

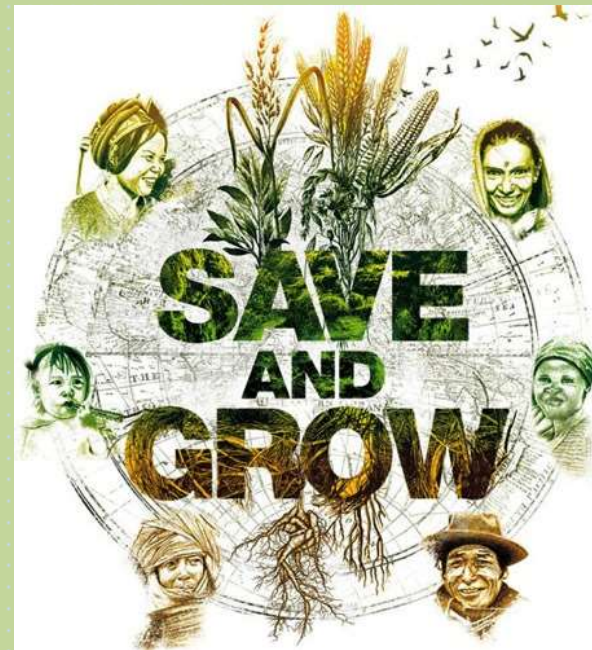


National Multi-stakeholder Workshop on Agroecological Transition

Vientiane, 2 - 3 June 2016



Sustainable Intensification of Rice Production: Ecosystem-based Approaches



Stephen Rudgard
FAO Representative in Lao PDR



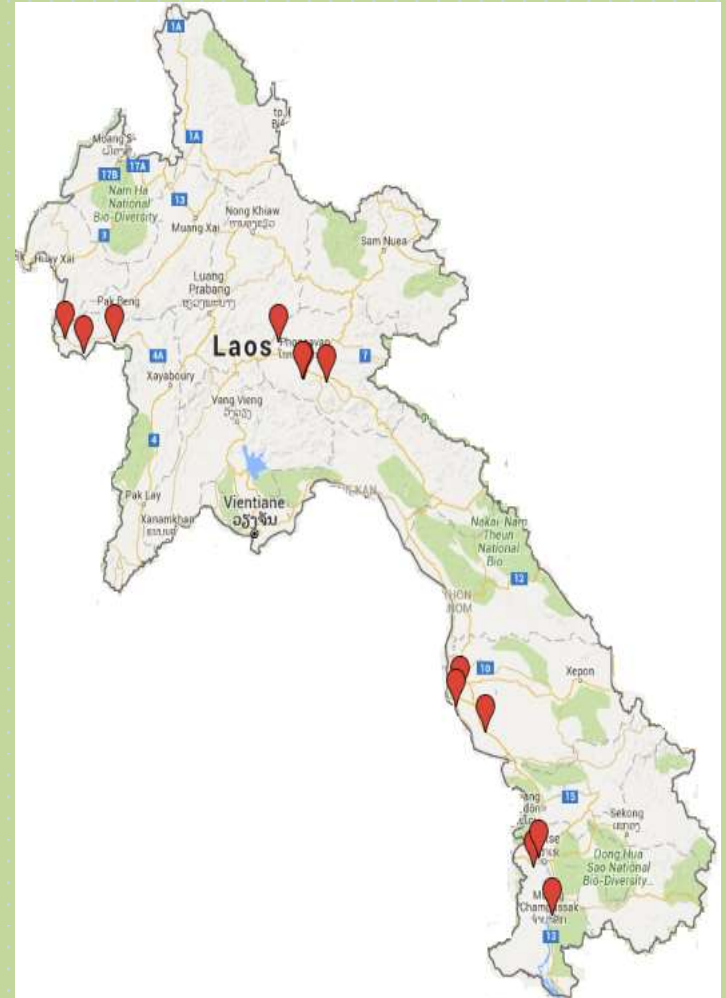
Food and Agriculture
Organization of the
United Nations

Background

- **Objectives/Targets of Save and Grow-SIRP:**
 - Enhancing productivity and profitability;
 - Increased resource use efficiency;
 - Ecological sustainability;
 - Climate-smart - Enhancing Resilience.
- **Intervention:** Capacity building through 13 Farmers Field Schools in 4 Lao rice producing provinces implemented during 2015.
- **Implementation partners:** MAF Plant Protection Center - Department of Agriculture, and National University of Laos.

Activities in 2015

- Baseline Surveys - February
- Curriculum Development and Training-of-Trainers - April
- Implementation of 13 FFSs (354 farmers including 112 women) in 4 provinces: April – November
- FFS Monitoring, and Trainers Exchange/Study tour – October
- FFS Results Assessment and Workshop – December



Save and Grow-SIRP improved management practices promoted in Farmers Field Schools

- Use of certified seeds and improved high-yielding varieties;
- Single, younger seedlings & wider plant spacing;
- Using natural biological control and natural pesticides, if needed;
- Balanced chemical fertilizer applications, including replacement with bio-fertilizers;
- Reduced labor through direct seeded method.

Field Experiment Design

- 1,000 meter square plots, replicated across 13 FFS sites, with Save and Grow good practices compared with conventional practices
- Yield estimates (tonnes/ha) at harvest time (through crop cuts and yield parameter assessments)
- Economic benefits assessments (revenue, total costs, gross margins (LAK/ha))



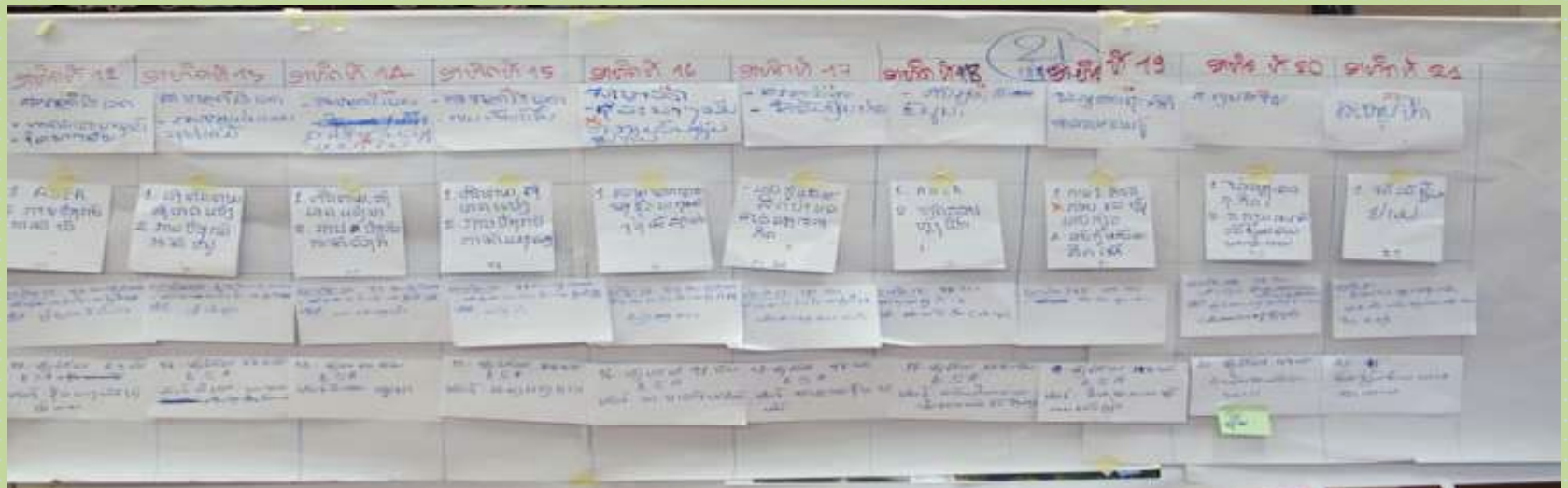
Targets to be achieved

- Different provinces - different conditions
- Save and Grow approach adapted to local situation
- Separate productivity improvement targets set

Province	Yield	Labor	Organic fertilizer	Chemical Fertilizer	Pesticides
Savannakhet	Increase	Reduce	Increase	Better Balanced based on crop needs	Not used
Champasack	Increase	Reduce	Increase	Better Balanced/ increase	Not used
Xiengkhouang	Increase	Reduce	Increase	Better Balanced	Not used
Xaiyaboury	Equal	Reduce	Increase	Better Balanced	Reduced

Curriculum Development

17 week FFS curriculum developed to address production problems and inefficiencies of production input use based on location and situation specific baseline data



Farmer Field School Curriculum Overview:

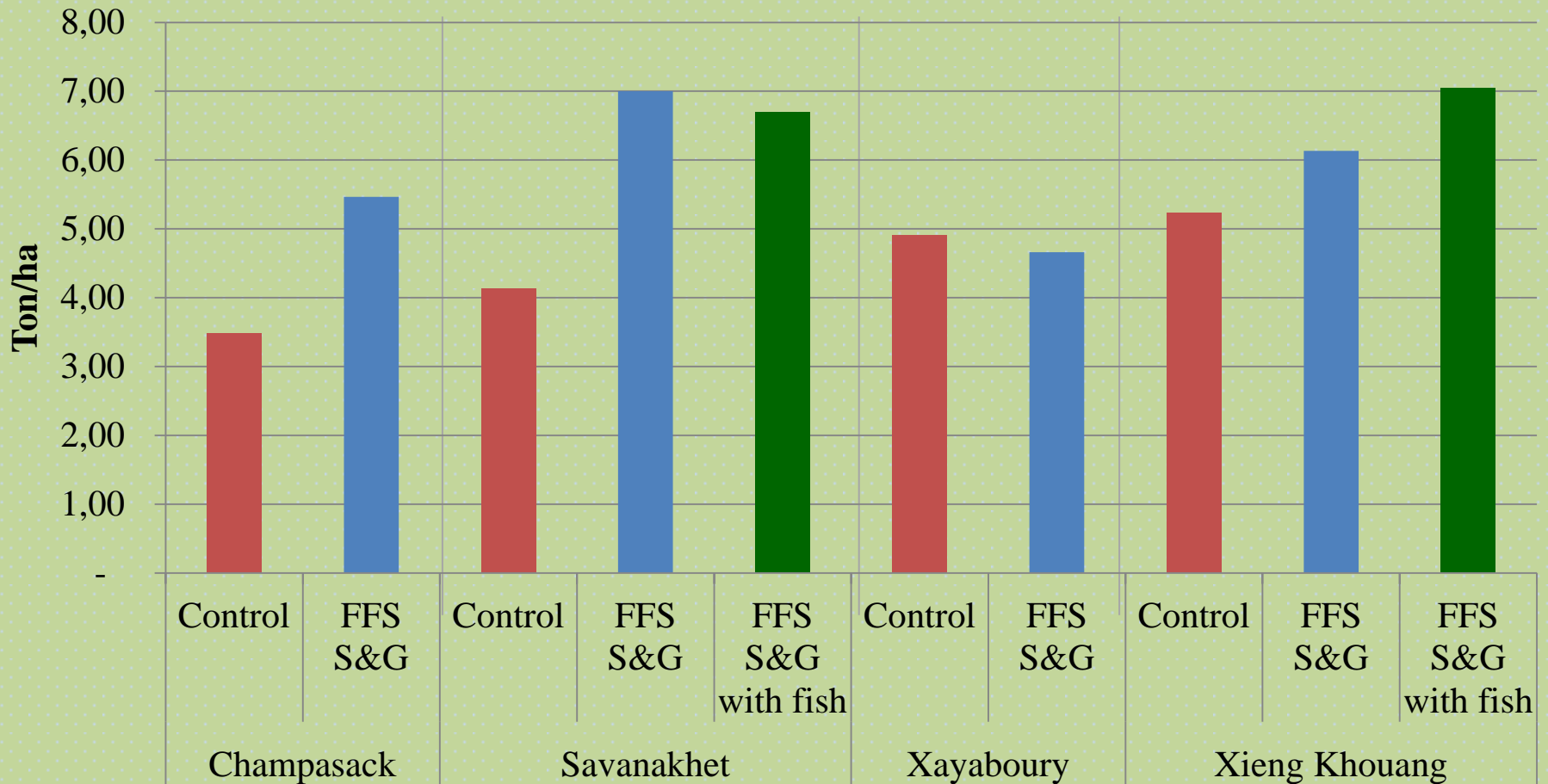
A typical weekly FFS session

- Regular field visit and crop monitoring
- Agro-ecosystem and Economical Analysis
- Icebreaker/Group dynamics
- Special Topics: Depending on location and situation specific learning priorities



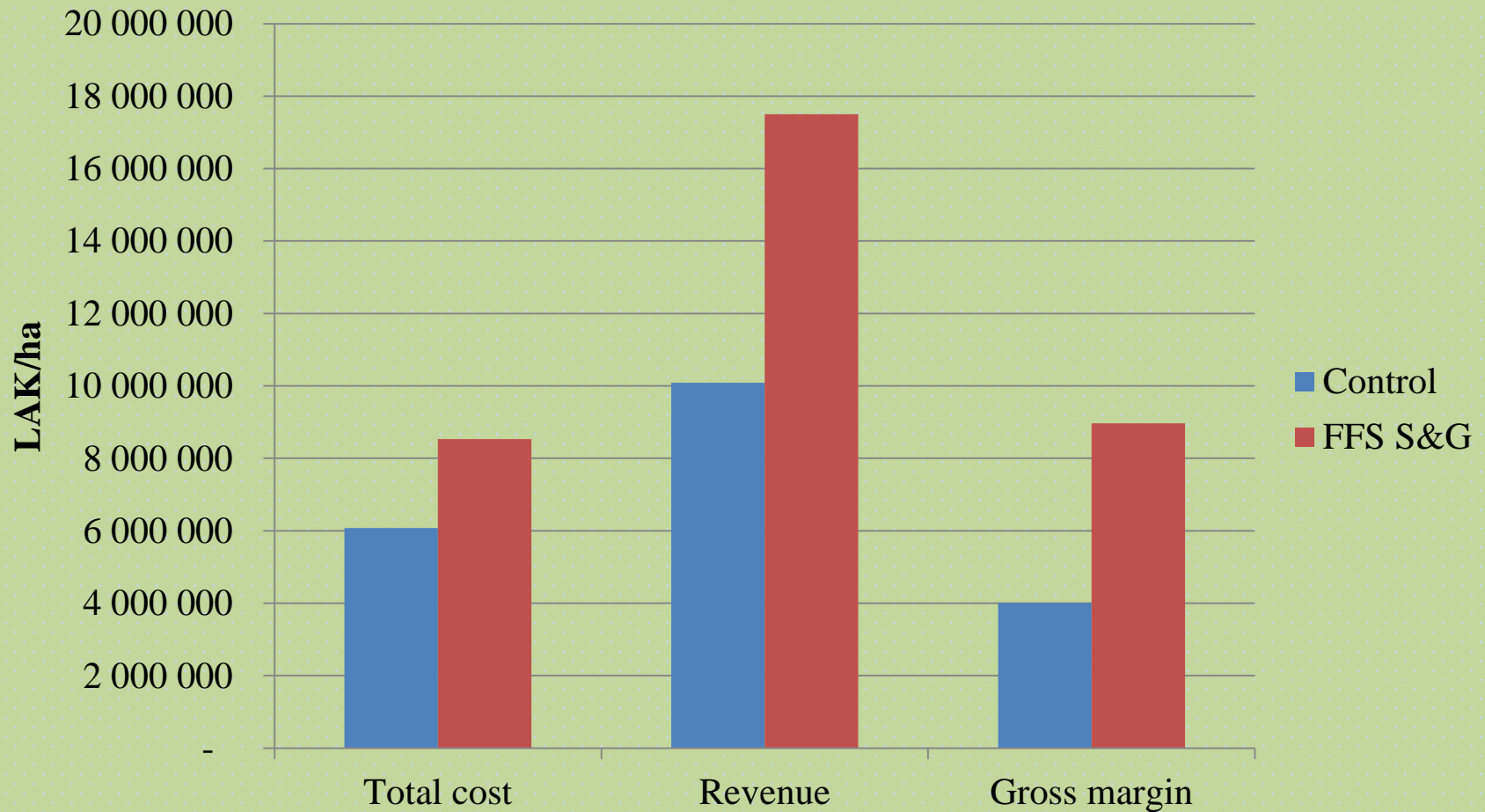
 A detailed financial table with multiple columns and rows of data. The table is written in Thai and appears to be a record of economic analysis, possibly related to the FFS curriculum. It includes various numerical values and some text labels. The table is organized into several sections, with some rows highlighted in yellow. The data includes various economic indicators and their corresponding values.

Paddy Rice Yield by provinces



Control = Farmer practice

Revenue and gross margin for Save and Grow in Savanakheth (LAK/ha)



Returns on Investment

Save & Grow vs. Farmer Practice

Return on Investment (ROI)	Farmer Practice Control	S&G – SIRP	% change
Champasack	0.61	0.83	+ 36
Savannakhet	0.67	1.05	+ 56
Sayabouly	1.49	2.19	+ 47
Xiengkhuang	1.23	1.96	+ 60

Conclusions

- Farmers acquired new knowledge and skills in the FFSs;
- Results showed more efficient use of inputs, higher rice yields, and greater profits for farmers;
- In some provinces, production costs in Save and Grow interventions were higher but yields and profits increased;
- More efficient use of production inputs and no pesticides allowed rice-fish production, increasing land productivity and supporting food and nutrition security;
- Provincial and District Government officials highly appreciated FFS interventions and results.



Rice – Fish Systems



In Lao PDR



Rice Fields – More Than Rice



Food Security – Nutrition – Livelihoods

Consumption Survey



Location: rural villages in five provinces in Laos

Timeframe: period of 10 days, September 2015

Participants: 239 people in 50 households

Method: families recorded the weight and type of the aquatic resource (fish, plant, crab, snail, etc.) before each meal, three times per day. DLF officers recorded value at local markets.

“Collecting this data caused me to think about my food in a new way. I see the fish and think, ‘that’s money,’ or I see the frogs and think, ‘that’s also money.’ If these resources decrease, I understand more clearly how much I will have to spend on food that was once free.”

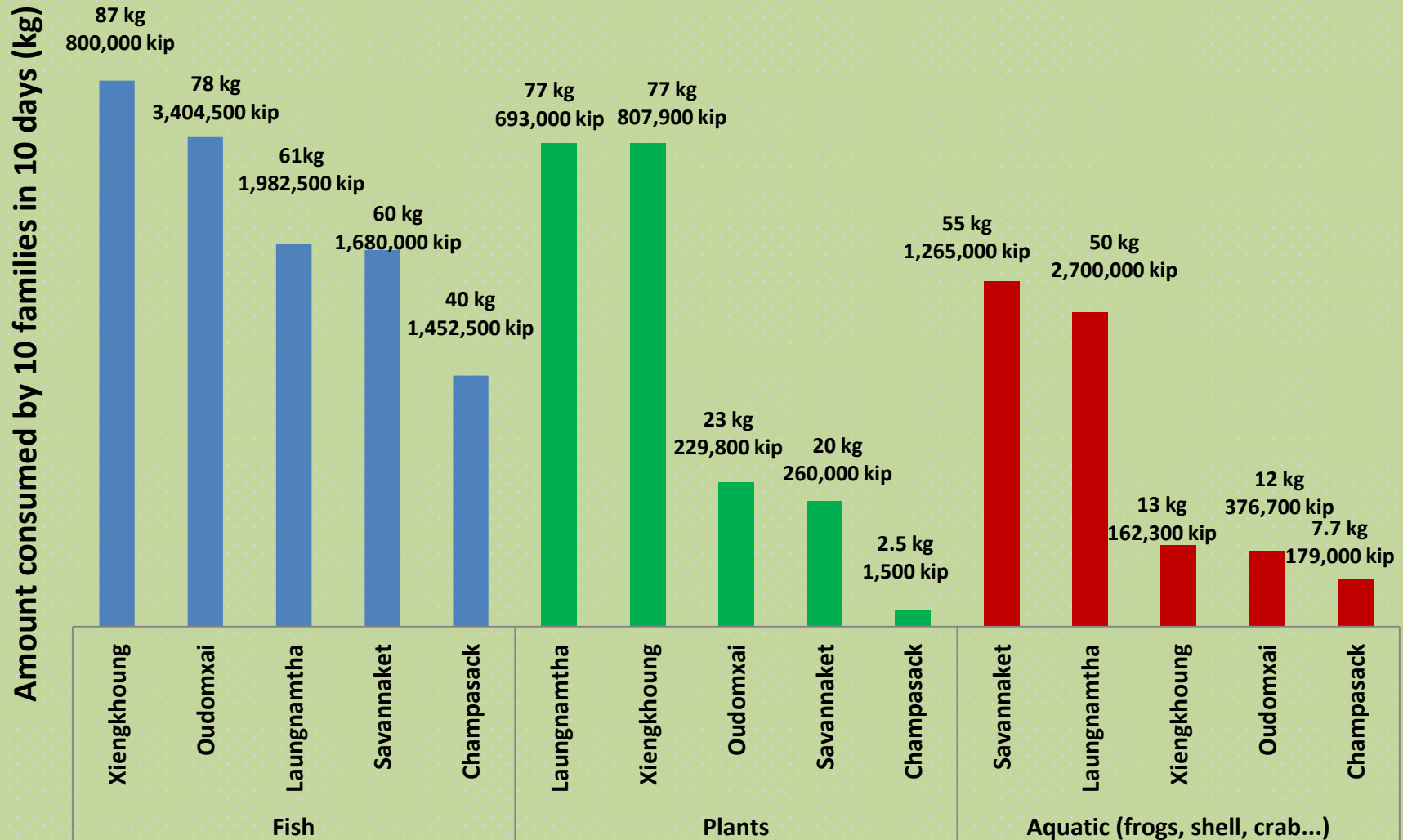
- Mr. Boonthong, Farmer, Xieng Khuang province

Consumption Survey



Survey Results

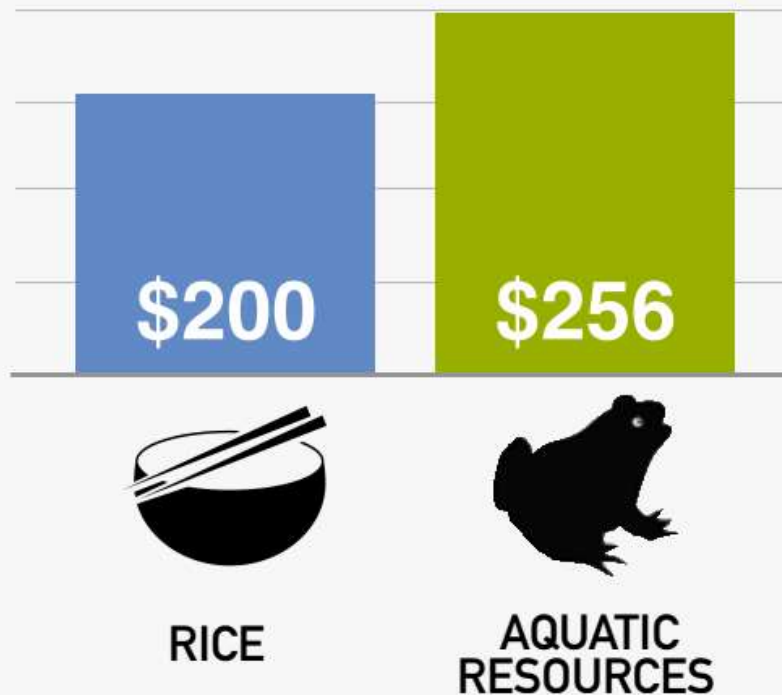
Summary of animal and plant consumption by 10 families in 5 Provinces (Kg)



Survey Results

Economic importance

For rural farmers, the monetary value of aquatic resources in rice fields was found to be more than the average value of rice consumed per person per year:





Thank You!

<http://www.fao.org/ag/save-and-grow/>