FAO
REGIONAL RICE INITIATIVE
Pilot Project
PHILIPPINES
BACKGROUND
RICE: Philippine’s most important staple crop:

Rice accounts for around 20% of the GVA of Philippine agriculture.

Rice employs 2.5 million households, broken down into 2.1 million farmers, 110,000 workers for post-farm activities and 320,000 for ancillary activities.

RICE:
Philippine’s most important staple crop:

Rice accounts for 25% of food expenditures of the poorest 30% of the population. Securing Rice, Reducing Poverty, Balisacan & Sebastian, 2006.

A 25% increase in rice prices translates into a 7-10% drop in real incomes of poor consumers. IRRI. 2008. The Rice Crisis: What needs to be Done.
RICE TRENDS

Growth rates in consumption outpacing production, area and yields:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GROWTH RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRODUCTION</td>
</tr>
<tr>
<td>1991-2001</td>
<td>3.39</td>
</tr>
<tr>
<td>2001-2011</td>
<td>2.88</td>
</tr>
</tbody>
</table>

SOURCE: Bureau of Agricultural Statistics.
DECREASING TRENDS IN PHILIPPINE RICE SELF-SUFFICIENCY RATIO

SOURCE: BAS Philippines
THREATS: Ensuring food security & alleviating poverty.

- Increasing costs of agricultural inputs & declining real farm incomes.

Filipino rice farmers incur the highest costs of production, but earn the highest net incomes due to high rice prices, the highest in the region.
# Comparative Rice Production Statistics

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>PHILIPPINES</th>
<th>THAILAND</th>
<th>VIETNAM</th>
<th>INDIA</th>
<th>CHINA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Central Luzon</td>
<td>Central Plains</td>
<td>Mekong Delta</td>
<td>Tamil Nadu</td>
<td>Zhejiang</td>
</tr>
<tr>
<td>PADDY RICE YIELD</td>
<td>MT/hec/yr</td>
<td>9.2</td>
<td>10.8</td>
<td>9.2</td>
<td>11.2</td>
<td>12.4</td>
</tr>
<tr>
<td>PRODUCTION COST</td>
<td>US$/MT</td>
<td>96.52</td>
<td>58.89</td>
<td>74.24</td>
<td>62.32</td>
<td>58.95</td>
</tr>
<tr>
<td>PADDY FARMGATE PRICE</td>
<td>US$/MT</td>
<td>171</td>
<td>102</td>
<td>92</td>
<td>128</td>
<td>120</td>
</tr>
<tr>
<td>NET PROFITABILITY</td>
<td>US$/hec/yr</td>
<td>1,196</td>
<td>666</td>
<td>477</td>
<td>677</td>
<td>987</td>
</tr>
</tbody>
</table>

**SOURCE:** P. F. Moya, Dawe, D. et al. 2002.
THREATS: Ensuring food security & alleviating poverty.

- Global competitiveness under increasing liberalized trade environments.

By 2015, the Philippines will be compelled to impose a lower tariff rate of 35% on imported rice under ATIGA - need to lower production costs by increasing production efficiencies.
## COP BENCHMARKS (% DECREASES)

<table>
<thead>
<tr>
<th>ECOSYSTEM</th>
<th>BASELINE COP (PHP/KG)</th>
<th>COP BENCHMARKS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SHORT TERM</td>
<td>MEDIUM TERM</td>
</tr>
<tr>
<td>Irrigated Rice (Dry)</td>
<td>11.06</td>
<td>5.06</td>
</tr>
<tr>
<td>Irrigated Rice (Wet)</td>
<td>11.17</td>
<td>5.10</td>
</tr>
<tr>
<td>Non-Irrigated Rice (Dry)</td>
<td>11.48</td>
<td>8.71</td>
</tr>
<tr>
<td>Non-Irrigated Rice (Wet)</td>
<td>11.61</td>
<td>8.70</td>
</tr>
</tbody>
</table>
THREATS: Ensuring food security & alleviating poverty.

- Global warming and climate change.
  Increased severity and frequency of extreme weather incidences.
  High temperatures will increase incidences of pests and diseases.

SOURCE: Future of Rice, Borromeo and Deb, 2006; Atlin, 2005.
THREATS: Ensuring food security & alleviating poverty.

- Global warming and climate change.
  Increasing proportions of rice lands will become drought-prone while urbanization will divert irrigation water for domestic use.
  Water scarcity will be a serious production constraint as about 45% of freshwater flows directly to rice paddies.

SOURCE: Future of Rice, Borromeo and Deb, 2006; Atlin, 2005.
KEY CHALLENGES

- Attaining rice self-sufficiency and food security to adequately feed a growing population.
- Raising rice productivity and making the Filipino farmer profitable, globally competitive and climate-resilient:

BY PRODUCING MORE WITH LESS.
MAJOR OBJECTIVE

- Increasing small farmer production efficiencies by promoting ecosystem-based farming within the context of sustainable rice intensification efforts and climate change.

Rice farmers must learn how to SAVE for production to GROW.
SPECIFIC OBJECTIVES

- Increase rice productivity by at least 10%.
- Increase cost efficiencies by reducing production costs by at least 15%;
- Increase farm incomes by at least 15%.
STRATEGIES

- OBJ. 1: FFSs addressing Good Agricultural Practices
- OBJ. 2: FFSs addressing Cost-Reducing Technologies
- OBJ. 3: FFSs addressing Integrated Rice-Livestock/Fishery & Multi-cropping Systems
Thorough land preparation and land leveling;
- Use of appropriate quality certified seeds with good seedbed preparation;
- Modified (System of Rice Intensification) SRI technologies;
- Soil sampling/analysis and Site-Specific Nutrient Management (SSNM);
- Balanced fertilization and use of organic fertilizers - vermicast and compost;
MANAGEMENT PRACTICES USED:

- Water management thru intermittent flooding and alternate wet/dry water saving techniques;
- Integrated Pest Management or IPM;
- Harvest and post-harvest management;
- Multi-cropping technologies (rice-vegetables);
- Diversified farming technologies (rice-duck and rice-fish cultures);
- Seed purification and plant breeding.
- Aquatic biodiversity.
PILOT ACTIVITIES

Twenty (20) pilot Farmer Field Schools in Save and Grow in partnership with local governments in ten (10) provinces in three (3) regions in Mindanao and fully funded by the Philippine National Rice Program.
PILOT ACTIVITIES

Five (5) FFSs in SG with aqua-biodiversity assessment, conservation & use activities with agricultural high school partners.

Case Studies: (1) Cost Efficiencies in Irrigated Rice Production; and (2) Increased Farm Incomes and Nutrition; (3) Plant Genetic Resources; (4) Role of Women in Sustainable Rice Production and (5) Institutional Sustainability.
## Farmer Field Schools in Save & Grow

<table>
<thead>
<tr>
<th>REGION</th>
<th>FARMER FIELD SCHOOLS IN S&amp;G</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FFS in S&amp;G</td>
</tr>
<tr>
<td>REGION X: NORTHERN MINDANAO</td>
<td>8</td>
</tr>
<tr>
<td>REGION XII: CENTRAL MINDANAO</td>
<td>4</td>
</tr>
<tr>
<td>REGION XIII: CARAGA</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

**SOURCE:** Data from 20 FFSs in S&G in Region X, XII and XIII.
Economic Data from Farmer Field Schools in Save & Grow

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Unit</th>
<th>Farmer's Practice</th>
<th>FFS in S&amp;G</th>
<th>% Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Yield</td>
<td>Kilo/Hec</td>
<td>4,400</td>
<td>5,730</td>
<td>30.41</td>
</tr>
<tr>
<td>Total Cost</td>
<td>Peso/Hec</td>
<td>33,595</td>
<td>28,112</td>
<td>-16.32</td>
</tr>
<tr>
<td>Net Income from Rice</td>
<td>Peso/Hec</td>
<td>41,179</td>
<td>69,506</td>
<td>68.11</td>
</tr>
<tr>
<td>Cost of Production</td>
<td>Peso/Hec</td>
<td>7.96</td>
<td>5.73</td>
<td>-35.94</td>
</tr>
<tr>
<td>Additional Income</td>
<td>Peso</td>
<td>0</td>
<td>40,660</td>
<td>N.A.</td>
</tr>
<tr>
<td>Total Farm Income</td>
<td>Peso</td>
<td>41,179</td>
<td>110,165</td>
<td>167.53</td>
</tr>
</tbody>
</table>

SOURCE: Data from 18 FFSs in S&G in Region X, XII and XIII.
RRI PHASE II: MOVING FORWARD
Sustainable rice production intensification or SRPI as it relates to rice self-sufficiency and food security, global competitiveness, and climate change requires comprehensive action at improving existing rice policies & rice production systems ABOVE and BEYOND their current capacity:
- Agricultural practices to improve soil fertility and pest management;
- Agricultural water management for efficient water use and conservation;
- Farming system diversification toward increased farm incomes, improved family nutrition and enhanced climate resilience.
 Development of agricultural technologies with greater farmers’ access through efficient agricultural advisory and information systems;
 Market efficiency through post-harvest facilities & farm-level and value chain infrastructure;
 Risk management and crop insurance.
RRI PHASE II ACTIVITIES

Fifty (50) Farmer Field Schools in Save and Grow (FFS-S&G) in partnership with local governments:

- Luzon: Ilocos, Bicol Regions
- Visayas: Western and Eastern Visayas Regions
- Mindanao: Caraga, Northern and Central Mindanao Regions

The FFS-S&G will be funded by the Philippine National Rice Program.
PILOT ACTIVITIES
Of the fifty (50) Farmer Field School in S&G:

• Ten (10) FFSs in SG with aqua-biodiversity assessment, conservation & use activities with agricultural high school partners.
• Six (6) FFSs in SG with climate change mitigation and adaptation activities
• Three (3) FFSs in SG with “Trees Outside Forests (TOF)” activities for improved water delivery and pest management;
SUPPORT ACTIVITIES

- **Refresher Course**: 10-days Training Course for FFS facilitators on SRPI technologies, Aqua-biodiversity, Climate Change Mitigation and Adaptation and TOF technologies; local adaptation of FFS-SG curricula, preparation of FFS-SG and field studies.

PROJECT IMPLEMENTATION MODEL

REGIONAL & PROVINCIAL IPM TEAM → DARICE/IPM PROGRAM/

AGRICULTURE SCHOOL OR COLLEGE ← DARICE/IPM PROGRAM/ → FARMER FIELD SCHOOLS IN SAVE & GROW

MUNICIPAL IPM TEAM

DA includes IRRI, PHILRICE, BSWM, BFAR, BPI, BAI, ATI, NAFC.
THANK YOU.