

## **Better Rice Initiative Asia (BRIA)**

Better Rice, Better Life

# "Sustainable Rice Production Practices"

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For "SAS for Food Security and Sustainable Development in the ASEAN Region"

Bangkok, 1-3 May 2017







## **BRIA** at a Glance



Vision: To contribute to better and sustainable rice production and nutrition in Southeast Asia.

Goal: To enhance the rice farmers' livelihood by strengthening the rice value chains and nutrition.

#### Countries:









#### **Duration:**

Oct 2013 - Nov 2017

Budget: €10m

Private (70%), BMZ (30%)

Project staff: 32

Core Strategy: Better Rice, Better Life

Target Beneficiaries: 30,000 farmers

#### Approach:

#### **Profession**

- Capacity of rice farmers & value chain actors
- Rice agriprenuership

#### **Production**

- Optimization of inputs and increase of productivity
- Standards & certification

#### **Nutrition**

- Increase of nutrient value of crops
- Rice fortification

Sustainable rice practices & farmer livelihoods

Functional and sustainable agri-business

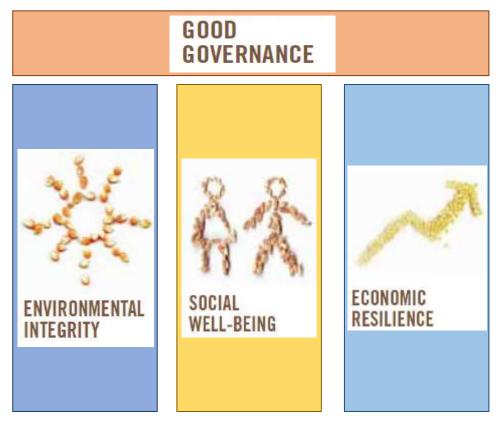
Public-private partnership models

www.better-rice-initiative-asia.org

### What is Sustainable Rice Production?



Rice production with considering the environmental, social, and economic sustainability, and also grounded and supported by good governance setup, in order to increase the production of rice in a manner that is economically viable and environmentally sustainable.



Source: FAO-NRDD (2013): Sustainability Assessment of Food and Agriculture Systems (SAFA). Rome.

## Sustainable Rice Platform



## Addressing food security, vulnerability to climate change & resource efficiency

- Founded in 2011: UN Environment and International Rice Research Institute (IRRI)
- Public-private partnership
- Main objectives:
  - Reduce vulnerability, enhance food security and resource efficiency
  - Serve as a knowledge repository, expertise, networks
  - Catalyze sector transformation through new alliances and by creating shared value

#### Governments & GOs

CAM, INDO, Lao PDR, PHILS, SL, TH, VN. GIZ

#### **Input suppliers**

BASF, Bayer, Syngenta, Dow, IFA

> Food industry Ahold, Mars, Ebro

#### **International Orgs**

UNEP, FAO, IFC

70 institutional members

#### **Traders/Importers**

Louis Dreyfus Commodities, Olam International, Sunrice, Tilda, van Sillevoldt Rijst, Westmill, Veetee

#### **NGOs**

Rainforest Alliance, FairTrade, Wildlife Conservation Society, Solidaridad, WWF

#### Research

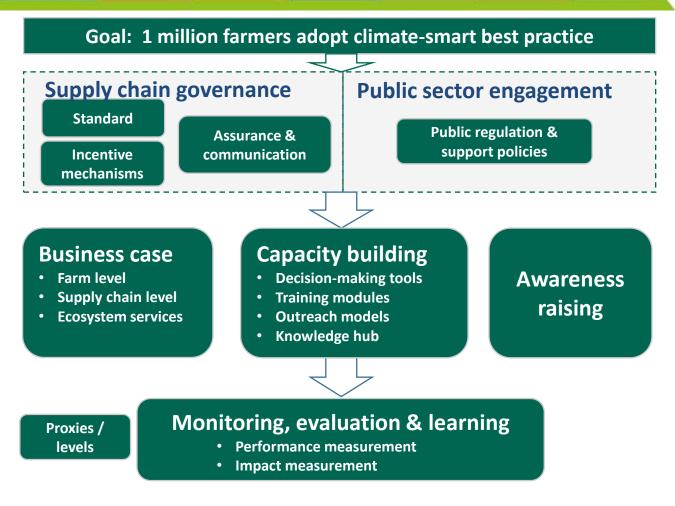
IRRI, Punjab Agricultural Univ, Sri Lanka Rice R&D Institute, NACA, NAFRI (Lao PDR), INPI

#### **Producer Groups**

Prime (Myanmar) Nestle Paddy Club Malaysia

## Sustainability evaluation by SRP tools

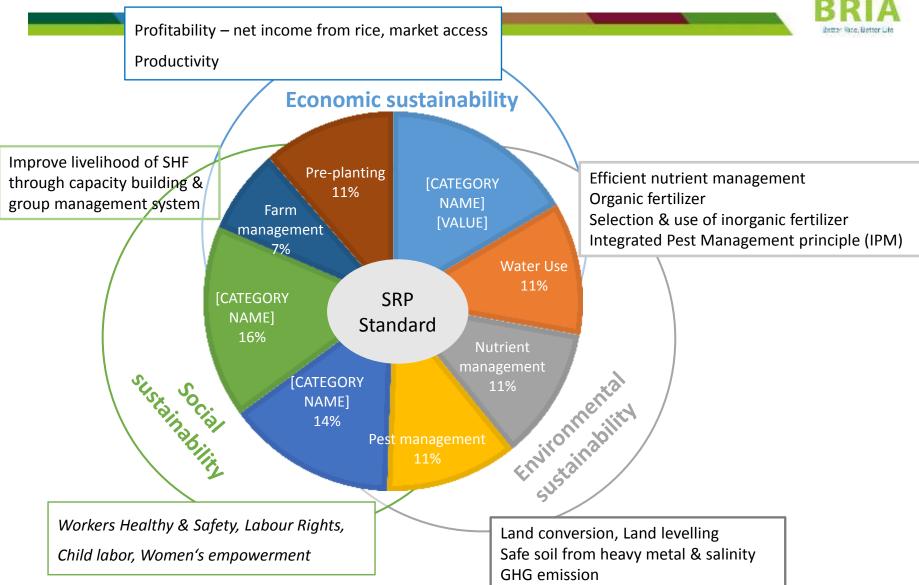




- SRP Standard
- SRP Performance Indicator

## Sustainability Standard to promote sustainable rice cultivation globally





## Performance Indicator to measure the impact of sustainable practices



Environmental Sustainability

PI 5: Water use efficiency

PI 6: Nutrient use efficiency – N

PI 7: Nutrient use efficiency – P

PI 8: Pesticide use efficiency

PI 9: GHG emissions

SRP Performance Indicator

Economic Sustainability

Social Sustainability

PI 1: Profitability – net income from rice

PI 2: Labor profitability

PI 3: Productivity – grain yield

PI 4: Food safety

PI 10: Health & safety

PI 11: Child labor

PI 12: Women's empowerment

## SRP Standard and Indicators: Measure the sustainability of any rice system

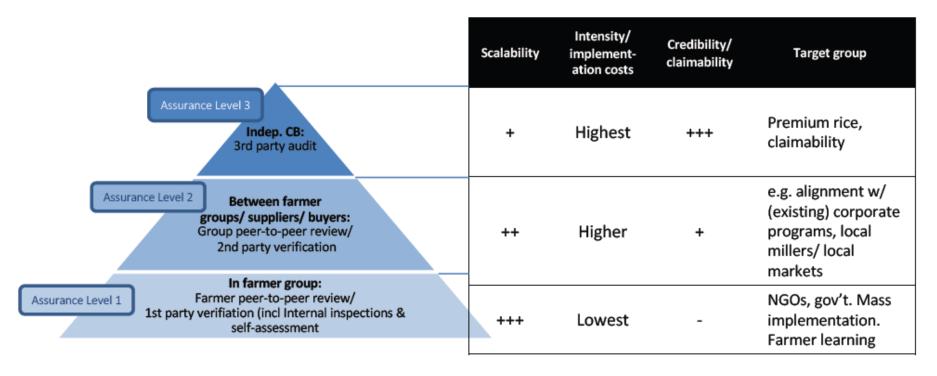


Score on standard Missed Thresholds			73	Points	
		4		Requirements	
		Chapte	er		
	= your score				
Chapter	Score	Thresholds not met 120	% —		
arm Management	89%	0 100	%		
Pre Planting	61%	1 80	% —		
Water Management	58%	0 60			
Nutrient Management	100%				
Pest Management	80%				
Harvest and Post Harvest	71%		% +		
	78%	0	lange hent Pre Planting Hange hent Manage hen Manage hen Mater Manage hen Mater Manage hen Pest	Manage rent Labout Health and Safety Labout	
Health and Safety					

## ISSUE: How to assure the adoption of the Standard?



#### Assurance System:



Innovative, flexible & credible. Allows for rapid scale-up, in line with SRPs objective to reach 1 million farmers by 2021.

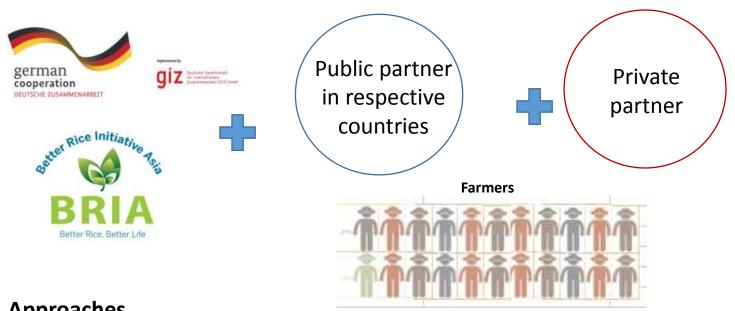
## 1<sup>st</sup> Level of assurance system



### Among farmers, using the Internal Control (Management) System

- Working in a group
- Farming as a business = professional! (organisational chart, task & responsibility of the management team, etc.)
- Risk assessment (what needs to be improved? On technical)
- Group planning (crop calendar)
- Data collection farm record
- Develop capacity building program
- Soil fertilization & IPM program!!!!
- Self evaluation & External Audit

## Joint forces of various stakeholders in testing the SRP standard



#### **Approaches**

- Pilot testing of the standard as a market linkages tools (certification models) in some BRIA countries (Thailand, and potentially Viet Nam)
- Integrate some of the requirements in the SRP standard to the BRIA training materials on National level
- Using SRP standard as one of the monitoring tools to measure the performance of BRIA farmers' practices



## **PILOT TESTING - THAILAND**

## Set up in Thailand





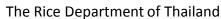




**Public sector** 

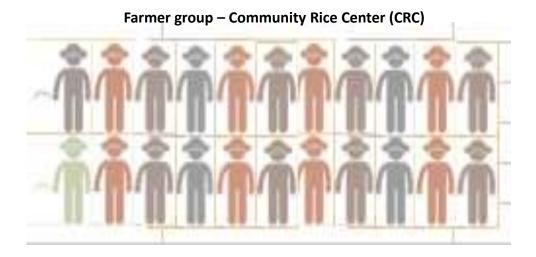








Private sector



## Scope



Target group:
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Bua Ngam CRC	Klang CRC	TOTAL
32 farmers	45 farmers	77 farmers
849 rai	546 rai	1,385 rai

- Variety: Hommali Rice produced in Northeast Thailand
- Rice Quality: GMP & Uniformed rice (other quality requirements to be specified)
- Production: Sustainably produced as recommended by RD/DoAE/BRIA TH
- Period: main crop season 2016 (April / May Dec'16)
- Market linkage arrangement
  - Guaranteed buying by Olam TH according to the agreed annual target through the participating local rice millers
  - Voluntary selling by farmers

### Result in 2016



The audit verified that **28 farmers of Bua Ngam CRC, and 43 farmers of Klang CRC can be considered as "working towards sustainability."** The independent 3<sup>rd</sup> party assessment also showed that farmer compliance

levels averaged 84% against the SRP Standard

400 tonnes of SRP-verified sustainable rice harvested, followed the "mass-balance model."





## Risk assessment



## **Identified challenges**

Farm record

Fertilizer application

Soil fertility

**Traceability** 

Farm Management

## **Corrective actions**

Introduce an integrated data base system (Farmers' diary & software - OFIS)

Conduct Farmer training on sustainable cultivation practices, specifically on the identified topics:

- Soil nutrition testing & leaf chart
  - Land Levelling
    - IPM

Adopt Internal Management System

Improve market linkages

Farmers Records incl. the cost & benefit analysis to help farmers to improve their practices

## Verification system (with utz)



- Internal Management System
  - Create confidence of farmer groups on:
  - ✓ Documentation & records
  - ✓ Risk assessment
  - ✓ Knowledge and understanding
  - ✓ Internal inspection & sanction
- Independent assurance (3<sup>rd</sup> party audit) by OneCert
  - √ Farmer level cultivation technique
  - √ Farmer group level IMS

From 77 trained farmers, only **71 farmers** that is included in the assurance system (due to the sanction system)

## Way Forwards



- Scaling up in 2017, for 22,000 MT of sustainable rice produced in the North East of Thailand
- Improve the IMS and capacitated farmers to be the manager of their own fields
- Improve data base management for impact assessment



#### **ON FARM:**

- No Herbicide applied, although needed. IPM implementation should be re-enforced
- Seed drilling machine can save up seed cost and manpower, but the implementations of farmers are still limited.
- Land Laser Levelling is recommended by SRP, however due to the limited service provider, field size & the cost, it's hard to be implemented. However, manual levelling could be another option

## **Issues and Challenges**



- Collaboration among stakeholders
- Farmer group management
- Verification / Assurance System
- Monitor the compliance with the suggested practices
- Cost and benefit analysis of each suggested practices
- Incentive for farmers
- Impact assessment

### Recommendations



- Production technology = value creation & incentive for farmers?
- Adoption to local context, promote local variety & use of local wisdom
- PPP among stakeholder (policy maker, local authorities, private sectors, farmer groups)
- Economic sustainability (cost & benefit calculation), and social sustainability
- Monitoring and evaluation = feedback to farmers on their improvement



## Thank You!







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