

# Sustainable rice cultivation within Rikolto

Rolling out the Sustainable Rice Platform Standard

**rikolto**  
VECO





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## Why sustainable rice?

**Rice is the daily staple food of 3.5 billion people. One in five people on our planet earn a living from rice. And demand is rising sharply, due to demographics, urbanisation and changing food habits. By 2050 global demand is expected to increase tremendously. How can we address this global challenge to boost production, while protecting the environment?**

Rice producers are now already amongst the most vulnerable for the impact of climate change, such as drought, floods, high temperatures, and raising sea levels. Paddy fields contribute to climate change, as they generate big amounts of greenhouse gasses: about 10% of global methane emissions come from rice paddies. Who says rice, says water: rice requires about 40% of the world's irrigation water. And in many cases, the crop is grown with considerable amounts of fertilisers and pesticides.

There is also a growing demand from consumers for safe and healthy rice. Also, more and more consumers are concerned about environmental aspects. So how can we make rice farming more sustainable so we can meet this global future demand for safe and healthy rice, while still protecting our planet, and safeguarding smallholder livelihoods?

# The Sustainable Rice Platform and its Standard

**The Sustainable Rice Platform (SRP) is a global multi-stakeholder partnership that wants to make rice farming more sustainable, from an economic, social and environmental angle. Its Standard for Sustainable Rice Cultivation and its Performance Indicators serve as a working definition for sustainable rice production and enable benchmarking and objective comparison of the sustainability of any rice system.**

The Standard v1.0 has 46 requirements grouped under 8 themes. Practices deal with farm management, pre-planting, water use, nutrient management, pest management, post-harvest, health&safety and labour rights.

The SRP Standard is a performance standard and not a pass-fail standard. By using a scoring system, it allows for a stepwise compliance to encourage and reward progress in improving agricultural practices.

The SRP Standard allows the following two claims: “Sustainably cultivated rice” if a farmer scores at least 90 and meets all essential performance levels and “Working toward sustainable rice cultivation” if a farmer scores lower and does not meet the essential performance level of one or more requirements.

The SRP Performance Indicators enable monitoring of progress and impact in terms of reduction in water use, input use efficiency, food safety, reduction in greenhouse gas emissions, biodiversity, increased productivity and income, labour productivity, health&safety, child labour and women empowerment.



**Rikolto's  
Rice Cluster**

In its rice programmes Rikolto wants to contribute to sustainable rice sector transformation at national, regional and global level, in order to:

- Generate decent profits and jobs for all actors along the value chain, especially for smallholder farmers (men, women and youth)
- Reduce the environmental impact of rice cultivation and to preserve the environment for future generations
- Provide safe, healthy, sustainable and quality rice to consumers.

To pursue this ambition, Rikolto has become a member of the Sustainable Rice Platform (SRP) and actively promotes the SRP instruments to make rice cultivation more sustainable.



# Rikolto's pilots with the SRP Standard



In 2017, Rikolto carried out a baseline survey with 11 Farmers' Organisations in 8 countries. In 2018, Rikolto facilitated SRP pilots with 12 Farmer Organisations in 7 countries, involving 1,760 farmers.

**Rikolto has been working in the rice sector of 9 countries: Benin, Burkina Faso, Mali, Senegal, RD Congo, Uganda, Tanzania, Indonesia and Vietnam. Since 2015 Rikolto has become a member of the Advisory Committee and has contributed to the development of the SRP instruments.**

## Year 1: SRP Baseline Surveys

The aim of this exercise was to establish a baseline score, which farmers would obtain with their current practices, without any prior explanation on the SRP Standard. A self-designed questionnaire using KoBo was developed to allow for mobile data collection. After the baseline surveys, the results were shared with the FOs and plans were made to set up effective SRP Pilots.

## Year 2: SRP Pilots

### Methodology

1. A workshop with the FO leadership and staff to introduce the SRP Standard and how to set up a SRP pilot
2. A workshop with the FO leadership and staff to concretely plan the SRP pilot: determining sample, selection of groups, selection of farmers, selection of contact farmers per group
3. Centralised training workshops for contact farmers on the 46 criteria and on data collection. In most countries these were split over 3 trainings and facilitated by Rikolto
4. Training meetings at group level by the contact farmers facilitated by FO staff
5. Data collection at group level; data collection was done as much as possible by field staff and contact farmers; in some cases by external enumerators
6. Workshop with contact farmers to analyse the scores
7. Feedback Workshop to FO leadership to share the results and to plan improvements for the next season.

The aforementioned steps guided the implementation of the SRP pilots in 7 countries, with some adjustments were made to suit local context. All countries followed step 1 and 2, but in Senegal particularly, the workshop was not only attended by FOs, but also by SODAGRI (Senegal Agriculture Development Agency) who was involved to concretely plan the pilot and select the samples.

Centralised training workshops for contact farmers were carried out in Vietnam, Indonesia, Benin and Uganda, yet with a different frequency. In Uganda, there was only one training session, in Vietnam there were several sessions throughout the season.

Not all pilot countries conducted training at group level (#4). In Vietnam and Senegal, this step was not carried out. In Uganda, contact farmers trained farmers individually in the farmers' own fields through practical and hands-on demonstration. While in Benin and Indonesia, group-level training took place.

In most countries, contact farmers who have been trained were responsible for data collection, such as in Vietnam, Uganda and Benin. In Indonesia, Rikolto recruited external enumerators to collect data. In all countries, Rikolto field staff had a small role in data collection, but took an important role in e.g. data cleaning and data completeness, supervising the overall process and bridging communication between farmers' organisations and enumerators.

After collecting the data, scores were analysed together with contact farmers, as done in Uganda. However, in Vietnam, Rikolto analysed the scores internally without involving contact farmers.

The pilot results were then shared to FOs and other stakeholders. In Senegal, other than to FOs, Rikolto also shared the results with FEPROBA, Rikolto staff and SODAGRI. Through the workshop, all stakeholders also discussed the plan for year 2 SRP. In Vietnam, results were shared with FOs. Based on the meeting, Rikolto will change the training contents and focus on missed thresholds. The same process was also carried out in Uganda and Indonesia.

## Results

Following table shows the sample size, sample area, the average SRP score per farmer and the average number of missed thresholds per farmer.

The most often missed criteria are: heavy metals, invasive species, water management, nutrient management, and pest management.

## Comparison between Pilots and Baselines

In all countries a considerable progress was noted in the SRP score and in the number of missed thresholds, with the exception of Benin.

Progress was made possible because surveyed farmers were trained, resulting to them having more knowledge of more sustainable practices. Farmers demonstrated a change of practices in these areas:

- **Reducing the use of chemicals**

In most pilot countries farmers reported that they have reduced the use of chemicals for fertilisers and pesticide. Farmers mentioned that they reduced the spraying frequencies and explored organic fertilisers and pesticides options.

- **Stopping child labour**

Specifically in Africa, improvement in scores occurred because farmers' organisations pushed their members to stop using children on their farms during school time and to do hazardous work.

- **Documenting planting cycles**

Small-scale farmers have phased in a crop calendar to better plan their farming activities and keep track of planting cycles.

- **Managing rice stubble and rice straw**

Farmers in Indonesia and Vietnam reported that they no longer burnt rice stubble and rice straw. Stubble is left on the field or used for cattle feed.

- **Promoting health and safety**

Due to the given training, farmers started to pay attention to their health and safety. For example, they have used masks as a respiratory protection, when spraying and handling chemical products.

Country	Farmer Organisation	Baseline			Pilot 2018			
		Nr of farmers	SRP Score	Missed TH*	Nr of farmers	Area ha	SRP Score	Missed TH*
Senegal	FEPROBA	65	53	14	244	398	64	11
Mali	ARPASO	65	70	6	248	131	76	5
Benin	UNIRIZ-C	63	83	3	221	255	75	6
DR Congo	ADPA , COOSOPRODA	49	60	13	52	20	72	7
Uganda	DIFACOS	50	58	13	281	401	77	5
Tanzania	Uwamale	50	47	19	-	-	-	-
Indonesia	MSA	20	67	6	50	11	84	1
Indonesia	APOLLI	100	67	6	350	117	74	3
Indonesia	APOB	50	67	6	160	59	74	3
Vietnam	Coops An Giang	34	59	13	34	109	62	11
Vietnam	Coops Dong Thap	-	-	-	120	161	73	7
<b>Totals/Avg</b>		<b>546</b>	<b>63</b>	<b>10</b>	<b>1760</b>	<b>1667</b>	<b>73</b>	<b>6</b>

\*TH = Threshold or Essential Performance Level



# Pushing for sustainable rice cultivation, one practice at a time

Adopting more sustainable farming practices takes a gradual process and strong commitment from farmers. Through SRP Pilot, Rikolto has helped farmers in Asia and Africa take the first big step towards this change.



**Kali Diao** (30) is a Senegalese rice farmer and a member of FEPROBA (Federation of Anambé Basin Producers), an organisation having more than 4,000 members of rice farmers. His participation in the SRP Pilot in 2018 has proven useful as he has gained new skills and knowledge on rice cultivation. Mr. Diao said that, through SRP he has learnt new information that guides him to change practices that are not good for environment in the long term.



**"I used a lot of pesticides and burnt rice straw previously. Thanks to the guidance given, I now try to do things differently. I collect empty pesticide bottles from the perimeter, wear protective clothing when spraying and pay attention to the wind direction when doing that. I also wash my hands and cloth afterwards,"**

Mr Diao said.

For soil fertility management, Mr. Diao has done post-harvest ploughing by burying straw residues in the soil, costing him around CFAF 20,000 (30 euro) per hectare. "Due to this practice, I have reduced the use of 250kg/ha fertiliser to 200 kg, which saves 20% on fertiliser expenses. I also try to strictly respect the periods of irrigation and drainage. I have also witnessed an increase in my yields from 3.8T/ha last year to 4.3 T/ha this year," he added.

In a similar note, **Budi Harsanto** (40), a rice farmer in Boyolali, Indonesia shared his experience when participating in the SRP Pilot. He said that he started adopting a number of new rice cultivation practices. The first is documenting planting cycles. **"I already have a crop calendar but I rarely updated it. Now I start using it to plan the next planting cycles,"** he said.

Mr. Harsanto said that he initially struggled to change old practices because he was familiar with certain way of doing things, one of which is using protective clothing. Yet, he is willing to do it due to his concerns over the negative impact of chemical produce to health and environment. "I receive information about what pesticide can do to human body and that worries me a lot. Now I wear a safety mask and gloves when dealing with chemical produce, especially when spraying pesticides," he said.



In most cases, farmers are resistant to change their rice cultivation practices because they fear the changes will affect on increase in cost and reduction in yield. However, **Hisa Nuhu**, a rice farmer in Doho, Uganda shared a positive experience on how sustainable practices actually helped him reduce some costs.



**"Before the pilot, I used to burn the stubbles. I also used inorganic fertiliser to improve the fertility of the soil because I believe that these practices would help me get higher yields. My perspective has gradually changed after receiving guidance from the SRP guides. I decided to try out and incorporate back the stubble in the rice field, and I reduced the use of inorganic fertiliser. I was surprised that I actually got the same yield, at a much lower cost,"** Mr Nuhu said.

# Lessons learnt and challenges



Overall, farmers in all pilot countries have improved their rice farming practices as validated by the improved SRP scores in six countries. Drawing on our experience, Rikolto faced some challenges in pilot-testing the SRP standard.

## Misunderstanding on a number of requirements

There are three main requirements that have generated a certain degree of confusion amongst surveyed farmers both in Asia and Africa, such as:

### 1. Heavy metal

Language is one of the major barriers to explain this requirement. Farmer guides/enumerators stated that they could not find a local language to interpret this, making it difficult for them to ask the question clearly to farmers.

### 2. Salinity

Similar to heavy metal, farmer guides/enumerators could not find a local interpretation for this terminology. To address this, some enumerators have tried to describe the impacts of salinity to paddy production that the surveyed farmers may have noticed. However, farmers were still unable to articulate their answers clearly.

### 3. Invasive species

Farmer guides/enumerators could not define whether a species is invasive or not. As an example in Indonesia, water hyacinth is considered an invasive species, however farmers in West Java have long used water hyacinth as a green manure for organic rice farming they control its growth only in a concentrated area.

## Mobile data collection

Contact farmers and enumerators faced challenges when collecting data. In Vietnam, partners and staff have just learnt about using KoBo and tablets. So it took time for them to finish the survey for each farmer. Farmers were also not willing to spend a lot of time to participate in the survey.

In Indonesia, the main challenge was about enumerators' capacity to understand the questions, to rephrase the questions in sentences that farmers could understand, and to be diligent enough to get satisfying answers.

In Uganda, farmer guides took time to familiarise themselves with using mobile phones to collect data. On a positive note, they also were excited to learn about mobile data collection as it could open up more opportunities for them to use the newly gained skills. At farmers level, we observed that farmers were more willing to give out information when they saw the farmer guides using mobile phones compared to when they saw paper-based questionnaire. Mobile data collection also took less time than paper-based survey, which gave farmers impression that the survey would not take much of their time.



## Reactions

The usefulness of the SRP standard according to the **farmers**



In **Senegal**, farmers found it useful to have the SRP standard as it takes into account all aspects of sustainable production in the basin, while at the same time improving productivity.

In **Mali**, Ali Sanago, the Agricultural Technical Advisor at ARPASO, the application of the SRP has led them to popularise, through the establishment of farmer school fields, an agricultural innovation combining SRI-Fertinova industrial organic fertiliser from the Elephant Vert company-Deep Placement of Urea, supported by Rikolto. This package of technologies was visited by Liberian producers through the IER (Institute of Rural Economy) that has this innovation, which is part of the improvement of SRP standards at ARPASO.

While in **Vietnam**, farmers have already adopted a lot of standards and techniques and find the SRP Standard less attractive. In addition, SRP is not officially recognised yet by the government.

In **Uganda**, Mr. Sagula Wilberforce, the DIFACOS Production Manager) stated that by having a system (the SRP Standard), which helps farmers to measure their scores at the end of the season, farmers are motivated to adopt more sustainable cultivation practices as they want to see their scores/ sustainability credential go-up at the end of season. Therefore, SRP is leading to farmers adopting more sustainable farming practices on their farms.

UNIRIZ-C in **Benin** also appreciated the SRP standard especially since it allowed experimenting with another fragrant rice variety with a short cycle.

The SRP pilot testing so far has received feedback from FOs. In **Indonesia** the training model has empowered farmers on certain stages of planting cycle, so farmers can plan effectively to produce better rice.

## Reaction from **other chain actors**



In **Benin**, the Consultative Body of Rice producers (CCR-B) is following the experience with the Interprofession (IFRIZ-Benin).

In **Uganda**, the Butaleja District Wetlands Office has interest in adopting the SRP Standard, as it has the mandate to ensure that wetlands in the district are used sustainably. Currently, individuals are permitted to grow rice within designated zones in wetland areas. The condition they are given is that the wetland should not be degraded, but used sustainably. However, the Wetlands Office has been depending on Environmental Impact Assessments (EIA). These are very expensive, and difficult to apply at smallholder level. As such, the Wetlands Office considers adopting this scoring system.

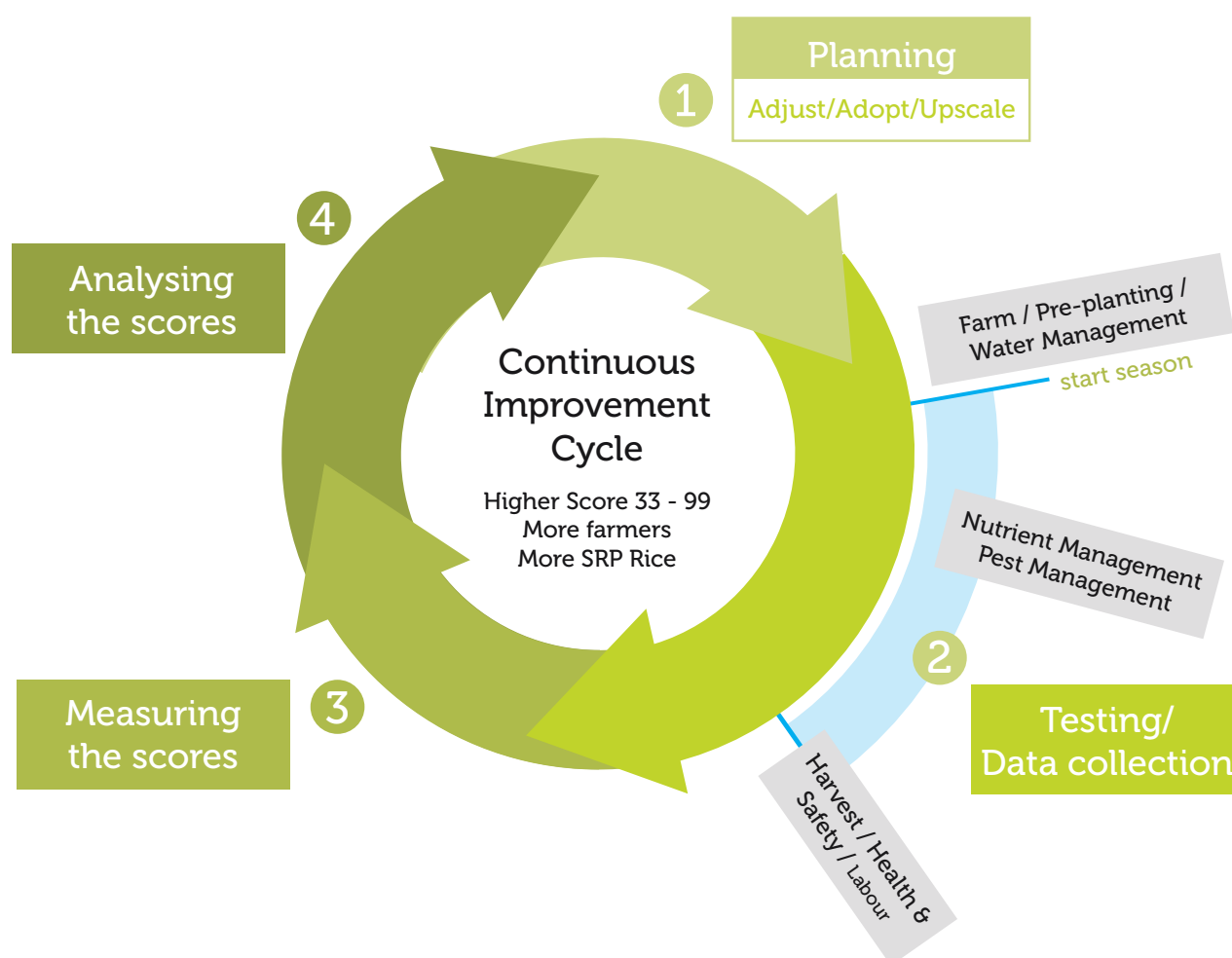
Rikolto in **Indonesia** has presented and introduced SRP to other NGOs such as: API (Indonesia Peasant Alliance), KRKP (People's Coalition for Food Sovereignty, Penabulu Foundation, ICCO Indonesia and GIZ Indonesia. ICCO has shown interest to join the SRP, while GIZ Indonesia will conduct SRP pilot in North Sumatera Province.

In **Senegal**, SODAGRI was satisfied with the SRP progress and actively participated in its training and implementation. Future plans will include promote the SRP Standard by collaborating with local media. There is already a contract signed between FOs and a community radio where every Thursday there will be a broadcast to allow information exchanges between farmers.

Rikolto in **Vietnam** and Phoenix Ltd have signed a MoU for cooperatives to supply sustainable cultivated rice.

## Challenges that farmer organisations will take up for the next SRP cycle

- Learning from the first pilot in Benin, it is necessary to buy the androids smart phone. We also need to give farmers more time so they can familiarise themselves with the SRP Standard.
- In Uganda, farmers will be challenged to meet requirements regarding nutrient management, IPM, disease management, mollusc management, safety instructions, Personal Protective Equipment, washing & changing, and re-entry times.
- In Vietnam, farmers are likely to face challenges to perform better to change missed thresholds, e.g. burning straws and stubbles.
- In Indonesia, the main challenge will be ensuring that enumerators/contact farmers really understand the requirements so they can deliver a clear question in their local language to farmers.







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## Future Plans

**Rikolto's next major steps towards working for sustainable rice sector transformation are:**

1. **Upscaling and out-scaling the pilot to other organisations.** In 2019, we aim to involve over 8,500 farmers in Asia and Africa and get started in Burkina Faso and Tanzania. This has been done in the pilot countries, for example, in Indonesia, we have organised a workshop to introduce SRP to other NGOs working in the rice sector, such as Indonesia Peasant Alliance (API), ICCO Cooperation, GIZ, People's Coalition for Food Security (KRKP), and Penabulu who are interested in starting the SRP pilot.
2. **Starting to monitor the impacts of applying the Standard** by measuring selected Performance Indicators in all Rikolto facilitated SRP projects. The selected indicators are: income, labour productivity, grain productivity, nitrogen use efficiency, biodiversity, GHG emissions reduction, and food safety.
3. **Developing market linkages** between SRP rice producers with private companies, such as Phoenix in Vietnam, SWT Tanners Limited in Uganda, and millers in Bagré, Burkina Faso.
4. **Partnering with service providers**, one of which is Peterson Control Union, for mobile data collection.
5. **Presenting lessons and success stories** to policy makers and all relevant stakeholders in the rice value chain to push for a wide-scale adoption of the standard.

In Uganda, Rikolto was invited by the Ministry of Agriculture, Animal Industry and Fisheries to attend an intersectoral meeting with a view to develop the new National Rice Development Strategy 2020-2030. In the meeting, Rikolto provided input on our experience in developing and applying the global standard for sustainable rice.





## What will we eat tomorrow?

### About Rikolto

Rikolto (formerly VECO) is an international network organisation with more than 40 years of experience in partnering with farmer organisations and food chain stakeholders across Africa, Asia, Europe and Latin America.

The question that guides our work, is: What will we eat tomorrow? How can we guarantee that future generations retain access to affordable quality food, knowing that climate change, low prices and poverty are forcing more and more farmers from the land? Rikolto firmly believes that small-scale farmers, who produce 70% of our food worldwide, are a big part of the solution

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