



From theory to paddy: translating the sustainable rice platform in Cambodia

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Abstract

Although Voluntary Sustainability Standards have gained traction in promoting more sustainable food production and value chains, their impacts are not always conclusive. Building on actor-network theory, our aim was to analyze the translation of sustainability ideals promoted by the Sustainability Rice Platform (SRP) proponents into grounded agricultural practices and their outcomes on various dimensions of sustainability. To this end, we used a mixed-method and multi-scale approach that combined analysis of SRP governance documents and implementation tools, and a detailed case study conducted in Kampong Thom province, Cambodia. Fieldwork included participant observation, in-depth interviews with SRP proponents, semi-structured interviews with farmers and local stakeholders ($n=57$), and quantitative assessment of SRP sustainability outcomes based on a randomized controlled survey of households ($n=275$). Our findings underscore exclusionary outcomes in SRP processes, namely the consolidation of hegemonic positions within the supply chain and the limitation of smallholder farmers' autonomy in decision-making and implementation. Additionally, the paper reveals the absence of impacts of SRP farming practices on the environmental, social, and economic dimensions of sustainability. We argue that sustainability, or the lack thereof, is instead a contingent outcome of local agrarian circumstances shaped by historically embedded agrarian dynamics. Our paper contributes to ongoing discussions on agricultural innovations and cautions against solutions that do not tackle the political cause of unsustainable development.

Keywords Voluntary sustainability standards · Actor-network theory · Rice farmers · Incentive mechanisms · South-east Asia

Introduction

Transnational private governance by way of Voluntary Sustainability Standards (VSSs) has reinvigorated the debate around the sustainability of agricultural and food systems (Daviron and Vagneron 2011; Marx et al. 2024; Schönherr

2022). VSSs are increasingly tied to Sustainable Development Goals (Blankenbach 2020) and mobilize rubrics of the 2030 Agenda repertoire to synergize economic prosperity, social well-being and environmental durability. More specifically in the Global South, VSSs promise to link

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smallholder farmers to lucrative agricultural commodity markets and hence, pathways out of poverty (Elder et al. 2021).

Sustainability standards have gained traction along with considerable multi-stakeholder engagement: increased consumer awareness, corporate motivation and government buy-in (Marx et al. 2024). The number of standards in operation worldwide has increased sharply to reach 361, including 207 in the agricultural and horticulture sectors (International Trade Centre 2025). This development led to the diversification of their governance structure, the stringency of their sustainability requirement, and in their scope within value chains (Derkx and Glasbergen 2014; Marx et al. 2024; Schönherr 2022).

However, VSSs are the subject of heated debate, and there is no consensus concerning their contribution to sustainability. A body of critical scholarship views VSSs as technical fixes that obscure underlying power dynamics. Among others, Loconto and Fouilleux (2014) argue that the institutionalization of VSSs is fraught with political tensions that are never made explicit in the development of the standards and are sidelined by discussions on technical procedures. Bartley (2022) goes further and suggests that VSSs are impregnated with the power of corporate entities who use them primarily to build, protect, or repair their own reputation. Likewise, Bennett (2017) challenges the notion that VSS helps bring producers into global economic governance. While the heterogeneous impacts of VSS across commodities, standards, and regions is generally acknowledged (Meemken 2020), an increasing number of (meta) studies reveal a decoupling between the sustainability goals of VSSs and their outcomes on the ground. Certification and monitoring costs are often too high for small-scale peasant farmers to afford, which tends to exclude them from these innovations (Boonaert and Maertens 2023). Despite positive evidence that VSS increases the sales price of crops and hence the farmers' profits, their impacts on total household income and well-being remain uncertain (DeFries et al. 2017; Oya et al. 2018).

Our study tackles these contradictions. It focuses on the Sustainable Rice Platform (SRP), a standard co-convened in 2011 to "transform the global rice sector by improving smallholder livelihoods, reducing the social, environmental, and climate footprint of rice production, and offering the global rice market an assured supply of sustainably produced rice" (SRP 2023). Like most other market-based regulatory instruments, SRP proposes a set of principles that define an approach to sustainability, translates these principles into guidelines and measurable actions to be implemented by stakeholders, and has developed an institutional framework to monitor and certify adopters' compliance

with these standards. Certified compliance then opens up access to protected markets and premium prices.

In Cambodia, since 2022, the SRP standard has gained importance as a rallying point for the many stakeholders interested in promoting sustainability in the sector. And there is much at stake. Rice is a strategic crop; it is both a staple food and a flagship export commodity (Cramb et al. 2020; Green, 2021). The development of the Cambodian rice sector has followed a green revolution-like trajectory: the adoption of improved varieties and broadcasting techniques as well as increased use of mineral fertilizers, herbicides and other pesticides has boosted production (Baird et al. 2022; Cramb et al. 2020). However, the more intense use of agrochemicals and conventional tillage practices has also degraded soil health (Pheap et al. 2025) and modified habitats (Chea et al. 2024; Mahood et al. 2020). The recourse to credit to finance upfront input costs, access to irrigation water, and mechanized services has introduced new forms of social-ecological vulnerability in rural communities (Green, 2022). These processes have triggered rapid social differentiation between some producers who accumulate capital in the form of land and assets, and others who rely increasingly on wage labor through labor mobility and migration (Diepart and Thuon 2022; Yokying 2025).

In mainland Southeast Asia, studies of the SRP mainly focus on the evaluation of consumer choice for sustainable rice (Connor et al. 2022; My et al. 2018), the efficiency of extension services (Watcharapongchai et al. 2018) and the transfer of agricultural knowledge to farmers (Sae-Heng et al. 2021). Analyses that examine local governance and the local impacts of the SRP standard in fostering more sustainable rice farming practices are scarce. To fill this gap, our study offers insights into the agronomic, socioeconomic, and environmental impacts of implementing the Sustainable Rice Platform (SRP) in promoting sustainability in the Cambodian rice sector. The analysis is based on a case study conducted in Kampong Thom province. Building on the sociology of translation (Latour 2007) and the concept of grounding (Graz 2022) that allow for an analytic of complex social-technical network, the objective of our study is twofold. First, to understand how actors engage with, adapt, and operationalize the SRP standard on the ground and the power dynamics mobilized in this translation. Second, to evaluate the sustainability impacts of SRP at the level of smallholder farmers in terms of changes in practices and agricultural productivity (land and labor). Based on a governance-level analysis of how SRP is framed and institutionalized and an empirical assessment of its effects on farming prices, we argue that SRP consolidates hegemonic positions within the supply chain and does not translate into more sustainable rice practices. Instead, we reveal how differences in farming practices and agricultural productivities

are contingent outcomes of local agrarian circumstances shaped by historically embedded agrarian dynamics.

The article is structured as follows. First, we present the conceptual framework of the study at the intersection of the Actor-Network Theory and the sociology of standards. Next, we describe our methods and the case study investigated. We then present our results aligned with three key moments of translation. Finally, we discuss if and how the SRP has kept its promises to improve farmers' well-being and enhance the sustainability of Cambodian rice landscapes.

Conceptual framework: sociology of translation

We consider the Sustainability Rice Platform (SRP) as part of a socio-technical transition to sustainability (Geels 2019) that aims to transform rice-based farming systems and the relationship among the actors who shape these systems. We build on Actor-Network Theory (ANT) (Latour 2007), which offers useful conceptual insights to study the SRP as an adaptive process in Cambodian rice landscapes. First, ANT makes it possible to examine the inter-relations between expressive and material components mobilized for the SRP. These components include the actors and their institutions (norms, values, policies), the standards sustainability tool kit per se, and the materiality of farming. Second, ANT focuses on the forces that tie these heterogeneous elements together, stabilize them, or make them fall apart. This leads us to consider sustainability in the rice sector as emergent and contingent properties of these relations, as opposed to a predictable outcome. This analytical approach has a political edge. It draws attention to the power dynamics and the forms of knowledge tied to the exercise of power by the different actors involved (Müller 2015). Building on scholarship that examines the political economy of sustainability initiatives (Loconto and Demortain 2017; Milne et al. 2019), we question how power influences the formation of common interests and alliance-building in the SRP and shapes the resulting sustainability.

To trace associations in the SRP apparatus, we draw on the 'sociology of translation' (Callon 1984; Latour 2007). We identify three overlapping moments that structure the translation process. The first is what Callon (1984) terms 'problematization'. In our case, it consists of formulating the sustainability problem at stake and defining how it should be tackled in practical terms. Drawing on the sociology of standards, Loconto and Demortain (2017) refer to this moment as '*Standard in the making*'. It is a journey across spatial and institutional scales that starts with the global vision of sustainable rice production desired by the proponents of the SRP, moves on to the paddies cultivated

by smallholder farmers, and ends in the market. It raises political questions about knowledge co-production: what forms of knowledge are valued, and how are they integrated into the process? To what extent is SRP open to contestation or reinterpretation by actors at different levels? To what degree does it embrace the complexity and political-economic asymmetries of agrarian landscapes or, on the contrary, introduce simplification to ensure that the intervention conforms with a technical domain that is easier to grasp (Li 2007; Milne et al. 2019)?

The second moment of translation draws upon the notion of boundary objects (Star and Griesemer 1989), itself an extension of the notions of '*interessement and enrollment*' proposed by Callon (1984). It mirrors what Loconto and Demortain (2017) term '*Standard in Action*'. Seeing SRP as a boundary object opens up the possibility to examine how alignments are forged between actors driven by different strategies and interests in sustainable rice production (Star and Griesemer 1989; Trompette and Vinck 2009). SRP takes multiple forms and meanings depending on the position of the actors, including farmers, paddy millers, corporate actors who export, biodiversity conservation organizations, among others. Important questions arise, such as how does SRP create a space to articulate their perspectives, facilitate cooperation, and form alliances across intersecting social worlds? What are the processes of negotiation or compromise-seeking involved between and within the different stakeholder groups during the process?

The third moment of translation is mobilization, the moment of truth, so to speak. It is the point at which a relatively stable actor-network emerges. Effective mobilization is contingent on the success of the two preceding moments. It implies that the problem and its remedies were properly identified and that the roles of actors, along with the values and tools they mobilize, have been well assigned (Callon 1984). In our case, we question mobilization in SRP by asking if and to what extent actors working toward sustainable rice production effectively achieve sizable outcomes in environmental, social, and economic terms.

Methods

Our analysis is based on a critical review of the development of the Sustainable Rice Platform (SRP) and on insights gained from a detailed case study conducted in Kampong Thom province at the site of the very first SRP project in Cambodia, initiated in 2016. We first contextualize the case study site before describing the three research stages, each corresponding to one of the moments of translation described above.

Case study site

The study area is located in the Tonle Sap floodplain, in central Cambodia and is characterized by a tropical monsoon climate (Fig. 1). The land along the northern part of the national road is primarily used for rain-fed rice production with one harvest per year. Irrigation schemes have been developed on the land located along the southern part of the national road, the primary source of the irrigation water being a reservoir in Preah Damrei Commune (Fig. 1). Irrigation enables two to three rice harvests per year. Across the floodplain, distinct habitats such as gallery forest, seasonally flooded grassland, and rainfed habitats can be identified based on the duration of the annual flood (Arias et al. 2012). The lake and its flood plain are widely known as a biodiversity hotspot with extraordinary livelihood and conservation values (Gray et al. 2009; Seng 2017).

In 2022, the SRP project included five communes (Prolay, Rong Roeung, Preah Domrey and Chamnar Leu in Stoung District; San Kor and Damrei Slab in Kampong Svay district) in Kampong Thom Province, including 29

villages and 389 SRP farmers. These communes cover an area of 60,016 hectares, with a total population of 63,591 inhabitants distributed in 12,523 households (NCDD 2023).

Phase 1. SRP from a sustainability ideal to operational guidelines

Our investigation of the SRP conundrum started with a participant observation. The first author completed the authorized training on the SRP standard in June 2022. Her objective was an in-depth understanding of the SRP instruments and the internal logic of the standard.

To understand how the sustainability vision was operationalized to produce specific guidelines, we examined the three core documents of the SRP framework. These include the standard itself, with its 41 sustainability requirements for farming practices; the performance indicators used to assess the impacts of the implementation of the SRP standard; and the assurance scheme that frames rules to confirm compliance and ensure credible claims concerning sustainability. A more specific analysis was conducted of

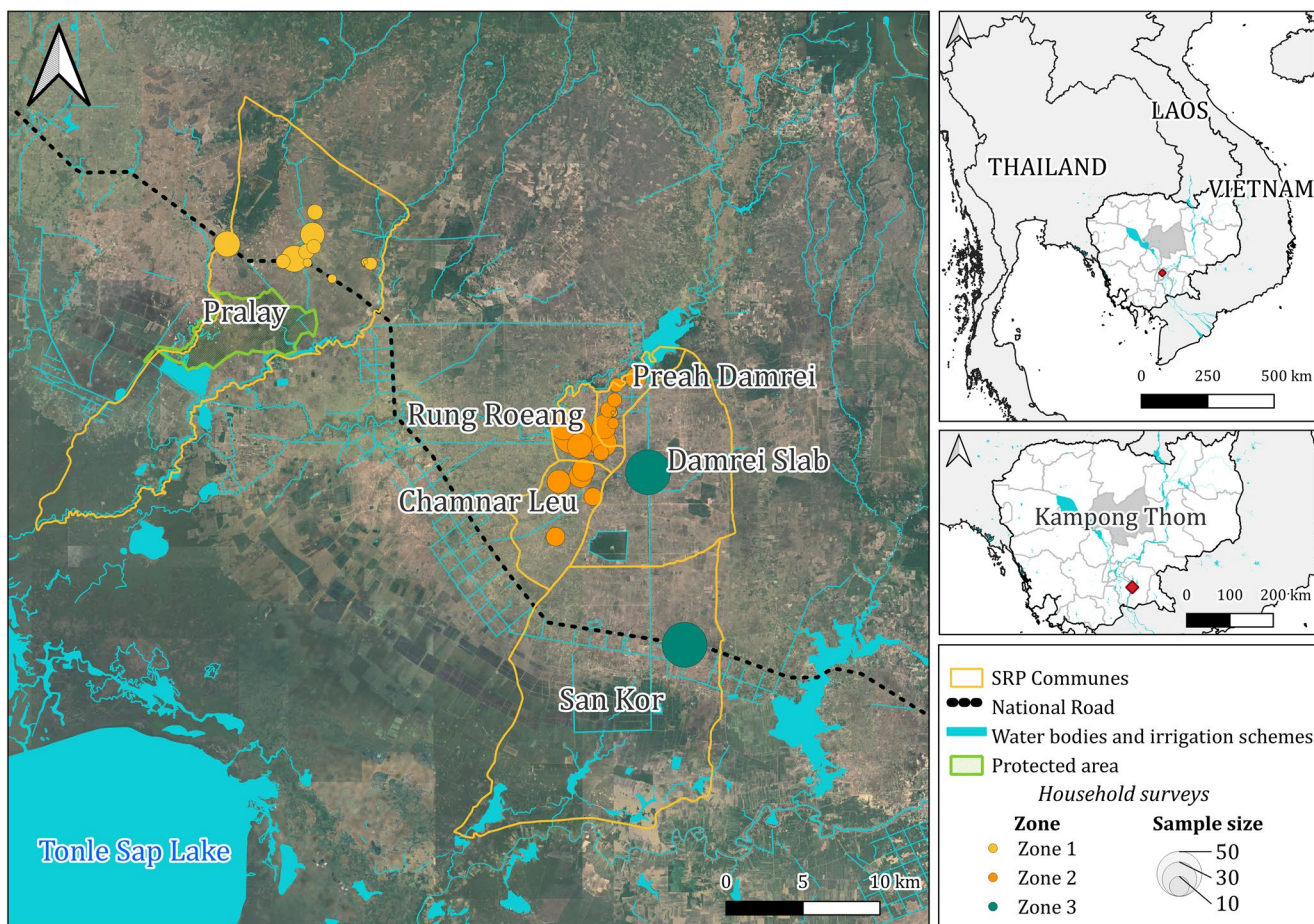


Fig. 1 Location of the study area and number of farming households sampled per zone. Data: GADM; State of Land in the Mekong Region; Aruna Technology, Phnom Penh; ESRI Satellite (ArcGIS/World_Imagery)

the content of the standards document. We classified each of the 41 requirements into three categories based on the ability of rice farmers to implement them autonomously: 1) most farmers can implement the requirements independently, 2) most farmers are able to implement them but first require training or financial support 3) most farmers cannot implement them without the help of external service providers. Two authors conducted this analysis independently based on their grounded knowledge of farmers' capabilities in the study area, and later discussed to reach a shared interpretation.

Phase 2. SRP: from a guideline to a localized alliance of actors in Cambodia

To contextualize the development of SRP in the Cambodian rice sector, we conducted a series of discussions with key actors about the structure of the SRP actor-network in Cambodia, its evolution, and its vision for the future. This included in-depth interviews ($n=6$) with representatives of three out of the four SRP projects officially registered in Cambodia in Battambang and Kampong Thom provinces in 2023 and 2024. We interviewed representatives of the Cambodian Rice Federation (CRF). We reviewed Cambodian press coverage of the development of the SRP in Cambodia since its inception. Our review included 33 press articles released in the Khmer Times and the Phnom Penh Post between 2017 and 2024. The articles were searched for using the keyword "Sustainable Rice Platform".

The lead author conducted a qualitative field study from July to November 2022 at the site of the case study in close collaboration with two non-governmental organizations (NGOs) that pioneered the SRP in Cambodia: Wildlife Conservation Society (WCS) and its partner, Samson Mlup Prey (SMP). The latter works directly with the rice farmers. During the field work, we participated as observers in the farm visits and training sessions organized by SMP. We regularly met with both organizations to get project updates and their feedback on our ongoing research. Additionally, we conducted 23 interviews with elderly people and local authorities to understand the historical and contemporary dynamics of the agrarian landscape. The households sampled were clustered in three zones along a gradient of rice intensification and production associated with the creation of the irrigation infrastructures (from zone 1 to zone 3, as shown in Fig. 1). Our underlying hypothesis was that the structural and functional characteristics of the farming systems differ in each zone and that this could influence their farming practices and performance. We also interviewed 22 'key farmers' identified by SMP to help implement the project and recruit other SRP farmers at the village level. Finally, we conducted semi-structured interviews with

farmers engaged in the SRP project ($n=9$) and with those who had dropped out ($n=12$) to understand how SRP farming practices are implemented and the farmers' motivations and challenges concerning the standard.

For this qualitative research, the number of respondents was determined by data saturation, meaning that data were collected until no new information and insights emerged from additional interviews. The first author, who has basic proficiency in Khmer, conducted them in collaboration with Khmer-speaking co-authors. Interviews were audio recorded and accompanied by note-taking. Transcription and systematic debriefing discussions were conducted with the translator after each interview.

Phase 3. impact of the SRP on farming practices

To assess the impacts of the SRP on farming practices and performance, we conducted a quantitative study from January to March 2023, seven years after the SRP project was initiated. The duration of SRP implementation is therefore sufficient to detect changes in farming practices that might have occurred. Sampling was based on a stratified random sampling approach, aimed at comparing farmers across the three zones (Fig. 1); to this end, we created three groups representing different degrees of engagement in the initiative: SRP farmers, drop-out farmers, and non-SRP farmers. The size of the sample in each zone was determined using the Yamane Taro formula (Israel 1992), applying a sampling error of 15% at a 95% confidence interval. These sampling parameters enabled robust comparison of farming practices across the different zones and farmer groups (see details in Appendix A). A total of 275 households were randomly selected (99 SRP farmers, 44 drop-out farmers, and 132 non-SRP farmers). To reduce any potential selection bias, the SRP and drop-out farmers were selected randomly based on an exhaustive list provided by SMP. Non-SRP farmers were selected through random walk in the villages where the enumeration took place.

The survey was carried out using a two-step process. First, we collected data on household activity systems (labor, land, total household income including rice and all other activities, loans, assets), cropping and livestock systems, as well as their participation in the SRP program (or the lack thereof). Different possible answers related to motivation, benefits and challenges were presented to each respondent on illustrated cards. The interviewees could then move the cards around and rank them based on their own experience. Using such a tool helped engage with the interviewees more perceptively than in a conventional survey. This quantitative survey was conducted entirely in Khmer by trained enumerators.

Second, we evaluated farming practices based on 27 indicators we had identified to assess the farming practices captured in the 41 sustainability requirements proposed in the SRP standards (detailed in Appendix B). Additionally, 6 out of 12 performance indicators (PI) were calculated based on the SRP Performance Indicators Manual (SRP 2020) as detailed in Table 1. Because our focus is on farming practices and rice production processes per se, some sustainability requirements and PIs such as greenhouse gas emissions, women's empowerment, health and safety were not included in our analysis. Other specific parameters, like inbound water quality or the presence of heavy metals, were not included because the information was either not available or could not be measured with just a household survey.

As the majority of SRP farmers use SRP and conventional practices in different plots, we conducted the analysis at the plot level to identify the effect of the zone and SRP practices more accurately. We collected data concerning 387 plots grouped in three similar categories to those of the farmers (SRP, drop-out, and non-SRP), based on the assumption that farmers' decisions relevant to SRP and non-SRP plots are independent as per our observations during the previous qualitative phase. We applied a Factor Analysis on Mixed Data (FAMD) to accommodate continuous and categorical variables. Differences in the PIs were assessed using a Kruskal-Wallis test (H statistic) followed by a Dunn test with Bonferroni correction for pairwise comparisons of the groups and to identify specific group differences. Differences in the PIs among the different agrarian zones were assessed similarly. All the data were analyzed using R software (version 4.2.2 - R Core Team 2022).

The timing of the survey may have influenced participation, as some farmers are often temporarily absent from the village due to seasonal migration or off-farm activities. In addition, some quantitative data rely on recall-based responses, which may affect reporting accuracy. However, the relatively large sample size limits the influence of individual outliers.

Participation in the study was voluntary, and informed consent was obtained prior to interviews, in accordance with the European General Data Protection Regulation (GDPR). The first author received training in research data

management and ethical responsibilities, and enumerators were trained on consent procedures.

Results: three moments in SRP translation

The results section is structured around the three moments of translation of the Sustainable Rice Platform (SRP) standard: problematization, enrollment and interestment, and mobilization. The structure of this section mirrors the three phases of the methodology detailed above.

From a vision of sustainable rice to technical guidelines

Framing of the SRP standard by powerful actors

The SRP was established as a multi-stakeholder alliance to create a new norm for rice that would address the global environmental, social, and economic challenges facing rice production. The SRP was co-convened in 2011 (Fig. 2) by the International Rice Research Institute (IRRI) and United Nations Environment Program (UNEP). Although the SRP was officially presented as a multi-stakeholder alliance, its governance was shaped by industry leaders, including firms from the agro-industrial sector, such as Louis Dreyfus Commodities, Kellogg's, Mars Food, and Olam Trading (Ellis et al. 2014). Among the group of 'big four ABCD' commodity traders that includes ADM, Bunge and Cargill, Louis Dreyfus is the only one to be actively involved in the rice trade. Olam Trading and Mars Food are leading suppliers of rice to world markets (Murphy et al. 2018).

Since becoming an independent association in 2020, the SRP has prioritized institutional and corporate interests, with a global vision focused on "Feeding the world Sustainably". To represent the interests of the members, the SRP's main decisions are taken by an executive secretariat supervised by a governance board and advised by a technical committee (Fig. 3). The composition of the governance board is not of secondary significance as it mainly consists of agrochemical firms, financial institutions, NGOs, and

Table 1 Performance indicators (PI) calculated using the SRP performance indicators manual

	SRP PI Name	Details	Unit
PI1	Profitability	Land productivity (value-added per hectare)	USD/ha
PI2	Labor productivity	Value-added per man-day	USD/man-day
PI3	Productivity (yield)	Grain yield (production per ha)	Tons/ha
PI5	Nitrogen efficiency	Ratio of the amount of grain produced per kg of N applied	kg grain yield/ kg N input
PI6	Phosphorus efficiency	Ratio of the amount of grain produced per kg of P applied	kg grain yield/ kg P input
PI7	Biodiversity	Pesticide or herbicide use	Number of spray applications

Note: To calculate land and labor productivity (PI1 & PI2) for non-SRP and SRP farmers, we used 2022 sales prices. For the SRP farmers, we used the SRP price premium they received in 2020, as no price premium has been offered in this project since 2021

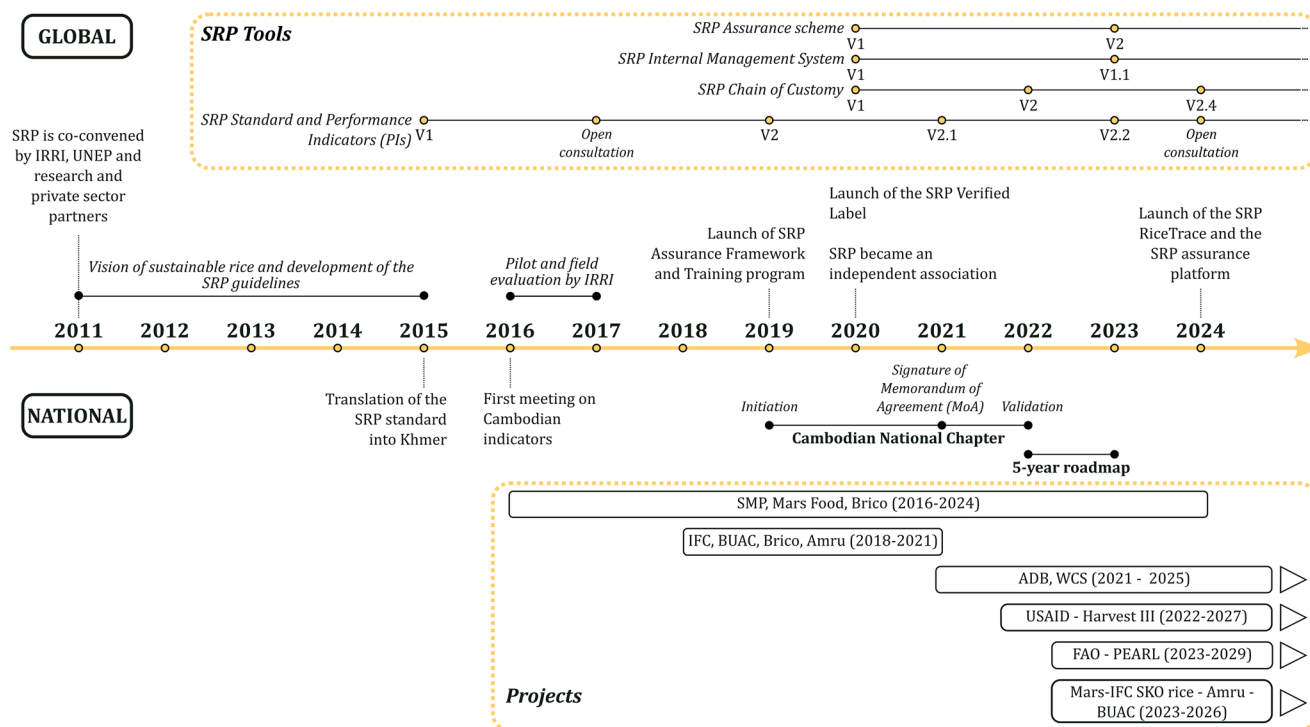


Fig. 2 SRP timelines at global and national levels. IIRI: International rice research Institute; UNEP: United Nations Environment Program; SMP: Sansom Mlup Prey; BRICO: Battambang rice investment Co. Ltd; IFC: International Finance Corporation; Amru: Amru rice Cambodia Co Ltd; ADB: Asian Development Bank; WCS: Wildlife Conservation Society;

USAID: United States agency for International Development; Harvest III: feed the future Cambodia; FAO: food and Agriculture Organization of the United Nations; PEARL: public-social-private partnerships for ecologically sound Agriculture and resilient Livelihoods; SKO: Sen Kra Ob

international research institutes. Farmer organizations are notably absent (SRP website 2025).

The original development of the SRP standard was influenced by concerns that there would be limited demand for sustainable rice, as the Western markets that usually drive premium pricing for certified products accounted for only 2% of global rice consumption (Ellis et al. 2014; Chen and Zhao 2023). Therefore, SRP’s initial strategy focused on increasing farmers’ margins by reducing production costs and increasing yields.

In 2025, 24 projects were registered as official SRP projects, targeting 423,111 farmers and claiming to have reached 187,868 farmers (SRP website 2025). In Cambodia, SRP implementation started with two pilot projects, one in 2016 the other in 2018, which, in 2019, culminated in the establishment of a National Chapter, the SRP country-level governance structure chaired by the General Directorate of Agriculture (GDA) and the Cambodian Rice Federation (CRF) (Fig. 2). CRF is a public-private initiative representing the diverse actors of the Cambodian rice sector, and a central body to implement the government’s flagship policy to export 1 million tons of milled rice every year. CRF is chaired by the CEO of AMRU, a prominent SRP rice exporter in Cambodia. Other members of the national chapter include SwissContact, WCS, and the French Agricultural

Research Centre for International Development (CIRAD). Taken together, the composition of the national chapter logically reflects the dual objective of SRP in Cambodia, i.e., to promote sustainable rice production and boost exports of milled rice. In 2025, four SRP projects were officially registered in Cambodia in the provinces of Battambang, Banteay Meanchey, and Kampong Thom, involving 3,700 farming households (Fig. 2).

Translating the vision of sustainable rice into ‘science-based’ production guidelines

To put their vision of sustainable rice into practice, SRP proponents and experts designed instruments deemed “science-based” (SRP Articles of Association v 2.1) (Fig. 3). In 2024, the SRP comprised five interlinked instruments: the SRP standard itself; Performance Indicators (PI); an assurance scheme; an Internal Management System (IMS); a Chain of Custody Policy and Standard (CoC); and ‘RiceTrace’, a digital traceability platform. A total of 37 documents, technical reports, and checklists (732 pages in all), are available to help individuals or organizations become members, train farmers to produce and sell SRP rice. The ISEAL Code of Good Practices serves as the guiding framework for the SRP, ensuring its alignment with international standards.

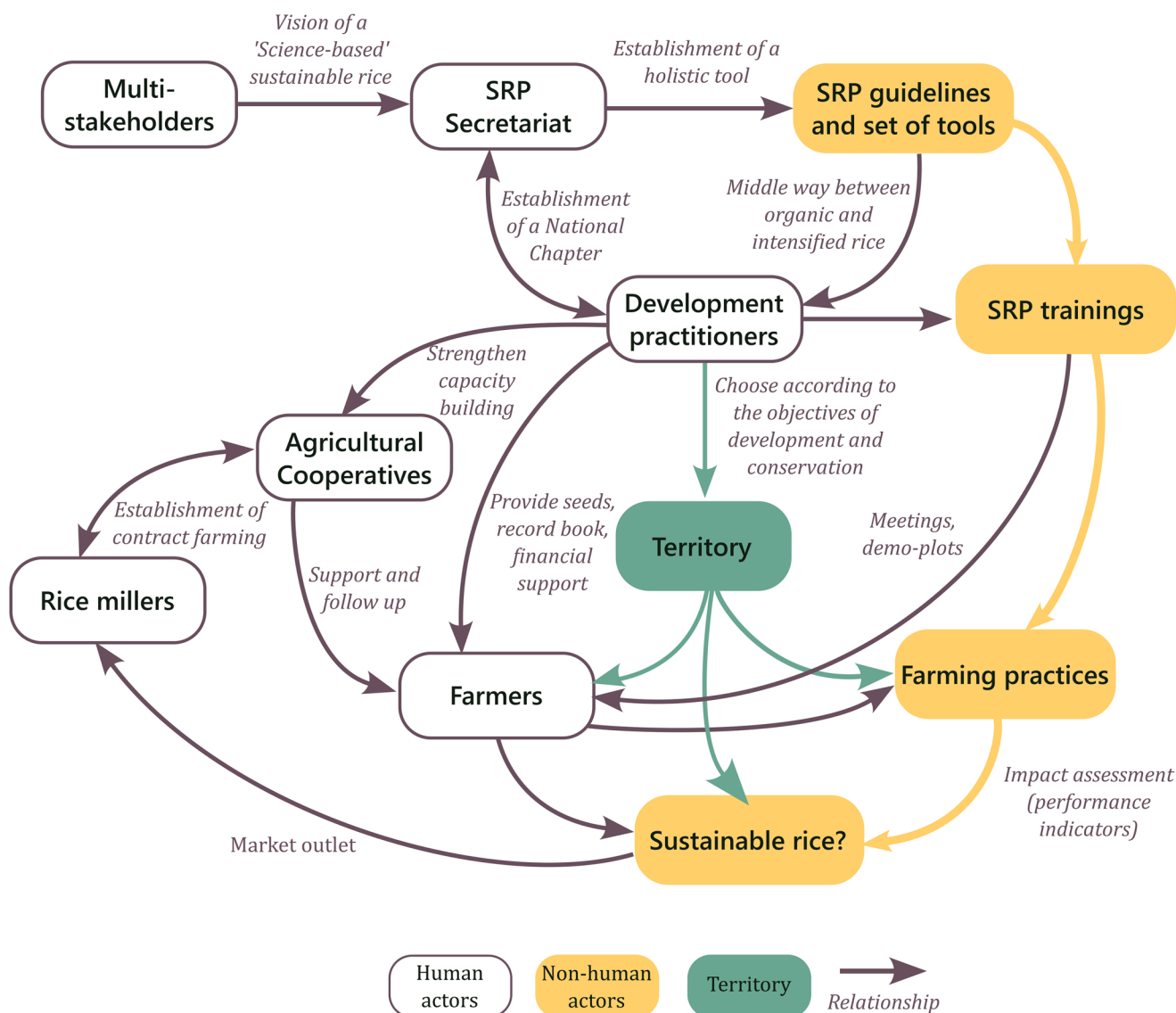


Fig. 3 Actor-network of SRP rice in Cambodia

Drafted between 2011 and 2015, the first version of the SRP standard guidelines and performance indicators was released for field testing in 2015 (SRP 2021). It comprised 41 requirements, focused on farming practices at the plot and farm level (SRP 2023). The SRP working group that defined the standard was composed of actors from development institutions (GIZ), NGOs (World Wide Fund for Nature-WWF, WCS, Rikolto, Winrock), certifiers (GLOBAL G.A.P.), agri-food industry (Ebro Foods, Mars Food), agro-chemical suppliers (Syngenta, CropLife Asia), research centers (Africa Rice Center), and experts from IRRI. After a two-month public consultation in 2017, a second version was released in January 2019.

Each requirement of the standard is scored at the household level to indicate the sustainability of the rice system. Farmers with a score over 90% are considered fully

compliant. The 12 PIs serve to assess the farming practices quantitatively and their trend towards sustainability. The SRP Assurance Scheme enables actors of the rice value chain to demonstrate their compliance. It offers three levels of verification: internal assessment (Integrated Management System - IMS), second-party assessment with an entity linked to the group of producers, and third-party assessment by an SRP-approved Conformity Assessment Body. Only the third level of verification allows companies and producers to make SRP claims or label their products.

Guidelines that limit farmer autonomy

The SRP guidelines were designed to be exhaustive yet flexible in order to facilitate their adoption in specific contexts. For example, the use of fertilizers, herbicides, and pesticides

is not regulated by specific threshold values, and the guidelines suggests that their use should be based on “local recommendations” or “according to plant needs” (SRP 2023). However, these ‘local recommendations’ are not mandatory, and, as a result, specific regulations concerning the amount of chemicals were not implemented. By contrast, some post-harvest rules were extremely precise, specifying an exact harvest window or a target grain moisture percentage.

Based on the Cambodian context, our analysis suggests that the SRP guidelines considerably limit farmer autonomy (see Section “Phase 1. SRP from a sustainability ideal to operational guidelines” for methods). Only 37% of the guideline requirements can be implemented by the farmer alone (Table 2). These requirements focus on health and safety (e.g. pesticide storage and disposal) and labor rights (e.g. child/forced labor or hazardous work). To comply with a further 34% of requirements, farmers require proper training (e.g. in record keeping, in alternating wet and drying methods, integrated pest management) or need financial support (e.g., for hermetic rice storage). To fulfil 29% of the requirements, an external service provider is necessary to rent tractors and laser equipment for land leveling, or to check inbound water quality or the level of groundwater extraction.

As such, many SRP requirements oblige farmers to rely on a structured network of intermediary actors thereby limiting their autonomy and decision-making capacity. Additionally, access to equipment and external services come at a cost that most farmers cannot afford without financial support, thereby increasing their dependency on micro-finance institutions, which could heighten their economic vulnerability (Green, 2021; Green, 2022).

SRP as a boundary object

The SRP standard was used to combine diverse goals

Stakeholders involved in the SRP initiative being analyzed here come from multiple horizons, have different world-views, and are motivated by different rationalities. Aside from these differences, they share a strategic objective for sustainable rice production that incentivizes them to collaborate. SRP acts as a boundary-object that connects disparate goals while facilitating communication and cooperation across multiple stakeholder groups (Fig. 3).

On the private sector side, the initiative involved Mars Food & Nutrition, a global agri-business, and Battambang Rice Investment (BRICo), one of its Cambodian suppliers (Fig. 3). Both companies are involved in other SRP initiatives in Cambodia as beneficiaries of the International Finance Corporation (IFC) through the Private Sector Window of the Global Agriculture and Food Security Program (GAFSP). They view SRP as a mechanism to progress toward their sustainability targets in order to make the country more attractive to international buyers and to access premium international markets.

Farmers’ motivations in joining the SRP were first and foremost economic. Sixty-nine percent of the SRP farmers were keen on joining the initiatives because they expected certification would give them access to new profitable rice markets. Other motives were to increase yield (9% of SRP farmers), receive technical and material support (7%), or use the opportunity to learn new rice cultivation techniques (6%). The importance of economic considerations in participating in SRP certification was confirmed by a development practitioner who suggested that “farmers are not interested in following guidelines unless there is an economic gain” (P#2 - 2023). Likewise, farmers who dropped out of SRP did so mainly because it was difficult for them to obtain

Table 2 Analysis of farmer autonomy in implementing the SRP standard in Cambodia

	Number of requirements	Farmers can implement the requirement alone	Farmers can implement the requirement, but require preliminary training or financial support to do so	Farmers cannot implement the requirement, or cannot do so without service providers
Farm management	3		2	1
Pre-planting	6		2	4
Water use	5		2	3
Nutrient management	3	1	2	
Pest management	1		1	
Harvest and post-harvest	7	3	3	1
Health and safety	9	5	2	2
Labor rights	7	6		1
Total	41 (100%)	15 (37%)	14 (34%)	15 (29%)

good-quality seeds (32%), thereby limiting their access to more profitable markets, or because the opportunity cost of implementing the guidelines was too high (23%).

Development practitioners in our case study area include the Wildlife Conservation Society (WCS) and a local non-governmental organization, Samson Mlup Prey (SMP) (Fig. 3). WCS views the SRP as a set of science-based farming practices with positive environmental outcomes that are integrated into their efforts to conserve the Bengal Florican (*Houbaropsis bengalensis*), a critically endangered bird species whose habitat is the grasslands of the Tonle Sap floodplain (Fig. 1). SMP works directly with farmers in the field. It views the SRP as one incentive mechanism integrated in their larger services portfolio, aimed at encouraging farmers to adopt sustainable farming practices. As such, SRP contributes to the professionalization of its services and helps structure its social business model.

Facilitating the implementation of SRP

In the field, SMP offered seven training sessions focused on specific SRP-required practices. Some were technology-oriented (land leveling or rice sowing equipment) while other sessions focused on nutrient management (dosage and timing of fertilizer application and cover crops) or pesticide management (individual protection). Some training sessions, such as seed production or rice quality assessment, only targeted ‘key farmers’, i.e. those who negotiate directly with the rice millers. None of these training sessions were mandatory, hence the farmers participated based on their interests. Highest in demand was the training to select good quality seed (attended by 95% of SRP farmers), followed by land leveling (60%), application of fertilizer (50%), application of herbicides and pesticides (28%), and cover crops (14%). The high degree of interest in seed quality and purity reflects farmers’ core motivation to increase yield and access more profitable markets as homogeneous production can be sold to millers at a higher price. As one key farmer told us:

Over the years, I have gained knowledge from the training, even if I forget some of it. For the other farmers, it depends; some understand, some do not. They are mainly interested in the quality of seeds. We see a difference in the quality of rice between the SRP and non-SRP members. Concerning land levelling, plowing in rice straw and the 3-step application of fertilizers, farmers take the training if they can afford to implement it. But they are definitely interested in the training on good quality seeds. KF#62–2022 (response to a question concerning his own participation in training sessions and understanding of the guidelines)

However, the training sessions were not tailored to meet the farmers’ specific needs. SMP facilitators were present in the field throughout the year to follow up with farmers. Farmers emphasized that the guidelines did not significantly alter their practices. Many farmers and agricultural cooperatives who enrolled in the SRP project had experience working on similar initiatives coordinated by SMP in the past (organic rice, contract farming with rice millers, saving groups, etc.). The key challenge for farmers was not attending and understanding the training but being able to apply and implement the techniques on their farms depending on availability of the equipment, costs, and time constraints.

I thought that they [the trainings] were not difficult to follow. The problem is the cost of applying the techniques we have learned, like land leveling, building a field dike to store the water. Even if you increase yields by following the guidelines, it costs a lot of money. KF#56–2022

The problem of the cost was confirmed by the lead SMP trainer, who pointed to the socially uneven outcome of SRP: SRP does not work for poor farmers with small landholdings because the premium price is too low to cover the costs and too much time is spent, and too much work involved. P#3–2023

SRP as a limited negotiation space

The centrality and influence of millers in the SRP dispositive stood out in our study. The millers have the ability to exert control over pivotal aspects of the rice production process, including the selection of rice varieties and quality standards, which are instrumental in determining the premium price.

To trade SRP rice, millers concentrated on fragrant rice varieties such as Phka Roumdoul and Sen Kra Ob for European and North American markets, where the demand for sustainable products is higher. This approach excluded high-yielding and short-cycle varieties associated with intensive farming practices and intensive use of chemical inputs, for which the need for sustainable interventions is more acute.

This commercial focus on niche markets has resulted in the inversion of incentive logic. Millers opted to offer a premium price based on the intrinsic quality of the rice harvest rather than on the sustainable practices promoted by SRP. Factors such as seed purity, grain brokenness, and moisture content became central to the negotiation between farmers and millers, and completely overshadowed discussions on changes toward more sustainable farming practices. During the COVID-19 crisis, when rice exports took a downturn,

the miller stopped offering a premium price and simply quit the project. The situation left the farmers in disarray.

The SRP National Chapter was established to align the interests of the different stakeholders. However, millers currently hold a dominant position on the national chapter’s board, and the perception shared by many practitioners is that the national Chapter merely serves for marketing with minimal tangible changes in the rice value chain. As one of our national-level respondents pointed out:

What’s going on with the SRP national chapter? Nothing has happened for the last two or three years. It was created to facilitate the value chain, but people have their own interests. There are conflicts of interest. The millers are competitors. They cannot really fully support the process. All this does not really support or drive the SRP. P#2–2023

Impact of the SRP on farming practices and performances

In this section, we analyze the mobilization of farmers in creating a network of actors who effectively work towards sustainable rice production. Specifically, we examined the extent to which SRP membership and local agrarian dynamics influence farming practices and performance indicators (see Section “Phase 3. impact of the SRP on farming practices” for methods).

Before doing so, we present some key livelihood characteristics of the households that took part in the survey. Table 3 groups households based on their type of engagement in the SRP project and the zone in which they operate. Household demographic structure, measured by the number of members and active laborers as well as by the high degree of reliance on migration, was found to be similar across types and zones. However, significant differences were identified between SRP farmers (those still involved and those who dropped out) and non-SRP farmers in terms of the size of their agricultural landholding (total area, area under paddy and under other crops) and ownership of mechanized equipment. Results showed that SRP farmers have larger endowments than non-SRP farmers. On the other hand, the proportion of non-agricultural income in total income is lower for SRP farmers. Taken together, this suggests that SRP farmers tend to be more specialized in agriculture, and in rice cultivation in particular, than non-SRP households. A similar pattern of specialization in rice cultivation was also identified when we compared zones; zone 3 hosts larger agricultural landholdings, more land under paddy, and more tractor ownership, and a smaller proportion of non-farm income.

Table 3 Household livelihood characteristics, according to the type of engagement in the SRP and the zone

Name of the variable	unit	Type of households											
		SRP (n=99)			Dropped out of SRP (n=44)			Non-SRP (n=132)			Zone		
		mean	s.d.	%	mean	s.d.	%	mean	s.d.	%	Zone 1 (n=99)	Zone 2 (n=91)	Zone 3 (n=85)
Household members	person	4.9	1.6	4.5	1.5	4.7	1.6	4.9	1.6	4.7	1.7	4.7	1.5
Households active labor	person	3.4	1.3	3.2	1.2	3.3	1.4	3.4	1.4	3.3	1.3	3.3	1.3
Permanent migration	%	14%	19%	17%	24%	20%	25%	15%	21%	19%	25%	19%	23%
Temporary migration	%	5%	16%	6%	17%	4%	13%	3%	12%	5%	14%	6%	18%
Total annual income* #	USD/year	10,970	22,996	9,371	18,456	5,943	6,653	4,667	4,330	5,649	4,754	15,373	27,535
Proportion of non-agricultural income of total income* #	%	57%	60%	66%	63%	75%	75%	77%	91%	75%	98%	56%	60%
Total cultivated land* #	ha	5.0	8.7	4.6	5.5	2.3	2.5	2.8	2.8	2.1	2.5	6.4	9.6
Area under paddy* #	ha	4.2	8.5	3.5	4.9	2.0	2.1	1.9	1.3	1.3	0.8	6.0	9.5
Area under other crops*	ha	0.9	1.9	1.1	3.0	0.3	1.4	0.8	2.2	0.8	2.2	0.4	1.1
Cattle and buffalo#	head	3.5	3.9	5.8	11.6	2.9	3.9	5.2	8.2	2.3	3.7	3.1	3.9
Ownership of a power tiller	%	52%	56%	41%	50%	37%	48%	43%	52%	37%	49%	48%	55%
Ownership of a tractor#	%	4%	20%	7%	25%	5%	21%	1%	10%	2%	15%	12%	32%

s.d. = sample standard deviation; * Significant differences between types of respondents ($p < 0.05$); # Significant differences between zones ($p < 0.05$); The results of the statistical tests are provided in appendix C

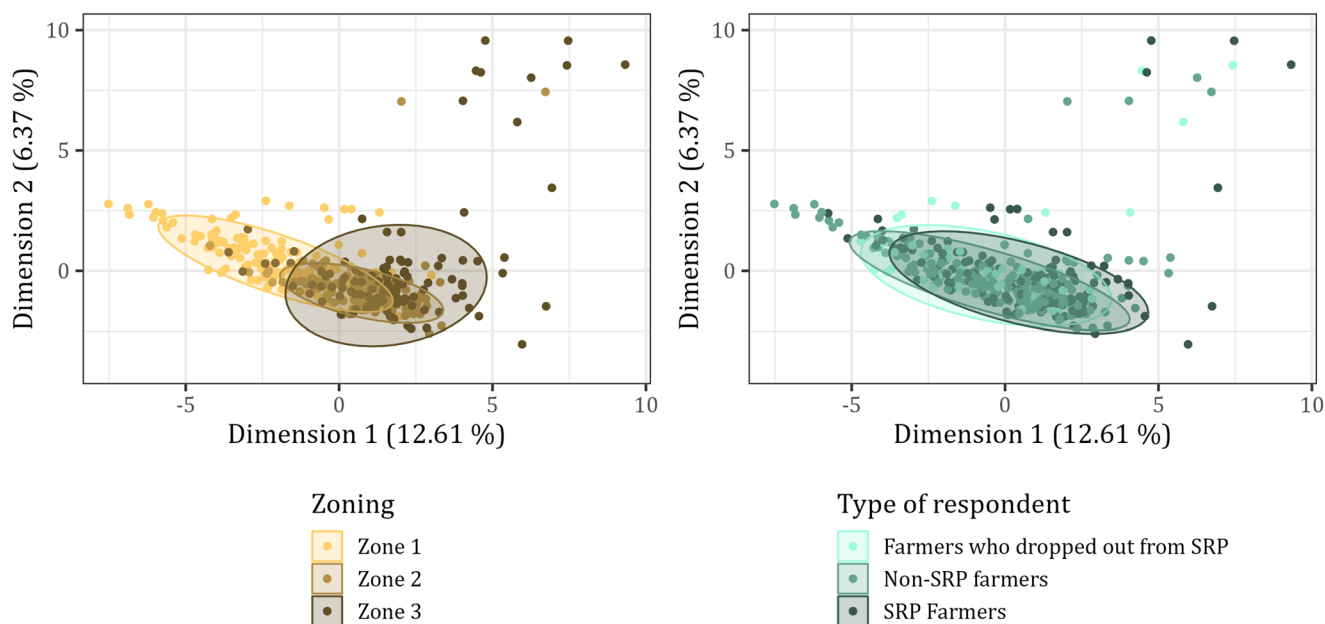


Fig. 4 Factor analysis of mixed data (FAMD) on rice farming practices

Impact of SRP practices

Figure 4 shows the results of the factor analysis conducted based on the indicators that describe the type of farming practices depending on the zone where the plot is located (on the left) and on the type of plots (SRP, drop-out and non-SRP) (on the right). The first five dimensions explained 32.70% of the variance in the farming practices dataset, while the first two dimensions explained 18.26% of total variance. Dimension 1 primarily captures differences in the intensity of input use, with a strong correlation with the number of fertilizer applications, the quantity of nitrogen and phosphorus applied, the type of fertilizer used, and the method of application. Dimension 2 is associated with the scale of production and mechanization.

The first information that emerged from this analysis is the absence of differences in farming practices according to the type of plot (SRP, drop-out and non-SRP) (right). Plot-based farming practices seem to vary more depending on the agrarian dynamics of each zone (left). Given that the farmers we interviewed have been taking part in SRP training and field-based activities for six years (2016–2022), this result challenges the assumption that the SRP standard influences farm management.

Limited impact of SRP membership on performance indicators

Our results showed that only one SRP performance indicator (i.e. land productivity) differs significantly between SRP, drop-out and non-SRP plots. When calculated with a

Table 4 Difference in performance indicators between types of plots (SRP, drop-out, non-SRP) with and without premium

	Grouping factor: type of plot			
	With premium price		Without premium price	
	H Statistic	p-value	H Statistic	p-value
PI1 Land productivity	10.35	0.0158*	1.00	0.802
PI2 Labor productivity	3.89	0.274	0.94	0.817
PI3 Yield	3.27	0.3521	3.27	0.352
PI5 Nitrogen efficiency	5.28	0.152	5.28	0.152
PI6 Phosphorus efficiency	6.07	0.108	6.07	0.108
PI7 Biodiversity	6.14	0.105	6.14	0.105

*=p-value < 0.05

premium price, we found that the land productivity (PI1) of the SRP plots was significantly higher than that of non-SRP plots but did not differ significantly from that of the plots owned by SRP drop-out farmers (Table 4, Fig. 5). However, land productivity did not differ significantly between groups with no premium price. Again, this challenges a central SRP assumption that adopting SRP standard practices reduces the farmers’ production costs and increases profitability without requiring higher sales prices.

Like for the other performance indicators, our results suggest there is no difference between types of plots, which is surprising in the case of the number of spray applications of pesticide or herbicide (Fig. 5). Similar analyses conducted of each zone separately did not reveal any differences in farming practices or in performance indicators between the different groups of farmers (Appendix D). These findings

Fig. 5 Boxplots of the performance indicators (PIs) grouped according to the type of farmers plot (left columns) and per zone (right columns). Note: SRP farmers have been engaged in the project for 6 years (2016–2022). The statistical significance of the Dunn test is indicated by the letters above the boxplots; groups with the same letter do not differ significantly from each other. “Non-SRP plots” include both plots belonging to non-SRP farmers and plots not registered under the SRP project but that belong to SRP farmers. Land and labor productivity (PI1 and PI2) were calculated using the SRP premium price

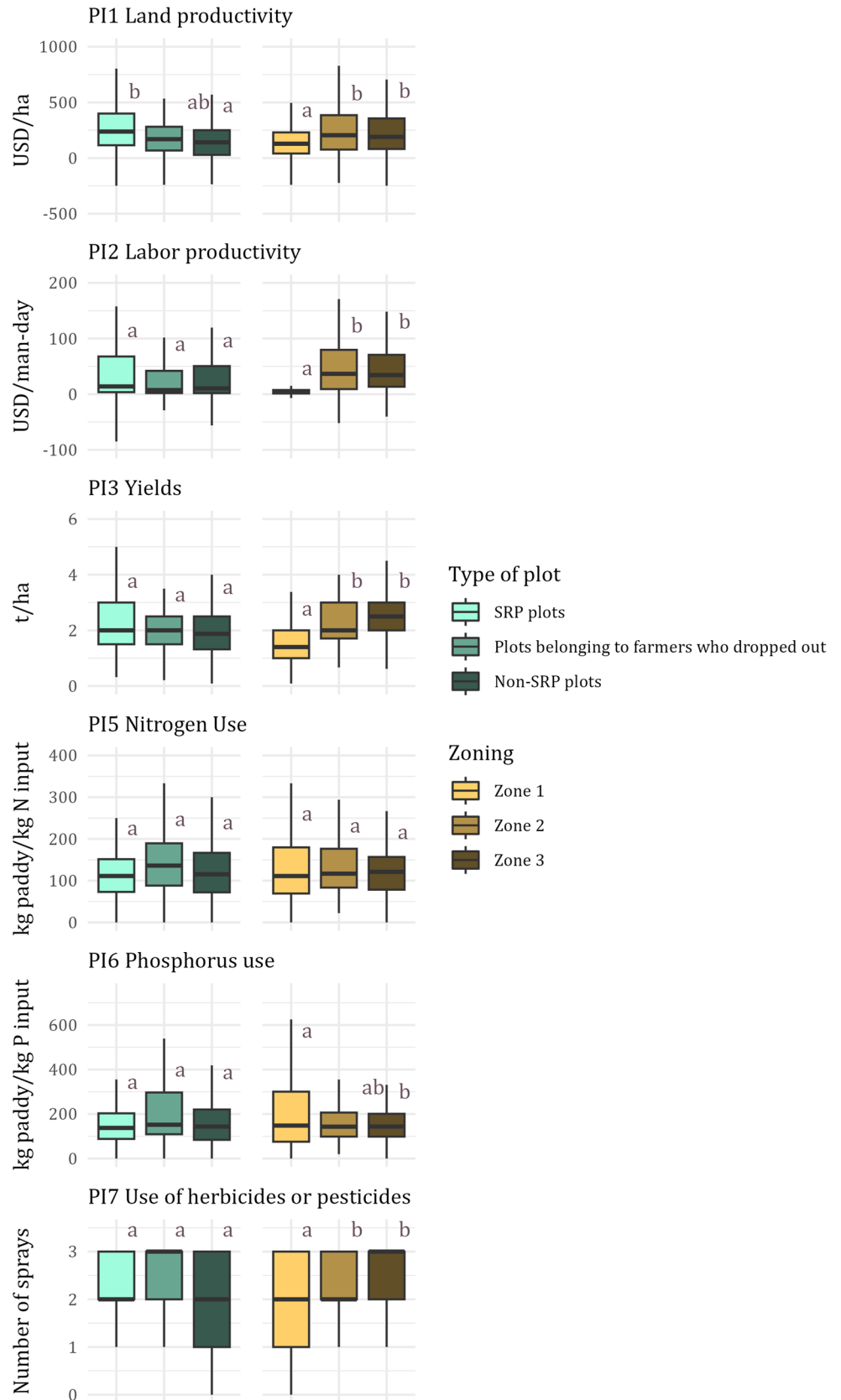


Table 5 Difference in performance indicators between zones

Variable	Zone	
	H Statistic	p-value
PI1 Land productivity	17.92	0.000128
PI2 Labor productivity	85.42	2.82E-19*
PI3 Yields	115.92	6.74E-26*
PI5 Nitrogen efficiency	0.27	0.873
PI6 Phosphorus efficiency	7.52	0.0232*
PI7 Biodiversity	25.24	3.31 E-06*

*=p-value < 0.05

are at odds with SRP's promise to improve the sustainability and performance of rice cropping systems.

Importance of the local agrarian dynamics

However, the local context influences the variations in performance indicators to a greater extent than farmers' involvement in the SRP project. Most of the PIs differed significantly between the zones (Table 5), particularly between zones 1 and 3 for key performance indicators such as land productivity (PI1), labor productivity (PI2), yields (PI3), phosphorus use (PI6), and the number of applications of chemical inputs (PI7). Zone 3 consistently showed that several key indicators performed better than in zone 1. Zone 2 did not differ statistically from zones 1 and 3 for PI1 and PI6 but had higher labor productivity and higher yields than zone 1.

The three zones in our study represented different stages along an agrarian transition (Fig. 1), with an increase in agricultural intensification and production scale gradients toward zone 3. Zone 1 was characterized by smaller-scale farming and reliance on organic fertilizers sourced from livestock, and farmers located in this zone reported lower incomes and less mechanization than in zones 2 and 3. In contrast, farmers in zone 3 farmed bigger plots using more mechanization and comprised the most intensive use of chemical inputs. Zone 2 was intermediate, with some characteristics of both Zones 1 and 3. This gradient of agricultural intensification and production scale is the product of local agrarian development, in particular, of the investment in irrigation infrastructure that accelerated the modernization of rice cultivation. Using spatially distinct observations (the zones) to identify a causal explanation of temporal transformations (the agrarian transition) is arguably constrained but our results suggest that differences in local agrarian trajectories have more influence on progress in farming practices toward sustainability than enrolment in the SRP project.

Furthermore, performance indicators in zone 3 have higher values. This is paradoxical considering this zone is where current agricultural practices are the most intensive across our study area, as shown in Fig. 5. This also questions

the validity of using these indicators to measure progress toward sustainability, as proposed in SRP documents. It also raises fundamental questions about what these performance indicators measure and the actual meaning of sustainability that underpin SRP.

Discussion: has SRP been lost in translation?

We considered the Sustainable Rice Platform (SRP) as an adaptive socio-technical process geared toward more sustainable rice production. In our case study area, however, the translation of sustainability ideals promoted by the SRP project proponents into grounded agricultural practices has not delivered on its promises.

'Certifying' hegemony

At the governance level, the narrative concerning SRP praises the virtues of pluralism, inviting all stakeholders to have a seat at the table. However, in reality, the forces that spearhead the standard, are corporate actors driven by market logics. Producers are excluded from the highest governance body, as reported by Bennett (2017) for many other sustainability standards. Hegemonic actors have framed a highly political problem (here, the lack of sustainability in the rice sector) as a set of technical and apolitical issues. The SRP standard is presented as a technical fix that offers "science-based" solutions, which seem to be neutral, objective, and somehow indisputable. The process resembles the process of "rendering technical" described by Li (2007). Following Bartley (2022), this approach consolidates the position and power of hegemonic actors who steer sustainability transformations.

In our case, the implementation of the SRP standard has three exclusionary consequences. First, the SRP is well aligned with the Cambodian Government's policy to modernize rice cultivation and increase exports of milled rice. As such, the power of transnational corporations to push rules through their supply chain is co-constitutive with the power of the state. It does not merely accommodate it, as Bartley (2022) suggests. This convergence of interests strongly legitimizes the knowledge mobilized to promote SRP as a key sustainability pathway in the Cambodian rice sector. Second, the SRP governance and guidelines impose a structured framework that limits the farmers' autonomy, both in decision-making and on-the-ground implementation. Not only do the farmers depend on training or financial support but also require external service providers to implement SRP practices and to confirm their compliance with the standard. This echoes a broader critique of green economy instruments, which suggests that environmental value is

produced by technocratic and bureaucratic processes (Milne and Mahanty 2019). Third, costs associated with certification and compliance (upfront purchase of inputs, the time spent, payment to service providers) tend to exclude smallholder farmers who are risk-averse or simply cannot afford it, particularly when these costs are not offset by higher prices or by other sources of income. SRP certification is more suited for better-off and risk-taking farmers; an observation that aligns well with that of Boonaert and Maertens (2023) and Baird (2024a, 2024b) in the context of organic rice certification in Thailand and Laos. This also echoes the literature showing that livelihood outcomes for smallholder farmers are limited when sustainability interventions do not align with local needs or priorities, in Cambodia (Cook et al. 2025) and beyond (Scoones 2015).

Unchanged agrarian trajectories

In our case study, the implementation of the SRP standard is highly influenced by the rice miller, who acts as an obligatory point of passage (Latour 2007) in the SRP process. First, millers focused SRP rice production primarily on varieties with aromatic qualities suited for export markets. This has also been reported in southern Laos, where millers exert significant role in controlling markets and influencing farmers' practices (Baird et al. 2022). Yet, without the intensive use of agro-chemicals, these varieties can generally only be harvested once a year. As a result, sustainability practices are encouraged for a few rice varieties, and the practices concerned are not the most harmful. Second, the centrality of rice miller has led to an inversion of logic in the certification process. While SRP is supposed to be *process-based* and to reward sustainable rice cultivation practices, in reality, the value of the premium is *output-based* and is decided upon by the miller based on market criteria, such as the rice variety, seed purity, moisture content, and the percentage of broken rice. Even in the case of product-based verification of organic rice in Southern Laos, Baird (2024b) observed that quality criteria set for export to China do not depend only on environmental verification, but also other quality factors such as color, moisture, etc. As such, the investments made by the farmers to adapt their cropping systems and to comply with new sustainability requirements were not directly rewarded. The potential of SRP to transform broader market conditions has consequently not been fully realized. The market conditions fixed by the dominant actor in the supply chain (i.e., the rice miller) continue to prevail over the capacity of farmers to adopt the more virtuous and sustainable practices promoted by the standard.

In our case study area, we found no significant differences in farming practices between farmers and plots based on their relationship with SRP (enrolled, drop-out, not

enrolled). This was found to be true for both the sustainability requirements listed in the SRP guidelines and the progress toward sustainability measured by performance indicators. In other words, the implementation of SRP does not trigger changes in rice cultivation practices toward more environmental durability. Neither does the SRP standard influence land and labor productivity (value added) nor improve farmer welfare. This is inconsistent with other studies on organic rice production in Laos and Thailand (Baird et al. 2022) but it is well aligned with the results of several meta-studies suggesting there is limited evidence to show that the uptake of voluntary standards has increased yields and total income (DeFries et al. 2017; Meemken 2020; Oya et al. 2018). However, the differences did become significant when we compared the cultivation zones, reflecting different degrees of agrarian transition and the modernization of rice cropping systems. Local contingencies are at play here, as reported elsewhere (Meemken 2020; Milne et al. 2019; Oya et al. 2018; Promkhambut et al. 2023). The adoption of sustainability practices depends on local factors, which, in our study area, are shaped by local agroecology circumstances and by recent agrarian developments. In other words, the level of agricultural intensification weighs more heavily than SRP practices in shaping the sustainability of rice production practices. This assertion is well-aligned with Cook et al. (2024) who argued that sustainability outcomes cannot be understood independently of past processes of land, labor, and capital reconfiguration.

Local contingency is also shaped by the accumulated experience of farmers and supporting actors who have participated in similar initiatives in the past. While the prospects of SRP are rather grim in our study area, other SRP initiatives in Cambodia are successful. In Battambang province, a contract was signed in July 2024 between the rice miller AMRU and the Battambang Union of Agricultural Cooperatives (BUAC) for the SRP certification of 250 tons of rice that were exported to Germany. In-depth interviews with project proponents revealed that this success would not have been possible without several other initiatives (conservation agriculture, contract farming, etc.) and other stakeholders which paved the way for SRP to suffer not a setback. This highlights the role of implementers as another obligatory point of passage in the SRP procedure. Implementers enabled the SRP through awareness-raising and training, or simply by covering the certification costs that millers are unwilling to pay and that farmers or cooperatives cannot afford.

Neoliberal governance and market fetishism

The SRP offers market-based mechanisms to incentivize rice farmers and supply chain actors to make more informed

choices and to adopt more sustainable farming practices. Unlike markets in *laissez-faire* economics, SRP markets are highly regulated. Corporate actors play a key role in regulation, but the State is neither absent nor withdrawn. It actively facilitates and encourages the actors, directly or indirectly, to act in conformity with the market rules. What emerges is a neoliberal governance network, in the sense of Guthman (2007). Although this network does not yield much sustainable outcome in our case study area, a question lingers. Does it create conditions that could enable the system to become sustainable in the future? In other words, does it enhance the capacity of the rice social-ecological system to cope with, adapt and shape changes? Unfortunately, the SRP working hypothesis is that optimizing performance and promoting growth are necessary conditions for sustainability. The market imperative serves to prescribe how things should be and reward those who comply with this ideal. However, more fundamentally, this market fetishism obscures reality and does not question the fact that generalized and uncontrolled commodification of all productive resources in the rice sector is a key underlying factor driving unsustainability. As such, SRP offers a very narrow window to promote adaptability and transformability that are at the core of social-ecological resilience (Folke 2006).

Critical sociology of translation

Most of the analytical attention on sustainability standards has focused on their design and governance structure. Loconto and Demortain (2017) call it ‘standards in the making’ and argue that such an approach is incomplete because it fails to understand how the standards live their life and circulate. We contend it also falls short of grasping what the standards produce on the ground (Arnold and Loconto 2021; Graz 2022). In the case presented here, ANT is particularly useful as it allows seeing SRP as a socio-technical boundary object that connects the dots between the global problematization of rice production sustainability and grounded mobilization of farmers. Instead of seeing the global and the local as distinct scales, ANT helps trace relationships between the micro and the macro (Latour 2007). In SRP certification, these relationships occur through opportunistic adaptations and simplification of sustainability practices (Li 2007), which interact with actors and processes shaping local histories of agrarian transformations. By eliciting drivers that are not obviously visible in the SRP institutional environment, ANT offers an analytic of networked and horizontal changes as opposed to vertical and linear transformations that could be attributed to the standard only. This conceptual principle, well aligned with Loconto & Demortain idea of standards as interconnected spaces of diversity (2017), cautions against overgeneralization. However, power asymmetries identified

here are likely to operate elsewhere and should therefore remain a core analytical element.

Conclusion

Drawing on the sociology of translation, the paper examines the conceptualization and implementation of the Sustainable Rice Platform, the world’s first voluntary sustainability standard for rice. The insights gained from our case study conducted in Cambodia reveal that SRP produces a neoliberal governance that subordinates smallholder farmers to other supply chain actors. What is more, its economic, environmental, and social sustainability outcomes are not proven. While these findings are highly context-specific, we caution against viewing SRP as a silver bullet to promote sustainability.

Enhancing sustainability will not only be achieved through more regulated markets. If SRP is to yield more tangible sustainability outcomes and livelihood benefits for smallholder farmers, more collective action is required to strengthen the position of the farmers. In addition to measures that protect them from the exclusionary effects of markets, it is essential to build on their agency, accumulated experiences, as well as on institutions, even if this approach does not fit neatly into a technical guideline. This cannot be achieved without the political emancipation of the peasantry. At the root of it is a need to “rethink” sustainability governance in ways that question the contradictions of agrarian capitalism and don’t just reproduce its internal logic.

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Data availability The data that support the findings of this study are available from the first author upon reasonable request.

Declarations

Competing interests The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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