

Regional Rice Initiative Implementation in Indonesia : *the progress and lesson learned*

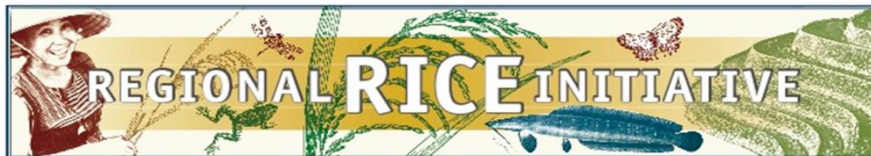
by :

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VECO Indonesia

Objective:

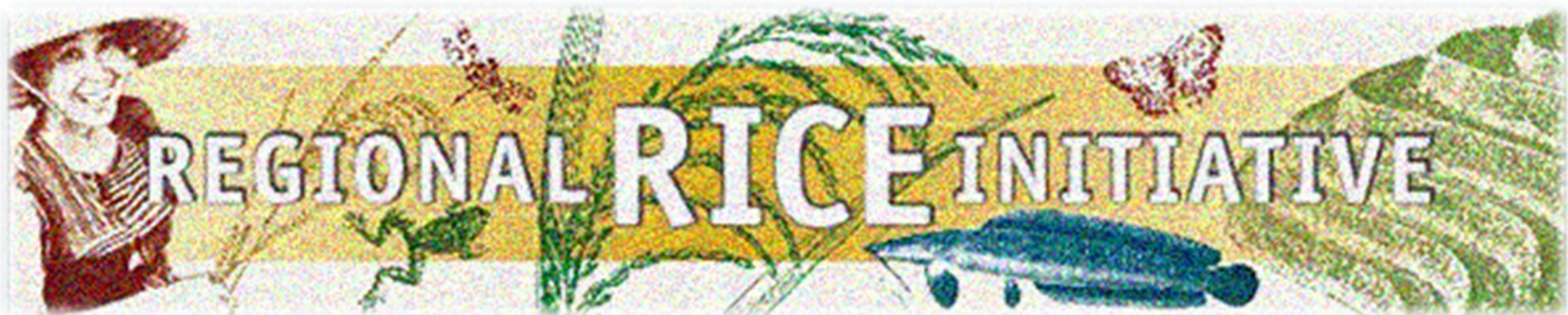
Share knowledge and experience on Regional Rice Initiative (RRI) implementation in Indonesia

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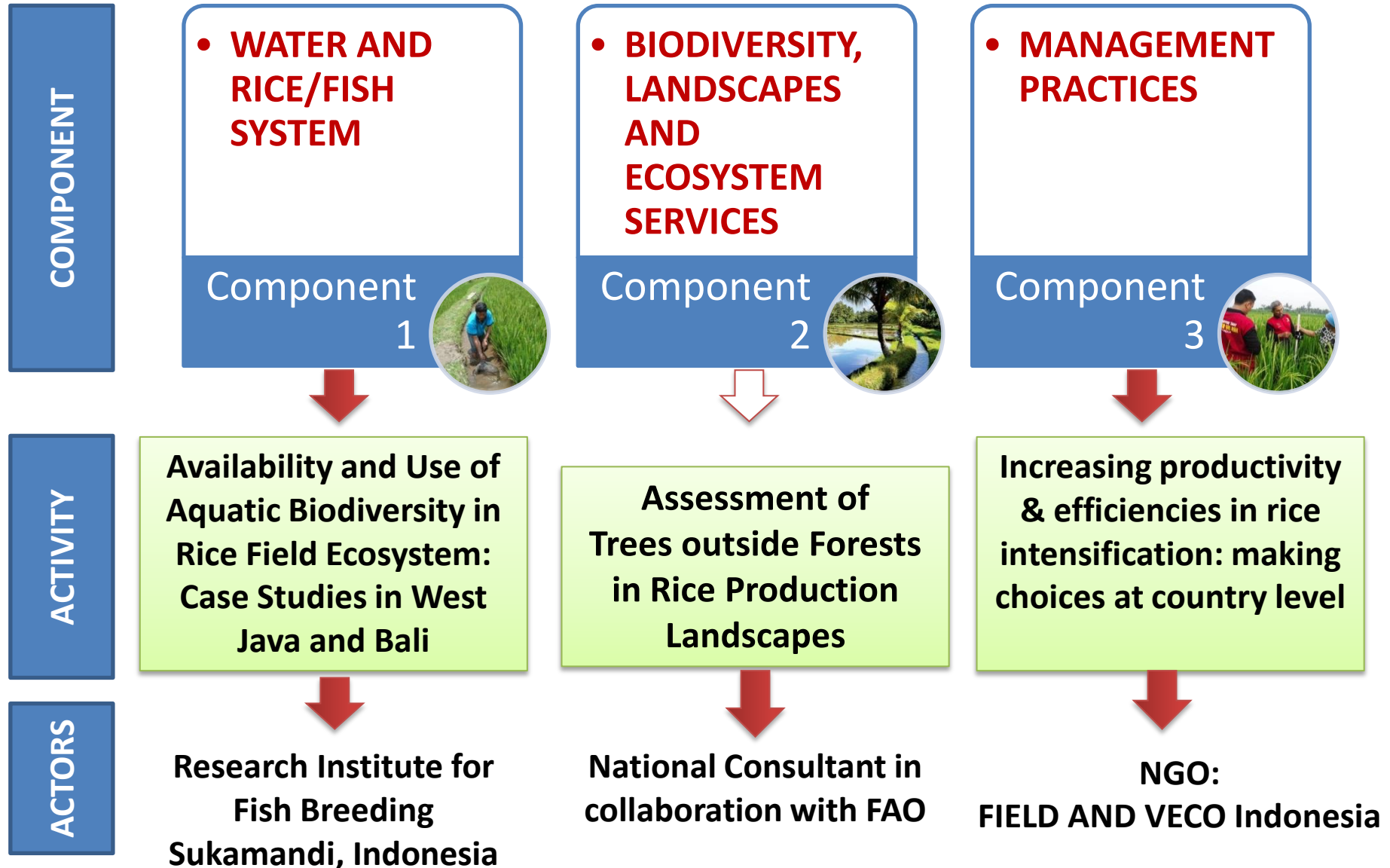
- I. RRI in Indonesia: the progress and lesson learned
- II. Ten Million Ton Rice Surplus Program
- III. One Million Hectare Rice-Fish Program



I. RRI Implementation in Indonesia: the Progress and Lesson Learned



A Glance of Regional Rice Initiatives Phase II Implementation in Indonesia:



COMPONENT 1 RRI
AVAILABILITY AND USE OF AQUATIC
BIODIVERSITY IN RICE FIELD ECOSYSTEM:
CASE STUDIES IN WEST JAVA AND BALI

A. Key Findings

West Java

61 species of aquatic organisms

Sundanese uses the diversity of aquatic organisms for food and livelihood

fish, frogs, snails, reptiles and insects

Bali*

58 species of aquatic organisms

Balinese collect a variety of aquatic organisms for food and feed

All elements of this system used for livelihood

*complex, irrigated rice ecosystem “subak”

B. Lesson Learned



Rice-fish culture is important in Indonesia, has been known for years, but underestimated and undervalued its potential



Many good reasons to support the target:

- Provide more food sources, better use of scarce resources, protect the environment, create opportunities for value added
- Increase food security, lower food expenditures, provide rural employment



Rice-fish culture needs to be promoted again understood as the precursor for rice-based aquaculture

**COMPONENT 2 RRI
BIODIVERSITY, LANDSCAPES AND
ECOSYSTEM SERVICES**

A. Background:

- ❑ Maintaining an **adequate tree cover** and **integrating trees and crop** in agroecosystem landscapes can provide multiple services and products, both under economic and environmental aspects
- ❑ Although trees and rice are often seen as **incompatible**, TOF integrated in rice production landscapes can provide multiple services **mitigating stressors such as climate change, water scarcity, land degradation** helping address multiple stressors faced by rice production systems.

B. Finding

☐ TOF in rice production landscapes in Asia can be found in:

	Home gardens	Roads and streams	Agroforestry systems	Small woodlands	Hedges	Fallows
Food, fodder	X		X			
Soil productivity			X			X
Woodfuel, timber			X	X		
Animal production				X		
Soil protection		X	X	X	X	X
Incomes /job			X		X	
Market adaptability						
Water level		X	X	X		X
C sequestration and storage		X	X	X	X	X
Biodiversity preservation			X	X	X	X
Buffering T°	X	X	X	X	X	



c. Next Steps

- **Replicating** and **up-scaling** the present study at national and regional level.
- Encouraging governments to promote trees presence and **agroforestry** practices in these kinds of crop systems (Agroforestry Guidelines developed by FAO, 2013).
- Assessing availability of **agroforestry planting material**, providing information on how to access it.
- Developing **catalogues of trees suitable** for each of the different rice growing situations

COMPONENT 3 RRI MANAGEMENT PRACTICES

Increasing productivity & efficiencies
in rice intensification

**Making choices
at field level**



A. Process:

National meeting – link to national policy, coordinate among RRI components

Planning - set principles, choice of themes and locations
(link with component 1)

Curriculum development *(link with component 1)*

Training of Trainers – Farmers Field Schools

Case studies

Consolidation/recommendations

Series of Activities: Indonesia FIELD → Indramayu, West Java



Series of meetings with farmer groups in Indramayu for site selection

B. Findings:

- On average the yield has increased with 10 – 15% compared to conventional
- One of the biggest challenges for farmers is the rapid and massive development of weeds, which is caused by the limited use of water

C. Lesson Learned:

Adaptable to:

specific conditions, locations and scales

Three key lessons

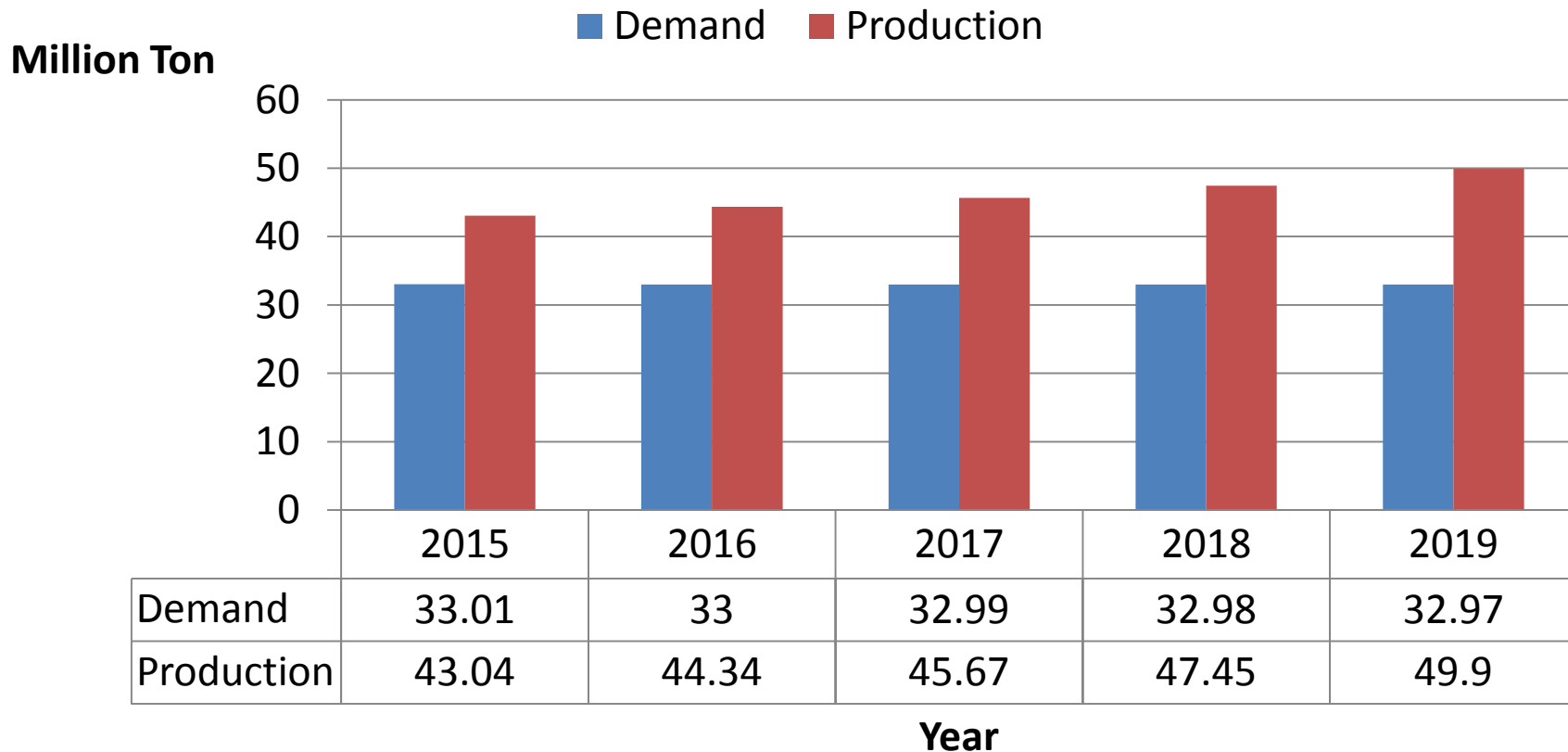
- 1) Increasing rice yield alone is not sufficient
- 2) There is no "*one size fits all*" or "*silver bullet*"
- 3) Sustainable production is knowledge intensive



II. Ten Million Ton Rice Surplus Program

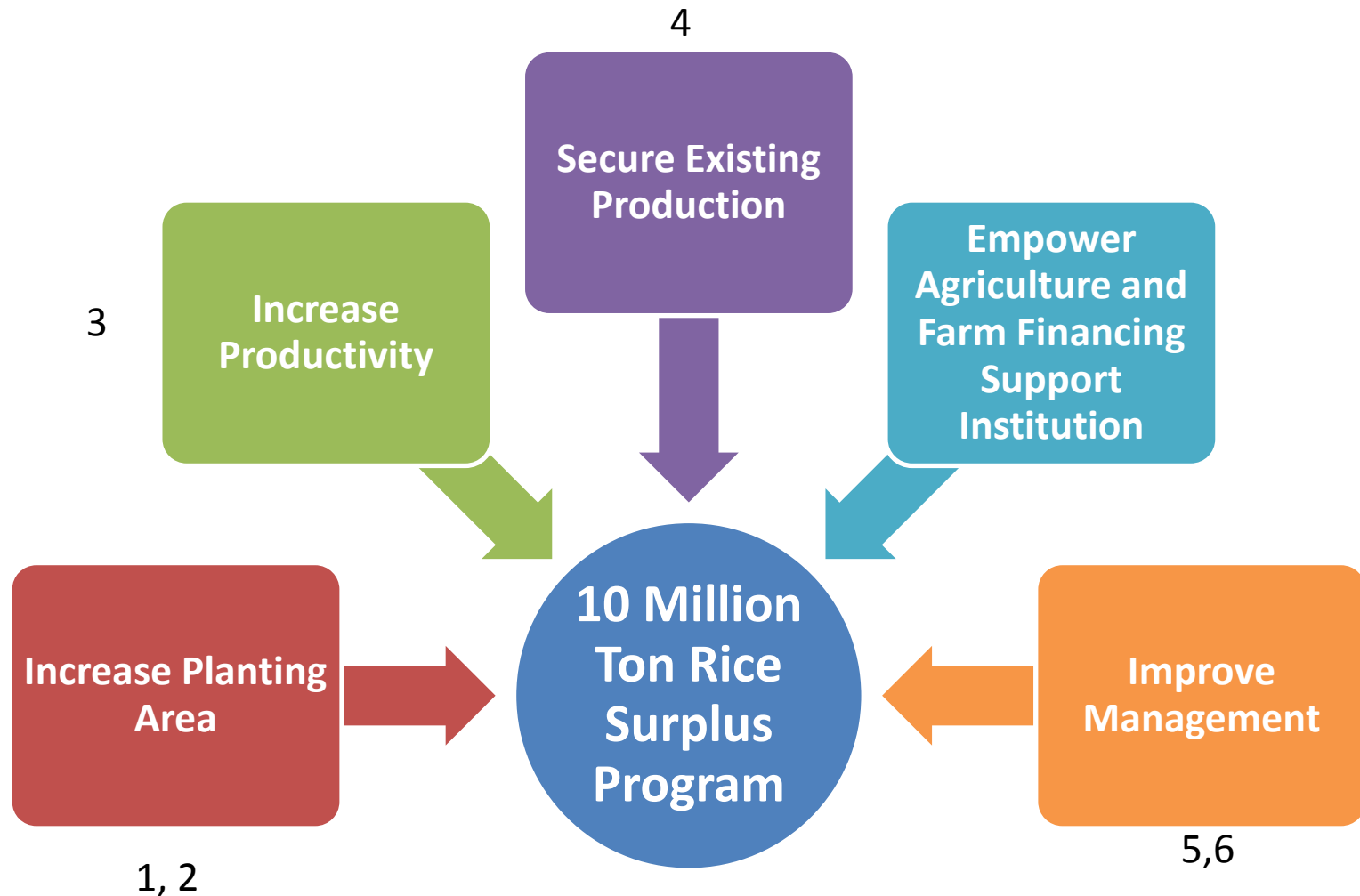


ESTIMATION OF RICE DEMAND AND PRODUCTION 2015-2019



**In 2013, Rice surplus was around 5 million tons,
Main Goal: to have supply and price stability at all times**

STRATEGY OF RICE PRODUCTION



MEASURES TO INCREASE RICE PRODUCTION

1. Open New Rice Field
2. Rehabilitate primary irrigation
3. Use of technology
 - a. Implement System Rice Intensification (SRI) and integrated crops management
 - b. Land Optimazion
 - c. Use of certified high quality seeds
 - d. Use of fertizer recommendation
 - e. Use of rice planting calendar
 - f. Use Rice Space Row Planting “Jajar Legowo”
4. Reduce area of infected pest and diseases
5. Farmer Field School on Integrated Crops Management
6. Public-Private cooperation in rice production

Space-Row Planting System “Jajar Legowo”



Parallel Column 2 : 1



Parallel Column 3 : 1 and 4 : 1



III. One Million Hectare Rice – Fish Culture Program (GENTANADI)



Why “Rice-fish” Culture should be developed in Indonesia ?

- Rice is the main staple food and fish is one of the important protein sources;
- Rice is the important food security commodity economically, socially, and politically;
- To achieve food security, rice field should be maintained sustainably;
- To accelerate inland fish production without reducing rice production;
- To improve environmental condition in rice field ecosystem;
- To improve sustainable food security at farmers and rural levels;

Benefits of rice-fish culture

- **Full utilization of natural resources-increased productivity from paddy field:**
 - Rice production increase by 10-20%, 6-7.5 tons/ha/crop;
 - Additional production of fish/aquatic animals: 1,2-1,5 tonnes/ha.
- **Symbiotic relationship between fish and rice:**
 - Paddy field provides fish with free feed;
 - Fish fertilizes paddy with feces and improve soil structure;
 - Paddy provide oxygen and shelter for fish/crustacean.
- **Food Safety and environmental benefits**
 - Reduce chemical/pesticides/herbicides usage — less environmental impacts;
- **Social and economic benefits:**
 - Increase farmer income US\$ 4.800-7.800/ha
 - Protect the rice cultivation by making it an attractive livelihood

Common fishes cultivate in paddy fields



Tilapia



Gouramy

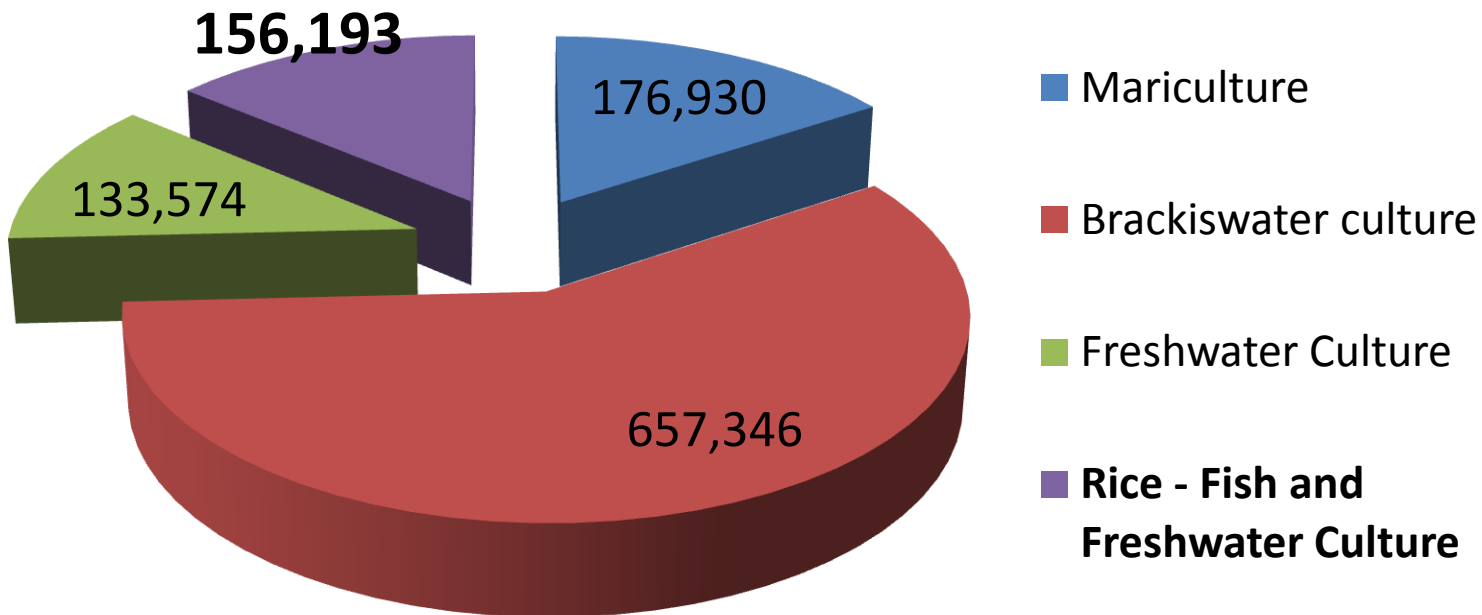


Catfish (Clarias)



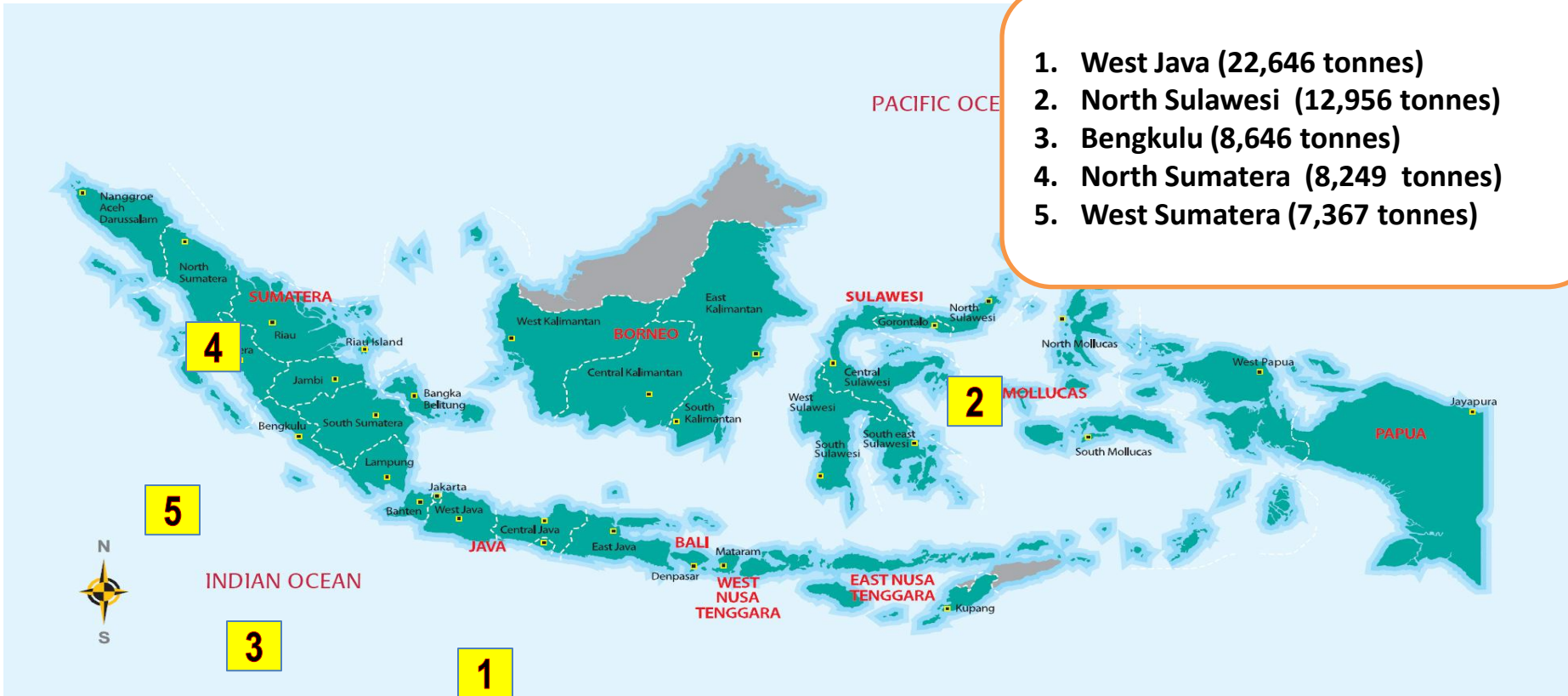
Nilem

Aquaculture Area in Indonesia (hectares) in 2012



Source : Indonesian Aquaculture Statistic, 2012

Five Main Rice-Fish Producers in Indonesia, 2012



1. West Java (22,646 tonnes)
2. North Sulawesi (12,956 tonnes)
3. Bengkulu (8,646 tonnes)
4. North Sumatera (8,249 tonnes)
5. West Sumatera (7,367 tonnes)

Rice Fish Culture Area

2011	2012	2013	2014*	2015*
50.000 Ha	200.000 Ha	250.000 Ha	250.000 Ha	250.000 Ha

Activities of Rice Fish Culture System in West Java



Land preparation



Rice nursery & Plantation



Fish & Prawn Stocking & Harvest

A high-angle, panoramic view of terraced rice fields in a mountainous region. The terraces are filled with water, reflecting the sky, and are surrounded by lush green vegetation. In the foreground, a thatched-roof hut is visible. The text "Thank You" is overlaid in a white, cursive font across the center of the image.

Thank You