



CONTRACT FARMING FOR ORGANIC PADDY SUPPLY IN PREAH VIHEAR PROVINCE

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ACRONYMS

AC	Agricultural Cooperative	ICS	Internal Control System
AFD	<i>Agence Française de Développement</i>	IVY	International Volunteers of Yamagata
AVSF	<i>Agronomes et Vétérinaires Sans Frontières</i>	IRAM	<i>Institut de Recherche et d'Application des Méthodes de Développement</i>
CB	Certification Body	MAFF	Ministry of Agriculture, Forestry and Fisheries
CIRD	Cambodian Institute for Research and Rural Development	NOP	National Organic Program (USA organic standards)
COrAA	Cambodia Organic Agriculture Association	PDAFF	Provincial Department of Agriculture, Forestry and Fisheries
CSR	Corporate Social Responsibility	PMUAC	Preah Vihear Meanchey Union of Agricultural Cooperatives
DACP	Department of Agriculture Cooperatives Promotion (/MAFF)	SCCRP	Support to the Commercialization of Cambodian Rice Project
DAI	Department of Agro-Industry	SNEC	Supreme National Economic Council
EOS	Ecocert Organic Standard	UAC	Union of Agricultural Cooperatives
EU	European Union	USA	United States of America
FO	Farmer Organization		
GDA	General Directorate of Agriculture		

¹ www.avsf.org ; www.cird.org.kh ; www.ong-adg.be

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UNITS AND MEASURES

ha	Hectare
kg	Kilogram
KHR	Cambodian Riel (Approximately 4,000 KHR for 1 USD).
t	Ton (metric ton)
USD	United States Dollars

1. OVERVIEW: SUMMARY OF THE PILOT ON CONTRACT FARMING FOR ORGANIC PADDY SUPPLY IN PREAH VIHEAR

Since 2013, Organic rice in Preah Vihear province has been supported by SCCR project in partnership with COrAA. For the first year, the project had supported 5 Agricultural Cooperatives (AC) to produce organic paddy in compliance with COrAA private organic standard (but with the perspective to reach international organic standards in the following years) foreseen to be directly sold to rice millers or exporters who had expressed interest (notably at that time AMRU Rice (Cambodia) Co. Ltd., and Kim Se rice mill). In 2013, the experience was successful in term of the setting-up of Internal Control System (ICS), but the commercialisation of organic paddy was not yet satisfactory, mainly due to inefficient logistics and coordination at harvest time. To address this and secure the selling of organic paddy, the approach was changed from a direct selling model (without prior contract) in 2013 to a Contract Farming (CF) approach in 2014, with an extension to 3 new ACs. COrAA was still contracted by the project as an implementing partner. After several potential buyers were identified and negotiations took place, the CF agreements on producing and supplying organic paddy were signed between the 8 ACs and AMRU Rice with support from SCCR project. It is noted that the objectives of organic rice standards were also changed at that time from COrAA standard to EOS and NOP standards, requiring external certification by an international certification body (Ecocert).

As the results were quite satisfactory in that second year, the contracts have been renewed by the two parties every year since then and progressively scaled-up with the integration of new ACs and new farmers. In 2015, in order to sustain functions of supervision of Internal Control System and liaison with the certification body, the 8 ACs engaged took the decision to mutualize resources and set up a Union of Cooperatives and take over the role previously played by COrAA and financed by the project.

In 2016, 12 ACs (4 new ACs) engaged in the contracts with AMRU. Additionally, a Memorandum of Understanding have been signed (in July 2016) between AMRU Rice and the 12 ACs to consolidate their partnership over a longer period of time. In the same time, Preah Vihear Mean Chey Union of Agricultural Cooperative (PMUAC) was also officially registered as a legal entity by the General Directorate of Agriculture/MAFF.

Meanwhile, the same model of Contract Farming for organic paddy supply has been replicated with another exporter (Signatures of Asia) with 7 other ACs in Preah Vihear in 2016. These 7 ACs have formally joined PMUAC in March 2017, contributing to consolidate the viability of the Union (scale economy) and its resilience (reduced market risks thanks to a diversification of partners).

In 2017, the Preah Vihear Meanchey Union of Agricultural Cooperative gather 26 ACs (19 officially member, and 7 new ones which will formally join in 2018) all involved in organic paddy production and in Contract Farming with either AMRU-Rice or Signatures of Asia, for a total volume committed for this year of more than 21,680 tons of paddy. The Union is able to sustainably and professionally manage the Internal Control System, and the selling of organic paddy generate substantive premium prices for farmers and allow to cover the ICS costs and management of operations by ACs. An overview of the history of the whole process of development of this organic paddy supply chain in Preah Vihear is shown on a one page timeline in Annex 1 at the end of this document.

2. THE ORIGIN OF THE ACTION AND THE STAKEHOLDERS INVOLVED

2.1. ORIGIN OF THE ACTION

The Support to the Commercialization of Cambodian Rice Project (SCCRP) was just starting in 2013 when a contact was established with the Cambodian Organic Agriculture Association (COrAA) who expressed its interest to work on the production and commercialization of organic paddy with Agricultural Cooperatives. Since the subject was well in line with SCCRП objectives (which notably include the development of Farmer Organization involvement in paddy commercialization, and the differentiation of high quality Cambodian rice by quality labels / certification). An initial concept note describing the proposed pilot activity (for an initial duration of one year) was developed by COrAA with SCCRП project team.

2.2. MAIN STAKEHOLDERS INVOLVED

The development of this innovative partnership between an exporter and cooperatives for the production and supply of organic paddy through Contract Farming has engaged various stakeholders as follows:

AMRU RICE (CAMBODIA) Co., LTD. AND OTHER MILLERS/EXPORTERS

AMRU Rice (Cambodia) Co., Ltd started rice trading activities in 2009 followed by gradual vertical integration since 2011 by the establishment of its own semi-processing facilities, working its way upstream into contract farming with farmer cooperatives in specific provinces. The 3 rice milling plants of AMRU Rice have capacity to produce 80,000 tons on output milled rice per annum and 1,000 tons on output of rice paper and rice noodle in 2016. Its products include Cambodian Long-Grain Jasmine Rice, Long-Grain/Medium-Grain/Jasmine Brown Rice, Cambodian Fragrant Rice, Long-Grain White Rice and Special Rice & Organic Rice. AMRU is a major rice exporter in Cambodia, continuously present in the “top 5” for volume exported from 2013 up to now (2016), with volumes exported annually roughly in the range of 40,000 to 60,000 metric tons.

From the early stage of the action, other millers and exporters (potentially interested to buy organic paddy) were consulted by Cooperatives before to select their main partner. Besides, from 2016, another exporter (**Signatures of Asia**) has developed a similar partnership (also supported by SCCRП) with other cooperatives which have now joined PMUAC. Signatures of Asia is also a relatively important rice exporters, within the “top 15” in the past four years.

AGRICULTURAL COOPERATIVES

At the early stage of this pilot action, in 2013, five ACs in Preah Vihear province were involved in the action and started to produce organic paddy. Progressively, more ACs aggregated in the process: 3 more in 2014, then 4 more (a total of 12 engaged with AMRU) in 2016 + 7 other ones in contract with Signatures of Asia. Hence, in 2016, a total of 19 ACs have been applying the CF agreements for organic paddy in Preah Vihear province (see Annex 1). These cooperatives have generally between 100 and 500 members (a total of more than 5,000 members for the 19 ACs engaged in 2016, and about 14,000 ha of rice fields, but not all members and not all surfaces are engaged in the organic program. These cooperatives have established PMUAC (see below).

PREAH VIHEAR MEAN CHEY UNION OF AGRICULTURAL COOPERATIVE (PMUAC)

Preah Vihear Mean Chey Union of Agricultural Cooperative (PMUAC) is the Union of Agricultural Cooperatives, gathering ACs in Preah Vihear engaged in the contract farming with AMRU. The creation of this Union was first envisaged from the end of March 2015 with AC leaders, as a solution to take over the role of supervision of internal control implemented by COrAA (and financed by the project) in 2013 and 2014. PMUAC was officially founded only on 25th April 2016 (founding General Assembly) and was formally registered as a legal entity on 19th of July 2016 by General Directorate of Agriculture of MAFF as the first Union of Cooperatives registered in Cambodia (reg. No. 001GDA/UAC/P). But before its registration, the Union has informally started to operate from mid-2015. In 2017, there are 19 ACs as its full members in 2017. PMUAC plays vital roles to maintain the organic certification (training of farmers on organic standards, training and supervision/coaching of ICS inspectors, verification and consolidation of ICS data, liaison with the Certification Body), but also additional support roles to

the cooperatives (for their management, and for the collective negotiation of the Contract Farming agreement and reference prices), and also on improvement of paddy seeds, mobilization of combine-harvesters for the harvest, extension on improved post-harvest management, or collective order of certified organic fertilizers. According to PMUAC 5-year strategic plan, the Union expect to increase the number of its members to 30 ACs by 2022, within Preah Vihear province, to produce and supply organic rice to the potential buyers (starting with its current buyers), and to progressively develop other service businesses: buy/sell agricultural inputs (organic fertilizer, agricultural materials and equipment), agricultural services (ploughing, harvesting, threshing...), credit service... Besides, PMUAC can now consider to diversify its activity and to support members on other crops and value-chains.

CAMBODIA ORGANIC AGRICULTURE ASSOCIATION (CORAA)

CORAA is a nationwide private sector organization working for the promotion of organic agriculture in Cambodia. It was established in 2006. With the implementation of organic paddy production in Preah Vihear, CORAA has been contracted by SCCR project to provide technical training to the members of cooperatives in the production of organic paddy, and to support the cooperatives to set up ICS and get involved in the initial steps of selling the organic paddy produced. It has also supported PMUAC staff at the very early stage of the operational establishment of the Union, to develop ISC supervision capacities.

MAFF SERVICES

MAFF services have been involved throughout the process of this action implementation. Notably: the Department of Agricultural Cooperatives Promotion (DACP) has contributed to the capacity building of ACs and to the establishment of PMUAC. The Department of Agro-Industry (DAI) took part in the facilitation of Contract Farming. The Provincial Department of Agriculture, Forestry and Fisheries could provide some regular backstopping and support to cooperative leaders and to PMUAC. Officers from these different services were supported by SCCR project, including through financing of their specific inputs.

SCCRP PROJECT TEAM

The SCCR project team (notably through the consultants it engaged, in particular from AVSF, CIRD and IRAM) have also provided extensive support and facilitation, notably strategic support for the main orientations (for instance IRAM input for the reflection and scenario for the sustainability of the system set in place, which led to the decision of creation of the Union of Cooperative, based on functions defined and financial scenarios), AC managerial capacity building, and specific support and backstopping to ensure the compliance with international organic standards and reliability of the ICS system (the expertise of AVSF-CIRD in this matter was very useful).

ECOCERT

Ecocert is the international Certification Body contracted by AMRU-Rice for the certification of the compliance with EU and USA organic standards. Beyond providing the organic certification, Ecocert's annual inspections were useful to evaluate the ICS established and provide advices to gradually improve it.

3. HISTORY OF THE ACTION: THE IMPLEMENTATION PROCESS

3.1. YEAR 2013: FIRST TEST OF ORGANIC PADDY PRODUCTION BY 5 COOPERATIVES

During the second half of 2013, SCCR Project coordinated by SNEC has contracted CORAA to implement a pilot action referred to as "Strengthening of smallholder cooperatives engaged in the organic rice value chain" in Preah Vihear province. At that time, 5 ACs (with 550 producers) were involved and supported by CORAA in order for farmers to be trained on organic standards (CORAA standards, for the first year) and for ACs to set up their Internal Control System (ICS). In the meantime, contacts were made with rice millers/exporters interested to buy organic rice. In October 2013, after meeting AC representatives, two potential buyers confirmed their interest after discussion on purchase conditions with cooperatives. But finally, only one of the buyers (AMRU Rice) has bought organic paddy, yet in limited quantities (only about 100 tons, whereas approximately 500 tons were available and compliant with CORAA standards). The main reason for the failure to sell more was inefficient logistics and coordination between ACs and the buyer at the harvest time, in particular in the process of paddy quality control

which was not process on time to allow the collection of larger volumes. As the paddy was sold right after harvest (without drying), farmers could not wait and had to sell it as conventional to other buyers in order to avoid quality depreciation. For the Agricultural Cooperatives involved, this also revealed the risk of investing further in the internal control system without reasonable guarantees that the paddy will be sold as organic, with the corresponding premium price. To secure deals with buyers from the beginning of the cropping cycle was thereof seen as a must.

3.2. YEAR 2014: FIRST EXPERIENCE OF PRODUCTION AND SUPPLY OF ORGANIC PADDY BY 8 COOPERATIVES, ON CONTRACT FARMING BASIS

3.2.1. SELECTION OF PARTNER AND CONTRACT NEGOTIATION

Building on lessons learnt from that first year, the approach of direct selling (in 2013) was changed to a Contract Farming approach from 2014 in order to secure the selling of the organic paddy to a buyer willing to pay a premium for this certified quality. 8 ACs were involved on that second year. Organic certification was also shifted from COrAA organic standard to the EU and USA (NOP) organic standards. To introduce the concept, a workshop on “Organic paddy commercialization under Contract Farming in Preah Vihear province” was organized in Preah Vihear in June 2014. The objective of the certification to EU and USA organic standards was presented and discussed (with the specificities of these standards described). In the following days, AC leaders consulted back with their members to get their feedback and validate the principle to enter into negotiation of Contract Farming agreements with potential buyers. Then, on 1st of July 2014, AC leaders have met potential partners (4 exporters) in Phnom Penh during a “business matching” workshop organized by SCCRP team. Besides plenary discussions, time was reserved for ACs to have private bilateral discussion with each of the four companies and discuss on the conditions they could offer to buy their organic paddy.



△ Bilateral discussions between cooperatives and each company interested to purchase organic paddy (in Phnom Penh, on July 1st, 2014).

After comparing offers of different buyers, ACs have decided to pursue negotiation with AMRU-Rice. But before to discuss the terms of contracts, AC leaders had another round of internal consultation within each cooperative. Feedbacks were gathered, and at the same time cooperatives were able to prepare lists of interested farmers with the surface of land, the varieties they grow and the potential of production. Based on these data, the contracts were drafted, with the support of project team and DAI representative.



△ Signature of 1st Contract Farming Agreements between Mr Song Saran, President of AMRU Rice, and cooperative leaders, in September 2014.

Negotiations on the terms of the contract continued at two levels: 1. between the management team of AMRU Rice and the representatives of 8 ACs; 2. between AC leaders and their members (sometimes with participation of representative of AMRU). At all levels, the facilitator joined the meetings in order to help and make sure that all the stakeholders have the same understanding. The draft contract was progressively improved throughout this negotiation process. Eventually, the 8 ACs signed the first Contract Farming agreements for the production and supply of 1,800 to 2,300 tons of organic³ Jasmine paddy with AMRU Rice on the 8th of September 2014. These contracts were engaging 906 farmers.

³ Based on EU (EOS) and USA (NOP) organic standards.

Box 1: Main features in the Contract Farming agreements signed between AMRU Rice and 8 cooperatives for organic paddy supply in 2014

The CF agreements between AMRU Rice and the 8 ACs (one contract per cooperative) on producing and supplying organic paddy of jasmine varieties (*Phka Rumduol*, *Phka Malis*, and *Phka Rumdeng*) were signed on the 8th of September 2014, and it had a period of validity of 4 months from 8th September 2014 until 8th January 2015 (it is noted that at the date of signature, the cropping had already started). Below are main terms and conditions written in contracts:

- For each AC, the volumes were defined as a range (from ... t to ... t) to take into account the variability of the actual production that are likely to be reached based on the surfaces engaged. Moreover, it was mentioned that the volumes of paddy planned to be bought can be adjusted depending on the quality of paddy, in case it doesn't comply with COAA organic rice standard, and standards of EU and USA.
- Producers are accountable to cover all production cost by themselves and sell the paddy produced to the Buyer in the quantity, quality and price as described in the contract.
- The Buyer (AMRU Rice) is responsible for buying jasmine paddy from the Producer at agreed conditions, and to providing technical assistance and advice to the Producer (by itself or through a technical partner). The Buyer is also responsible to provide sacks and to cover the costs of organic certification (contract and pay the CB).
- Quality grades were referred to actual paddy checking and approving by the two parties. There were two types of quality specifications: quality grades No. 1 [varietal purity: 90% and above, moisture content: 13%-14% for dry paddy and 15%-19% for wet paddy, broken rate: 10%-15%, color: light yellow, and foreign matters: less than 1%], and quality grades No. 2 [varietal purity: 82%-89%, moisture content: 13%-14% for dry paddy and 15%-19% for wet paddy, broken rate: 15%-20%, and foreign matters: not more than 2%].
- The price to be paid for paddy is based on a *reference price* + *premium*. The contract fixes the level of premium (according to quality grade) and defines the way to determine the reference price at the time of harvest.

→ The reference price considered is: the highest price offer (mill-gate) for conventional jasmine paddy by three reference rice mills (the list of rice mills – located in Kampong Thom province – was then agreed by the two parties at harvest time) over a period of 7 days preceding the harvest in Preah Vihear.

→ The level of premium to add to the reference price was between 100 and 200 KHR/kg of paddy depending on the grade and moisture content. A clear table of level of premium for each quality was indicated in the contract as shown below:

Table 1: level of premium applied for different grade of Jasmine paddy in 2014

Criteria → ↓ Grades	Purity	Moisture content	Broken rate	Premium (KHR/kg)
A1	90% - 100%	13% - 14.9%	1% - 15%	+200
A2	90% - 100%	15% - 19%	15.1% - 19%	+150
B1	82% - 89%	13% - 14.9%	15% - 20%	+150
B2	82% - 89%	15% - 19%	15% - 20%	+120
C1	90% - 100%	13% - 14.9%	21% -30%	+150
C2	90% - 100%	13% - 14.9%	31% - 35%	+100

[It has to be noted that the reference price (being a mill-gate price whereas AMRU collects in villages) is already higher than the local price offered by local collectors to farmers.]

- For harvest and transportation: the Producer shall inform the Buyer within 7 days in advance before harvest and then the Buyer shall provide specific information about date of paddy collection at collection points agreed by the two parties. All cost of loading and transporting from paddy collection points to rice mill that is a responsibility of the Buyer. During paddy receiving and loading to truck, the Buyer and the Producer must sign on the 2 copies of delivery note and shall keep one respectively.
- Regarding modalities of payment: the Buyer shall pay in cash (in Riel currency) to the Producer right after completely paddy quality checking, paddy weighing and document verification at the collection points. In case paddy transportation during weekend, the payment will be made an early of the week.

3.2.2. IMPLEMENTATION OF ORGANIC PRODUCTION AND CERTIFICATION

During the cropping season, technical trainings on organic standards were delivered to the contracted producers by COrAA and ICS trainings were also offered to internal inspectors selected in each AC. In addition, a series of documents of ICS management were required to be prepared and developed such as list of farmers, farmers' rice production recording book, book of sanctions, general organization chart of ICS team etc. Furthermore, ICS management was set up and comprised of two levels (ICS managers and Internal Inspectors) so that they could coordinate and facilitate each other in order to gather all data/information required from the Producer to be computerized and submitted to the external inspector from the CB. Internal inspections were conducted by internal inspectors at AC level, with support from COrAA, 2 times per year (first time during land preparation and transplanting; and second time 10 days before harvesting).

Organic certification process: In order to receive organic rice certification, facilitator (COrAA) had consolidated data from the ICS and provided to AMRU Rice to prepare all the required documents to be submitted to international Certification Body (Ecocert) for inspection and for issuing EU and USA organic standard certifications. After receiving the request, Ecocert had conducted inspection on field visits in October 2014. Few points of non-compliance were notified to require immediate corrective measures. The project team has helped the cooperatives and AMRU Rice to implement corrective measures as required and to send necessary documentations to answer deviations to the certification body. Organic certification was issued then issued (after further verification) by Ecocert, but (for that 1st year) only in January 2015, i.e. after harvest. Yet the confidence in the process was high enough for AMRU to be able to purchase the paddy as organic.

3.2.3. IMPLEMENTATION OF THE TERMS OF CONTRACT FARMING AGREEMENT, RESULTS AND BALANCE

While implementing these contracts in 2014, the two parties have generally adhered to their commitments in compliance with the terms defined and agreed in the contract. Yet some difficulties were met and adjustments had to be made. Regular follow-up and communication between the two parties, supported by project team, was essential to ensure the trust is not harmed by difficulties met and issues are discussed and addressed in an amicable way. Both parties had to accept some compromises in order to consider issues met by their partners and ease the process. For instance, AMRU has accepted to buy paddy even with a lower quality level than the one defined in the contract (lower grade categories – D1 and D2 – were defined, with lower premium) to address the difficulty to reach the required specification in particular for broken kernels rate. On the other hand, ACs have tolerated a longer delay of payment by AMRU than the one defined in the contracts.



△ Cooperatives gathering paddy from producers at collection point for delivery to AMRU (Photos: courtesy of AMRU)



Truck load △

In total for the season 2014, the 8 cooperatives have delivered 1,465.7 tons of organic paddy to AMRU (81% of the volume set in the contract). The level of premium was not yet very high (in general in the contract, but mainly because most of the paddy delivered was in lower grade categories). Yet it was estimated that in total, the amount received by cooperatives for these 1,465.7 tons of organic paddy was about +65,000 USD above the value given by local collectors in village for the same quantity of conventional paddy.

It has to be noted that a margin has to be retained by the ACs on the payment received from AMRU. In average, the cooperatives retained about 3% of the total turnover (to recover the AC costs and remunerate people in charge) which leaves the main part of the organic premium price to producers.

Overall, results were encouraging, and the two parties were willing to pursue the partnership and discuss improvements.

3.3. YEAR 2015: FIRST INCREASE OF VOLUMES AND STRATEGIC REFLECTION ON SUSTAINABILITY

3.3.1. ANTICIPATING ON PROJECT PHASING OUT AND SUSTAINABILITY: DECISION OF CREATION OF THE UNION OF COOPERATIVES

While assessing the results of the first year of contract implementation, it was also identified that a number of functions / roles played or financed by the project (and notably the services implemented by COrAA) would have to be sustained in the long run. IRAM advisor to SCCR project has prepared a note to reflect on the consolidation and sustainability of the model, identify the main challenges, and envisage scenarios to address them.

One of the main challenges identified was to sustain the Internal Control System and certification. ICS inspectors at cooperative level were already trained and mobilized. And AMRU was paying directly the certification body. But in between, a very important worked was done by COrAA to supervise the ICS inspector, verify the quality of the internal inspection, then to compile and consolidate all the data of the ICS in a comprehensive report, in English, that can be made available for the Certification Body.

How to sustain this function and how to cover its costs was discussed in March 2015, with AC representatives and AMRU. Different scenario were presented and discussed, with a tool to explore budget simulations for different options. Notably, for this function of ICS supervision and management, three main options were discussed:

1. **Internalize at cooperative level:** Recruit staff at cooperative level (seasonal or through-out the year / full time or part time).
2. **Internalize at inter-cooperatives level:** Mutualize resources to recruit staff serving several cooperatives (possibly through a formal Cooperative Union, or with part time contracts for each cooperative and an agreement between them on time sharing).
3. **Externalize:** hire service providers on a task-based contract (as it was done with COrAA in the previous year).

After several steps in the reflection, it was estimated that the option 1 would not be viable at AC level as the scale is relatively small, and the solution of mutualisation of resources between ACs to recruit their own permanent staff was chosen. The principle of the creation of a Union of Agricultural Cooperatives was decided at that moment, then endorsed by the General Assemblies organized in each of the 8 ACs.

A MoU was signed between the project, the 8 ACs and AMRU-Rice to define the conditions of further support of the project to set up the Union, the commitments of the ACs, and also engagement of AMRU in the mid-term (Cf Box 2 next page). In order to have the time to develop its capacities, it was decided that the Union shall be immediately operational (as an informal “pre-Union” first before it can be registered⁴), and start to recruit staff and undertake the key functions it was set up for. The project has agreed to subsidize the costs of the staff and operational costs for Year 2015 (and partly for Year 2016), while ACs took the engagement to contribute an amount of 50 KHR/kg of organic paddy sold to finance the Union level. In parallel, it was agreed with AMRU that the level of premium would have to be increased progressively. Based on preliminary budget simulation, it was estimated that the costs of the Union could be fully covered once volumes of organic paddy sold annually would reach approximately 3,500 tons, which in a 2-3 years perspectives sound reasonable.

Despite not yet registered, the “pre-Union” started to be operational from mid-July 2015 with the recruitment of a General Manager and three ICS Supervisors. As indicated above, costs were covered by project subsidy for 2015, with a perspective of taking over by ACs for approximately 75% of total ACU budget in 2016. Capacities of ACU

⁴ The Cambodian Law on Agricultural Cooperatives of 2013 (Chapter IV, Art.89 to 95) makes a provision for the creation of Agricultural Cooperative Unions. But in 2015 additional regulation (*Prakas*) was still to be issued to precise the process for registration of these Unions by MAFF services. Finally the *Prakas* was issued in February 2016, and the Union in Preah Vihear could be registered later in that year.

staff were developed with the support of SCCRP project (direct support of project team for managerial part + capacity building by COrAA – still contracted by project in 2015 – for the ICS management part).

In the meantime, AMRU was very proactive in the identification and negotiation with clients in the EU and the USA. These fruitful efforts to seek for clients are a key factor of the success, as they have provided enough confidence for AMRU to take the commitments to progressively increase volumes and premium.

Box 2: Main commitments taken by ACs, AMRU and SCCRP in MoU signed in May 2015

Commitments of AMRU Rice:

- Increase of premium price paid for organic rice in 2015 and 2016.
- Purchase at least 2,500 tons of organic jasmine paddy + tentatively 1,000 tons of white rice paddy in year 2015.
- Purchase at least 3,500 tons of organic jasmine paddy + tentatively 2,000 tons of white rice paddy in year 2016.
- Hire and pay the international Certification Body.

Commitments of Agricultural Cooperatives:

- Endorse and support the creation of a Cooperative Union.
- Respect the principle of organic production.
- Work on the improvement of paddy quality.
- Implement the Internal Control System required in order to ensure the paddy certification;
- Negotiate with AMRU-Rice the signature of Contract Farming agreements and pursue the partnership with AMRU-Rice in the medium term.
- Retrocede to the Cooperative Union, after each harvest under the contract farming for organic rice starting from 2015, an amount of not less than 50 KHR/kg applied on the total of organic paddy sold by Cooperatives.

Commitments of SCCRP project:

- Facilitate the process of creation of a Cooperative Union.
- Build capacities of the Cooperative Union.
- Subsidize operation costs of the Union of Cooperatives for the year 2015 (+ possibly partly in 2016).
- Facilitate the negotiation, formalization and registration of Contract Farming agreements.

3.3.2. THE SECOND SEASON OF CONTRACT

Based on an assessment of estimated production capacities, contracts for the season 2015 have been negotiated, and contracts were signed in Preah Vihear on 3rd of August 2015, for a total volume committed of 3,359.25 tons of paddy, mainly of Jasmine varieties as in the previous year, but white rice varieties were also introduced in the contracts (for 214 tons only). The level of premium price applied has been revised (increased) according to the commitment taken by AMRU in the MoU.

Table 2: Quality categories and premium price paid by AMRU to cooperatives for organic fragrant paddy (Jasmine) in contracts for year 2015 (+comparison with last year premium prices)

Criteria → ↓ Grades	Purity	Moisture content	Broken rate (2015)	Broken rate (2014)	Premium (2015) (KHR/kg)	Premium (2014) (KHR/kg)	Premium Evolution (2015/2014)
A1	90% - 100%	13% - 14.9%	1% - 18%	1% - 15%	+260	+200	+60
A2	90% - 100%	15% - 19%	19% - 20%	15.1% - 19%	+210	+150	+60
B1	82% - 89%	13% - 14.9%	15% - 20%	15% - 20%	+210	+150	+60
B2	82% - 89%	15% - 19%	15% - 20%	15% - 20%	+180	+120	+60
C1	90% - 100%	13% - 14.9%	21% -30%	21% -30%	+175	+150	+25
C2	90% - 100%	13% - 14.9%	31% - 35%	31% - 35%	+125	+100	+25
D1	90% -100%	15% - 19%	31% - 35%	31% - 35%	+175	+80	+95
D2	90% - 100%	15% - 19%	36% - 37%	36% - 37%	+125	+70	+55

The Table 2 (previous page) shows the quality grades and the level of premium applied for each of them, in 2015 and in comparison with 2014. For white rice varieties, only three categories of quality are defined in the contract (1st, 2nd and 3rd) and the levels of premium are not defined in absolute value, but as an additional percentage of the reference market price (from 25 to 15% of the price depending on quality grade).

Another new element in the contract was related to the financing of the Union of Cooperatives. ACs had accepted the principle of a “service fee” of 50 KHR/kg of organic sold to AMRU to contribute to the budget of the Union of Cooperatives for Year 2016. In order to ease the process of fee collection, it was agreed and mentioned in the contract that this amount would be withheld from the payment made by AMRU to the ACs, and then directly transferred by AMRU to the bank account of the Union (or “pre-Union”) after the harvest and collection process is finished⁵.

AMRU has provided training to AC representatives on paddy quality assessment, and the Pre-Union of ACs has organized an additional training on harvest and post-harvest to try to improve the quality.

Finally, volumes of organic paddy delivered have been lower than volumes committed in contract (about 28% less than in contracts, mainly to a drop off of yields because of drought). Yet more than 2,400 t of organic paddy have been supplied to AMRU by these 8 ACs, which was still considered as a good result and put the partnership on a growth track (very close to the roadmap set in the scenario toward progressive financial autonomy of the Union of Cooperative, which were established on incomes for 2016 based on 2,500 t delivered in 2015).



△ Implementation of inspections in the fields by cooperatives Internal Inspectors and pre-Union supervisors, with supervision and backstopping of COrAA team.

The implementation of the partnership was getting smoother in 2015, as lessons were drawn from previous year. Contracts were negotiated and signed earlier in the year, and the implementation of controls and certification was achieved on time: Ecocert had granted the organic certification in October, before the harvest, which was of course safer for the buyer. Ecocert inspector has provided a very positive feedback on the Internal Control System and the job done by pre-Union staff (ICS supervisors) with the support and backstopping from COrAA and SCCRП team.

The Annex 2 to the present case study shows a simplified chart of the internal control and certification system for organic standards, and notably the respective roles at AC level, Union level and Certification Body.

3.4. YEAR 2016: FORMALIZATION OF THE UNION AND DIVERSIFICATION OF PARTNERS

3.4.1. FORMALIZATION OF PMUAC: THE FIRST UNION OF AGRICULTURAL COOPERATIVES

The official founding General Assembly of Preah Vihear Meanchey Union of Agricultural Cooperatives (PMUAC) was held on the 25th April 2016, and PMUAC was also officially registered by MAFF’s General Directorate of Agriculture on the 19th of July 2016. It is the first Union of Cooperatives ever registered in Cambodia.

Meanwhile, even before this official status was granted, the “pre Union” had continued to work on its internal and managerial capacities. The “service fees” (the 50 KHR/kg) from the harvest 2015 were transferred in January to the temporary bank account of the pre-Union, representing an amount of 29,653 USD representing already a significant part of the budget planned for Year 2016, completed by the project subsidy and, to some extent, by some support of IVY, a Japanese development organization which started to support PMUAC as well and brought in four new cooperatives in the frame of Contract Farming with AMRU.

Regarding the ICS, CorAA has provided its final support to PMUAC in the beginning of 2016, with some improvements made on the organic farmers’ recording books. PMUAC started to take over the training of new

⁵ This arrangement has been implemented in 2015, but it was removed from the contracts in the following year because this has induced confusion on the nature of this transfer. It has been referred to as a support of AMRU to ACU, which actually was not the case as this payment was only part of the value of the paddy the buyer had agreed to pay. So from 2016, this amount was not withheld anymore from payment made by AMRU, but directly transferred by the cooperatives to the Union.

farmers on organic standards, and the training of new ICS inspectors, as required to adjust to the up-scaling of the number of farmers involved in the organic paddy production in contract with AMRU.

3.4.2. THIRD YEAR OF CONTRACT FARMING WITH AMRU

Four new cooperatives, supported by IVY, have joined the contract farming program for organic paddy production in contract with AMRU. So 12 ACs were involved with AMRU in 2016. They have signed Contract Farming agreement for a total volume of 8,768 tons of paddy (4,608 t of Jasmine varieties, and 4,160 t of white rice varieties).



△ *Quality check on organic paddy in season 2016.*

This rapid scaling up (2.5 times the volumes committed in the previous year, or 3.5 times the volume actually delivered) was seen as ambitious, in particular to maintain an efficient ICS system in place and guarantee that the certification would be obtained. Yet the results have proven that PMUAC (with the support of its partners) has well managed this challenge: Ecocert has renewed the organic certification in October 2016, and a total of 8,012 tons of paddy were delivered to AMRU by the 12 ACs, i.e. more than 93% of the targeted volume.

3.4.3. NEW COOPERATIVES AND NEW COMMERCIAL PARTNER JUMP IN

In 2016, the SCCR project was approached by Signatures of Asia, another exporter which expressed interest to buy organic paddy and develop a similar partnership with cooperatives. Several potential sites were explored, in different provinces of Cambodia, but finally Preah Vihear was selected due the availability of relatively large surface of paddy fields with no or limited risks of contamination, and presence and interest of several cooperatives.

Seven cooperatives (different from the ones involved with AMRU) get engaged in the process. They have signed contracts with Signatures of Asia for 880 tons of paddy (mainly white rice varieties), and have delivered 760 tons (or 86% of the expected volumes) – also certified as organic according to EU and USA standards.

In order to ensure the sustainability of these new contracts, it was suggested (and accepted by all parties) that those 7 ACs would join the Union in the following year. Thereof they have also accepted to reserve the same contribution of 50 USD/kg after the harvest 2016, in order to be able to take their share of the costs of the Union in the following year. In the meantime, a new ICS supervisor was recruited by the project to undertake the role with the members of these ACs for their first year, then to be transferred to the Union.

For PMUAC, this was an opportunity to scale up but also to develop a partnership with another buyer and be (a bit) less dependent on one partner only.

3.5. YEAR 2017 AND BEYOND...: SCALING UP AND CONSOLIDATION

3.5.1. PMUAC GAINS GREATER AUTONOMY

In 2017, the Union of Cooperative has formally integrated the new members (engaged in contracts in the previous year) and now counts 19 ACs as members. Also, with in total volume of organic delivered in 2016 by these 19 ACs close to 8,800 tons, the “service fees” collected represent for PMUAC an income of approximately 440 million Riels (or 110,000 USD), in principle largely sufficient to sustain the team and services of PMUAC for 2017, for a replication at the same scale. If a relatively small portion of subsidy is still needed in 2017, it’s only to contribute to finance the growth, as again the volumes committed by contract keep growing at a fast pace, with a need to continue to integrate new cooperatives, new farmers, and to recruit and pay additional inspectors and ICS supervisors (PMUAC annual budget plan for 2017 is of approximately 126,000 USD, but with more than a doubling of volumes committed by Contract Farming agreements).

In mid-2017, PMUAC has recruited new staff and now counts a total of 12 permanent employees. Besides, ICS controllers, which used to be remunerated at cooperative level, are now covered by the budget of the Union.

PMUAC also had a reflection in 2017 on its strategic planning. Whereas consolidating the successful partnership for the supply of organic paddy is its first priority, it may start now to consider a diversification and explore the potential of other productions of its members (cassava, cashew...) and its knowledge and know-how on organic production and internal control system.

3.5.2. ON-GOING CONTRACTS FOR ORGANIC PADDY PRODUCTION IN 2017

As PMUAC is progressively proving its capacity to successfully manage the Internal Control System, and as cooperatives have also been able to improve in their management of paddy collection and quality checks, PMUAC and its members are partners appreciated by AMRU and Signatures of Asia. Besides, these exporters are continuously demonstrating the efficiency and commitment in their (vital) part of the job: finding export markets. Thus orders made via the contract farming schemes have continued to increase in 2017: AMRU has now contracts with 18 Cooperatives members of PMUAC (or future members, already supervised by the Union team) for a total volume of 16,662 tons of paddy (11,880 t of white rice varieties and 4,782 t of jasmine). Signatures of Asia made contract with 8 ACs, and for a total of 5,025 tons of paddy (mainly white rice varieties). **In total, in 2017, more than 4,200 smallholder farmers are engaged with PMUAC and its commercial partners in the production of organic paddy, for a total volume of 21,688 tons of paddy.**

New deals are made in 2017, as part of AMRU contracts but with the French company Ethiquable who will buy rice produced by PMUAC members and processed by AMRU as organic and fair trade standards. Volumes concerned are still limited (about 80 tons of milled rice for this first year), but generating significant additional premium – estimated to more than 30,000 USD for this year – to be mutualized at PMUAC level in order to avoid big differences of price received by cooperatives which would become a factor of conflict and would be harmful for the cohesion within the Union).

4. ECONOMIC ANALYSIS: WHAT “WIN-WIN” MEANS

While not always necessary or relevant in the Cambodian context for conventional paddy, Contract Farming proves to be highly relevant for the production and supply of organic paddy. In this case, the exporter (who has client abroad willing to buy organic rice) has to secure his supply from one of the very few groups of producers who have the ICS system in place and can ensure that the organic certification will be obtained. On the other hand, farmer groups or organization who invest in maintaining an ICS system in place have to make sure that they will be able to sell their paddy to one of the very few buyers able to pay the premium price for it. There is in such a case a strong inter-dependency that justifies the building of a long-term partnership, materialized by the Contract Farming agreement and even by longer term MoU between partners. This inter-dependency also creates a certain equilibrium in the bargaining power to discuss the terms of the partnership. And the level of premium price that can be applied for organic rice on international market creates added value that can thereof be fairly distributed among stakeholders. The analysis below documents how the partnership between AMRU and ACs for organic paddy production in Preah Vihear benefits to farmers and their organizations and to the export company.

4.1. ANALYSIS AT THE SCALE OF IMPLEMENTATION IN 2016

Preah Vihear is a relatively remote province of Cambodia, and the practice of most of the smallholder farmers engaged in the production of certified organic paddy had already extensive production systems, very close to an organic cropping system, with no or very limited use of chemical fertilizers and chemical pesticides⁶. The switch to an organic-certified production system did not generate major changes in the cropping practices, in production costs and in yields. Yet, farmers (via their organizations, ACs and PMUAC) had to implement functions that are not under their responsibilities when farmers sell individually to a local collector or trader. Mainly:

- Transaction costs related to the negotiation of contract farming with the buyer and other negotiation and management at the Union level.
- Organizational and managerial roles to mobilize producers, and ensure the paddy quality control and collection down to the collection point where AMRU will pick-up the paddy.

⁶ This situation was actually a major reason for the choice of the Preah Vihear as a potential area to develop organic production.

- Costs of training of farmers on organic standards, costs of ICS internal inspectors and costs of supervision of the ICS system.



All these costs are occurring at ACs level or at PMUAC level, and have to be covered by channeling a portion of the additional value paid by AMRU for the paddy (compared to price normally offered by local collectors) to contribute to PMUAC budget (through the service fees of 50 KHR/kg) or to AC budget (through a margin retained by ACs to cover their costs and to remunerate their teams).

◁ Management of paddy payment to producers at AC level (Photo PMUAC).

Therefore, we analyse below the gross added value for the paddy sold to AMRU (compared to the price that would offer local collectors in the same geographical location – village level – and for a similar paddy, but sold as conventional). Then we'll see how this gross added value is distributed between the three levels (farmers, ACs and Union) and if the level retained at AC and Union levels are sufficient to sustain the implementation of their functions.

4.1.1. GROSS ADDITIONAL VALUE GENERATED BY THE SELLING CERTIFIED ORGANIC PADDY

As it is developed in the Section 3 of this note, price paid by AMRU-Rice to ACs is composed of:

- A reference price based on the price paid for paddy by large rice mills located in Kampong Thom province,
- A premium price (defined in the contract) which level vary according to the quality grade.

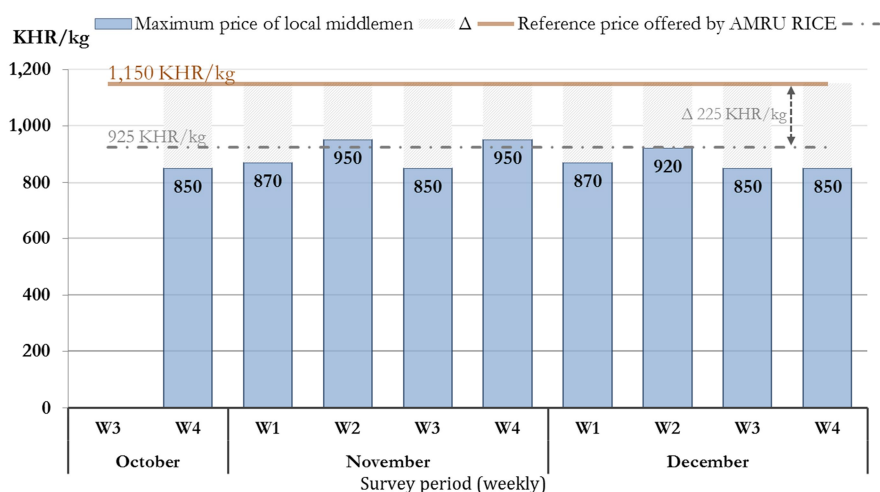
FOR JASMINE VARIETIES:

For the season 2016, the reference price (for Jasmine rice varieties) was established at 1,150 KHR/kg.

At the time of harvest, PMUAC has monitored on a weekly basis the price locally paid by collectors in the village for similar conventional jasmine paddy. The highest (among all ACs locations⁷) prices offered by local collectors week by week were all between 850 KHR/kg and 950 KHR/kg⁸.

In the analysis below, we use a price of 925 KHR/kg as the estimation of the local price offered by collectors for dry paddy (jasmine), noting that it is, in most of the case, far above the reality.

Figure 1: Follow-up (by PMUAC) of local dry paddy prices (conventional) and comparison with AMRU reference price, for Jasmine rice, harvest 2016



With this conservative estimation, we can estimate that the reference price considered by AMRU for dry jasmine is approximately 225 KHR/kg above the price locally offered for similar conventional paddy. The difference between reference price and local price for wet and semi dry fragrant paddy is considered equivalent.

⁷ In the location of many of the cooperatives, prices offered by local collectors were very often below the one shown in the figures, in which we considered only the highest price among all locations of ACs. For some location, 800 KHR/kg was the highest price offer recorded throughout the harvest season. These prices may now sound low, but one also has to keep in mind that international market prices for Jasmine rice were at a historically low level in 2016!

⁸ This is actually the range of the highest price recorded (for dry paddy) in the location of the different cooperatives, during the harvesting season, from end of October to December. In some villages, collectors were offering even lower prices than that.

On top of this, we add the premium price. In 2016, for Jasmine, the premium actually paid by AMRU has been relatively low (82 KHR/kg in average⁹), because 2/3 of the jasmine paddy delivered was in the lowest grade of quality (“A4”, added in 2016 contracts, which is notably characterized by the high rate of broken kernels), for which the applied premium is only + 50 KHR/kg. High rate of broken kernels has always been an issue in Preah Vihear¹⁰, but in 2016 the quality was particularly affected by very late rains.

Overall, for jasmine, we can estimate that in 2016, the gross additional value generated by selling organic paddy to AMRU (instead of selling the paddy as conventional to local middlemen) was + 307 KHR/kg¹¹. For 5,055 tons of jasmine paddy delivered, it represent a gross additional value (compare to traditional selling opportunities for farmers) of + 1.55 billion Riels, equivalent to approximately + 388,000 USD.

FOR WHITE RICE VARIETIES:

A similar analysis can be done for white rice varieties. The monitoring of prices offered by local traders was not done as systematically as for jasmine, but based on data collected by cooperatives, we can estimate that for dry paddy (non-fragrant varieties), the price offered by local collectors was in average of 780 KHR/kg, whereas the reference price agreed with AMRU was 850 KHR/kg. So an over-price of +70 KHR/kg.

The premium actually paid by AMRU for white rice paddy was in average of +211 KHR/kg (weighted average). As non-fragrant varieties did not face the same problems as Jasmine varieties regarding the quality, the level of premium actually obtained was much higher.

So in total, for non-fragrant (white rice) paddy varieties, we can estimate that in 2016, the gross additional value generated by selling organic paddy to AMRU (instead of selling the paddy as conventional to local middlemen) was +281 KHR/kg¹². For 2,957 tons of non-fragrant paddy delivered, it represent a gross additional value (compare to traditional selling opportunities for farmers) of +831 million Riels, equivalent to approximately + 207,000 USD.

IN TOTAL (FOR CONTRACT WITH AMRU RICE ONLY, NOT INCLUDING SIGNATURES OF ASIA)

In total for 2016 and contracts with AMRU, the gross additional value generated from selling 8,012 tons of organic paddy to AMRU (compared with selling the paddy as conventional to local middlemen) reaches 2.38 billion Riels, or approximately 595,000 USD, i.e. about 74 USD/ton of paddy.

4.1.2. DISTRIBUTION OF THE GROSS ADDED VALUE BETWEEN FARMERS, ACS AND PMUAC

PMUAC

The contribution to the operation and structural costs of the Union of Cooperatives (PMUAC) is of 50 KHR/kg (or 12.5 USD/ton). With 8,012 tons delivered to AMRU in 2016, these contributions have generated an income of 400 million Riels to PMUAC (100,000 USD) – still not including contracts with Signatures of Asia. As mentioned above, thanks to the scale economy, this is now seen has sufficient to cover 100% of PMUAC costs to maintain its structure and services in the year $n+1$ at the same scale as in the year n at the end of which fees are collected. It can even finance some growth or diversification of the services, to a limited extent.

ACS

In total, the 12 cooperatives involved in the contract with AMRU Rice in Year 2016 have, for that year, retained as gross margin a total amount of 273.2 million Riels (68,000 USD), i.e. in average¹³ 34 KHR/kg or 8.5 USD/t.

With this amount, cooperatives are covering:

⁹ This is a weighted average, taking into account the volumes actually delivered for each category grade.

¹⁰ Farmers have relatively large surface to harvest while limited labor force is available. So the harvest takes week and cannot be done within the optimum timing, which affect significantly the rate of broken kernels, in particular for Jasmine varieties. ACS and PMUAC have started to work on it, notably in 2016, trying to mobilize entrepreneurs with combine-harvesters. But in the remote areas of Preah Vihear, access of combine-harvesters to paddy fields is often very complicated, and most of the fields are still harvested by hand.

¹¹ 225 KHR/kg for the difference between reference price and local trader prices + 82 KHR/kg for the average premium.

¹² 70 KHR/kg for the difference between reference price and local trader prices + 211 KHR/kg for the average premium.

¹³ These are the total amount combined for all the 12 cooperatives. But rates of margin applied can vary a little bit from one cooperative to another according to their own internal policies. The PDAFF officers are supervising this as regulatory framework for cooperative provide some guidelines. In some cases they intervened to avoid exaggerated level of remuneration for the committees.

- The costs of Internal Control Inspectors (77 million Riels in 2016, i.e. about 2.41 USD/ton.)
- The costs of daily workers at the time of collecting the paddy (53 million Riels)
- Miscellaneous operation and administrative costs (communication, stationaries...) for about 15 million Riels.
- The remaining 127 million Riels cover the management of all the operations by the AC committee and the AC net profits.

FARMERS

Farmers are getting the rest of the gross additional value generated by selling organic paddy to AMRU instead of selling paddy as conventional to middlemen (calculated in Section 4.1.1. above), i.e. 53 USD/t (74 USD/t – 12.5 USD/t paid to the Union and an average of 8.5 USD/t retained by cooperatives).

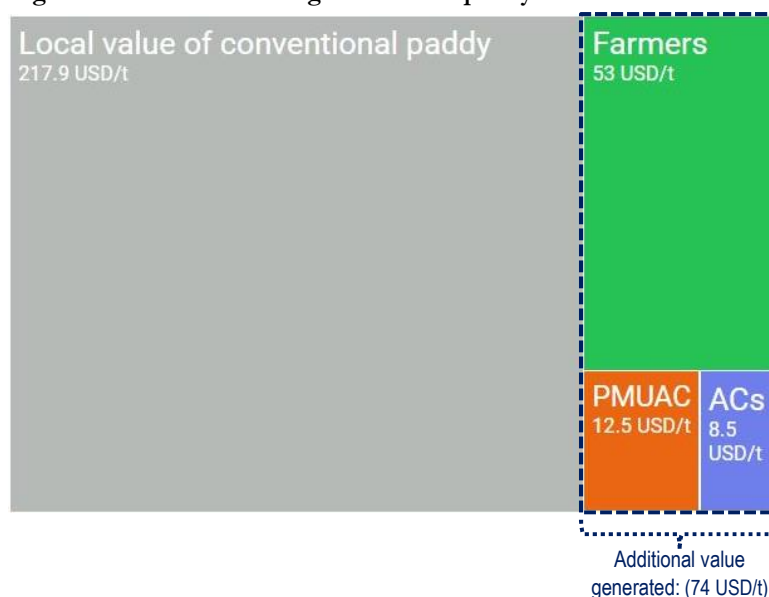
SYNTHESIS

In total the value paid in cooperatives area by AMRU for the organic paddy is approximately 33% above the value that farmers would sell their paddy as conventional to local collectors.

Farmers are capturing 72 % of this additional value (or 53 \$/t) created by the organic certification and the partnership with AMRU, the remaining part covering the costs engaged at Cooperatives level (8.50 \$/t) and Union level (12.5 \$/t).

Note that the values in the Figure 2 – opposite – so not correspond to a specific type of variety, but are an average for jasmine and white rice varieties (weighted by the proportion of the two types of varieties sold by ACs to AMRU in 2016).

Figure 2: Additional value generated for paddy and its distribution



4.1.3. BENEFIT FOR THE MILLER/EXPORTER (CASE OF AMRU RICE)

AMRU Rice had to invest significantly at the beginning of this project of development of an organic paddy supply chain, notably for immaterial investment (commercial prospection of buyers abroad, contract with Certification Body, etc.) and organization of the warehouse and milling process to ensure separate processing and traceability for the organic paddy and rice. It is clear that at the scale of implementation in the first year(s), these investments were not immediately recovered. We do not have access to AMRU accounting and finance data and cannot say for sure if AMRU starts to have a returns on investments from 2016 or 2017 (or not yet). But according to AMRU management, the company expects to start to get profit from this operation from 2017, but these profits will be re-invested to finance expansion, along with external loans and grants. Still according to AMRU management, the organic rice production and selling could generate approximately 15% of net profit from 2020, and up to 30% for the production of organic rice noodle and organic rice paper¹⁴.

Besides the economic benefit, and maybe as important, this partnership with smallholder farmer cooperatives for organic paddy production and supply has also created a benefit in term of image for the company. It is a strong asset in the CSR policy of the company, and this benefit on image has positive impact for the company: it is considered both by clients (importers abroad) and by financial partners. AMRU Rice has benefited from foreign investments and partnership: the company has indicated they have received over \$4.5 million loan and grants from European institution to continue to invest in socially and environmentally responsible partnership with farmers and paddy sourcing.

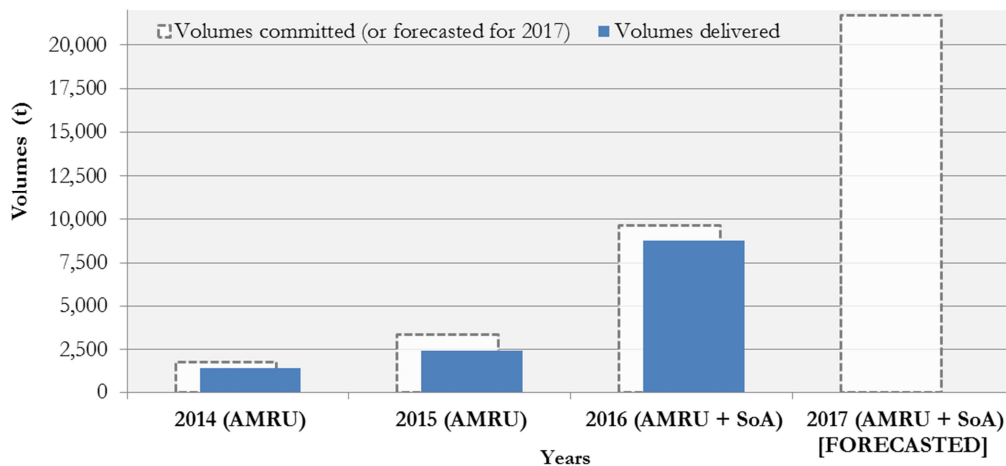
The positive impact on image has also been materialized by international rewards: Song Saran, CEO of Amru Rice was winner of the «Takeda Young Entrepreneurs Award 2015» in Japan in February 2016, for its project of “Contract Farming for Sustainable Development”.

¹⁴ A part of the organic paddy is further processed by AMRU to produce rice noodles and “rice paper”.

4.2. POTENTIAL WITH THE SCALING UP

The above analysis is for year 2016. In 2017, PMUAC members (or “pre-members” for the new ACs joining in this year) have signed contract with AMRU and Signatures of Asia for a total volume of 21,688 tons of paddy. Even if the farmers manage to produce and deliver only 90 % of this volume¹⁵ (or approximately 19,500 tons), the total additional value generated locally (compared to the local value for conventional paddy) would represent +1.44 million USD (based on the same average of +74 USD/ton of paddy).

Figure 3: Historical progression and forecasts of volume of organic paddy contracted by the ACs involved with PMUAC



With the same rate of 72% of the additional value reaching farmers, this would represent a total additional income of more than 1 million Dollars US for farmers engaged. With 4,200 smallholder farmers engaged in 2017, this means an additional income of nearly 250 USD per farmer household in average.

5. VIABILITY: STRENGTH, WEAKNESSES AND FORESEEN FUTURE OF THE INITIATIVE

The Table 3 (next page) presents an overview of the main strength, weaknesses, opportunities and threats from the point of view of PMUAC and ACs.

PMUAC is progressively proving its capacities to sustainably undertake its main functions on ICS management, necessary to sustain the organic certification, and thereof the benefits for all parties involved in the Contract Farming scheme.

With the current scaling up already engaged in 2017, the cost-efficiency of PMUAC services is expected to increase: already in 2017, PMUAC start to bear the costs of internal inspectors¹⁶, without charging additional fees (still with 50 KHR/kg, or even with a reduction of this amount). Even if the actual volumes delivered in 2017 have been significantly below the objectives (only 10,393 tons delivered, due to lower yields and increased competition with external buyers who could pay cash at harvest whereas selling to AMRU and SoA comes with some delay for payments), these volumes can remain a realistic target for the coming year, and the Union still has some plans to aggregate few more cooperatives and farmers (their strategic plan estimate that PMUAC could gather 30 ACs and up to 7,000 farmer households by 2022). It is anticipated that after 2018, the pace of growth might start to slow down.

But other opportunities are identified that could create even more additional incomes for farmers, ACs and PMUAC. Fair trade certification is part of it, and the tripartite partnership between PMUAC, AMRU and Ethiquable, starting in 2017 is promising as it could generate high additional fair-trade premium (even if the volumes concerned may remain limited). A second opportunity is the diversification of PMUAC on other productions and value chains such as cassava or cashew (already produced by their members) building on the

¹⁵ (They delivered 91.4 % of the volumes contracted with AMRU in 2016).

¹⁶ In 2017, only for farmers engaged since previous years (and who therefore have contributed to finance PMUAC for the current year). For farmers who have joined in 2017, PMUAC will cover the costs of ICS inspectors from 2018. Until 2016, cost of ICS inspectors were covered by cooperatives. This change could allow cooperatives to reduce the gross margin they take, without requiring PMUAC to take more as the costs are covered thanks to the economy of scale.

Union human resources and capacity to implement proper ICS systems, a know-how that could be valued for other productions.

Table 3: Synthesis of SWOT analysis

STRENGTH	WEAKNESSES
<ul style="list-style-type: none"> ▪ Good quality of paddy produced in term of purity and kernel length. ▪ Professionalism of PMUAC team: good capacities of Human Resources developed for ICS supervision and management. Internalized capacities to train new farmers and new ICS inspectors. ▪ English language skills make PMUAC able to directly liaise with the Certification Body and international partners. ▪ Certification continuously achieved since 2014 for EU and USA organic standards. ▪ Long term vision and perspectives of the commercial partners engaged. Strong, continuous and efficient efforts of the exporters to successfully expand its market. ▪ True mutual interest of both parties (cooperatives and AMRU) and willingness to consolidate the partnership. Tangible benefits for all parties make contract farming agreements solid. ▪ Capacity to financially sustain PMUAC services, and thereof maintain organic certification (and even to finance growth, to a certain extent, and to set provisions for risks). ▪ So far, capacity to manage the growth of number of farmers and number of ACs enrolled in the organic paddy production at a fast pace and following the request of clients. ▪ The Union strengthen ACs/ farmers bargaining power (collective negotiation). 	<ul style="list-style-type: none"> ▪ High rate of broken kernels for jasmine varieties: more improvement needed at harvest and post-harvest level to address this issue and improve milling yield. ▪ Low availability and relatively high cost of local labour (for harvesting, loading trucks...). ▪ Difficult access of combine-harvesters to fields is an obstacle to address the quality issues. ▪ Needs to consolidate managerial and administrative capacities in some of the Cooperatives engaged. ▪ Remaining volumes of jasmine paddy in 2016: some of the organic jasmine paddy had to be sold as conventional as the buyers could not absorb all the volumes produced. This is also linked to the difficulty to adjust the surface of rice fields to the demand of buyers given the variability of yields. ▪ Turn-over in PMUAC team (yet with a certain resilience of PMUAC because it reaches a scale at which it can hire several staff to undertake the same kind of functions, so departure of one staff doesn't lead to a full loss of know-how and capacities). ▪ PMUAC has just started to pilot new services to its members related to organic paddy production, but still need to develop them more: organic seeds production, supply of organic fertilizers,
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ▪ Confirmed export market opportunities (with significant premium price offered for organic). ▪ Still some potential to scale up paddy production (number of producers and of cooperatives). ▪ Willingness of AMRU (as well as Signatures of Asia) to consolidate, scale-up and invest. ▪ Potential to generate additional incomes from Fair Trade certification (notably building on the tripartite agreement between PMUAC, AMRU and Ethiquabe started in 2017). ▪ Potential for diversification of PMUAC activities: valuing PMUAC capacities on ICS management and traceability for other productions of its members (cassava, cashew...). ▪ Regular support of MAFF and PDAFF services. ▪ Other projects or development partners are interested to collaborate with PMUAC. ▪ Additional incomes from Fair Trade certification (partnership signed with Ethiquabe in 2017) can increase PMUAC's capacity to invest. 	<ul style="list-style-type: none"> ▪ The very fast pace of scaling up represents a challenge and the maintenance of efficient and reliable ICS (and thus of the certification) with many new farmers and cooperatives can be at risk. ▪ Even if PMUAC starts to set provisions for risks, the costs of ICS would be difficult to finance in year $n+1$ in case a major problem occurs in year n (loss of organic certification or very low production due to natural disaster...). ▪ Dependency on only two buyers at the moment represents a risk... but on the other hand, scale economy and loyalty to the partners are pillars of the sustainability of the system. Developing relation with one or two new partners for PMUAC shall not be to the detriment of existing partners. ▪ Support from other projects/NGOs can be an opportunity but can also present some risks (for instance to mobilize too much time of PMUAC staff and pull them away from the core role of ensuring organic certification. ▪ Some AC leaders sometime challenge the level of contribution to the Union budget and the cost of PMUAC human resources (despite the benefits it brings – by maintaining the certification – can represent 8 to 10 times what it costs. This could put the Union at risk.

To address quality issues PMUAC can continue to get involved in services such as facilitation of access to combine-harvesters. According to AMRU, this has started to bear fruit, as the rate of broken kernels as very significantly decreased (even for Jasmine types of varieties, for which it was previously problematic), and the milling yield has thereof been very significantly improved.

Last, PMUAC also starts to develop its role in supplying agricultural inputs compatible with organic standards to its members. Other path could also be explored to work on the preservation of soil fertility, such as the implantation of legumes crops after paddy harvest to fix nitrogen in soils (yet still after double checking compliance with organic standards).

6. REPLICABILITY AND CONDITIONS FOR REPLICABILITY WITHOUT SCCR PROJECT SUPPORT

6.1. WAS SCCR PROJECT'S INTERVENTION DECISIVE FOR THE SUCCESS OF THIS CASE OF CONTRACT FARMING FOR ORGANIC PADDY PRODUCTION AND SUPPLY?

The success and profitability of this case of Contract Farming for organic paddy production can arouse interest and desire for other economic stakeholders (both farmers/ ACs and agro-food company) to imitate this model.

The willingness of economic stakeholders to invest in a long term partnership and their commitment to make it successful are obviously the first fundamental conditions of success. In the case described in the present paper, farmers have shown a firm commitment to get involved, adopt organic cropping practices, and accept the collective rules. And buyers such as AMRU Rice have committed a lot of time and resources to build this partnership, mobilize the Certification Body, and were very proactive on the commercial side to identify clients abroad and secure deals. This case would not have been successful without this full commitment of economic actors.

Yet, reciprocally, we think that it would have been difficult for AMRU and the cooperatives to reach this success without the support provided directly or indirectly by SCCR project. Those support included:

- Identification of suitable areas and ACs for organic production (in particular for the case of the contracts with Signatures of Asia, in which the initial step was a demand from the company to identify potential area for organic production).
- Training of farmers on organic production standards (implemented by COrAA at the initial stage, financed by SCCR).
- Training and development of tools for Internal System Control.
- Facilitation of contract farming negotiation (project team with counterparts from DAI and or PDAFF).
- Support the development of ACs capacities to manage the contracts (project team and DACP + PDAFF)
- Support the process of creation of PMUAC and capacity building (with involvement of DACP and PDAFF).
- Initial subsidies to cover ICS supervision, before these costs can be handed over to PMUAC.
- General follow-up and backstopping...

6.2. WHAT WOULD BE THE CONDITIONS FOR A REPLICATION BY OTHER ACs AND COMPANIES

This model of Contract Farming partnership for organic paddy production¹⁷ could be replicated by other stakeholders. But at least part of the supports that Preah Vihear Farmers, their cooperatives and AMRU have received shall remain available beyond the frame of a project such as SCCR. This raises the question of the maintenance and systematisation of permanent offer of services to economic stakeholders, that could ideally be proposed by governmental institutions (or alternately by projects of NGOs).

MAFF services can directly be involved (yet with no exclusivity, and other service providers can play the same roles) for:

¹⁷ But this could also be true for other type of standards requiring certification on the way the paddy is grown (such as Sustainable Rice Platform standards, Protected Geographical Indications, etc...) or for other products than rice.

- The support to the creation and the monitoring and capacity building of Agricultural Cooperatives, and possibly Unions of Agricultural Cooperatives (mainly DACP and PDAFF);
- The identification of partners for the agro-industry (DACP, DAI and PDAFF);
- The facilitation of Contract Farming negotiations and follow-up (DAI and PDAFF)
- Technical assistance for the production (PDAFF, extension services)..

Yet, at present, MAFF may not have all the competences required for more specific services, in particular there are no or limited capacities in MAFF related to international organic standards, development of ICS services and preparation of certification schemes. Overall in Cambodia, the number of experienced experts in these fields is very limited.

This would be a field in which the government could invest by:

- Supporting the development of training curriculum / training offer, for instance as a possible post-graduate specialization for students in the agriculture sector.
- Setting up a mechanism of subsidy, accessible by economic stakeholders, based on applications files demonstrating the consistency and reliability of their value-chain development project.

Such subsidies could also contribute to finance the costs of farmer trainings, Internal Control System implementation for the first year(s), and maybe even contribute to the certification costs for the first year. Yet, as it was done¹⁸ in the case of Preah Vihear organic paddy supply chain development, this initial financial support shall be conditioned to a formal commitment taken by stakeholders to take over the costs in the second year (or progressively over 3-4 years).

Table 4 next page recall some of the key support functions required to support the development of such partnership between Farmer Organization and agro-food industry for certified (typically organic) agricultural product supply, where these functions could be hosted, and how they could be financed.

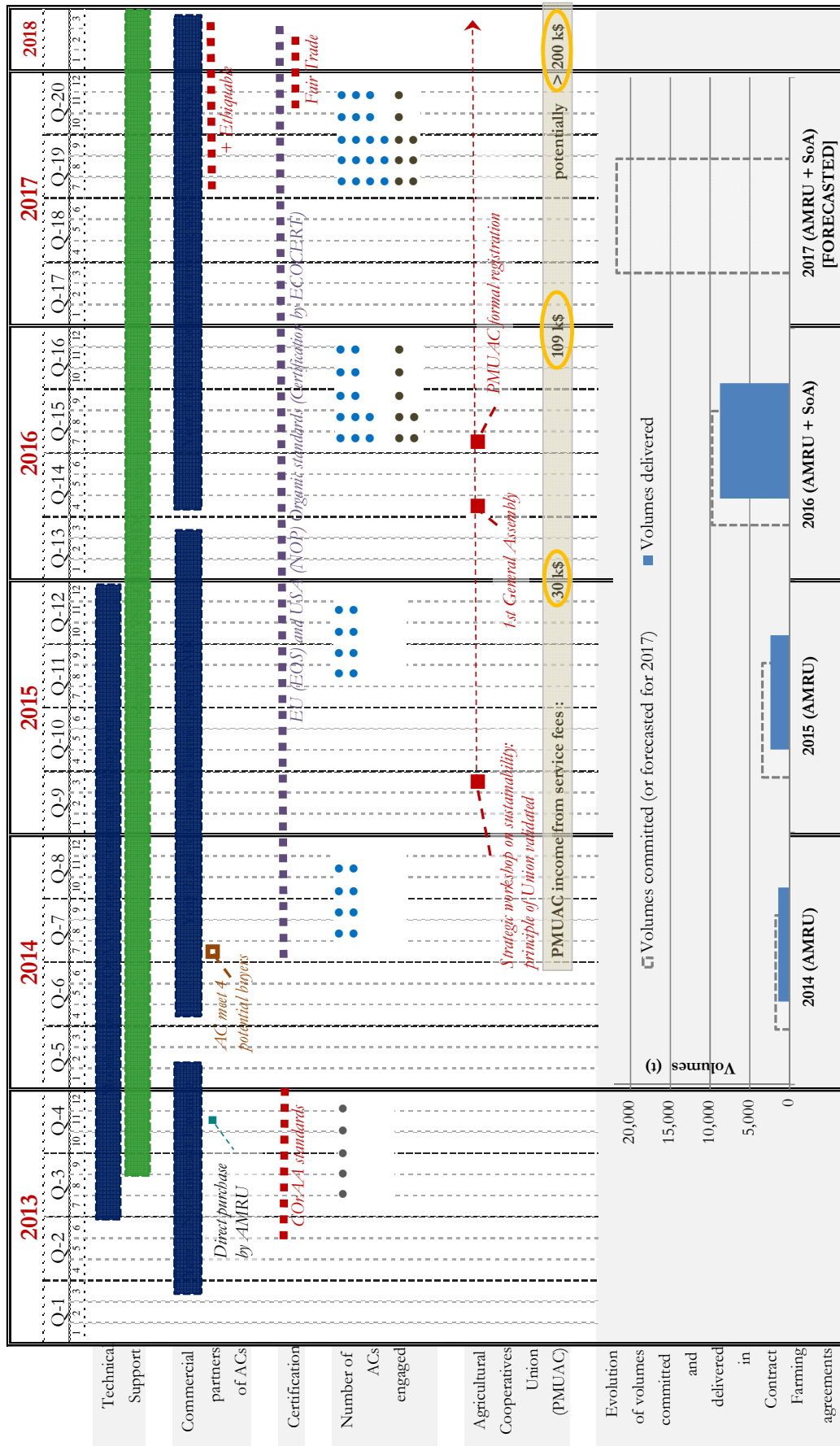
¹⁸ The SCCRP project covered the costs of the Union team in the first year only with a written commitment of cooperative leaders (previously validated with their members) to channel 50 KHR/kg from the sale of organic paddy at harvest time to generate the financial resources from which the Union would carry over the work in the following year.

Table 4: Key support functions, possible institutions mobilized and financing to support replications

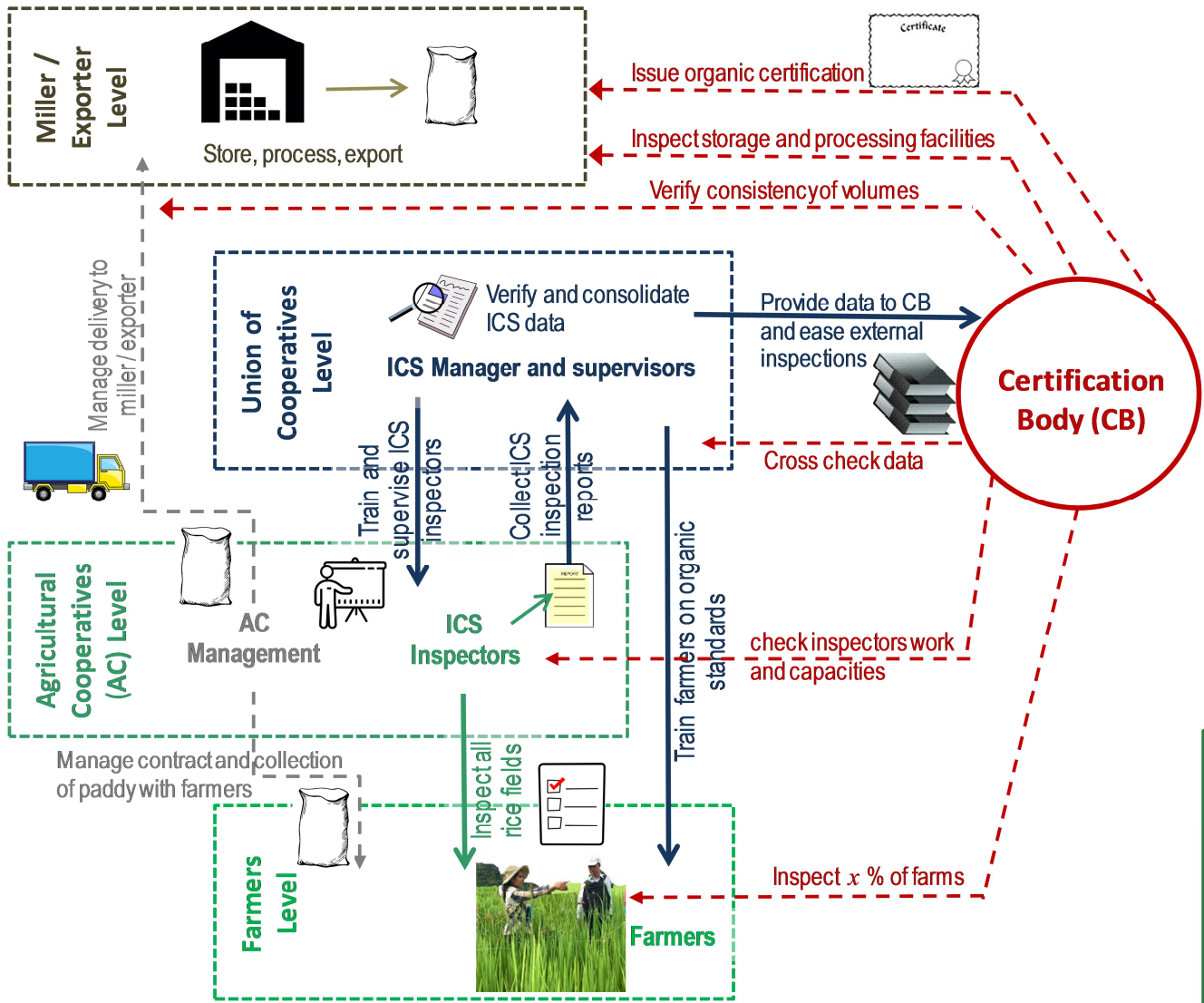
Key roles	Main tasks to be implemented	Organization / Service Provider		Source of funds
		Governmental	Other	
Identification of partners	Identify potential AC(s) to make the contract with the Buyer	DACP PDAFF	FO Federations...	State budget for DACP or PDAFF (in MAFF budget)
Support creation of ACs + ACs capacity building	Train leaders of AC(s) on AC management, bookkeeping etc. Supervise and ensure transparency of process, decision making and loyalty to members.	DACP PDAFF	FO Federations (for capacity building)	State budget for DACP or PDAFF (in MAFF budget)
Facilitation and monitoring of CF	Help facilitate a contract farming preparation between the two parties. Acknowledge Contract Farming agreements. Follow-up the implementations of the contract Intervene in case of difficulty or conflict.	DAI PDAFF (+ possibly local authorities)	NGOs, Federations, other third party...	State budget for DAI or PDAFF (in MAFF budget).
Training of farmers on required standards	Develop training material on required standards. Implement training of producers on required standards	Limited or no capacities in MAFF at present on these subjects.	Specialized organizations or experts	Possible creation of a dedicated fund (government) to subsidize such initiatives. (Can be co-financed by economic stakeholders).
Development of ICS capacities and tools	Help to select and train ICS inspectors. Supervise ICS inspectors + train ICS supervisors / managers if relevant at the scale of implementation. Accompany and facilitate first inspections by Certification Body. Help stakeholder to implement corrective measures if needed.			

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ANNEX 1: TIMELINE OF THE DEVELOPMENT OF ORGANIC PADDY SUPPLY CHAIN



ANNEX 2: SIMPLIFIED CHART OF THE INTERNAL CONTROL SYSTEM AND ORGANIC CERTIFICATION



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