



Transforming rice value chains: The Sustainable Rice Platform

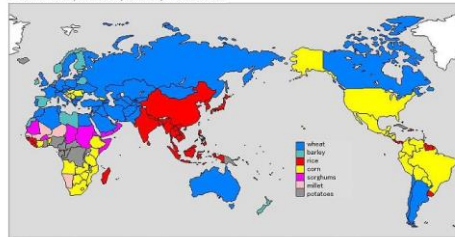
By
Wyn Ellis, PhD



The world eats rice: about 480 m MT per year

1. 19% of global per capita caloric intake
2. 47% of SE Asia per cap caloric intake
3. 29% for all Asia
4. Staple diet for 50% of the world
5. Asia dominates global population: Africa accounts for 30% of rice export growth since 1990 and is expected to be the next source of pop growth
6. Due to its size and cultural appeal rice is not substitutable on a large scale

The main crops in every country in the world



(note) Grain with the maximum harvested area in every country in the world was shown (2004).
The United States etc. are the one even if corn is 1st place for export. (Barley is the main for fodder.
The staple food of the country is not necessarily shown.)

(source) FAOSTAT

Total Population



The size of each territory shows the relative population of the world's population living there.

www.worldmapper.org

Source: *Olam Rice*

Rice: meeting future demand



“For every 1 billion people added to the global population, an additional 100 million tons of rice needs to be produced every year.”

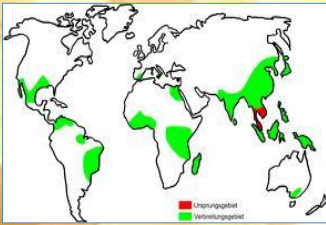
Source: IRRI



Production challenges: Rising demand, falling productivity

- Slowing growth in production
- Diminishing marginal returns to inputs such as N and P
- Loss of agricultural land (degradation, conversion, urbanization)
- Competition for production factors
- Rising energy and fertilizer prices
- Climate change - 2050 rice yields will decline up to 20% compared with 2000 (IFPRI/ADB, 2009).

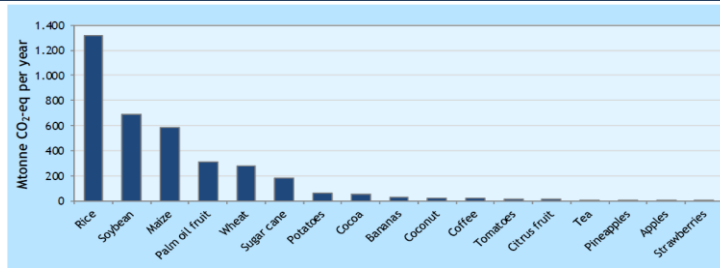
Rice sustainability challenges



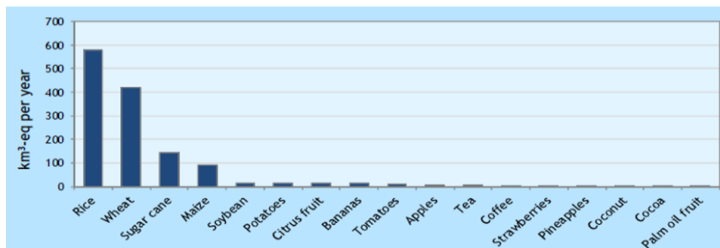
- Resource use efficiency (land, water, agrochemicals, labour);
- GHG emissions (CH₄, N₂O, CO₂);
- Impacts on ecosystem services;
- Soil impacts (e.g. salinization, arsenic, organic matter);
- Disease impacts (e.g. water-borne pathogens);
- Climate change impacts



Annual global GHG footprint per commodity



Annual global water scarcity footprint per commodity



Source: Oxfam, 2016



Pesticide use: 0.4-3.8 kg a.i./ha

Ecological breakdown



BPH outbreaks



Virus diseases



Hopper burn

China, Thailand, Vietnam, Korea, Japan,...

Fertilizer N use: from 25 to >250 kg/ha/season

Too much...



Algal bloom in Shuitaozhuang reservoir (水涛庄), China

Too little...



Mandalay, Myanmar



Proven climate-smart technologies

- Site-specific nutrient management (SSNM)
- Alternate wetting and drying (AWD)
- Integrated Crop Management (ICM)
- Integrated Pest Management (IPM)
- Resource-Conserving Technologies (RCT)
- ICT- GIS applications



Mobilizing the rice value chain

We need.....

- A credible, robust and feasible 'standard' or 'sustainability toolkit' available for farmers, that serves to define sustainability in rice and provide a normative framework for policymaking
- A mechanism for passing benefits through the value chain and drive widespread adoption

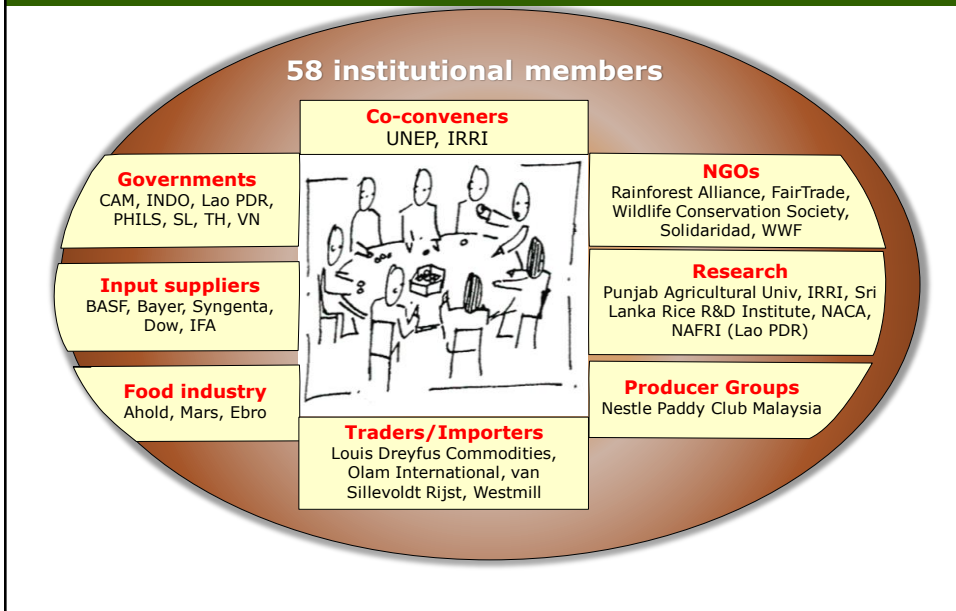


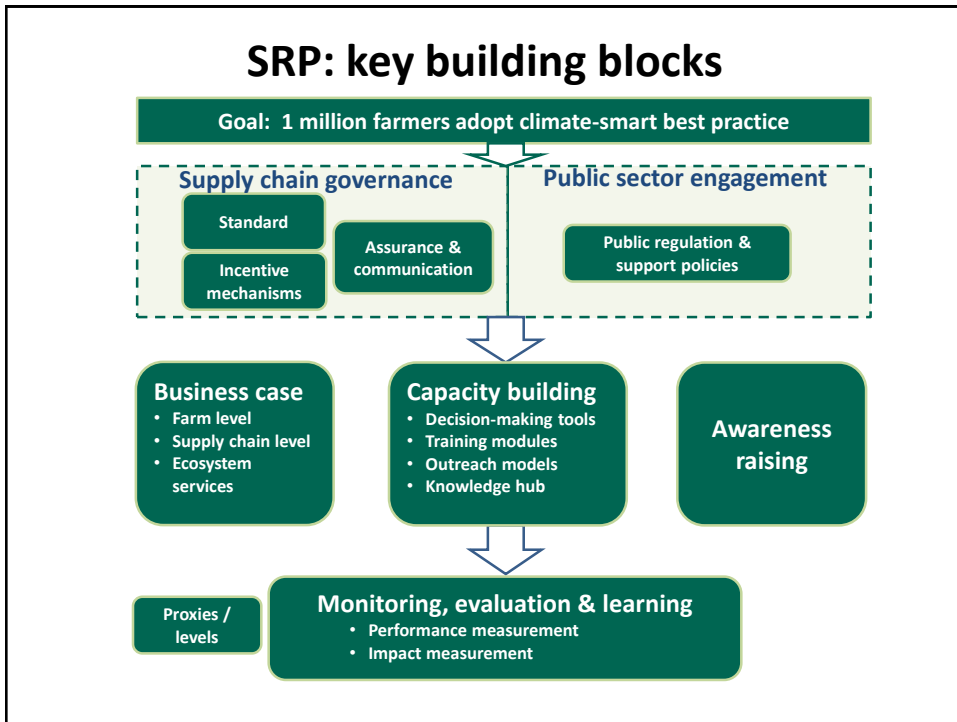
The Sustainable Rice Platform





A global multi-stakeholder partnership to drive impact





Driving best practice: the SRP Standard and Performance Indicators

- **Distribution:** Members' Area of SRP website (brochure format also available)
- **Translation:** Vietnamese, Thai, Khmer, French
- **Supported by SRP data collection and aggregation tools**
- **Communication and Assurance Guidelines for Pilot Phase**
- **Training materials**



SRP: World's first rice sustainability standard



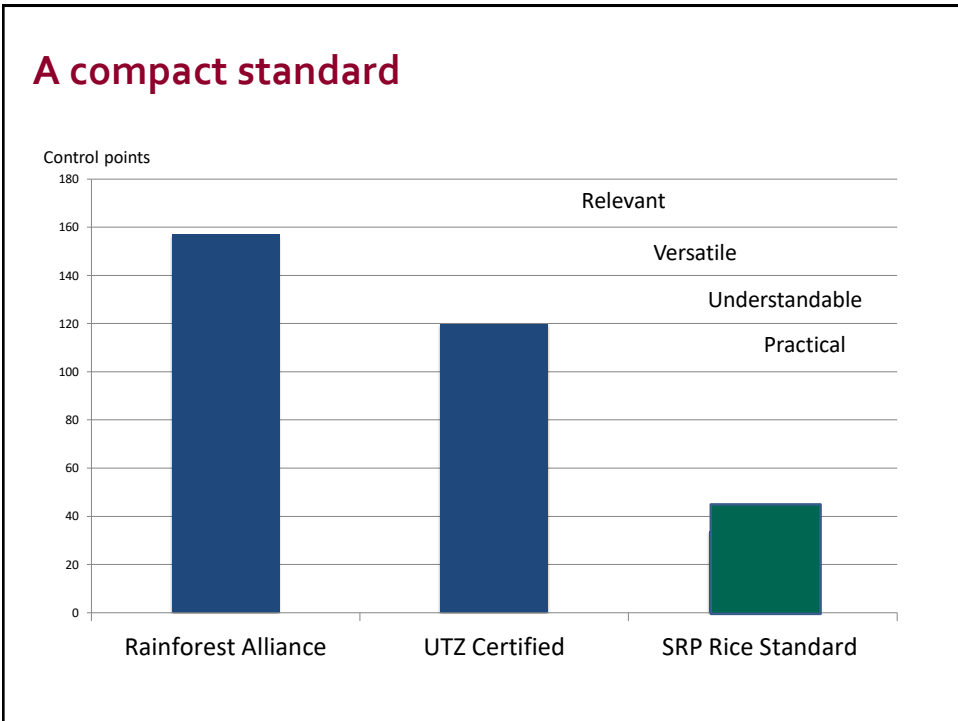
©FLICKR

The Standard covers the following 8 themes:

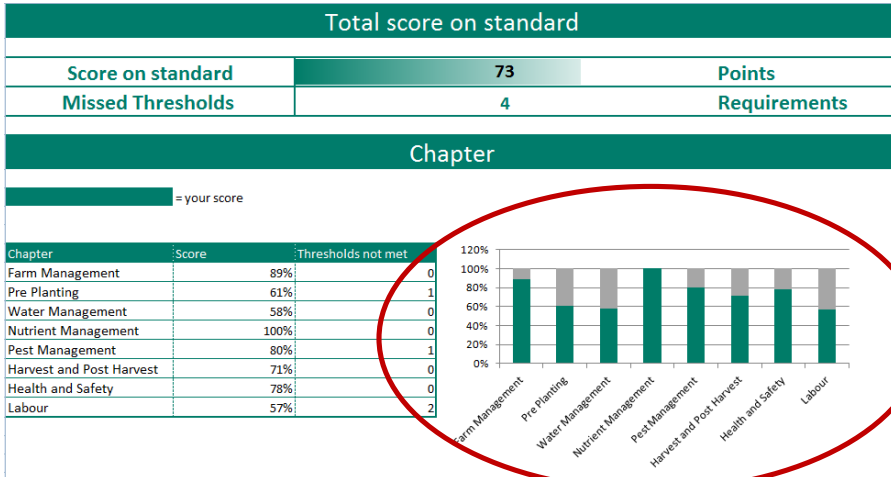
	Water use		Nutrient management
	Pre-planting		Health & safety
	Harvest & post-harvest		Farm management
	Labour rights		Pest management

Photos: image collection of the International Rice Research Institute (IRRI)



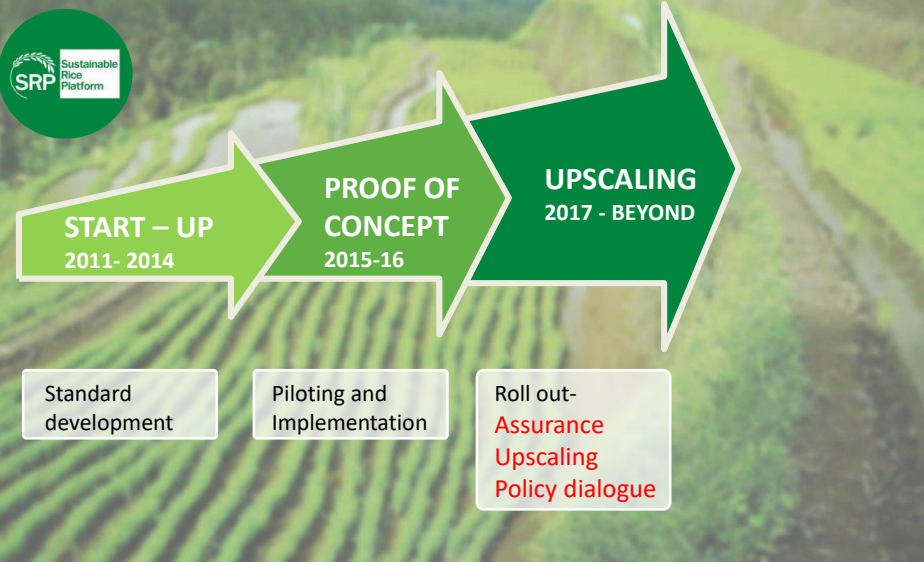



SRP Standard and Indicators: Measure the sustainability of any rice system

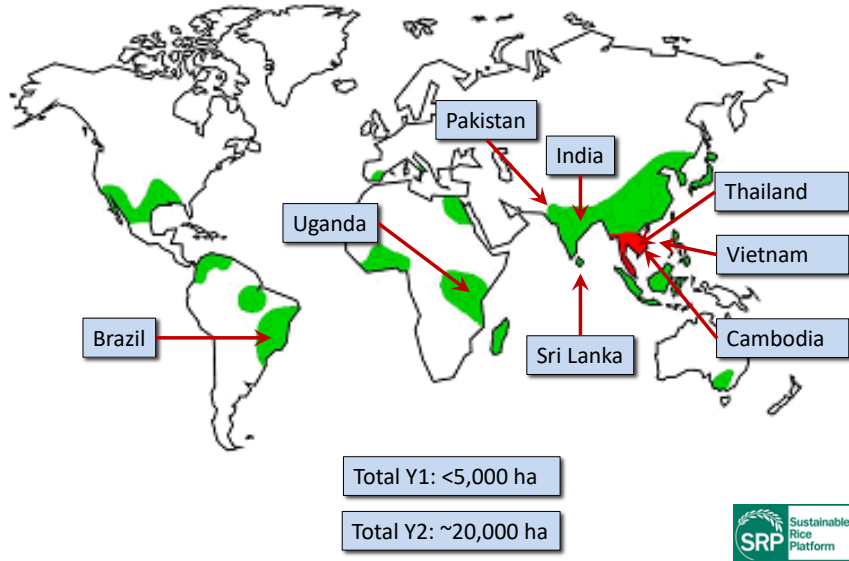


SRP data collection tools

SRP development trajectory



Multi-country field validation programme



17 SUSTAINABLE DEVELOPMENT GOALS AND 169 TARGETS



The Sustainable Rice Platform: Contributing to the SDGs



Goal 1. End poverty in all its forms everywhere (1.5)



Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture (2.3, 2.4)



Goal 3. Ensure healthy lives and promote well-being for all at all ages



Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Goal 5. Achieve gender equality and empower all women and girls (5b)



Goal 6. Ensure availability and sustainable management of water and sanitation for all (6.4)



Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all



Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (8.4, 8.8)



Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.



The Sustainable Rice Platform: Contributing to the SDGs



Goal 10. Reduce inequality within and among countries



Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable



Goal 12. Ensure sustainable consumption and production patterns (12.1, 12.2, 12.4)



Goal 13. Take urgent action to combat climate change and its impacts* (13.1, 13.2, 13.3)



Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss (15.5, 15.9, 15a)



Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development (17.7)

* Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.



SRP Sustainable Rice Platform

Key messages:

- Transformation of rice value chains will be key to developing a sustainable food system, for which the Standard serves as a foundation
- Proven technologies are available to enhance resource use efficiency and mitigate climate impacts in rice
- Effective incentive mechanisms and farmer outreach are key to adoption of sustainable best practices

However....

- Only a collaborative, scaled-up response can we reach our goal

25

Thanks for your attention!

SRP Sustainable Rice Platform

aidenvironment, Louis Dreyfus Commodities, IRRI, Olam, Ahold Delhoize, AAC, Kellogg's, Bayer CropScience, MARS, BETTER FOOD TODAY, A BETTER WORLD TOMORROW, Solidaridad, IFC International Finance Corporation, giz, BASF, NEA Paddy Club, Rainforest Alliance, Rainforest Alliance, WILSON COOPERATION SOCIETY, VECB, LOC THOI, Department of Agriculture, DOW, Dow AgroSciences, FAIRTRADE, GALAXY RICE MILLS, natcap, WWF, COD, Westmill, Nestlé Good Food, Good Life, SRP, breta consulting, REIS fair & good, mato, Tilda, Veetee, ifa, IPNI INTERNATIONAL PLANT NUTRITION INSTITUTE