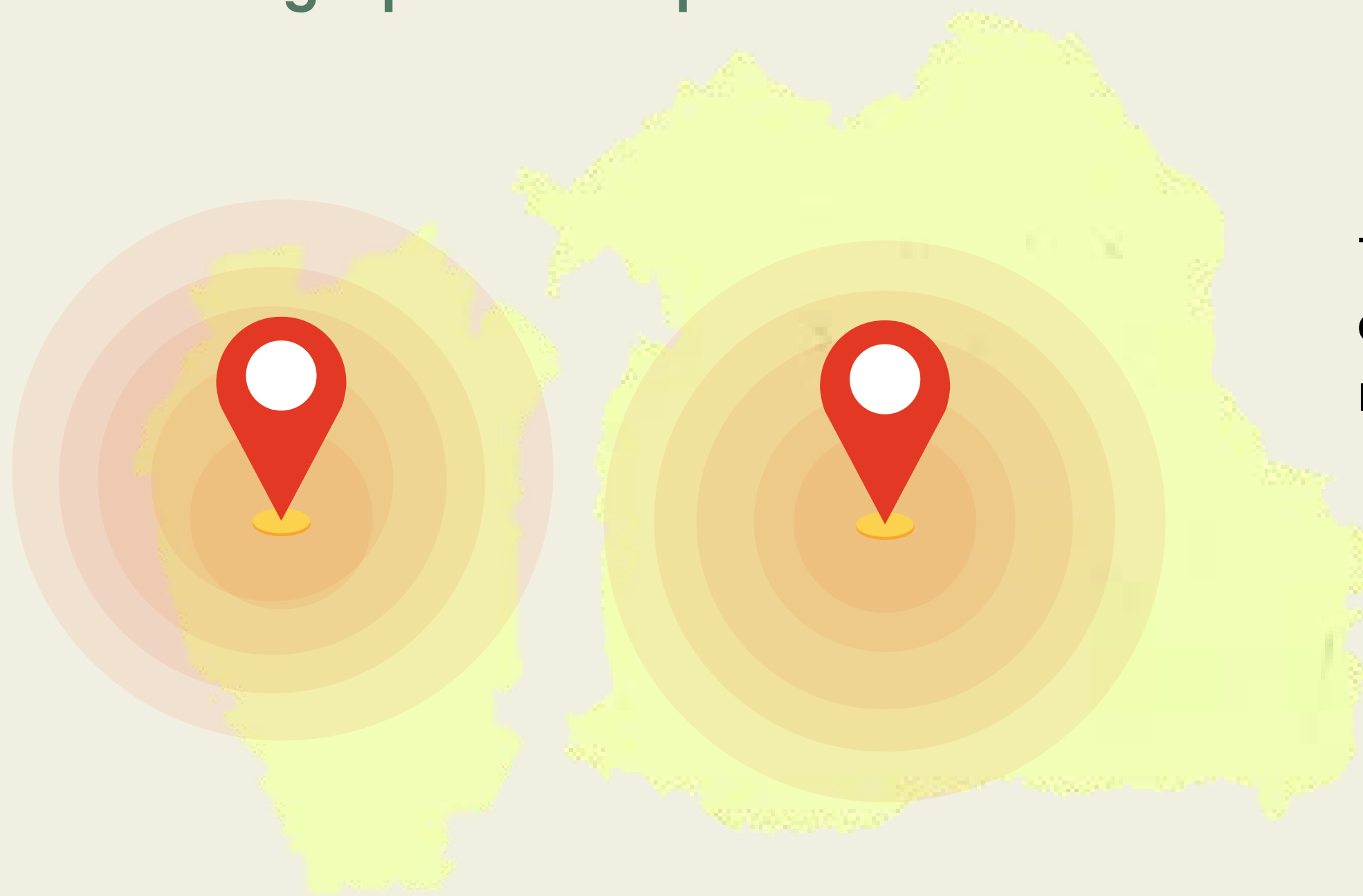


- What would be the additional value and overall impact of adopting SRP standard for sustainable rice cultivation in Thailand in terms of impact on natural, human, social and produced capitals?
- What is the public sector return on investment (ROI) in pro-nature production?



Research scope

Geographical scope



The Central and Northeast region covers more than 80 percent of the rice cultivation area in Thailand.

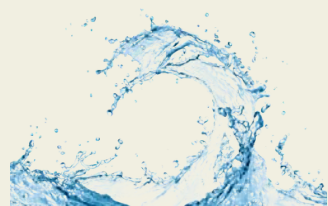




Research scope

Management practice scope

WATER MANAGEMENT



- Water footprint
- GHG emission

NUTRIENT MANAGEMENT



- GHG emissions
- Cost of cultivation
- Rice yield

PEST MANAGEMENT



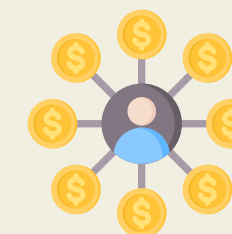
- Biodiversity
- Cost of cultivation
- Human health

RICE STRAW MANAGEMENT



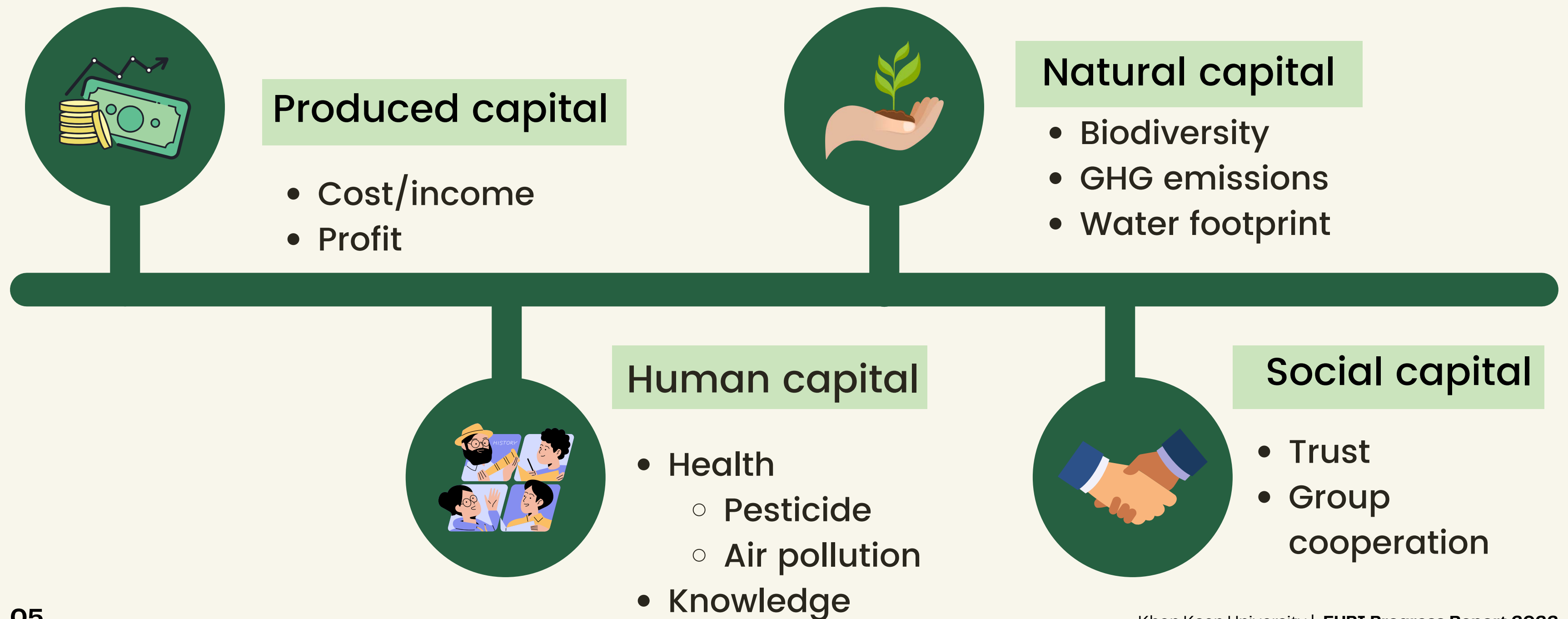
- GHG emissions
- Air pollution
- Human health

DIVERSIFICATION

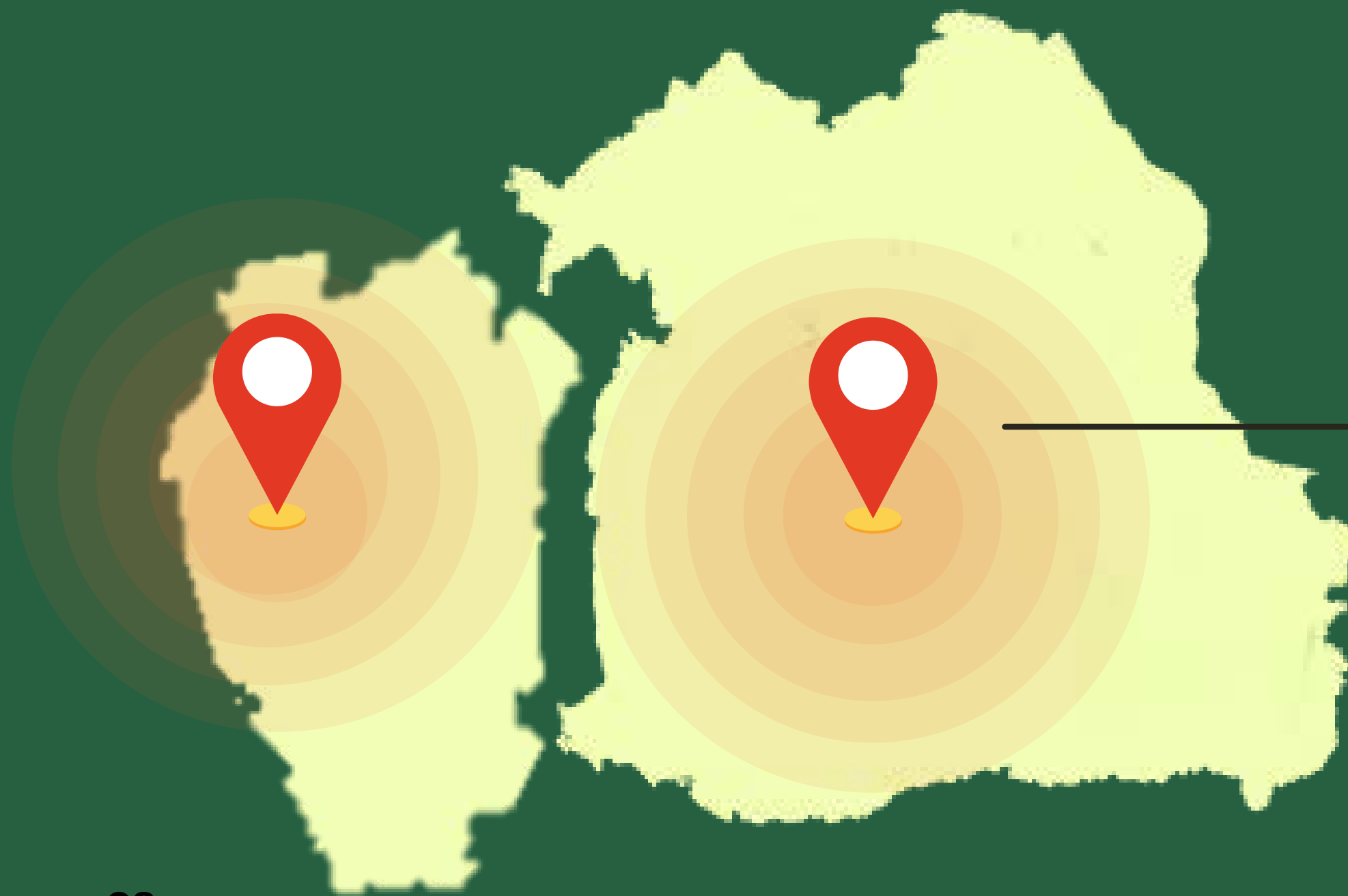


- GHG emissions
- Bioviversity
- Rice yield
- Cost of cultivation

TEEBAgriFood framework



Scenario Development



● Scenario analysis land platform change to sustainable rice in Northeastern and Central Thailand.

Scenario Development

Based on current policies and farmers' decision

- Thailand's 20-Year National Strategy (2018–2037) goals
- Bio- Circular and Green Economy (BCG) national agenda
- Mechanism to lead farmers' decision to SRP adoption



Incentives



To reorient and identify incentives that could encourage farmers to adopt sustainable rice practice

Incentives



Policy Questions



- What would be the systemic impacts of a change or reorientation of agricultural subsidies towards direct support of nature-positive production methods in the rice sector?
- How do small holders benefit from adoption of practices promoted by SRP/GAP++? How do other stakeholders benefit? Where could incentives be most equitably directed to encourage good practices?
- What would be the additional value and overall impact of other specific policy incentives or investments?

Incentives matter

- Incentives to reduce risk, especially during the transition period, are important.
- Forms of incentives are also important.



Indicators



To identify policy achievement in a balanced holistic set of indicators that focus not only on productivity, livelihood development, and growth, but also on environmental sustainability and public health and wellbeing.



Indicators



Policy Questions

- Which are critical sustainability indicators at national level for successful agrifood policy achievement in the next 20 years?
- Which natural and human capital costs and benefits need to be prioritized to support the transformational shift to sustainability by 2030?

INDICATORS

Index	Pillar	Policy response*	Indicator	Measurement
Rice Production Sustainability Index (RPSI)	Economic	Production	Land productivity	Physical yield of per unit area ¹
		Growers' income	Benefit-cost-ratio	Ratio of total revenue and cost ²
		Supply of adequate input	Input-self-sufficiency	Ratio of local and external input ³
		Non-farm employment	Pluriactivity	Family income sources other than farming ⁴
	Environmental	Balance of nutrients	Nutrient management	Extent of fertilisers use, quantity & preparation ⁵
		Proper utilisation of natural resources	Use of recourse conserving practs. & techs.	No. of practices & technologies used that are assumed ecologically sound ⁶
		Balance of major & minor crops	Crop diversity	No. of crops & proportion of acreage of crop to total cropped area ⁷
		Emphasis on non-chemical measure	Pest, disease & weed management	Extent of chemical & non-chemical methods application to manage pests, diseases & weeds ⁸
	Social	Develop efficient manpower	Level of education	No. of years of schooling of growers ⁹
		Provide technological information	Information availability & accessibility	No. of sources of information and growers ability to access ¹⁰
		Develop farmers' network	Social capital	Extent of involvement, no. of contact & their confidence on the organisations ¹¹
		Serve society	Equity	Growers' opinions on how to distribute goods & services to society ¹²



Thank You



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