

SUSTAINABLE RICE

MOBILISING RICE VALUE CHAINS TOWARDS SUSTAINABILITY

By Rebecca Sherratt, Production editor, Milling & Grain

As the world's population skyrockets and global food demand continues to grow, securing our future food supply will be crucial, especially for staple foods such as rice. However, a shortfall in supply is expected due to declining productivity growth on rice farms. In the 1960s and 70s, rice productivity growth was exceptionally high. During the 1970s and 1980s, rice yields increased by around 2.4 percent per year (pa), but since then, yield growth has stagnated to just 0.4 percent pa.

Moreover, there is less land available due to land conversion, soil salinity and water scarcity. By 2050, it is expected that global demand for rice will grow significantly; however, due to extreme weather events and adverse climate change impacts, a shortfall in production is projected if the trends continue. To meet global demand, the International Rice Research Institute (IRRI) projects that production needs to increase by 25 percent over the next 25 years.

The importance of rice in providing food and nutritional security for half of the world's population is widely recognised.

However, rice farming presents huge sustainability challenges, particularly in its use of water and fertilisers, and in the emission of large amounts of greenhouse gases from flooded rice fields.

According to IRRI, rice production uses 34-43 percent of the world's irrigation water. For every one kilogram of rice produced, approximately 2,500 litres of water is used. In addition, rice accounts for about 13 percent of the global nitrogen fertiliser supply and is responsible for 5-10 percent of global methane emissions.

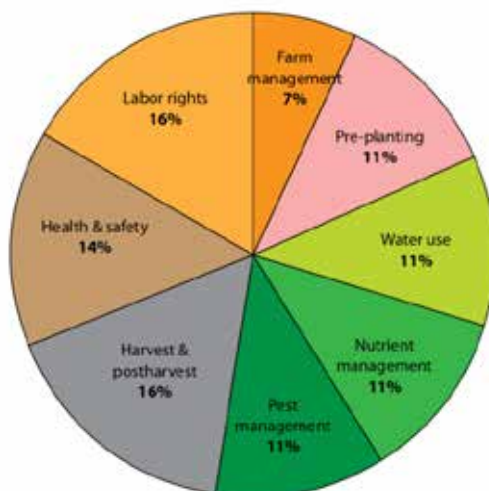
The picture is further complicated when we consider that rice not only contributes to climate change through greenhouse gas (GHG) emissions but is also highly a victim of climate change. Rice farmers are among the world's most vulnerable to climate

change impacts such as drought, flooding, temperature rise, extreme weather events and rising sea levels.

So how can the global rice sector address the challenge of boosting production on existing rice lands to meet demand, while at the same time protecting the environment, mitigating climate change impacts and safeguarding farmers' livelihoods?

The Sustainable Rice Platform: A springboard for collaborative action

Recognising the scale and complexity of this challenge, the Sustainable Rice Platform (SRP) was launched in 2011 as a global



multi-stakeholder alliance led by UN Environment, IRRI and GIZ alongside several governmental, value chain and civil society partners. Its mission is to promote efficiency and sustainability of resource use in the global rice sector through an alliance that links production, policy making, trade and consumption. The SRP and its partners aim to encourage wide-scale adoption of sustainable, climate-smart best practices by smallholder rice farmers, while boosting farm incomes and protecting the environment.

The alliance has since expanded into a global multi-stakeholder partnership, with almost 100 institutional members consisting of government agencies, private-sector actors, research institutes and civil society organisations. The SRP pursues the following objectives:

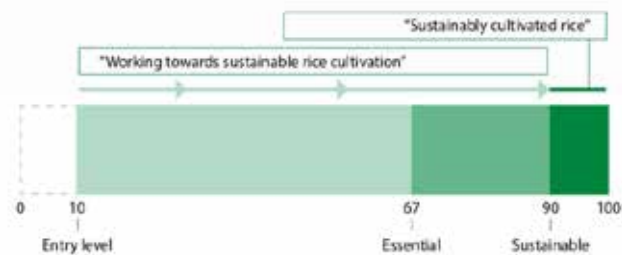
- Develop a context-dependent modular standard for sustainable rice production, including decision-making tools and quantitative sustainability impact indicators

- Develop and promote outreach models that enable large-scale adoption of best practices through supply chain mechanisms and public policy advocacy

- Establish an international platform globally recognised for its role in promoting continuous improvement in rice sector sustainability with broad participation from all actors throughout the value chain, the public sector and non-profit organisations.

What is the SRP Standard?

In 2015, the SRP launched the world's first voluntary sustainability standard, the SRP Standard for Sustainable Rice Cultivation. The Standard offers an objective and widely recognised working definition for sustainability in rice. The SRP Standard was launched, together with a set of SRP Performance



Indicators, to enable monitoring of progress and impacts of best practice adoption on the farm.

These tools are currently undergoing revision following to incorporate feedback from a multi-country pilot farm-level implementation over the past two years. The revision follows global standard-setting guidelines established by the International Social and Environmental Accreditation and Labelling Alliance (ISEAL). Version 2.0 of the SRP Standard and Performance Indicators was launched in January 2019.

The SRP Standard encourages stepwise improvement to reward progress toward full compliance. It comprises 46 requirements, categorised under eight themes, each with a specific sustainability aim and impact (See Figure 1).

Participating farmers are scored between 1-100 on a scale, with at least 90 points allowing a claim of ‘Sustainably cultivated rice’. (see Figure 2).

In order to measure the impacts of adoption of on-farm sustainable practice, the following indicators (known as Performance Indicators) are used:

- Profitability
- Labour productivity
- Grain yield productivity
- Food safety
- Total water productivity
- Nitrogen-use efficiency
- Phosphorus-use efficiency
- Pesticide-use efficiency
- Greenhouse gas emissions
- Health and safety
- Child labour
- Women’s empowerment

Taken together, the SRP Standard and Performance Indicators can serve as a working definition for sustainable rice production, enabling benchmarking and objective comparison of the sustainability of any rice system according to agreed metrics.

Benefits for farmers and planet

A variety of benefits are available to SRP members, including access to innovative tools and partnerships, support for Standard implementation in value chains as well as a policy tool. Members help shape the alliance and contribute to advancing the rice sustainability agenda; moreover, participation in SRP’s activities can contribute to organisational targets under the UN Sustainable Development Goals.

Following two years of on-farm pilots in diverse rice environments around the world from 2016-2017, analysis by IRRI reports significant benefits for both farmers and the environment. The results show significant savings in water and chemical usage, reduced greenhouse gas emissions as well as higher net incomes for rice farmers.

These encouraging early outcomes have strengthened the resolve of SRP and its members to redouble its efforts to achieve rice sector transformation by expanding its programmes and partnerships.



“The SRP tools have shown us what is possible; our challenge now is to mainstream adoption of climate-smart, sustainable best practices. We call upon governments, along with supply chain actors, financial institutions, scientists and development partners to work together to mainstream adoption of low-emission rice farming and help translate these climate change benefits into economic benefits for farmers,” said Dr Wyn Ellis, SRP Coordinator.

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