



Sawah Bali

# AGRO-TOURISM IN 21st CENTURY PILOT PROJECT DATA REPORT



# Introduction

Perhaps one of the most compelling reasons to consider this data is agricultural and economic resilience through climate change and Bali's water crisis. The other compelling reason is that Balinese farmers' income increased between 300% - 500% during our pilot project implementation.



Conventional rice (hybrid white) ▲ adjacent to pilot, fell over after storms & wind



▲ 100% project Heritage rice withstood extreme weather of wind and rain

The Pilot Project was conducted with farmers in Subak Malung Bulu Jauk, Brs. Bunutan and Tanggayuda, Gianyar, Bali, Indonesia. As a "living laboratory" utilizing permaculture and organic systems, **sustained** technical assistance with workshops, collaborative problem solving, capacity building within the community for quality control, marketing and logistical chains of supply, we present this data to Stakeholders. By collaborating with farmers and community members, **income increased between 300%-500%** from the sale of premium, organically grown, value added products and initiating agro-tourism to support the former. Agro-tourism is an agent of "change management". Western youth view farming as "cool". Autonomy, entrepreneurship and growing healthy food is a positive and viable way to make a living. No farmer that participated in this project wants to sell their land: their heritage, because an increased sustainable income can now be obtained from their land.

This pilot project demonstrates that a comprehensive program for land conservation, natural resource management ( this heritage rice uses 85% less water than conventional rice), cultural retention and community economic development is possible. Agro-tourism allows farmers to finally benefit from tourism. Sawah Bali would like to replicate this program. Opportunities to scale up this program and work with a full subak arrive each week from pekaseh, asking for Sawah Bali's help to transition their sawah.

# SEEING IS BELIEVING

*Transitioning to organic systems, while harnessing international volunteers and local youth who acknowledge the health and economic benefits of locally grown food without chemical fertilizer, pesticide or herbicide*

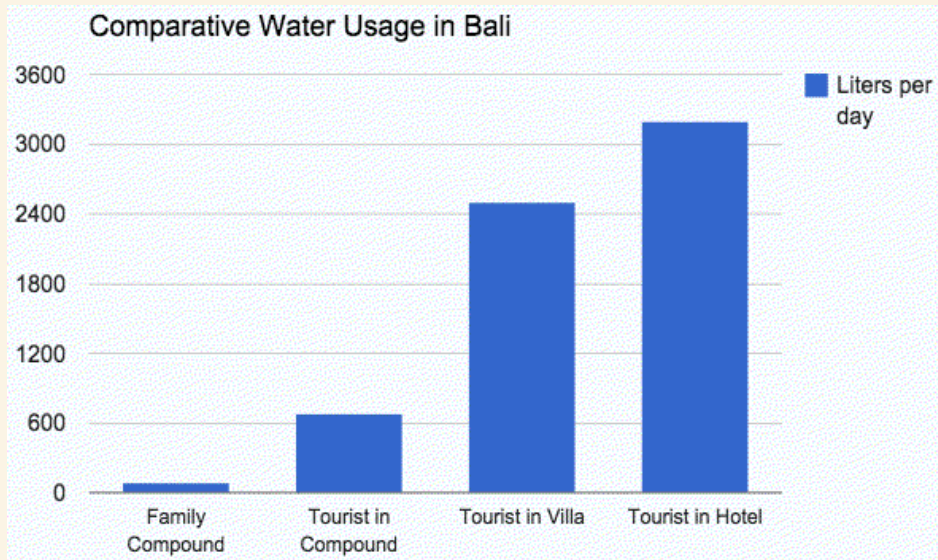


## Context: Seeing is Believing - Agriculture in 21<sup>st</sup> Century

- ❖ The water crisis spanning 2015-2016 was in full force in Bali. In addition, there was the “El Nino” effect further exacerbating the lack of water. Extreme weather inconsistent with wet and dry season is now becoming the norm.
- ❖ Any farmer in Bali who grew **conventional rice** or beras merah in the second half of 2015 lost **40 % - 100% of their harvest, due to lack of water in subak or rain.**
- ❖ Farmers who grew heritage **Mangkok rice** did not lose their harvest, because this rice **requires 85% less water.**
- ❖ Mangkok had a better yield also due to **SRI (System for Rice Intensification)** planting, yet **uses less gabah (rice seedlings)** than conventional rice planting.
- ❖ Conventional rice farming with hybrid rice is not indigenous to Bali. It requires more and more chemicals, pesticides and a lot of water, no longer available in subak.
- ❖ **There is deficient water in subak,** due to tourism building in sawah and water being diverted to tourism rapacious needs. **No farmer can grow more than two harvests a year**

### ▼ Appropriate technology (weeding tool) for the System for Rice Intensification





▲ Bali's Daily Water Consumption (Compiled from Various Sources)

- ❖ The soil in Bali is DEAD from 45 years chemical usage and no biomass added. The habitat is destroyed. The only way to increase yield and health is to add high grade compost and discontinue all chemical usage to restore a healthy habitat of sawah for people, animals and plants.
- ❖ Sustained technical assistance with workshops is necessary to learn organic systems and **solidify change management** within Subak System

Australian Ambassador for Indonesia, H.E. Paul Grigson in the organic vegetable patch learning about Moringa



▲ *Gotong Royong* (Mutual Assistance), Cultural Immersion and Change Management are the focus of Agro-tourism



▲ Our collaborative Mutual Assistance in Action!

- ❖ **Volunteers from all over the world came to learn about subak and culture, working side by side with Balinese farmers. Agro-tourism program participants stayed in the village homestays increasing community income. Partnership with Udayana University Agriculture and Agribusiness provided first time field opportunities for students .**

**If financial support is not obtained we cannot continue this work. The iconic rice paddies are disappearing at 1000 hectares each year. The time is now for Stakeholders to ensure that Bali remains for Balinese and for the next generation**



◀ Our Permaculture Technical Assistance for the local farmers ▶



***Volunteers have told us that staying in family compounds and being part of Balinese village life while “learning by doing” in the sawah + subak has been the most meaningful experience of their visit to Bali***

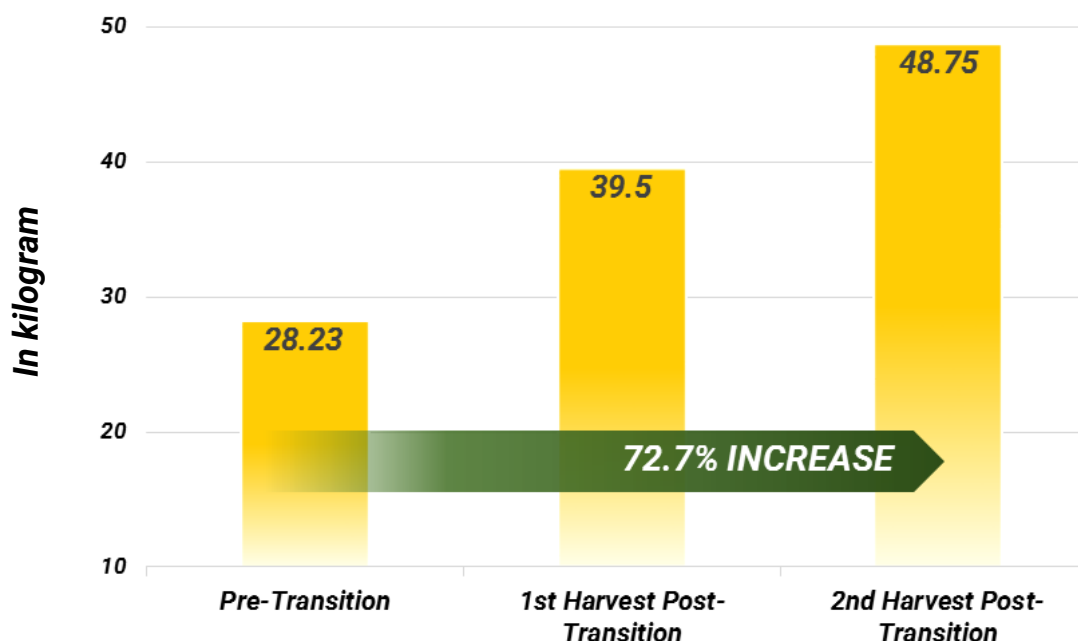


## Data from Pilot Project

- ❖ Since Dec.2014, YKSB has given over 40 workshops and sustained technical assistance to over 30 farmers, families and volunteers in Subak Malung. The assistance covered targeted knowledge in Organic systems, SRI, preparation and use of compost, Integrated Pest Management (IPM), and Logistics for Quality Control. Delivery, Marketing & Sales protocols were set up with other family members.
- ❖ Initially four farmers from the Subak participated and implemented only organic systems with Heritage Mangkok (Brown) Rice as their commodity. They transitioned from the conventional hybrid rice and all chemical fertilizers, pesticides and herbicides, which has proven to be more expensive, less productive, and less resilient to climate change

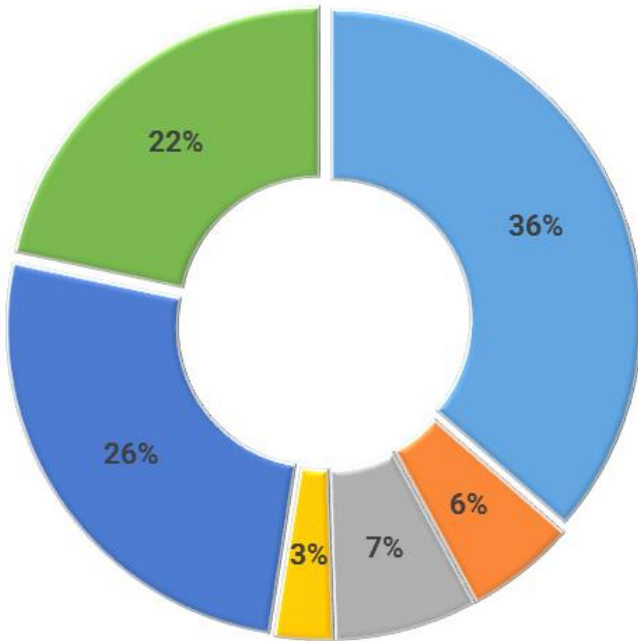
*Pilot project 'Seeing is Believing' in Subak Malung Bulu Jauk, Gianyar Regency Transition from Conventional Farming, Hybrid Rice with Chemical Fertilizer to Organic Systems and Heritage Mangkok (Brown) Rice (110-days harvest cycle)*

*Yield total combined (in kg) per are. Initial Project of 75 are*



- ❖ The data revealed higher yields with seed selection, organic systems + SRI planting for the local Balinese farmers. Dragon flies + bees returned to these fields and ignored conventional fields. **Compared to the previous method of conventional hybrid rice with chemical fertilizers, herbicides and pesticides, the farmers gained a 72.7% increase in yield and 300% increase from price per kilo, which represents an aggregated 408% increase in rice income.**





## “SEEING IS BELIEVING”

*Pilot Project Income*

*Time Period of  
March 2015 – March 2016*

**FIRST YEAR DIRECT PAYMENTS  
TO FARMERS ► RP 81.382.000**

<b>AGRO-TOURISM (HOMESTAY)</b> COMMUNITY ECONOMIC DEVELOPMENT	<b>Rp 32,010,000</b>	<b>36%</b>
<b>FARMERS HEALTHY MEALS</b> HERITAGE MANGKOK RICE RETAINED BY FARMERS	<b>Rp 19,044,000</b>	<b>22%</b>
<b>MORINGA FOOD SUPPLEMENT</b>	<b>Rp 6,500,000</b>	<b>7%</b>
<b>ORGANIC PREMIUM VEGETABLES</b> HIGH QUALITY LOCALLY GROWN, SOLD BY FARMERS	<b>Rp 2,605,000</b>	<b>3%</b>
<b>ORGANIC MANGKOK HERITAGE RICE</b> SOLD BY FARMERS WITH PREMIUM PRICE	<b>Rp 22,723,000</b>	<b>26%</b>
<b>AGRO-TOURISM MEALS</b> TRADITIONAL MEAL AT HOMESTAY	<b>Rp 5,000,000</b>	<b>6%</b>

- ❖ The visualized data above showed the allocation of benefits during the implementation of our 12 month pilot project, which is **highly significant compared to their previous income through conventional rice farming**. In the **following six months**, farmers continue to earn greater income than the previous year as yield continues to increase and Moringa sales are increasing
- ❖ Sawah Bali’s vision of creating New Markets for Local Farmers has been successful by **disrupting the old model**. 21st Century agriculture demands organic products with agro-tourism supporting farmers and communities. Additional opportunities such as Moringa products and family compound Homestay has given this community extra financial stability. **Funding this program enhances Bali’s objective of sustainable Tourism, while also protecting Sawah and Subak for cultural retention, land conservation, and food security.**

## ***Our Next Phase: Empower More Farmers!***



### **▲ Udayana University Agriculture & Agribusiness Students “Learning by Doing”**

- ❖ **Successful collaboration with farmers requires funding for sustained technical assistance, 2 years time, materials and skills - building workshops.**
- ❖ **This will establish a sector of sustainable tourism with **Agro-tourism**, opening up an avenue for community development and support for farmers. **Agro-tourism combines learning about the many attributes of sawah and subak and enriching the interaction of cultural exchange between host and visitor.****
- ❖ **We need financial support by all stakeholders to continue.** This important work will ensure that the next generation of farmers and entrepreneurs conserve and protect sawah/subak for the sacred sovereign use to grow healthy food.
- ❖ **Our objective is to inform and urge Stakeholders to support proven methods of transitioning Balinese farmers to grow organic heritage rice, value added premium products for greater income so that *sawah/subak* is retained for agricultural purpose and cultural heritage.**
- ❖ **We submit to you this important program that is unique to Bali and has yielded measurable results. YKSB needs immediate funding from Tourism stakeholders, Government, Business, Granting entities and the many wealthy Balinese, Indonesians and foreigners who reap profits from this island.**

**IT'S TIME TO GIVE BACK IN A MEANINGFUL WAY**

# ***Our Next Phase: Empower More Farmers! Initiate and Integrate Agro-tourism!***

***Our next phase is to empower more farmers, more students and youth, more community members with this Sawah Bali model,  
BUT ONLY IF WE RECEIVE FUNDING***

## **NEXT PROJECT FUNDING SUMMARY**

 **IDR 2 BILLION**  
TOTAL PROPOSED BUDGET

 **125 FARMERS**  
FOR PROGRAM TARGETS

 **IDR 1.3 BILLION**  
FOR CAPACITY BUILDING

 **9 WORKSHOPS**  
OF SUSTAINED  
TECHNICAL ASSISTANCE

 **24 MONTHS**  
PROJECT TENURE

**> IDR 13.6 BILLION**  
POTENTIAL INCREASED FARMERS  
AND COMMUNITY INCOME

# OUR PARTNERS

***Yayasan Konservasi Sawah Bali is very thankful to our partners, friends, and individuals for their assistance and support during the course of our Pilot Project. We are very indebted for their goodwill to help us in achieving our mission for conserving Bali's agriculture and farmers***



**NATURAL  
CAPITAL  
NETWORK**



Headquartered in Massachusetts, USA, Natural Capital Network is the non-profit crowdfunding platform which helped Sawah Bali kickstarts its crowdfunding, while LCA Trust is Sawah Bali's fiscal agent which continues to proceed the tax-deductible donation from our donors



AustralianAid is one of the globally-recognized ODA which provides supports and assistance for poverty reduction and sustainable development in Developing Countries

**MENYAN PROJECTS**



**UNIVERSITAS UDAYANA**



**Pemerintah  
Kabupaten Gianyar**



**center for leadership in  
global sustainability**  
VirginiaTech

# OUR TEAM



**Phyllis Kaplan**  
Founder, Executive Director



**Chakra Widia**  
Director of Permaculture & Transition



**Wayan 'Dedik' Rachman**  
External Affairs and  
Resident Cultural Director

**Prof. Wayan Windia**  
Advisor & Subak Expert



**Wiwik Dharmiasih**  
Secretary, YKSB Board  
and Advisor



**Made Suraja**  
Project Manager



**Annie Harold**  
Agro-tourism Director  
and Social Media

**Kadek Suardika**  
Farmer Liaison  
and Site Manager



**Adhi Pratama**  
Special Projects and  
Administrative Support



**Adhe Pradipta**  
Translator



**Pak Anggir**  
**OUR FARMER HERO**

***Agro-tourism supports Farmers for 21st Century Economic Viability  
with benefits for its Community***

**The mission of Sawah Bali is to conserve and sustain a  
working landscape in Bali and to restructure agricultural  
production to secure greater economic equality and  
wellness for Bali's farmers.**



Sawah Bali

**YAYASAN KONSERVASI SAWAH BALI**

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