

Is Fairtrade leading to sustainable changes in the value chain?

A case of Organic Basmati Rice in India



January 2018

Harpreet Singh Sondh
MSc programme - Organic Agriculture
Registration number - 760918785120
Thesis code: CPT-80836



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Harpreet Singh Sondh

Organic Agriculture

Dr. Ir. Harro Maat

Dr. Ir. Sietze Vellema

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1 Introduction

Fairtrade¹ and other participatory approaches in sustainability initiatives across the world attempt to include small and marginal farmers to attain development goals. Knowledge exchange between the international buyer and the farmers, makes the basis of such an initiative, which revolves around improving production processes, implementing pricing and procurement standards or enabling the farmers to adjust their practices to organic and/or other value chain requirements for international trade to achieve sustainable product standards (Fayet and Vermeulen, 2014). Whether Fairtrade is leading to sustainable changes in the value chain, is however a matter of debate. It has been argued that these initiatives may not be able to bring the intended benefits for the small and marginal farmers and may not be sustainable in the long run. For instance, minimum pricing standards not being in line with the production costs (Claar and Haight, 2015; Pedini et al., 2017). However, it is also argued that the Fairtrade based initiatives work within the marketplace and reward productive activities and production processes that are valued by consumers and that are good for the local environment and economy (Dragusanu et al., 2014), thus achieving its intended goals.

This study researches the case of a Fairtrade Basmati Rice value chain partnership (VCP) in India. India is one of the original centres of rice cultivation. The rice harvesting area in India is the world's largest. India is the largest producer and exporter of Basmati rice with about two thirds of the production being exported. The country has exported 40,00,471.56 MT of Basmati rice to the world worth INR 21,604.58 crores (or 3,230.24 US\$ mill.) during the year 2016-2017². From socio-economic perspective rice is a staple crop which is deeply embedded in the food culture. Moreover, rice serves as one of the most important food crops from food security point-of-view, feeding millions of people. Further, Basmati rice is the leading aromatic fine-quality rice of the world trade and fetches a good export price in the international markets³ earning foreign exchange for the country. It also serves as a cash crop contributing to the financial security of small and marginal farmers, however, the full potential is not yet fully realised owing to lack of organised value chain for export markets and sub-optimal production practices (Ditzler et al., 2018).

In this study, we analyse and document how the practices around seeds and procurement within the Basmati rice value chain are reorganising and whether the sustainability goals of the initiative are achieved. Further, we trace how processes within the Basmati rice value chain and the local context are reconfiguring due to the sustainability initiative, where the main assumption is that reconfiguring intermediate processes or outcomes are predictors of the effectiveness of a sustainability initiative in the long run. In other words, assessing the intermediate outcomes (current impact of the initiative) in the given context, as harbinger for future potential of the sustainability initiative. We focus on both the farmers and the off-farm stakeholders namely traders and millers and their interactions with farmers.

The following research questions are addressed:

- How are evolving institutional arrangements, social linkages and interactions reshaping the value chain?
- How are the procurement and processes around seed and inputs reconfiguring in the value chain?
- Is the initiative making the value chain sustainable?

Sustainability initiatives revolve around the benefits they provide to the farmers and other stakeholders. However, such initiatives can be quite demanding for the farmers and other stakeholders, including the support organisations, as it involves reorganising of practices within the value chain, for example, by establishing buyer–seller relationships, organising farmers and setting up producer organisations to increase their bargaining capacities and improve access to knowledge and technology, and helping in capacity building to be more competitive and hence sustainable in the long term (Vermeulen et al., 2008; Laven, 2009; Bolwig et al., 2010; Magnus and Steenhuijsen, 2010). Most studies primarily focus on economic indicators to understand the benefits of such initiatives, providing valuable insight in overall cost-benefits, but little about the changes in the underlying social interactions, and how that affects social relations and capacity to meet the demands of the new standards/practices brought by re-

¹Fairtrade International website- <https://www.fairtrade.net/about-fairtrade/what-is-fairtrade.html>

² http://apeda.gov.in/apedawebsite/SubHead_Products/Basmati_Rice.htm

³ <https://www.wto.org/>

organising value chain. The latter, however, may be critical in making the value chain sustainable in the long term.

This study seeks to document the value chain in its current stage, and applies the Realist Evaluation approach (Pawson and Tilley, 2004), to identify predictors of the sustainability of the value chain, termed as proto-institutions (Vellema et al., 2013). So that in the coming years it can be verified whether these predictors prove to be reliable. As theory suggests, investigating the value chain with a focus on the 'the hidden middle' will reveal 'reconfiguration of practices', giving insight into shifting responsibilities and dependencies. In this study we validate the theory, for the Basmati Rice value chain case in India in enabling us to identify reconfiguring practices and embedded social linkages which shape the indicators of sustainability of the value chain. As per the Realist Evaluation Approach, it is important to understand partnership interventions and the intermediate outcomes- the new rules and practices that generate institutional change, in the given context. Highlighting that the effectiveness of such an initiative is not dependent on the outcomes alone. In other words, it is a context-mechanism-outcome, rather than a cause-effect relationship. It is described as configurational thinking, in which outcomes are considered to follow from the alignment, within a case (context), of a specific combination of attributes and behaviour. These reconfigurations, are termed as proto-institutions, as they are critical in achieving the desired development outcomes. Further, this study, contributes by listing contextual challenges which the VCP needs to overcome, or adapt to, for the VCP to achieve its developmental goals.

In the following chapter, we first elaborate on the theoretical approach. Followed by the research approach, detailing the methodology in chapter 3. In chapter 4 under results, we document the case specific context and 'reconfiguring practices'. These results are further analysed in chapter 5, and documented as the 'intermediate outcomes' due to the VCP, leading to a listing of the processes/events which are critical to bring about a transformative change regarding the sustainability of the value chain in the long run. In chapter 6, we further discuss the results and analysis in line with the latest research on value chain components and developmental goals of sustainability initiatives, also discussing the limitations of this study. Finally, the conclusions are presented along with the recommendations for further research and/or sustainability of the value chain.

2 Theoretical Approach

2.1 The Role of Off-farm Stakeholders

Food chains in developing countries are going through continuous and in most cases, rapid transformation, and getting modernised. Transformation is described as a “quiet revolution,” as these changes are grass rooted in nature (Reardon et al., 2012). The distribution of marketing margin between farmers and processors is an area of great interest.

Increase in scale and change in technology have been identified as the key drivers for transformation in the rice value chains (Reardon et. al, 2012). Flor et. al, (2016) studied approaches to enhance learning and adaptation of rice-farming technologies in Myanmar. The Learning Alliance (Lundy et al., 2005) approach, in which the information exchange is extended to traders and other off-farm stakeholder, resulted in increased social learning for farmers and millers. These studies show that participatory approaches should not merely facilitate deliberations between actors but also support the reconfiguration of practices other than farming and in establishing linkages between practices such as buying rice and milling (Flor et. al, 2016).

The off-farm components of the value chains account for about 40% of the total margins in the rice chain. Reardon (2015) conceptualises this phenomenon as the “hidden middle” which is relatively neglected. Recent studies in development economics have pointed out the importance of further exploring the role of the “hidden middle” in sustainability initiatives in evolving value chains. Sitko and Jayne (2013), highlight the role of the traders as aggregators who provide market access to millions of remote small-scale farmers, who are cut-off from output markets. Contrary to the held notion that the process of aggregation is exploitative for the farmers, it is highly competitive in terms of number of buyers in villages operating on low margins. And in doing so, they bring down the cost of marketing for these farmers and make the value chain more efficient. Likewise, in a steadily globalising value chain of shea butter in West Africa, the existing wholesalers have shown the resilience and their relevance in solving specific co-ordination problems of the supply chain (Rousseau et al., 2015). The wholesalers still play an important role in the smooth functioning of the chain and in profit sharing down the chain to the rural poor. As stated by Rousseau et al., (2015) their prolonged existence relies on two forms of cooperation: vertical cooperation within each individual wholesaler’s network and horizontal cooperation between wholesalers, the central nodes of the networks. They also suggest that the wholesalers should not be seen as “free riders”. In developmental economics, their role as social players in empowering the rural poor should be taken into consideration more carefully. In the artisanal trade networks in East Kalimantan, Kusumwati et al., (2013) studied the role of middlemen-traders, called *pongawa*, that hold most influence over shrimp production. Their role is key in regulating the conduct of farmers and constitutes a vital role in shaping the production choices that farmers make. Even though they hold a central position in the value chain they have been largely overlooked by state and NGO-market-led regulatory networks. The exclusion of these actors, which are beyond the farm level, holds implications for the development and implementation of production standards, and ultimately certification as a means of environmental governance. Engagement of middlemen traders, with local knowledge and practices, is key to the process of standardisation and certification.

Thus, the literature suggests that investigating the value chain with a focus on ‘the hidden middle’ will reveal ‘reconfiguration of practices’. This study focuses on ‘the hidden middle’ of value chain for certified organic and Fairtrade basmati rice in Uttarakhand, India and traces the actions it has taken to be sustainable and its impacts on the farmers and other stakeholders of the value chain.

2.2 Reconfiguration of Practices

Schouten et al., (2016), highlight that to bring about any transformative change regarding the sustainability of the value chain, it is important to successfully align and merge global standards of sustainable movements with local embedded social practices.

The governing models in an existing value chain can get reshaped in response to the arrival of standard-setting, sustainability driven global value chains. It may lead to emergence of new requirements and capabilities for the existing value chain, for example, bulking and aggregation of the produce under a sustainability standard, from small-scale farmers which are widely dispersed in a region. This may

involve new stakeholders across the value chain such as traders and processors providing such services. Thus, new linkages and social interactions may bring new learning and a set of new practices (intermediate processes) which may be different from the existing deeply embedded social practices, e.g., procurement, at village level instead of the farmers having to bring the produce to the regional market; and financial interactions, like cash on delivery etc. (Leeuwis, 2004; Flor et al., 2016; Vellema 2016). These changes or the new method of conducting business is referred to as 'reconfigured' practices. The extent of these linkages and changes can be explained by the intermediate processes (Ton et al., 2014) of the sustainability initiatives. Thus, as per literature, regulative and normative understanding of these practices and the related social groups is needed to achieve sustainability.

Therefore, the theoretical framework for this study hypothesises that, to establish whether a VCP is bringing about sustainable institutional changes in a value chain, it is important to focus on 'the hidden middle' and 'reconfiguration of practices', by studying underlying social linkages and interactions in evolving institutional arrangements, which are reshaping the value chain. This study seeks to establish whether the VCP is bringing sustainable institutional changes in the Basmati rice value chain in India, by exploring the reconfiguration of practices of procurement and, seeds and other inputs in the value chain. As this is where the farmer interacts with 'the hidden middle' and new standards for practices are set to meet the goals and demands of the VCP, and where changes are expected in social linkages and interactions due to the VCP. Given the goals the VCP seeks to achieve the expected changes in the value chain due to the VCP are organising, capacity building (such as negotiation, problem solving skills) of farmers, development of sustainable production systems, optimising the value chain (fair and transparent procurement practices, seed and input availability) and institutionalisation of value chain components.

3 Research Approach (Methodology)

In this chapter we explain the research approach used in this study, which is a case-study design and we elaborate on the study case and data collection method.

3.1 Case-study Design

The 'Realist Evaluation' approach recognises that the outcomes of the initiative are dependent on many variables which are interlinked in deeply embedded social practices. These outcomes vary, depending on how the social actors operate in different contexts (Pawson and Tilley, 2004). In our study, we follow the case based evaluative research method to document the intermediate outcomes in a context, and analyse the course and impact of the sustainability initiative.

To evaluate the development impacts of the value chain partnerships a three-step case study analysis approach (Vellema et al., 2013) is used:

- Step 1: Descriptive inference - summary of the events and the outcomes, and the background of the VCP. Here we document how the value chain has evolved with regards to institutional arrangements, social linkages reconfiguring dependencies and the implications arising out of this for procurement and, seeds and other inputs.
- Step 2: Impact hypotheses - context based counterfactual arguments and reasoning to determine the impact of the VCP. During data-collection (interviews) context specific alternative causes for change are discussed as to document and reason the impact of the VCP in the given context.
- Step 3: Case analysis: Attribution and generalisation - the findings are 'Intermediate Outcomes' with respect to 'Process triggered by the Initiative' as well as new requirements and capabilities that may be required to embed the Intermediate Outcomes (Proto-institutions) of the initiative in the local and social context to bring about a transformative change regarding the sustainability of the Value Chain.

Thus, this methodology seeks to identify the processes of change by investigating vertical as well as horizontal linkages of the actors, following a Realist Approach to evaluation, which is sensitive to context, and looks for mechanisms as generative processes.

3.2 Case description: Basmati Rice Value Chain Partnership (VCP) in India

From 2011, a Swiss-Indian consortium of two non-governmental organisations (HELVETAS⁴ Swiss Intercooperation and Intercooperation Social Development India (ICSD)) implemented a project, funded by the Swiss Coop Sustainability Fund⁵, to develop a sustainable value chain for certified organic and Fairtrade basmati rice in Uttarakhand, India, the "Sustainable Production of Organic and Fairtrade Rice in India" project (SPOFR India project). The second phase of the project ends in 2017.

The members of the VCP - SPOFR India projects are:

- Intercooperation Social Development (ICSD) - provided technical advice to partners which ensured implementation and monitoring of the project, and supported in implementation of Participatory Technology Development (PTD) activities with farmer groups and extension activities.
- Nature Bio Foods (NBF) - responsible to ensure production, extension, quality management, bulking, processing and export of the rice.
- Producers' organisation (PO), set-up as per guidelines laid down by Fairtrade. The PO, named as Fair Farming Foundation, Ramnagar (FFF) has 12 Producers' Executive Board (PEB) members besides other functionaries, and is presided over by the president of FFF.

The objective of the SPOFR India project is to establish rice value chains that increase and secure farm incomes from rice based agriculture; reduce water use, reduce and off-set greenhouse gas emissions, increase biodiversity; and reliably supply high quality certified rice. The expected results are organising

⁴ HELVETAS: https://www.helvetas.org/topics/keystone_mandates/rice_project.cfm

⁵The SPOFR India project is a mandate of Coop, initiated by its daughter company Reismuehle Brunnen, which is the nodal value chain actor

and capacity building of farmers; development of sustainable production systems; optimising the value chain; knowledge management, outreach and communication; and project management, coordination and administration.

3.3 Data Collection Method

Study site

The SPOFR India project has been implemented in three different blocks⁶ of Nainital district in Uttarakhand, India, namely Kotabagh, Betalghat and Ramnagar.

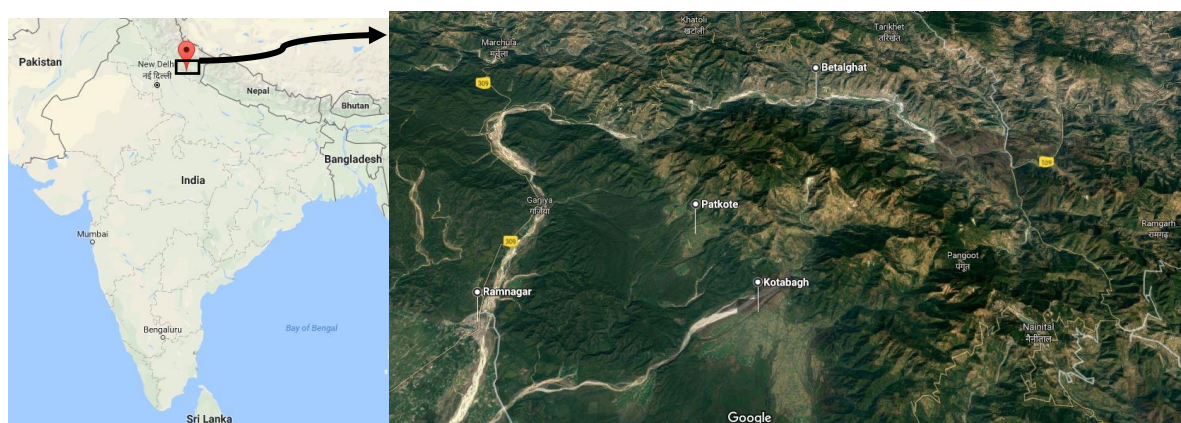


Figure 1. Project area location⁷

The Blocks and their characteristics

Kotabagh, Betalghat and Ramnagar, the three blocks, which were visited have in common that they are part of Nainital district, but differ greatly with regards to geographic positioning (altitude, accessibility the year round), wildlife, water management challenges.

Kotabagh (29.39°N and 79.29°E) is a small town near Nainital in the Kumaon region, it is situated at the foot of the southern face of the hill Teet and is bordered by Trai in the south, Kaladungi in the east, Dhaniakot in the north and Ramnagar in the west. The altitude of the place is 375-750 meters above sea level (masl)⁸.

Betalghat (29.55°N and 79.34°E) block is 75 km from Ramnagar and 90 km from Haldwani. The nearest township Bhatrojkhan is 12 km from Betalghat. The altitude of the place is 1000-1200 masl.

Ramnagar (29.40°N 79.12°E) is located at the foothills of the Himalayas on the bank of river Kosi. The mean annual temperature in Ramnagar varies from 15°C to 35°C. It has an average elevation of 345 masl. Total annual rainfall is nearly 205 cm⁹.

Data Collection

The data was collected at the study site during a field study in the months of April-May 2017, by conducting individual interviews, interviews with multiple interviewees, market visits and attending a conference/meeting of the stakeholders called by the Value Chain Partnership (VCP) to discuss the planning for the year forward, and other issues regarding co-ordination amongst the stakeholders in the

⁶ A block is an administrative unit used in some South Asian countries, a district sub-division.

⁷ [Google maps - Ramnagar](#)

⁸ <http://www.nainitaltourism.com/Kotabagh.html>

⁹ <http://www.ramnagar.com>

value chain. The data has been compiled as per the key issues such as, procurement, seeds and other inputs, and the general functioning and management of the value chain. During the field study, several villages in all the blocks of the project area, namely Kotabagh (Kotabagh, Pawalgarh, Kaladhungi, Ranikota), Betalghat and Ramnagar (Ramnagar, Patkote and Dhela) were visited to get a comprehensive assessment and variation in the factors affecting the issues mentioned above.

During the fieldwork, off-farm stakeholders and farmers were interviewed both from within the VCP as well as from outside of the VCP, to get a complete picture of the changes in processes introduced by the VCP, with respect to value chain processes of procurement and, seeds and other inputs, and their implications on the value chain. Where the farmer interacts with 'the hidden middle' renewed social linkages and interactions were expected due to new standards for practices being introduced to meet the goals and demands of the VCP. Off-farm stakeholders were selected to get insights into the reconfiguring processes of procurement and, seeds and inputs, to revalidate the data gathered from farmers and to establish intermediate outcomes. Stakeholders from outside the VCP were selected to get insight into the impact of the VCP on the value chain beyond the boundaries of the VCP, to disentangle the impact of the VCP in the given context and to highlight the role that the context may have played. The data presents the perspectives of direct actors/stakeholders like the farmers, NBF (Nature Bio Foods), ICSD (Intercooperation Social Development) from within the VCP or "Sustainable Production of Organic and Fairtrade Rice in India" project (SPOFR India project), as well as other local actors from the project areas who are not part of the project.

The selection criteria for the farmers for the individual interviews and for the interviews with multiple interviewees was as follows:

- Per block (administrative unit) based on their active participation in the VCP, which was identified with the help of the ICSD extension team,
 - organic basmati farmers
 - both PEB/PO members as well as non PEB/PO members
 - the remoteness/geographical location (hill-side/riverbed side) within the block, to capture the diversity in accessibility and geographical conditions
- Secondly farmers were selected per block, which are not participating in the VCP or no longer active in the VCP, which were identified with the help of the VCP extension team and based on leads from interviewed farmers. To get a broader understanding of the context, and specifically to get insight into the reasons for farmers to not be part of the VCP or having left the VCP.
 - organic/non-organic farmers

The selection criteria for off-farm actors/stakeholders was as follows:

- Based on VCP structure and input from the ICSD extension team
- Based on leads from interviewed farmers
 - Past and current vertical linkages of interviewed farmers within the region
 - Vertical linkages both within and outside of the VCP

The farmers and local actors in a block were interviewed per block at their farms or their respective local offices. During the interviews, we explored – How did the processes evolved during the project? What other changes would the actor/stakeholder want in the process to improve or bring maturity/sustainability to the value chain? See annex 1 for a listing of topics/guiding questions for interviews.

The identified changes were further investigated and revalidated by interviewing actors/stakeholders, which were vertical linkages as well as horizontal linkages of the earlier interviewed actors/stakeholders. Further, actors, who are not part of the project, were interviewed to find out the impact of the basmati value chain reconfiguration by the VCP, outside of the project. Interaction with other VCP actors/stakeholders was by means of a conference/meeting and individual/group interviews.

As shown below in table 1, a total of 30 farmers and 20 local off-farm stakeholders like *shellers* (local paddy millers) and traders from the project areas have been interviewed, as well as other VCP actors/stakeholders.

Table 1. List of actors and stakeholders interviewed with during the fieldwork

	Farmers		Other local actors in project area	Other VCP actors/stakeholders
	In the project	Out of the project		
Kotabagh	15	2	11 2 <i>sheller</i> /millers, 3 traders, social worker, 3 bankers, 2 retailers	PO (Producers' Organisation)/ PEB (Producers' Executive Board) members VCP appointed trader ICSD-project manager & extension team
Betalghat	3	1	5 <i>sheller</i> /miller, trader, social worker, banker, village head	NBF- procurement & extension team, <i>sheller</i> /miller/trader, PO manager, Internal control system (ICS) manager Other project team members: <i>Jal Sakhi</i> , <i>Jaivik Mittr</i> , Bio-Gas, Water
Ramnagar	9	1	4 2 <i>sheller</i> /millers, 2 traders	

Note: One of the farmers has been noted twice, both inside and outside of the project, as he is formally in the list of farmers participating in the project, but was introduced as a farmer from outside of the project as he has not sold his paddy to the VCP procurers last year, and will make up his mind about selling his paddy this year depending on the procurement procedure. Some of the interviewed *sheller*/millers are also farmers. Some of the interviewed farmers are also PEB/PO members. Some of the interviewed farmers are also extension team members for ICSD/NBF - *Jal Sakhi* or *Jaivik Mittr*. Some of the interviewed farmers are also social workers. One of the local traders is a VCP appointed trader.

Where possible and agreed to by the interviewee(s) the interview was recorded for the ease of documenting the interviews. A log of the interviews and interview notes was kept. The interview log was extended with coding and a summary of the interviews:

- Location (block) /date of interview
- Role of interviewee: farmer, *sheller*/miller, trader, social worker, banker, retailer, village head
- In/outside of project
- Subject list (e.g. seed/ppm/inputs, water, procurement/quality, PO)
- Summary

For the impact hypotheses, during the interviews information was sought about - Which other developments have taken place, in the last few years, which may have impacted the processes of procurement and, seeds and other inputs. And what the impact was compared to the impact of the VCP. Other discussed developments were:

- *Notebandi*¹⁰¹¹ ('demonetisation'): leading to delay in payments
- Technical development outside of project, such as electric weighing, mobile phones, internet
- Increased organic awareness, due to other national awareness projects
- Decrease in available farming labour
 - Men of the family leaving for a second income to sustain the family, women of the family taking care of farming,
 - Decrease in availability of seasonal labour (due to socio-economic improvements in their home region or other more lucrative work)
- Plots getting smaller and smaller, spread all over the area (no land consolidation rules/traditions)
- Decrease in interest in farming
 - Social status of farming as a profession,
 - Lack of future opportunities in farming,
 - Social status of farming as a profession, leading to decrease in marital chances for men

¹⁰ https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=38520

¹¹ <http://www.atimes.com/article/indias-demonetization-takes-toll-major-sectors/>

- Market forces and competition

The findings of the study are presented in three sections of the following chapter- 'Results', in which we describe, (1) the Context of the partnership, (2) Procurement, in which the key changes in the processes around procurement are described and listed and (3) Seeds and Other Inputs, in which key changes in the processes around seeds and other inputs are described and listed.

In the following chapters – Results, Analysis and Discussion, the results (from procurement, seeds and other inputs) are further analysed using the conceptual framework mentioned in the Research Approach and, discussed in line with the VCP goals and sustainability of the value chain.

4 Results

In this chapter, the study explores; how the processes around procurement and, seeds and other inputs have 'reconfigured' during the VCP using the conceptual framework described in introduction and chapter 2 And how evolving institutional arrangements, social linkages and interactions are reshaping the value chain is presented using the 3-step approach described as per the case study design in chapter 3.

The events and outcomes are presented as a schematic summary in table 2a for procurement and table 2b for seeds and other inputs. The detailed interview data was translated from local language Hindi to English and is documented and codified in Annex 2, 3, 4 and 5.

The findings in table 2a & 2b describe:

- How processes were 'before the arrival of the VCP'; highlighting the context and the background,
- How they are now 'after the arrival of the VCP'; highlighting reconfiguring practices.
- The key inferences and implications are presented as 'detected changes' which are important indicators of the intermediate outcomes triggered by the processes initiated by the VCP.

These 'detected changes' are then further traced in line with the sustainability and developmental goals which the VCP seeks to achieve, to bring about transformative change to the value chain.

To disentangle the impact of the VCP and the role of the contextual features towards capacity building, contextual features with direct impact and contextual features with indirect impact on procurement and, seed and other inputs have been documented in subchapter 4.1 to help us understand the dynamics of embedded social practices in 'the hidden middle'. Practices regarding procurement, seeds and other inputs are detailed further in subchapters 4.2 and 4.3.

4.1 Context and Embedded Social practices

Following the case study design, in Realist Evaluation, processes and outcomes are made contingent on selected contextual features. This section helps to identify regulative and normative understanding of such contextual social practices which enhance or discourage the facilitation and adoption of sustainable practices led by the initiative, for example, the farmers from the project region are aware of organic farming and its value for the environment and its added value for the consumer, or, lack of education and lack of organisational capacity and poor access to information and technology may prove as hindrance in achieving the desired sustainability goals.

In this study, the following contextual features were taken on board in analysing the practices around procurement, seeds and other inputs. Betalghat is an organic farming block¹², while the other blocks have not been declared as organic regions as they have both organic and non-organic farming systems. UOCB (Uttarakhand Organic Commodity Board)¹³ provided training on organic farming to the farmers in 2004. As per one of the farmers in the Kotabagh region, who is growing Fairtrade Basmati rice since 2011, "shifting to organic helped save money which used to be spent on buying chemicals. There is overall an organic environment now, UOCB has played an important role". Similar pattern of contract farming has started for organic vegetables albeit at local level. Basmati leads to more fodder and/or more manure. Organic basmati has indirectly led to the revival of livestock for manure, which is used to fertilise the organic fields. Hybrid and *Sarbati* rice varieties are grown for local consumption while Basmati is meant to be sold in the market. Number of *shellers* (local paddy millers) has increased across the project region, indicating the revival of (basmati) rice and increased local consumption. There is emergence of new aggregators in the Kotabagh region, who are an important link between the market and the farmers, when it comes to procurement, pricing and/or small financial loans. Water challenges

¹² <https://timesofindia.indiatimes.com/city/dehradun/State-govt-plans-5-organic-farming-districts-in-state/articleshow/50223693.cms>

¹³ Uttarakhand Organic Commodity Board <http://organicuttarakhand.in/index.php>

are integral part of the context (detailed in Annex 5) which differ per region, sometimes there are local issues involved such as water availability due to terrain or local politics.

Above examples outline the reorganising 'hidden middle' leading to role diversification and rise of stakeholders such as the local paddy millers in the value chain. Such contextual features and evolving social practices highlight the perception and receptivity to the new practices brought in by the VCP. However, there are other factors like labour non-availability, presented below which may have indirect bearing on the sustainability of the value chain. The human-animal conflict is an ongoing issue which is a regular threat to farming in the project region.

In the Kotabagh, more banks could be seen, credit disbursal has increased through *Kisan Credit Card* (KCC) or Farmer's credit card, the credit limit of which is linked with land holding of the farmer. There is shortage of 'qualified labour' for SRI (System of rice intensification)¹⁴, given the understanding of the technique, especially for marginal farmers and hilly regions like of Betalghat. Also, there is lack of motivation to do farm work given the hard work one needs to put in for paltry wage resulting in labour shortage. Government schemes like 'subsidised food quota without it being linked with work' have not helped the matters in this regard. Further non-availability of temporary labour from other regions due to improved circumstances in those regions and better pay in other kinds of work are complicating the matters.

There is need for basic mechanisation; Kotabagh farmers have started using small agricultural tools, and concentrating on few crops to get efficiencies by economies of scale, with Basmati rice forming integral part of the crop-rotation to get consistent volumes for the procurement in supply chain. However, farmer land is divided into many small scattered parts and long discussed 'land pooling policy' is still to be adopted in Uttarakhand. Understanding and overcoming such challenges could prove a stepping stone towards sustainability of the value chain.

Internet, phone have increased the reach of the farmers, making them aware and well connected with the markets. Villages like Kotabagh appear more like a small city with Colleges and Hospital and other amenities.

In the next sections, this study explores the reconfiguring processes and intermediate outcomes associated with regards to procurement, seeds and other inputs.

4.2 Procurement

Before the arrival of the project (Value chain partnership or VCP), the project farmers used to take the produce to the nearby Mandi (Market) on their own and used to sell it to the trader at the prevalent market rates for coarse paddy. The president of the PO (Producer Organisation) uses the local Hindi proverb "*Murda ghat pe gaya hai to phook ke hi aayenge*" to explain, that the farmers felt captivated to the situation, once they reached the market, they had no option but to sell the produce at prevalent rates. According to him, "the project process of procurement at village level saves time, commission, and the costs paid to the transport and porters for taking it to the market. And the farmer does not feel trapped in the situation by the trader regarding price". The farmers in Patkote, expressed their happiness for the procurement to be done at the source, "we are intimated 4 to 5 days in advance for procurement at a central place in the village", said one of the farmers. However, interviews with various farmers also revealed that across the project area, the procurement often gets delayed, resulting in resentment due to loss of tonnage. Thus, the initiative has brought a new process which has reconfigured the existing practice of procurement leading to a shifting of the place, where procurement takes place. Even though the farmer has expressed satisfaction but there is new developing concern regarding the delay, moreover, he/she is now dependent on the new procurer. These are the intermediate outcomes which may have a bearing on sustainability of the value chain in long term.

The trader from the Mandi (Market) who organises and manages the procurement from various blocks for the VCP acknowledged the problem for the delay of procurement, saying, "Labour non-availability

¹⁴ System of Rice Intensification (SRI): line-sowing instead of broadcasting, intercultural operations (harrowing) instead of manual weeding, furrow-irrigation instead of flooding the whole field

for such an extensive region, given the lack of aggregators and volumes in the region, is one of the biggest factors which leads to delay resulting in anxiety at farmer's end. The whole process takes 1 to 2 months". From his perspective, it was easier to get the produce directly in the Mandi. Thus, illustrating that the changed context and the new standard of procurement set by the VCP is posing a challenge, due to the extent of the procurement region and lack of resources.

At the same time, arrival of the project (VCP) has also led to the diminishing role for the small-time aggregators (*Banjare*). Aggregators for the rice in the project area are non-existent barring one or two in Kotabagh region. In Betalghat, according to a farmer "for rice there are/were hardly any middlemen but for other vegetables there are aggregators (a transporter charging for tonnage of the produce)". As organised procurement replaced the local *Banjare*-who used to sell rice to local wholesalers, their role has lost the relevance with the farmer and in the evolving value chain. The *Banjare* have gradually been pushed out of the rice value chain. They have gone to the remote areas which are difficult to access. According the two *Banjare* interviewed: "the farmer is aware about the prices and the buying process has become more transparent, like the use of computerised electronic weighing. There is not much work left for us; next generation has opted out for other diversified jobs", outlining the impact of the VCP on them. Thus, we see a clear example of reconfiguring of the value chain, in terms of shifting dependencies for the farmer for procurement and impact on the stakeholders who are no longer relevant in the value chain.

Pricing

The study finds the 'hidden middle' going under massive reorganising leading to reconfiguring of processes of pricing. Procurement price, one of the key determinants of value creation for the farmers, remains a point of contention. Farmers are provided price/rate information through PEB (Producers' Executive Board) members. Procurement price is decided by the PO and NBF (Nature Bio Foods) during the parleys and negotiations, Pricing policy and a fixed formula is missing, the final procurement price largely depends on the negotiation between NBF and the PO, highlighting the role for the PO as the new intermediary. The process also highlights the VCP as a link for the farmers to export markets leading to higher remuneration, shifting of dependencies of farmers for the price, higher collective bargaining power for the farmers, and further challenges to sustainability regarding resolution to pricing formula.

As one of the farmers from the Patkote area explains, "Farmers are more aware about the prices and are better informed to negotiate for prices. Meeting for prevalent market rates is held in Ramnagar to enquire about the price, we have been getting better rates than the prevalent rates in the Mandi (Ramnagar or Haryana)", A PEB member further explains "Local market doesn't distinguish between organic basmati and any other basmati, while the project offers the rates for organic Fairtrade basmati rates prevailing in the international market".

"We get the information on price from the mandi, having a phone helps. We use our local relations and phone to know the prevalent price. However, price we get is solely reliant on price quoted by the company and PO members. Thus far, the farmers feel contented with the price. Though, last year, we felt that the price was unsatisfactory when compared with the rate at which the seeds were supplied for" revealed a farmer in Betalghat. According to the President of PO, "Farmers are provided price/rate information through PEB members. Procurement price is decided by the (PO) and NBF during the parleys and negotiations, which remains a point of contention. Once the produce is ready, the companies start prospecting and quote the price. First year rate was INR 3000/ quintal(100kg), next year INR4800, then INR3000 (with increased production area). Market price was half of what was paid by the VCP in the early years of the project"

However, the project has seen early troubles as explained by one the former active members, who works with the competing project run by UOCB-Kohinoor, "Price was not paid as promised (by the purchaser) in the first year, leading to withdrawal of the farmers and entry of the competition. There was no written agreement then", she says.

The president of the PO acknowledges the presence of the competition, "UOCB-Kohinoor pays INR 2/kg more to buy from the farmers. Local project manager acknowledges that competition pays slightly more, but doesn't purchase large quantities. So, it is perceived as a market disruption attempt more

than anything else. Farmers explain their rational to not per se go for the INR 2/kg or more, as UOCB-Kohinoor does not have year-round project extension and do not provide other facilities such as knowledge sharing, winnowing fans, and collaborating with other projects e.g. water, biogas, etc”.

“Rate setting is an evolving process, we also get the rate from the Haryana Mandi and Fairtrade prices. Emergency meeting have been called in the past to resettle the earlier offered (misquoted/miscommunicated) price. Company(NBF) promised INR2200 plus INR400 as bonus while the price was INR2890. However, we managed to get the actual price for the farmers”. He insists, “the farmer doesn't feel cornered by the company for selling the produce for now, he/she can exercise the free will to sell it anywhere”, a sentiment echoed by other farmers upon asking.

The above account of interview data explains how practices have reconfigured during the course of the VCP leading to intermediate outcomes, such as written contract and evolving pricing formula and other capacity building processes in the hidden middle forming the crucial part of value creation and sustainability.

During the interviews, the farmers expressed satisfaction with the mode and time taken for the payment of their produce, which has encouraged them towards better paying basmati and gradually shifting away from traditional paddy or growing it only for personal consumption. This has also to do with the fact, that there is a market for basmati rice. However, payment got delayed during *Notebandi* (demonetisation) for about 15 days in Kotabagh. While in Betalghat, as per the farmers, payment got delayed for up to 3 months citing problems like wrong cheques and ensuing hassle.

Quality

To be able to benchmark on quality and price, grading is commonly used as a measure of quality. However, the interpretation of the term grading and the grading process differs among stakeholders within the value chain.

A group of farmers from Patkote had an interesting take on the subject, “the paddy sourced from Patkote is all the same quality and therefore, should get the same price. The quality-price up-and-down movement due to individual pricing (based on grading) may create friction amongst the community. Hence, we all (from the same village) should get the same price”. However, the farmers believe that the rice tastes different in hills and *terai* (foothills), and should get priced differently. Another instance of understanding the embedded social relationships and their linkages and their role in reconfiguring practices in the ‘hidden middle’.

As per a PEB member, “at the time of procurement purchaser decides the quality, roughly on moisture, mixture and liability to break, without using scientific instruments. Usually there is not much of disagreement. Grades (A, B and C) training for the PEB member has been completed in Sonipat (NBF office.) However, at the time of the procurement it was not implemented. At farm level, grading is still about mixture, moisture and grain size.

Similar views have been shared by farmers and PEB members across the Project area, like,

- “We have received Grades training (A, B and C), such grades are not known to Mandi (Market).”
- “There is no grading system; ABC all get same price, training was given in Sonipat, however, not implemented on the ground”.
- “Grading decided by the purchaser rather than the scientific grades as ABC.”

One of the other farmers had following to say, “Last year, I did not sell, as I was not happy with the rate, besides other reasons. Paddy collected at different rates is clubbed together in a lot then why are we paid differently? Small farmers are marginalised over the rate and quality, I felt over-scrutinised by the purchaser party. This proved to be one of the reasons of not selling but consuming myself”.

Another PEB member puts it, “For last two years, there has been no question of grading as seed quality has been bad. Farmers are not satisfied with grading abilities of the purchaser and the whole process. Farmers perceive grading differently; one aspect is mixture and breakage. The other being the grades ABC as explained in the training by NBF. Scientific parameters and benchmarks are missing.”

As per the NBF appointed trader, “Farmer is more aware about the prices and is better informed to negotiate for prices. Quality of the produce is settled mutually”.

The evolving practices around procurement processes within the SPOFR India Project, are listed in table 2a as ‘reconfiguring practices’. The ‘detected changes (inferences and implications)’ listed in table 2a for procurement, are the indicators of how the value chain is evolving with regards to institutional arrangements, social linkages, reconfigured dependencies and interactions, which in turn are reshaping the hidden middle of the value chain. In chapter 5, these will be further analysed in the realm of sustainability and project goals.

Table 2a Descriptive inference (Procurement) – Reconfiguring practices; describing how the value chain is evolving with regards to institutional arrangements, social linkages, reconfigured dependencies and interactions which in turn are reshaping the hidden middle of the value chain

Before the Project (Context and Background)	After the arrival of the Project (Reconfiguring practices)	Detected changes (Inferences and Implications)
<p>The farmer took the produce to the local market, price was decided by the traders as per the prevailing rates in the local market. The quality was assessed based on traditional means by the trader after physical examination and observation and then negotiated with the farmer. The farmer got cash payment in hand.</p> <p>Even though the farmer has become increasingly aware of the prices, with communication tools like cell phones and television, farmers felt captive to the rate after having off-loaded the produce and bearing the cost of transportation.</p> <p>There have also been small-scale aggregators (popularly called "<i>banjare</i>") on two-wheelers who used to buy the produce from the farmer in the villages and sell it to local wholesalers in and around the region. Pricing was negotiated between the buyer and seller on a door to door bases. Payment is cash-in-hand, then-and-there. The rates would be a notch lower than the local market rate. Over the years, farmers did not find such methods of procurement to be fair with regards to weighing (handheld weighing scale) and pricing.</p> <p>Another mode of sending the 'produce' to the market by the farmers was through the local transport ferrying between the villages and the local grain market. This option is based on trust, that the produce is delivered safely and the trader will give the market price and send the payment through the transporter on the way back. In some cases, market price is verified beforehand by calling the trader.</p>	<p>One middleman (NBF) between the farmer and the importer, which has designated local traders on commission basis for the procurement that takes place regionally near the farmer's location once a year for 2-3 consecutive days per region. Where, in the presence of a purchasing officer, designated by NBF, the produce is weighed by labour which is arranged by the trader</p> <p>The purchase officer establishes the quality of the produce and negotiates the price at village level with the individual farmer. Payment by cash/cheque (in case of demonetisation) is made 2-3 days later. Weighing is done by means of an electronic weighing machine.</p> <p>Farmers get the minimum support price decided by the Fairtrade or the price prevailing in the markets, whichever is higher, as negotiated by the PO and NBF. Fixed formula or fixed mechanism to arrive at a price without further negotiation is still evolving.</p> <p>NBF applies traditional means of quality assessment while purchasing and pricing. Knowledge transfer on quality and grading assessment mechanism to the farmers and the PO members is an ongoing process.</p> <p>Farmers see grades at time of procurement as a hassle. However, there are some farmers who are willing to adopt a more scientific system of grading and quality mechanism to arrive at a fair price</p>	<p>Place of aggregation shifted; is at village level; ease of procurement, alternative channel for paddy procurement, freedom of choice for the farmer on where and how to sell</p> <p>Single agency as buyer rather than multiple in the Mandi (Market), though similar buyer or competition exists; time and money savings</p> <p>PO as an intermediary; farmers getting a collective representation; bargaining power</p> <p>Banjare the local aggregators in the paddy value chain at the village level, pushed out of the value chain; shifting dependency</p> <p>Pricing for the farmer decided by the PO following a mechanism and negotiation with VCP-buyer; bargaining power, volume of organic basmati rice in the value chain has increased</p> <p>Grades introduced but not adopted yet; step towards fairness and transparency, hoping to reduce resentment</p> <p>The traditional weighing system has made way for electronic weighing machine. Fair and swift procurement, time saving reducing resentment</p>

4.3 Seed and Other Inputs

As per the new standard-setting practice, the project includes the provision of high quality seeds by NBF with a buy-back guarantee for the produce. In Betalghat block, a variety of rice - *Taraori* was used. However, during the project the variety was replaced by *Dehraduni type-3* basmati which is used now for last 2 years as it has proved to be a better alternative because of disease resistance, and its resistance to lodging.

One of the issues regarding the seeds is the timing of the seed provision. Farmers and PEB members from Betalghat and Kotabagh blocks also acknowledge that there is no prior schedule and planning for the seed delivery before the start of the season. Betalghat is usually the last to receive the seeds compared with other blocks. Farmers across the project area perceive delay and quality of seeds as a recurring issue, highlighting a reconfigured process in the hidden middle in which shifting of responsibilities and risks has gradually led to resentment among the farmers, posing a risk to sustainability.

Farmers also felt aggrieved that they pay more for the seeds for less quality than the produce they sell to the same buyer. Given the supply and quality challenges NBF/VCP wants the farmers to produce their own seeds. Across the project area, in all the blocks many farmers are creating their own seeds under the guidance of NBF and ICSD (Intercooperation Social Development). Some farmers also observe that, “the home-grown seeds have been found to be more resistant than the stock which is coming possibly from Haryana or elsewhere. Besides, they feel they can manage the risks better and are in control of their own destiny as they can better plan for the sowing and nursery preparation given the variation in weather in water scarce region”. The above account explains how standard setting changes should be contingent and not merely enforced by the initiative as applicable elsewhere. Such contingencies based solutions, as in the case of home-grown seeds, may prove to be the key to long-term sustainability. Farmers and PEB members from the Patkote region have contemplated preparing community seed beds and nursery especially in South Patkote region. “We have been advised by the Pant Nagar University (GBPUAT) to create our seed banks to be more self-sufficient and to mitigate risks regarding the seed quality and delay in seed provision”. Intermediate outcomes such as this one explains the power hidden in the supply chain for capacity building and value creation goes a long way in making the supply chain autonomous and sustainable.

According to the farmers from Patkote, “plant protection material and inputs are provided with the seeds. Also, household remedies as advised by the extension, are also prepared using the local available materials”. A PEB members explains, “Seed and *Trichoderma pseudomonas* are supplied together to the farmer in the beginning. Home remedies are suggested in the PO meetings. Other PPM is supplied as and when needed, but gets delayed sometimes due to natural causes such as water flooding due to monsoon. Also, at times, the farmer is late in spraying; a 2-day delay is significant. The chance of infection from hybrid varieties from adjacent farms is high in such a season”. The VCP is working towards capacity building and problem-solving around practical issues related to seeds and other inputs, one of the examples is increased involvement of the PO in ‘Input management’- the PO went to Biofach (trade fair) in Delhi to prospect for suppliers. An intermediate outcome, highlighting the extend responsibility for the PO acting as an intermediary in value creation.

Even then, as farmers from Patkote explain, “contamination from chemicals remains an issue, rendering the use of PPM and home-made solutions futile and a worth less exercise. *Trichoderma* is sometimes available, but other PPMs are hardly made available with the same vigour as in the sale of seeds. There is no common public notice board to communicate the timing and availability of PPM”.

The evolving practices around seeds and other inputs within the SPOFR India Project, are listed in table 2b as ‘reconfiguring practices’. The ‘detected changes (inferences and implications)’ listed in table 2b for seeds and other inputs, are the indicators of how the value chain is evolving with regards to institutional arrangements, social linkages, reconfigured dependencies and interactions, which in turn are reshaping ‘the hidden middle’ of the value chain. In chapter 5, these will be further analysed in the realm of sustainability and project goals.

Table 2b. Descriptive inference (Seeds and Other inputs) -- Reconfiguring practices; describing how the value chain is evolving with regards to institutional arrangements, social linkages, reconfigured dependencies and interactions which in turn are reshaping the hidden middle of the value chain.

Before the Project (Context and Background)	After the arrival of the Project (Reconfiguring practices)	Detected Changes (Inferences and Implications)
<p>Seeds and other inputs were developed by the farmers themselves or bought from the nearest "Farming unit centres"</p> <p>Other inputs (plant protection material and bio-fertilisers) were bought from the market or traditional local remedies were applied</p>	<p>Seeds are provided by VCP and distributed through their agents and the PO at local level</p> <p>Due to discontentment about the quality of the seeds, many farmers have resorted to developing their own seeds from the previous year's crop</p> <p>Although two types of varieties (<i>Dehraduni type-3</i> & <i>Taraori</i>) have largely been tried over the years, a new variety¹⁵ of Basmati rice has been proposed for water scarce regions by NBF in consultation with the PO</p> <p>Plant protection materials are provided by NBF as and when needed. There have been complaints of delay as well as, PPM not given to the farmers at the time of buying seeds. Moreover, the perception is that, if you do not buy seeds then you do not get PPM. Distributing certain plant protection material at time of seed distribution has been proposed as a solution by NBF</p> <p>NBF acknowledges the problem of supplying inputs like <i>Trichoderma pseudomonas</i> reaching late from far distance (Bangalore, South India) and often loses efficacy. The PO have reached out to Trader Fairs in Delhi and other markets to seek solutions</p> <p>Regions which are remote and hindered by the monsoon rains do not get plant protection material on time, thus it was also proposed by PO & NBF to designate an NBF agent or PO/PEB member at village level to store and provide PPM timely</p>	<p>Better seeds have helped to achieve secure produce since 2011; better volumes and remuneration</p> <p>New varieties; problem solving, better volumes</p> <p>PO as an intermediary; farmers getting a collective representation; bargaining power</p> <p>Other inputs provided by the VCP or the PO; PO becoming independent in finding solutions</p> <p>Increased knowledge about home remedies and solutions; self-sufficiency</p> <p>Alternative channel for the provision of seeds and inputs; shifting dependencies</p>

¹⁵ New variety to be decided/unknown

5 Analysis

The methodology and the results described in the previous chapters have enabled us to detect the changes by tracing the processes (events) before and after the arrival of the VCP. The changes help us understand the reconfiguration of practices and their implications.

In this chapter, we analyse the ‘detected changes’ and discuss them in line with the sustainability and developmental goals, which the VCP seeks to achieve. And we further analyse, which new requirements and capabilities may be required for the existing value chain, to embed the ‘Intermediate Outcomes’ (Proto-institutions) in the local and social context to bring about a transformative change regarding the sustainability of the Value Chain.

The results of these analyses have been listed in table 3a (Procurement) and table 3b (Seeds and other Inputs).

- “Processes triggered by partnership” in relation to “Intermediate outcomes (Proto-institutions)”
- “Processes/events which are critical to bring about a transformative change regarding the sustainability of the Value Chain”

5.1 Procurement

The VCP started the procurement of the produce at farmer’s doorstep as listed in table 3a. However, timing of procurement is an ongoing issue, which was explored. Adoption of same procurement policy for different regions and the reasoning behind was explored with counterfactual arguments. The study notices that better communication and pre-planning between the farmers’ organisation (PO) and the processing company about the timing of the harvest and ‘pick-up’, is required for avoiding delay in procurement, which leads to crop drying out resulting in the loss of tonnage and remuneration for the farmer. This is causing growing resentment amongst the farmers.

Sorting out the issues regarding labour availability at the local trader level is also one of the issues causing delays. The study also explores the next steps proposed by the VCP in policy drafting for procurement which intend to bring out the common knowledge between farmers and procurers after incorporating emerging contextual challenges concerning place and time of procurement.

Farmers are happy to be part of the partnership as their remuneration for the produce has almost doubled after joining the project. A fixed mechanism to arrive at a price is still evolving. The farmer is oblivious to the concept of ‘fair price’ of the produce as the price gap between procurement and the local market is currently significant.

The pricing strategy has gone back and forth from giving the same price to all basmati farmers to different pricing per farmer depending on quality parameters of the produce. A formula or index based transparent mechanism for pricing may be further developed, in consultation with the PO, with an intention to bring down the negotiations about pricing to the minimum. The next step proposed by the VCP is to communicate to the farmer about the components of pricing such as international and domestic market rates, cropping data etc.

Quality and grade parameters were traced and explored during the lifetime of the project. The farmers are aware of the traditional means and parameters of quality, such as moisture content, adulterants, colouration and chalkiness of the grain. These standards are largely discretionary in the hands of the purchasing officer. Far less farmers are aware of the scientific grades and other modern scientific ways of quality establishment, such as grades based on length and thickness of the grains. Even though training has been given to the PO/PEB members regarding grades, to most farmers these are still unclear. Some farmers do seek standardised scientific unbiased

Table 3a. Summary of analysis for Procurement- Tracing the intermediate outcomes (Proto-institutions) which emerged due to the VCP.

Processes triggered by partnership	Intermediate outcomes (Proto-institutions)	Processes/events which are critical to bring about a transformative change regarding the sustainability of the Value Chain
<p>Changing nature of sourcing rice</p> <p>Swift and easy procurement process for the farmer</p> <p>Problem-solving around pricing, getting a fair reimbursement to the farmers for their produce</p> <p>Standardised and fair quality and grading mechanisms</p>	<ul style="list-style-type: none"> • Emergence of local market (supplier, processor and buyer) for basmati rice. Decreasing number of intermediaries • The VCP serves as a link for marginal farmers of remote regions to export markets. • Procurement at a designated point in the village. Increased bulking and aggregation at village level • Representation of PO in procurement process • Weighing process modern and transparent • Formal pricing mechanism established, experimentation with different pricing strategies • Increased capacity of the farmers to negotiate, by making a farmers' cooperative (PO) • Increased capacity of the farmers to demand actual market price for the organic product • Grading parameter establishment for the whole procurement process • Quality established at time of procurement by purchasing officer • Some farmers are willing to adopt a more scientific system of grading and quality mechanism to arrive at just (commensurate) prices • Knowledge sharing about impact of post-harvest processes on quality and grading 	<ul style="list-style-type: none"> • The PO assuming the role of an intermediary and partner in the VCP requires institutional and democratic set-up with grievance redressal system to be able to function as self-governing body • Pre-planning and logistical coordination around harvesting and 'pick-up' • Managing lack of aggregate volumes and labour non-availability for pick-up at village level, to get procurement efficiencies. Thereby reducing tensions and making the process more farmer friendly • Further development and institutionalisation of index and market based pricing mechanism • Transparent, stable and consistent grade based pricing mechanism at time of procurement • Effective communication and knowledge sharing- making sure that the farmer understands the standards for quality and grades and, transparency is maintained between the purchaser and the farmer

standards of quality assessment at the time of procurement, which can be attributed to the knowledge dissemination during the project.

It was also interesting to know farmers' perception towards different pricing mechanism at farmer, village and region level. Farmers do not want different pricing within their known fraternity at the village level, however, they would want price-quality equation to vary amongst different region. Further steps planned by VCP lays emphasis on better communication and making sure that the farmer understands the standards better and, transparency is maintained between the purchaser and the farmer.

Pricing for different regions may be planned differently, for example, in regions like Betalghat, a fixed mark-up may be set aside for initiatives needed for water management and their development, at farm level or at the community level as water and its management is the chief limiting factor in achieving the desired objectives of the project in this region.

Another contextual issue, which may be temporary, was *Notebandi* (demonetisation)- which was a government step to reintroduce new currency notes resulting in wiping out 85% of cash, partially coinciding with the basmati procurement season tested the resilience of the financial process. Payments got delayed through cheques resulting in discontentment of the farmers. The VCP is contemplating electronic transfers directly to bank account as possible solutions, a change which we might see in the future. However, lack of reading, writing skills, for which the VCP will be introducing voice messages instead of text messages, and bridging the literacy gap may continue to prove hurdles.

5.2 Seeds and Other Inputs

Seeds availability is an ongoing issue regarding timing (delay of 2 weeks), quantity (not enough) and quality (mix of weed and hay). Possible solutions like community seed beds and breeder seeds from university or creating seed banks at village level have been suggested but not adopted yet. Most of the farmers have resorted to preparing their own seeds for the next season.

Plant protection material availability and timing of plant protection material is an issue. Possible solutions like home grown remedies and distribution of plant protection material along with the seeds, and challenges around it were discussed. The VCP acknowledges the structural issues and practical problems around usage and lack of resources for home-grown remedies besides the need to strengthen extension. The VCP seeks to develop package of practices and other context based structural issue and their solutions, different from what may have been perceived at the start of the project.

Table 3b. Summary of analysis for Seeds and other inputs- Tracing the intermediate outcomes (proto-institutions) which emerged due to the VCP.

Processes triggered by partnership	Intermediate outcomes (Proto-institutions)	Processes/events which are critical to bring about a transformative change regarding the sustainability of the Value Chain
<p>Seed and other inputs (bio-fertilisers, plant protection materials) provisioning</p> <p>Capacity building and problem-solving around practical issues related to seeds and other inputs</p>	<ul style="list-style-type: none"> • Establishment of distribution network and/or development of parallel distribution system (additional to the (existing/non-existing) government distribution system) • Increase knowledge and capacity to develop bio-fertilisers and plant protection materials in house, using local resources • Teaming up to address concrete problems without exclusively relying on a formalised contractual agreement to achieve trust • Increased participation of PO in voicing problems related to distribution, quality and timing of seeds and plant protection materials • Participation of PO to address concrete problems without exclusively relying on a formalised contractual agreement to improve seed procurement, improve bio-fertilisers and plant protection materials procurement and, capacity building • Increased capacity of PO to interact with government institutions and participation in Trade Fairs • Researching and experimenting with new varieties of seeds 	<ul style="list-style-type: none"> • Effective communication and knowledge sharing- making sure that the farmer understands the usage and application of seeds and plant protection materials • Further development and institutionalisation of seed management and distribution • Timely provisioning of good quality seeds and plant protection materials • Implementing identified solutions such as community seed beds/nurseries and breeder seeds from university or creating seed banks at village level to overcome challenges around seed provisioning • Local and contextual challenges like water provisioning in areas without irrigation networks, to timely develop nursery and seed beds for the season

6 Discussion

Several studies have argued that the commodity based fair trade initiatives may not be beneficial to the marginal farmers they are presumed to help (Claar and Haight, 2015). Pedini et al., (2017). They, for example, argue for the inclusion of the productions costs in local currency to arrive at a better pricing mechanism. However, this study corroborates the findings of Dragusanu et al., (2014) and Udomkit and Winnett, (2002), as it finds that the initiative has helped in the farmer creating new buyer-seller relationships, provide better incomes, improved working conditions through creation of producers' organisation and improving the environment at the same time, by following an organic and sustainable approach.

Further, this study also finds the farmers actively engaged in the processes of procurement and pricing, and the Fairtrade initiative helps increase their bargaining and export capacity, as reported in literature of similar studies (Parrish et al, 2005; Barrientos and Smith, 2007; Ruben, et al, 2009).

From a developmental perspective, Vermeulen and Kok, (2012) call for governments to promote such initiatives through better integrating product policies and development cooperation policies. This study finds that government's push towards active developmental work regarding water provision and repairing the channels in the study region can maximise the intended long-term benefits of the initiative to a great deal. This study corroborates the findings of Fayet and Vermeulen, (2014), calling for dual approach for creating market links and enhancing supply chain efficiency while providing development support at community levels. With such a balance, it will be possible to assure project sustainability and maximize long-term economic, environmental and social benefits.

This study supports the claim of the empowering impact of Fairtrade on the small farmers regarding access to training, improved producer self-confidence and organisational strengthening for the producers through producers' organisations to resolve disputes, build capacities and resisting or managing conflicts (Aguilar, 2007, cited by Nelson and Pound, 2009). However, this partnership can be viewed critically as a top-down and business-driven process which may lead to uncertain benefits for few producers and as a result may sidestep certain development concerns, for example, empowering the marginalised farmer in democratic participation to take decisions and, fair and equal distribution of Fairtrade premium, as also highlighted by Bitzer (2012) for similar studies. Even though the studies (Parrish et al., 2005; Stonehill 2006, cited by Nelson and Pound, 2009) suggest that Fairtrade certification encourages gender equality, improves democracy and fair representation of the farmers from all the strata, this study observes that even if the Fairtrade certification guidelines appear to be followed, the ground realities are different regarding democracy and fair representation. With regards

The VCP established a Producers' Organisation to participate in extension and other value chain processes which is one of the key outcomes of the VCP, giving a voice to the farmers. There is a proposal for making the PO into a Producer Company. The existing PO was found to have a top-down approach; members point out lack of processes, structure and democratic governance. Lack of plan for fund utilisation-per region or otherwise, conflict over selection for the location of the office for the PO and absence of grievance redressal system are few of the internal issues, which make up important context for the success in the long run. Communication and PEB (Producers' Executive Board) participation also needs improvement. Local politics or power struggle (arriving at the PO structure which does not clash with the local power structure), decisions without the quorum could prove to be major hurdles in taking up the next step and eventual success and autonomous functioning of the value chain.

to gender equality the VCP actively focusses on women and their participation, however, it is the menfolk who are leaving farming and the villages for the city in search of better livelihoods.

6.1 Limitations

The data selection criteria for farmers was to be randomly applied on a complete and up-to-date list of farmers participating in the VCP during each project year, also giving insight into farmers no longer being part of the VCP and additionally on a complete list of farmers in the VCP project area who are not and have never been part of the VCP. However, due to project constraints this was not possible. Thus, the data selection of farmers was done in consultation with the project partners and other stakeholders, where forthcoming and 'progressive' farmers and other stakeholders were selected. To minimise the data selection bias (with regards to regions their remoteness, participation of the interviewees) the study scope with regards to regions their remoteness and number of interviewees was increased manifolds (from 1 to all 3 blocks, from 10 to 50 stakeholders). However, data selection bias cannot completely be ruled out.

Since the study wanted to bring out the contextual features, building trust with the interviewees was considered of paramount importance, hence the applied interview method was exploratory in nature, guided by a set of topics and questions, instead of a set questionnaire. However, as the interviewer was accompanied by a representative of the project partner to the interview location and as the interviewees are stakeholders in the on-going project, care was taken to eliminate any influence of the situation, which may govern the outcome of the interviews. Circumstantial influence, however, cannot completely be ruled out.

The study involves primarily two languages, Hindi and English, along with local cultural, social and farming terminologies. Even though the researcher is a native level speaker for both languages, care was taken to eliminate any cultural and social biases, however, the nuances may be biased in terms of style with regards to translation of the interview data.

During the study, care has been taken to disentangle the developmental impact of the value chain, and the sustainability of the value chain. However, this study finds that they are closely linked in the understanding of the stakeholders. The boundaries often get blurred, which may lead to biases in interpretation of the impact of the VCP and the sustainability of the value chain.

7 Conclusions and Recommendations

This case based evaluative research, documented the intermediate outcomes in the context of the SPOFR India Project (Value Chain Partnership, VCP), and analysed the evolution and the sustainability of the Basmati rice value chain. The evolving value chain practices labelled as 'Reconfiguring practices' (table 2a and 2b), describe how the value chain is changing for procurement and, seeds and other input practices with regards to institutional arrangements, social linkages, reconfigured dependencies and interactions which in turn are reshaping the hidden middle of the value chain. These changes are important indicators of the 'intermediate outcomes' triggered by the processes initiated by the VCP. The contextual factors help us understand, how reconfiguration of practices is taking place, with regards to procurement, such as: evolution of a price mechanism, evolving role of the producers' organisation (PO) as an intermediary, ease of procurement, alternative channel for paddy procurement, freedom of choice for the farmer on where and how to sell. With regards to seeds and other inputs, the reconfiguration of practices is taking place such as: increased knowledge about home remedies and solutions for plant protection, reaching out to trade fairs to seek solutions, researching and experimenting with new varieties of seeds. These 'Intermediate Outcomes' labelled as Proto-institutions are the key indicators of the sustainability of the value chain. With regards to procurement, the value chain has improved in terms of capacity building and problem-solving skills, and linking the farmers to the local and export markets. Regarding seeds and other inputs, the value chain has improved in terms of capacity building and problem-solving skills regarding the distribution network, in-house biofertilizers and plant protection materials. This study, further contributes in bringing out, which new requirements and capabilities (table 3a and 3b) may be required for the existing value chain, to embed the 'Intermediate Outcomes' (Proto-institutions) in the local and social context to bring about a transformative change regarding the sustainability of the Value Chain. These are: institutionalising procurement policy including transparent pricing formula, pre-planning and logistical co-ordination during harvesting and 'pick-up', and grading formula, development of seed banks and nurseries, formal communication systems, further knowledge sharing, and institutionalising the producers' organisation (PO).

The study followed a 'Realist Evaluation Approach' and measured the effectiveness of the VCP in bringing institutional changes, and capacity building, by giving counterfactual reasoning to determine evolving intermediary processes. The evaluation recognises that the outcomes of the initiative are dependent on many variables which are interlinked in deeply embedded social practices. These outcomes vary, depending on the way the social actors operate in the given context. This method of evaluation helped us to disentangle the business processes from the development perspective and helps us to understand the evolution of the process in the context, for example, grading and price related perceptions of the farmers looking for same grading and pricing within village but different for other village or regions, seed banks and nursery for community beds due to water scarcity rather than just the distribution network, development of the collective bargaining power of the producers' organisation, water solutions not being implemented due to local politics rather than lack of funds or initiative, or the role of effective communication and understanding the social linkages and relationships.

The study finds that the Realist Evaluation Approach helps to formulate the required future changes which are contextual and deeply embedded in social practices, to make the VCP sustainable and effective in the long-run.

Other challenges, besides the smooth functioning of the value chain processes, is autonomous and democratic functioning of the PO. Following the guidelines of the Fairtrade, there is a proposal for making the PO into a Producer Company. However, the existing set-up needs to mature further to avoid it from collapsing once the partnership based administration is withdrawn.

With regards to development interventions to encourage gender equality the VCP actively focusses on women and their participation, however, it is the menfolk who are leaving farming and the villages for the city in search of better livelihoods for their household. Further research may also include developmental initiatives focussing on increased remuneration or secondary incomes for womenfolk as well as for menfolk.

This study outlined the water issue (annex 5) from value chain perspective, however, it is a much larger and deep-rooted issue in the region, which may impact not just the production processes, but also the value chain processes regarding seed and input availability, e.g. developing community seed banks and nurseries for transplantation. This study recommends researching the role of water (excess/shortage) with a renewed focus on value chain processes.

The follow-up study should address the limitations of this study wherever possible and build on the outcomes of this study to test the effectivity of the predictors for the value chain sustainability highlighted in table 3a and 3b. By documenting the value chain in future, further studies can compare the future outcomes with the current outcomes to validate the methodology used in this study. Further, the methodology strengthened by extending the existing comparative case study with the case used in this study.

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9 Glossary

<i>Banjare</i>	Small-scale aggregators on two-wheelers who used to buy the produce from the farmer in the villages and sell it to local wholesalers in and around the region
Barasingha	Large swamp deer
<i>BioFach</i>	International trade fair for organic food and agriculture
Block	A block is an administrative unit used in some South Asian countries, a district sub-division
Intermediate Outcomes	Current or intermediate impact of the initiative
<i>Jaivik Mitr</i> (lit. Organic Friend)	Extension officer for farming practices
<i>Jal Sakhi</i> (lit. Water Friend)	Extension officer for water related projects
<i>Kisan</i>	Farmer
<i>Mandi</i>	Local (grain) market
<i>Nali</i>	Local seed container and measuring device in Betalghat. 1 <i>Nali</i> contain approx. 2.5 kg paddy seeds (see cover page)
1 <i>Nali</i> Field	Area under cultivation with 1 <i>Nali</i> seeds
<i>Notebandi</i> (<i>Demonetisation</i>)	On 8 th November 2016, the Government of India announced the demonetisation of ₹500 and ₹1000 banknotes with effect from midnight of the same day, making these notes invalid, resulting in wiping out 85% of cash
Proto-Institutions	Intermediary new rules and practices that may generate institutional change
Paddy	Un-milled rice
<i>Shellers</i>	Local paddy millers
<i>Taraori-HBC 19</i> <i>Dehraduni type-3</i> <i>Sarbati</i>	Basmati varieties
<i>Terai</i>	Lowland region in northern India and Nepal that lies south of the outer foothills of the Himalayas
<i>Trichoderma pseudomonas</i>	A biocontrol agent against fungal diseases of plants.

10 Abbreviations

FFF	Fair Farming Foundation, Ramnagar, India
FT	Fairtrade
GBPUAT	Govind Ballabh Pant University of Agriculture & Technology, India
ICS	Internal Control System
ICSD	Intercooperation Social Development, India
INR	Indian National Rupee, is the official currency of the Republic of India
NBF	Nature Bio Foods, India
NGO	Non-Governmental Organisation
PEB	Producers' Executive Board
PO	Producers' Organisation
PPM	Plant Protection Materials
SLI	System of Lentil Intensification
SPOFR	Sustainable Production of Organic and Fairtrade Rice Project, India
SRI	System of Rice Intensification
UOCB	Uttarakhand Organic Commodity Board, India
VCP	Value Chain Partnership

11 Annexes

Annex 1: Guiding topics/questions for interviews

During the field work, we interviewed the actors - Traders, Millers and Farmers and explored their processes regarding procurement and, seed and other inputs in an evolutionary perspective under the Basmati Fairtrade initiative, with a focus on the following,

- How have the interactions with other value chain actors evolved in last few years?
- How have processes regarding procurement (paddy, rice, and inputs like seeds, fertilisers and plant protection agents) changed/evolved?
- How do they perceive risks and manage them?
- How have business cash flows changed in last few years regarding volume, credit, cash-on-delivery etc.?
- What do they think are the reasons behind these changes (technical, social linkages)?
- How the nature of interaction between the off-farm actors with farmers from project and non-project area differs?
- Did they have to make any (technical) changes regarding FT (Fairtrade), their challenges; and how have the changes impacted their business?
- Agency Turnover- new traders or millers entering the chain or old ones leaving?

Annex 2: Coded Interview Data - Context

Context

The farmers from the project region are aware of the organic farming and its value for the environment and, value they get from the consumer. Betalghat is an organic farming block. As per the social worker cum farmer from Pawalgarh village in Kotabagh block, “the area was largely organic before the arrival of VCP (SPOFR India project). UOCB trained organic farming to the farmers in 2004, I started vermicomposting in 2000.”

As per one of the farmers in the Kotabagh region, who is growing Fairtrade basmati rice since 2011 said, “better seeds have helped, shifting to organic had saved money which was expended on buying chemicals. There is overall an organic environment now, UOCB has played an important role. Similar pattern of contract farming has started for organic vegetables albeit at local level.

According to an old-time *sheller* (local paddy miller) cum farmer from the Ramnagar, “Farmer is more aware of organic farming and its purposes. Business has increased, there has been increased production leading to greater number of *shellers* and millers.” Even the remote region of Patkote has a new *sheller* affecting his business to some extent.

Similar views were expressed in Pawalgarh and Kotabagh, “*Shellers* have increased indicating the revival of basmati and increased local consumption. The farmer and the consumer is happy to have the facility next door.” Another *sheller* from Kotabagh added to the same viewpoint by saying, “hybrid and Sarbati varieties are grown for local consumption while Basmati is meant to be sold in the market”.

Usage and purchase of small agricultural tools has increased. As per NBF representative: “there is labour shortage for SRI (System of rice intensification), given the understanding of the technique, especially for marginal farmers and hilly regions like of Betalghat”, highlighting the changing context. “There is need for basic mechanisation; Kotabagh farmers have started using mechanical tools, and concentrating on few crops to get efficiencies by economies of scale”, he says

Arrival of internet, phone has increased the reach of the farmers making them aware and well connected with the markets. Villages like Kotabagh appear more like a small city with Colleges and Hospital and other amenities. There is emergence of new aggregators in the Kotabagh region, who are important link between the market and the farmers, when it comes to procurement, pricing or small financial loans.

Increased income from Basmati and other cash crops have manifested in form of fans, fridges and other basic amenities in the household. Farmers have been able to send their kids to school and marry off their daughters as desired, said the farmers from the Betalghat region. In the Kotabagh, more banks could be seen, credit disbursal has increased through Kisan Credit Card or Farmer's credit card (KCC), the credit limit of which is linked with land holding of the farmer.

Arrival of the project (VCP) has also led to the diminishing role for the small-time aggregators (*Banjare*). As organised procurement replaced the local *Banjare*-who used to sell rice to local wholesalers, their role has lost the relevance with the farmer and in the modern value chain.

Also, In Betalghat, number of *shellers* has increased, Basmati is grown largely as a cash crop and local rice for own consumption. Basmati leads to more fodder and/or more manure.

As per ex-Basmati rice farmer, who used to be a commodity trader with UOCB, “organic farming movement started around 10 years ago, then he sold commodities like chillies to UOCB.”

Another farmer said, “Use of chemicals led to loss of quality in traditional rice. Organic basmati rice has helped us to earn money as a cash crop, while traditional rice is grown for own consumption. Also, organic basmati has indirectly led to the revival of livestock for manure, which is used to fertilise the organic fields. Also, there is lack of motivation to do farm work given the hard work one needs to put in for paltry wage resulting in labour shortage. Schemes like ‘subsidised food quota without it being linked with work’ have not helped the matters in this regard. Further non-availability of temporary labour from other regions due to improved circumstances in those regions and better pay in other kinds of work are complicating the matters

Table 4. Summary of the events and the background of the SPOFR India Project, before and after arrival of the project

Factors	Before the Project	After the arrival of the Project
Context & overall impact on value chain(s) & stakeholders	<ul style="list-style-type: none"> • Overall organic environment; UOCB (Uttarakhand Organic Commodity Board) has played an important role. Similar pattern of contract farming started for organic vegetables albeit at local level • Banks, purchase of small agricultural tools has been on increase. Arrival of internet, phone, credit disbursal has increased through KCC (Kisan credit cards). Most of the people have taken loan. Village has become a small city in terms characteristics 	<ul style="list-style-type: none"> • Emergence of new aggregators based in the village with buying power and links with the traders in the market. Being in the village, there is a feeling of trust with the farming community regarding buying procedure and terms • Rotational crops (Planned by NBF and the PO) like tomato are essential to maintain the cash flow throughout the season • Basic infrastructure, like roads, has improved. Government support in form of subsidies have been beneficiary for organic farming

Animals

According to the farmers, wild animals are a constant threat to the farms and crops across the project area. They cause considerable damage to the crop by trampling or feeding on them. While in Betalghat, wild boar, barasingha (large swamp deer) are regular threats, in Patkote and Kotabagh blocks there is additional threat of wild elephants and herds of Nilgai (largest antelope) leaving the fields completely ravaged.

Solar fencing is one of the solutions which is implemented through the project initiatives in Dhela or Kyari (Ramnagar blocks), but is much awaited in other area.

Other Crops

Farmers in Betalghat are dependent on weather and rain-fed irrigation. Their way of risk aversion is to grow a diverse set of crops to cover for any crop failure.

- As per NBF, “rotational crops like asparagus, quinoa and artichoke, which have already been trialled are the possible rotational crops and chick-pea and lentils are part of the rotational crops. Amaranthus is another fill up crop for the other season. Soybean can be grown in areas where animals foray the basmati crop”.
- “Further, SLI (System of Lentil Intensification)¹⁶, is a possible and relatively easier solution as no standing water is needed in the field”.
- “In Betalghat, other rotational crops like turmeric and finger millets, chillies and soybeans are considered to increase the income by enlarging the portfolio”.

Elsewhere, in Kotabagh and Ramnagar blocks, tomato is grown as a useful cash crop for providing regular cash flows, and it works as a risk covering crop. Pulses and chick peas are other crops for organic fair-trade purchase. Black soya, and garlic are other profitable crops.

Competition

Market place and the context have changed for the farmers. Before joining the project, they were dealing with multiple traders in the Mandi with a produce which was not labelled as either organic or basmati. After joining the project, which provides them buy back guarantee for their produce, they may sell organic basmati at their door step at price negotiated between the procurer and the PO.

¹⁶ System of Lentil Intensification (SLI): line-sowing instead of broadcasting, intercultural operations (harrowing) instead of manual weeding, furrow-irrigation instead of flooding the whole field

There are other procurers (buyers), besides the VCP procurer, in the project area as reported during the interviews with the farmers. One of them is UOCB-Kohinoor.

As per a PEB member and farmers in Patkote, “UOCB-Kohinoor is there every year in the project area for the procurement”, which is also reported by the farmers in the Kotabagh block, they do not buy the whole produce, it seems that their purchasing targets are relatively lower than our project”

While a PEB member from Ramnagar block felt that some of the farmers look to take advantage from both the project players. They get full assistance from NBF-ICSD regarding extension or any other technical support, and at the time of selling their produce tend to choose the competition for paltry gains in price which could be as low as INR 2/kg.

NBF claims that they have revolutionised the way to do business with the farmers and other companies like Sunstar and UOCB Kohinoor are following the pattern.

Annex 3: Coded Interview Data - Procurement

Procurement process

Before the arrival of the project (Value chain partnership or VCP), the project farmers used to take the produce to the nearby *Mandi* (Market) on their own and used to sell it to the trader at the prevalent market rates for coarse paddy. The president of the PO uses the local Hindi proverb "*Murda ghat pe gaya hai to phook ke hi aayenge*" to explain, that the farmers felt captivated to the situation, once they reached the market, they had no option but to sell the produce at prevalent rates. According to him, "the project process of procurement at village level saves time, commission, and the costs paid to the transport and porters for taking it to the market. And the farmer does not feel trapped in the situation by the trader regarding price".

The farmers in Patkote, expressed their happiness for the procurement to be done at the source, "we are intimated 4 to 5 days in advance for procurement at a central place in the village", said one of the farmers. However, interviews with various farmers in Kotabagh and Patkote also revealed that across the project area, the procurement often gets delayed.

In Betalghat, one of the farmers who is also a PEB member said, "I had to take my produce to Ramnagar Mandi(Market) to sell, which would take me one whole day, as the Mandi(Market) is more than 3 hours of distance; while in the project the transport costs, trader commission and own travelling costs are saved". However, last year, the 'pick-up' across all the blocks was delayed, even in Kotabagh which is usually the first one to start with the process of procurement. "Timing is the biggest issue, procurement as always was delayed last year. There is a gap of 20 to 60 days between Kotabagh and Betalghat for procurement. The delay leads to crop drying out, hence loss of tonnage and remuneration for the produce", explained another farmer from Betalghat.

The trader from the Mandi (Market) who organises and manages the procurement from various blocks acknowledged the problem, saying, "Labour non-availability for such an extensive region, given the lack of aggregators and volumes in the region, is one of the biggest factors which leads to delay resulting in anxiety at farmer's end. The whole process takes 1 to 2 months". From his perspective, it was easier to get the produce directly in the Mandi.

Aggregators for the rice in the project area are non-existent barring one or two in Kotabagh region. In Betalghat, according to a farmer "for rice there are/were hardly any middlemen but for other vegetables there are aggregators (a transporter charging for tonnage of the produce)". There used to be small-time retail aggregators called *Banjare*, who have been pushed out gradually from the value chain.

A social worker cum farmer from Pawalgarh village, which also is in Kotabagh block, explains, "the role and relevance of *Banjare* has greatly diminished. They have gone to the remote areas which are difficult to access. The farmer is getting more but the credit should also go to the basic infrastructure, the road etc.", reflecting on the changes in the infrastructure and the overall development of the region. According the two *Banjare* interviewed: "the farmer is aware about the prices and the buying process has become more transparent, like the use of computerised electronic weighing. There is not much work left for us; next generation has opted out for other diversified jobs", outlining the impact of the VCP on them.

Other noticeable change is the usage of electronic weighing scales, and the non-existence of the '*Nali* system' in Betalghat which is replaced by electronic scales as observed in milk and other procurements. '*Nali*' is a local seed container and measuring device in Betalghat. 1 *Nali* contain approx. 2.5 kg paddy seeds and 1 *Nali* Field is equal to area under cultivation with 1 *Nali* seeds. "Electronic weighing has made dealings more transparent, it is in extensive use for last 4 to 5 years but the fact cannot be assigned to rice procurement", explains a farmer. A sheller from Ramnagar also puts across the perception of the consumers by saying, "Electronic weighing is also prone to tampering, consumers would like to have the option of use both the type of scales".

NBF recognises the challenges and have following plans for strengthening procurement,

- "Production targets per block would be set and managed by the respective team.

- Procurement policy would come into place explaining methods of procurement, defining quality standards, and training farmers about the same. The draft would be in place after July 2017.
- Meetings between the Purchaser and PEB members have taken place for the common knowledge to develop regarding the quality standards regarding broken material, moisture content. However, challenges like delaying of procurement and designating places of procurement persisted, even after making the announcement. Such issues would be covered in the policy, farmers and field team will be involved in setting up the guidelines with a view point on transparency and satisfaction.
- Such a procedure exists, but it needs to incorporate local challenges(context), and the synergies between farmers and the purchaser. For example, in one the other schemes, purchasers were taken to the field, at the time of the launch of the project, for better understanding about what a farmer goes through to get the production.
- Aggregation challenges for a minimum truck-load from an area also leads to delay. Harvesting at the same time and pre-planning are possible solutions.
- Transport and labour costs are borne by the company (NBF). Labour is happy to work in Mandi as they can be more efficient. Labour in the village procurement costs more”.

Pricing

As one of the farmers from the Patkote area explain, “Farmers are more aware about the prices and are better informed to negotiate for prices. Meeting for prevalent market rates is held in Ramnagar to enquire about the price, we have been getting better rates than the prevalent rates in the Mandi (Ramnagar or Haryana)”, A PEB member further explains “Local market doesn't distinguish between organic basmati and any other basmati, while the project offers the rates for organic Fairtrade basmati rates prevailing in the international market”.

“We get the information on price from the mandi, having a phone helps. We use our local relations and phone to know the prevalent price. However, price we get is solely reliant on price quoted by the company and PO members. Thus far, the farmers feel contented with the price. Though, last year, we felt the price unsatisfactory when compared with the rate at which the seeds supplied for” revealed a farmer in Betalghat.

According to the President of PO, “Farmers are provided price/rate information through PEB members. Procurement price is decided by the (PO) and NBF during the parleys and negotiations, which remains a point of contention. Once the produce is ready, the companies start prospecting and quote the price. First year rate was INR 3000/ quintal(100kg), next year 4800, then 3000 (with increased production area). Market price was half of what was paid by the Fairtrade in the early years of the project”

However, the project has seen early troubles as explained by one the former active members, who works with the competing project run by UOCB-Kohinoor, “Price was not paid as promised (by the purchaser) in the first year, leading to withdrawal of the farmers and entry of the competition. There was no written agreement then”, she says.

The president of the PO acknowledges the presence of the competition, “UOCB-Kohinoor pays INR 2/kg more to buy from the farmers. Local project manager acknowledges that competition pays slightly more, but doesn't purchase large quantities. So, it is perceived as a market disruption attempt more than anything else. Farmers explain their rational to not per se go for the INR 2/kg or more, as UOCB-Kohinoor does not have year-round project extension and do not provide other facilities such as knowledge sharing, winnowing fans, and collaborating with other projects e.g. water, biogas, etc.

Rate setting is an evolving process, we also get the rate from the Haryana Mandi and Fairtrade prices. Emergency meeting have been called in the past to resettle the earlier offered (misquoted) price. Company(NBF) promised 2200 plus 400 as bonus while the price was 2890. However, we managed to get the actual price for the farmers”. He insists, “farmer doesn't feel cornered by the company for selling the produce for now, he/she can exercise the free will to sell it anywhere”, a sentiment echoed by other farmers upon asking.

According to NBF project officer, price quotes were communicated by mobile text messages to project farmers. But, due to high illiteracy in the region, the use of mobile voice messages is under

consideration. Some of the project farmers indicate however, never having received mobile text messages.

A PEB member from Ramnagar block summarises the situation by saying, “pricing policy and a fixed formula missing, it is all about negotiation between NBF and the PO”.

The former member further cites the nature of engagement of the project, “NBF assists in other forms such as, distributing winnowing fans and other tools and means for farming. NBF and related NGOs in the project are involved with the farmer regarding know-how, biogas, water management and other support schemes. *Jal Sakhi*, *Jaivik Mit* have been appointed by NBF for ground support. UOCB-Kohinoor pays a little more in terms of price but is not involved in extension. Also, payment for the procurement UOCB-Kohinoor is generally delayed, which sometimes takes up to 2 months”.

In SPOFR India project, the Farmers have expressed satisfaction with the mode and time taken for the payment of their produce. However, payment got delayed during *Notebandi* (demonetisation) for about 15 days in Kotabagh. While in Betalghat, as per the farmers, payment got delayed for up to 3 months citing problems like wrong cheques and ensuing hassle.

Quality

To be able to benchmark on quality and price, grading is commonly used as a measure of quality. However, the interpretation of the term grading and the grading process differs among stakeholders within the value chain.

A group of farmers from Patkote had an interesting take on the subject, “the paddy sourced from Patkote is all the same quality and therefore, should get the same price. The quality-price up-and-down movement due to individual pricing (based on grading) may create friction amongst the community. Hence, we all (from the same village) should get the same price. However, they believe the paddy tastes different between hill and *terai* (foothills), and should get different price”.

As per a PEB member, “at the time of procurement purchaser decides the quality, roughly on moisture, mixture and liability to break, without using scientific instruments. Usually there is not much of disagreement. Grades (A, B and C) training for the PEB member has been completed in Sonipat (NBF office.) However, at the time of the procurement it was not implemented. At farm level, grading is still about mixture, moisture and grain size.

Similar views have been shared by farmers and PEB members across the Project area, like,

- “We have received Grades training (A, B & C etc.), such grades are not known to Mandi (Market).”
- “There is no grading system; ABC all get same price, training was given in Sonipat, however, not implemented on the ground”.
- “Grading decided by the purchaser rather than the scientific grades as ABC.”

One of the other farmers had following to say, “Last year, I did not sell, as I was not happy with the rate, besides other reasons. Paddy collected at different rates is clubbed together in a lot then why are we paid differently? Small farmers are marginalised over the rate and quality, I felt over-scrutinised by the purchaser party. This proved to be one of the reasons of not selling but consuming myself”.

Another PEB member puts it, “For last two years, there has been no question of grading as seed quality has been bad. Farmers are not satisfied with grading abilities of the purchaser and the whole process. Farmers perceive grading differently; one aspect is mixture and breakage. The other being the grades ABC as explained in the training by NBF. Scientific parameters and benchmarks are missing.”

As per the NBF appointed trader, “Farmer is more aware about the prices and is better informed to negotiate for prices. Quality of the produce is settled mutually”.

NBF project officer at the project site echoes the viewpoint of the president of the PO and the farmers, he says,

- “Farmer felt captivated to the trader earlier, crippled with problems like payments, rate and commission.
- In 2011, prevailing rate was INR 1500-1700/100kg for regular basmati rice, 21 farmers were selected for SRI (System of rice intensification)
- in 2013 for trials. Crop was insured for market rate of regular basmati production at market rate. We had 3 clusters in 2013, further added Betalghat in 2014 and ran INR 100 per quintal (100Kg) as promotional scheme for SRI (System of rice intensification) in 2015.
- We believe that there is a difference in the paddy procured from Betalghat and Kotabagh, but we pay the same rate.
- During Notebandi (demonetisation), Cheque payment was still a problem (faulty name, wrong details, advance cheques and early deposit, bouncing). However, NEFT (National Electronics Funds Transfer System), proposed by the trader is planned for future transactions. Other proposed initiative is; giving the information about price (Mandi price plus FT premium and bonus,) via SMS (text messaging)”.

Regarding pricing and quality, NBF summarise the situation as follows,

- “Head rice recovery and broken percentage are the chief quality criteria for the purchaser or in terms of commercial value. Two main challenges for quality and pricing are,
 - farmer's understanding for quality and rate in the market, for example, if a top-quality basmati is sold in a market like the one in Haryana at INR 3000/100kg the farmer in scheme region would also expect the same for his produce while we give him for 2700, given his quality. Therefore, the communication and understanding in this regard is paramount.
 - the farmer is easily convinced in the market regarding the quality and rate for his produce as it is a place for many and buyers and sellers. Comparative analysis become easier to conclude about the value of his produce, however, gaining the similar trust and conviction is rather tedious at his doorstep as there is single agency in operation.
- Negotiation and convincing may take longer. The way out is; better communication and making sure that the farmer understands the standards better and, transparency is maintained between the two agencies. Case in point, is the cultivation of two varieties- *Taraori-HBC 19* and *Dehraduni type-3*, they have quality and price differences, however, the whole block of Ramnagar was procured at the same price.
- Price is a component of international and domestic market and demand and supply forecasts based on the cropping data and carry forward stocks. It fluctuates on daily basis. We have given the farmer a buy-back guarantee, and we need to give the justification of the demanded price.
- Would like to apply standard grading (A1 - C1) for product quality procurement, but at present only grade the paddy at the time of processing paddy; we are contemplating to give feedback to project farmers on village level on the product grading.

During *Notebandi* (demonetisation), cheque books were not available payment got delayed due to lack of electronic financial channels”.

Annex 4: Coded Interview Data - Seeds & Other Inputs

Seeds

The project includes the provision of high quality seeds by NBF with a buy-back guarantee for the produce. In Betalghat block, according to a farmer who was one of the first ones to join the project in the that region, it was the variety *Taraori* which was used. However, during the course of the project the variety was replaced by *Dehraduni type-3 basmati*; confirmed by another farmer, who has increasingly brought more area under rice farming. *Dehraduni type-3 basmati* is used now for last 2 years as it has proved to be a better alternative because of disease resistance, withstanding to lodging.

As the farmer in Kotabagh puts it, “Seeds are provided by the company as well as the know-how related to sowing and other cultural practices”, he adds further, “the seeds supplied are often mixed with undesired elements such as hay, weeds and other adulterants. A matter which has been reported to NBF through the PO, however, there has not been much improvement on this account”. Farmers from Patkote, which is in Ramnagar block, and Kotabagh echoed similar sentiments regarding the quality of the seeds.

Farmers also felt aggrieved that they pay more for the seeds for less quality than the produce they sell to the same buyer. Another issue regarding the seeds is the timing of the seed provision. According to interviewed farmers in the Patkote region, “Seeds should ideally be distributed by May, which has never happened in the project thus far”. Farmers and PEB members from Betalghat and Kotabagh blocks also acknowledge that there is no prior schedule and planning for the seed delivery before the start of the season. Betalghat is usually the last to receive the seeds compared with other blocks. Farmers across the project area perceive delay and quality of seeds as a recurring issue.

One of the farmers, who happens to be member of the PO had the following to say regarding the seeds, “NBF is in charge for providing the seeds on time which they have regularly failed to do. Every year to organise and plan for the season ahead, a PEB meeting is called, which has not taken place yet for this season. Last year, the seed delivery was delayed by 20 days”. “Also, in the last few years, seed quality has been bad, the company cites the non-availability of the seeds as one of the factors, hence whatever NBF could source is shipped to the farmers, promising that whatever they produced, will be procured.”

Given the supply and quality challenges NBF wants the farmers to produce their own seeds. Across the project area, in all the blocks many farmers are creating their own seeds under the guidance of NBF and ICSD. Last season good quality seeds were procured by NBF, which were created by some of the project farmers themselves. However, the seeds which have come this season are not of the same quality.

Some farmers also observe that, “the home-grown seeds have been found to be more resistant than the stock which is coming possibly from Haryana or elsewhere. Besides, they feel they can manage the risks better and are in control of their own destiny as they can better plan for the sowing and nursery preparation given the variation in weather in water scarce region”.

Farmers and PEB members from the Patkote region have contemplated preparing community seed beds and nursery especially in South Patkote region. “We have been advised by the Pant Nagar University to create our seed banks to be more self-sufficient and to mitigate risks regarding the seed quality and delay in seed provision”.

According to the NBF project officer at the project site:

- “Seeds and PPM were offered during SRI (System of rice intensification) trials.
- 20-30 farmers will be selected for preparing the seed bank, as we have faced quality issues (seed length) in the previous years, weed in the seed was an issue.
- University (GBPUAT) will be approached for breeder seeds and the seed bank with 30 farmers selected from all the regions.
- PEB involved in selection of inputs. Inputs are on time, but problems, like communication, lack of participation in the meeting, rivalry and not disseminating the information on time, lead to lack of awareness regarding cultural practices related to seeds and PPM in general.

- *Jaivik Mitra* reaches out to the farmer, but even then, the farmers procrastinate at times. Solutions are providing inputs along with seeds, and second meeting after transplanting and inputs.
- In Betalghat, temperature-at the time of Basmati crop maturity, dips to non-optimal levels and affects the quality of the rice negatively. Proposed change in seed variety *Dehraduni type-3* rather than *Taraori-HBC 19*, as it matures 15 days earlier than *Taraori-HBC 19* and it is also not prone to lodging”.

Plant Protection Materials (PPM) and Other Inputs

According to the farmers from Patkote, “plant protection material and inputs are provided with the seeds. Also, household remedies as advised by the extension, are also prepared using the local available materials”.

A PEB member explains, “Seed and *Trichomonas* are supplied together to the farmer in the beginning. Home remedies are suggested in the meetings. Other PPM is supplied as and when needed, but gets delayed sometimes due to natural causes such as water flooding due to monsoon. Also, at times, the farmer is late in spraying; a 2-day delay is significant. The chance of infection from hybrid varieties from adjacent farms is high in such a season”.

According to the president of the PO “Input supply is a problem, *Trichoderma pseudomonas* is given with seeds, other biocides have been made available. Input management has been taken by the PO in its own hands. The PO went to Biofach (trade fair) in Delhi to prospect for suppliers. That is one change in the last few years”.

Even then, as farmers from Patkote explain, “contamination from chemicals remains an issue, rendering the use of PPM and home-made solutions futile and a worth less exercise. *Trichoderma* is sometimes available, but other PPMs are hardly made available with the same vigour as in the sale of seeds. There is no common public notice board to communicate the timing and availability of PPM”.

Similar experiences have been shared by the farmers in the Kotabagh block. The views also echoed by a social worker cum farmer, who started with the project but later switched to the competition- “PPM input supply is delayed in the our (competing) project as well, we have to rely on home-made remedies”, reflecting a market situation for lack of timely available of inputs and biocides.

In Betalghat, according to one farmer “*Pseudomonas* was used earlier but pest problems aren't a big issue anymore. Home remedies are potent remedies, the PPM-a reactive approach takes up to 15 days, the process of making PPM available has improved considerably, yet needs further improvement. Sometimes we buy from a local co-operative store, but at times, ppm is not available there either”, quips another farmer.

In Ramnagar block, the general perception of farmers is that PPM is not provided timely by NBF even though it is purchased with Fairtrade premium money. Also, planning process for purchase of PPM is not known to some PEB members.

According to the NBF project officer at the project site,

- “Seeds and PPM were offered during SRI (System of rice intensification) trials.
- PEB involved in selection of inputs. Inputs are on time, but problems, like communication, lack of participation in the meeting, rivalry and not disseminating the information on time, lead to lack of awareness regarding cultural practices related to seeds and PPM in general.
- *Jaivik Mitra* (extension officer for farming practices) reaches out to the farmer but still farmers procrastinate at times. Solutions are; providing inputs along with seeds, and second meeting after transplanting for inputs.
- Contingencies need to be handled, that is where the issue is regarding PPM.
- Some farmers are still dependent on external source for the inputs rather than the home-grown remedies”.

NBF summarises the situation as follows,

- “We acknowledge the lack of proven package of practices, scientifically proven and tested solutions for the farmers are needed; cannot be blamed only on extension.
- Supply side solutions has its own challenges, not everything is available in the market. Household remedies are a way out but not everybody is capable enough to manufacture and implement the formulated solutions.
- There are practical challenges at ground level for making the input available. We are committed to knowledge dissemination, we are there to play at least a facilitator's role.
- Discuss about need to increase the work force to swift communication and management (from seed, nursery, transplanting, fertiliser management, pesticide and disease management, harvesting and procurement).
- Company wants the farmer to produce their own seeds as there are supply challenges and quality challenges.
- Breeder seeds and community nursery are possible solutions would be put to trial in the next year(s)”.

Annex 5: Coded Interview Data - Other Factors

Water

Water provision or irrigation is one of the biggest challenges in the project. As per the president of the PO, irrigation channels have been developed in Kotabagh block in the last few years. But they tend to go dry in the months of May-June (which is a critical pre-sowing period) till the arrival monsoon rains, which in general, have an arrival date after 15th June. Even though parts of Ramnagar blocks like Dhela and Kyari fare better on water availability when compared with other project areas, it yet remains a challenge.

Government has supported the agriculture by setting up Tube wells for irrigation; one of them could be seen in Kotabagh village. As social worker cum farmer from Pawalgarh village in Kotabagh, explains, “a proposal was floated for tube well in 2004, and after some delays we finally got the irrigation facilities, in 2013 we got the concrete road”, emphasising the support from the local government in improving the basic infrastructure. However, the same cannot be said for areas such as Patkote, and Betalghat block.

In Patkote, farmers highlighted shortage of water as a biggest issue for the Basmati project, especially in the pre-sowing period. According to them, “Nursery development is totally dependent on rain. Water is the biggest limiting factor here, almost every week. We do not even have enough water for drinking purposes”. During the fieldwork and interviews, one could see pots and containers lined up for water supply, while the small tanks or any other sort of reservoirs had gone completely dry.

Situation has been worse in South Patkote, the farmers had the following to say, “there is no running stream of water here”, referring to the irrigation channels which could be seen in other parts of Patkote, or in Kotabagh block. “Nursery preparation is difficult owing to shortage of water. The whole sowing cycle gets delayed by a month, resulting in the weak plants unable to bear heavy rains, which arrive in June-July”.

“A local NGO guaranteed 5-year running water pump; all the efforts were made to achieve the task, however, local political issues proved a hindrance in the implementation of the project”, highlighting that even after all the efforts of the project linked NGOs, the issues are beyond them.

Betalghat faces the ire of water on both accounts, first the drought, and then torrential rains causing flooding and resulting damage. It was a rain deficit region in the year 2016.

As per a farmer near the river basin, “ICSD helped creating a water reservoir in the farm house premises. Irrigation has helped productivity. Pumps were also offered by the organisation but farmers did not take up owing to diesel costs etc. Since 2010, canal breach during the nursery period is a recurring problem. Landslide and run-offs damage the canals”.

Amel village, which is higher up the terrain remains bone dry in the months of April-May and faces drain damage due to incessant rains once they arrive. NBF representative acknowledges the situation by saying, “Water is the biggest challenge in Betalghat especially in the early season; also, we have laid special emphasis on canal repairing”.

A village administrative council head puts the blame on the government processes and machinery, which as per him are too slow to respond to any natural calamity. As per him, “Water and water management are part of infrastructural issues, floods cause annual damage to the canal and channels, which are not repaired in time”, causing further damage and aggravating the situation beyond control.

“The PO has helped to make water tanks for irrigation, however, area is hillier and with hardly any basic amenities. These are big enough challenges in themselves to overcome”.

Table 5. Summary of the events and the background regarding water and producer organisation of the SPOFR India Project, before and after arrival of the project

Factors	Before the Project	After the arrival of the Project
Water	<ul style="list-style-type: none"> Water as a resource is scarce especially in the months just before rice sowing and for nursery preparation. The problem is acute in hilly regions of Betalghat and Patkote. In the rainy season, floods cause annual damage which is not repaired in time as response system from the government authorities is slow, hence, water management is a challenge 	<ul style="list-style-type: none"> PO helped to make water tanks for irrigation however the areas which are hilly and remote, it yet remains a challenge. The FT premium has been utilised to repair water irrigation channels in consultation with local village agencies Government subsidy for water pumps have also been provided in certain areas to lift water from the nearby streams as in Betalghat
Producer organisation	<ul style="list-style-type: none"> There was no formal or informal producer organisation in the region 	<ul style="list-style-type: none"> PO set up Fairtrade (FT) premium used for computer centre, sewing centre, and channel repairs. Other items for farming needs such as Winnowing fans, Spray kits, Solar panels and fencing distributed.

Producer Organisation

Producers' organisation was set-up as per guidelines laid down by Fairtrade. The PO, named as Fair Farming Foundation (FFF) has 12 PEB (Producers' Executive Board) members besides other functionaries, and is presided over by the President.

The PO is increasingly participating in extension and, is involved in decision making regarding value chain process like procurement, pricing negotiations seeds and inputs management. However, as per a farmer interviewed in Betalghat, "meetings do not fulfil the desired purpose, and they are not held as frequently as should be. Further, not all members participate."

One of the reasons for inactive participation has been travel, time and related costs. A decision was taken to reimburse the PEB members, which started in May-June 2016. The farmers from Patkote had the following to say, "decision making is non- participatory; usually there used to be a meeting every month. However, since the disbursal of travelling and meal allowance started, meetings have reduced in frequency to 2 to 3 in the last year."

Also, there is a "lack of a proper feedback system regarding the functioning of the PO", as reported by the PEB members. "Meetings with PEBs are called without timely planning and agenda. The PO is registered in Delhi; the byelaws are not known to the PEB members." The agenda and 'minutes of meeting' are not shared amongst members, or there is no procedure for the same. "There is no method or process to make complaints or raise concerns, there is a feeling that nobody listens to you", said the PEB members.

Fairtrade premium has been utilised for various activities like buying and renting out tractor, canal repairs amongst others. In Betalghat, premium has been used to set-up a computer centre, sewing centre.