BRIEFING PAPER



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A Case Study on the Mango Economy of Malda

India's Foreign Trade Policy, 2004-09, envisaged a programme that seeks to secure economic growth and national development. The Annual supplement (2008-09) to the National Foreign Trade Policy (NFTP) shows that over the period 2004-2008 India's exports have increased 2.5 times. However, the intriguing question is how much of the resultant benefits have accrued to real producers. In this context, the case study is an attempt to understand whether or not such benefits are reaching the grassroot stakeholders.

CUTS implemented a project entitled, 'Grassroots Reachout & Networking in India on Trade & Economics (GRANITE)' in eight Indian states. The objective of the project was to generate a more coherent civil society voice on economic governance in India in the context of globalisation and its effects on the livelihoods of the poor, particularly the marginalised and women.

This case study looks into the Mango economy of Malda, explores the export-oriented value chain there and shows how various stakeholders are inter-related. The study investigates into what changes have transpired in the mango economy after implementation of India's Foreign Trade Policy (2004-09) which designated mango as a Focus product; how these changes have affected various stakeholders; and what needs to be done so that the benefits of export percolates down to grassroot stakeholders.

Trade and Development Linkages

Trade can be a powerful source of economic growth. International trade can expand markets, facilitate competition and disseminate knowledge, creating opportunities for growth, poverty reduction and human development. Trade can also raise productivity and increase exposure to new technologies, which often spur growth. But, while broadbased economic growth is necessary for human development, it is not enough. To ensure that benefits of international trade percolate down to the grassroot stakeholders, complementary domestic policies need to be in place. Synergy between trade and human development thus requires proper international trade policies that are complemented by appropriate domestic policies.

In the Indian context, the NFTP, 2004-09, envisages a programme that seeks to secure economic growth and national development. The annual supplement (2008-09) to the NFTP shows that over the period from 2004-2008, India's exports have increased from US\$63bn in 2004 to US\$155bn in 2007-08, i.e. a 2.5-time increase in what it was in the year 2004. It also claimed that increased trade activity had created 136 lakh new jobs in India. However, the intriguing question is how much of the resultant benefits have accrued to the real producers? India's development would remain largely vacuous if these producers do not enjoy a fair proportion of fruits of economic growth resulting from foreign trade.

In this context, this case study is an attempt to understand whether benefits (or adverse effects) of international trade are percolating down to the grassroot stakeholders by way of favourably (or adversely) affecting employment and hence disposable income. The study enquires into the channels through which such benefits are reaching (or not reaching) the grassroot stakeholders.

Selection of Specific Product

Mango, called the king of fruits in India, was chosen as the product for the case study. It accounts for 40 percent of the national fruit production in the country and 42 percent of the country's land under fruit cultivation. India is estimated to account for about 60 percent (9.5 million tonnes) of the world's mango production of 15.7 million tonnes. In terms of exports, India exported 79,060.88 million tonnes of fresh mangoes, with a value of ₹141.93 crore (US\$31.48mn) in 2006-07. Further, West Bengal is one of the top-ten mangoproducing states in India, which constitutes 22.3 percent of the total fruit production in the state during 2005-06.

Selection of Site for the Study

Malda, being the area with the highest production of mango in the state and also the district, with the largest area dedicated to mango cultivation, was the most obvious choice



for the study. Malda was also declared an Agri Export Zone for Mango under the EXIM Policy 2001. Further, due to its proximity to Bangladesh, the area is highly convenient and suitable as a hub of inter-country mango trade between India and Bangladesh. In Malda, the study concentrated on Amriti Gram Panchayat and Sadullahpur Gram Panchayat of Englishbazar Block and Araidanga Gram Panchayat of Ratua-II Block, selected primarily on the basis of feedback received from the exporters and mango merchants.

Sample Composition and Size

A sample of 110 stakeholders in the mango economy was interviewed. The sample composition was as follows:

- Mango Exporters Export mango to other countries (though a majority of them export mango to Bangladesh only).
- Mango Merchants (Mahajans) This group of stakeholders invest money in mango cultivation, which includes buying and selling of orchards. They appoint bariyals (garden contractor), who purchase/sell orchards on their behalf and also oversee the activities necessary to maintain the orchards during the entire cultivation period. The mango merchants share profit with bariyals on pre-specified terms. The mango merchants may or may not have their own marketing network. During the ripening season for mango, the mango merchants sell the produce either to the local wholesaler (aratdars) or to the exporters.
- Growers Primary stakeholders who grow mango, are
 different from the bariyals in the sense that the bariyals
 are more like contractors and share profit with the
 merchants. Growers, on the other hand, invest their own
 funds, look after their own orchards and finally sell the
 product themselves to the aratdars. Growers also do
 not share their profit with any other group of
 stakeholders.
- Labourers This refers to the wage labourers working in the orchards. They get their payment either daily or weekly.
- Processing Units in the Formal Sector The processing units registered with the Department of Food Processing Industries & Horticulture (DoFPI&H) or any other government certifying agencies.
- Processing Units in the Informal Sector The unregistered units mainly engaged in selling mango slice to the various registered food processing units for preparing pickles.
- Women They prepare various mango products like Amshawtto, Amchur, etc. and also work in various fruit processing units (locally called SLICE FACTORIES) in both formal and informal sectors during May-August.
- Packing Box Manufacturing Unit After the mango is plucked, it is packed in wooden boxes for exporting to Bangladesh or other states of India. This is necessary to prevent fruits from perishing in transit.

Inter-linkage Among Various Stakeholders in the Mango Economy of Malda

Flow of Commodity

Figure 1 and 2 explain the inter-linkage between the various stakeholders in the mango economy of Malda. It is evident from Figure 1 that as mango moves from one stakeholder to the other, its price increases steeply due to the profit percentage charged by each one of the stakeholders. While the farm gate price for mango is ₹10.50/ kg, it is sold to the Bangladeshi importers at approximately $\overline{\xi}$ 24/kg. The growers sell the produce directly to the *aratdars*. The *aratdars* then sell it off either to the exporters or traders in other states. The aratdars charge a commission of five percent from the growers as well as from the exporters/traders. Thus, they make a total profit of ten percent on each consignment of mango that they trade in. The exporters then sell the produce to importers in Bangladesh, which forms the bulk of fruits exported from Malda. The exporters enjoy incentives/duty rebates approximately amounting to 7.5 percent of the total export value under different schemes of the government aimed at export promotion. In addition to this, they charge a commission of 2.5-5 percent from the importers in Bangladesh.

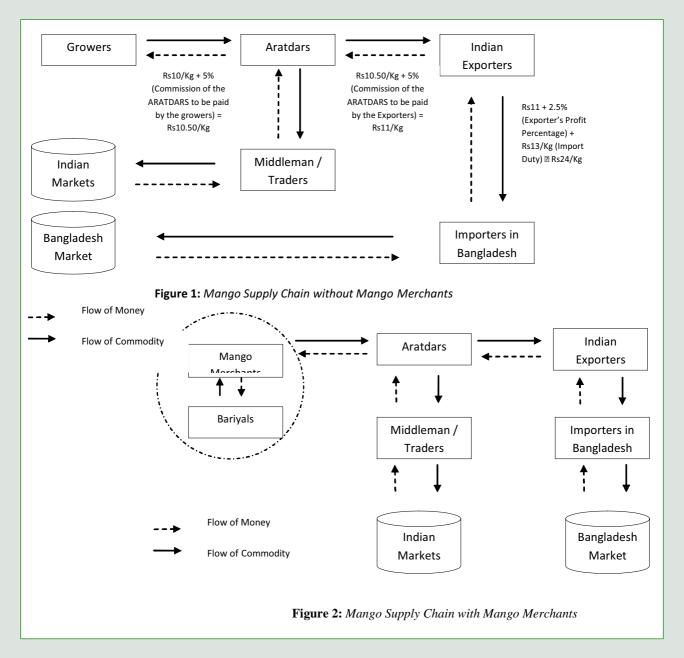
Thus, they are earning around 10-12 percent profit (including the export incentives from the government) by exporting fruits to Bangladesh. As expressed by a majority of the exporters in Malda, they are not faced with any serious problems while getting the incentives from the Directorate General of Foreign Trade (DGFT) office.

Figure 2 depicts the role of mango merchants and garden contractors *bariyals* in the mango economy. Mango merchants are businessmen who are interested in investing their money (mostly profits earned from their businesses) in the mango economy. These mango merchants lease in mango orchards and employ *bariyals* to take care of those. The *bariyals*, as facilitators, employ and manage whatever resources are required for ensuring a healthy harvest. The profit, earned after selling the produce, is shared between the mango merchants and the *bariyals* in a 50:50 or 75:25 basis. It is to be noted that mango merchants bear the cost of all the resources employed for growing the orchard. The produce is sold to the *aratdars* and is then either sold to the Indian markets or exported to Bangladesh.

Some of the mango merchants have well-established marketing channels in Bangladesh and deal directly with the Bangladeshi importers to sell their produce. The latter then designate an exporter, having Import-Export Code (IEC) code, in Malda to take delivery of the consignment. A majority of the exporters in Malda are of this type. They charge a commission from the merchants and send their consignments to Bangladesh. The increase in the price of mango from mango merchants to the Bangladesh market is more or less the same as discussed with the help of Figure 1.

Flow of Money

Inter-linkage among different stakeholders in terms of flow of commodity has been discussed in the previous section. This section traces the flow of money in the mango



economy of Malda. An important feature of the mango economy in Malda is that the entire flow of commodity from farm gate to the import market takes place on informal credit terms, i.e. on word of mouth basis and no formal agreements/ contracts are effected between the parties, neither do the growers and *aratdars* take any advance from the exporters or traders before delivering their consignment (Figure.1). For all the exports that happen, the *aratdar* receives his commission only after the exporter has received his payment from the importer. The grower will receive his payment only after the *aratdar* has received his payment from the exporter. This process and steps of payment/money flow are the same for the mango merchants as well. They give out the *bariyal's* share in the profit after receiving their payments from the exporter/trader.

Thus, the role the Bangladeshi importer plays is an extremely crucial one considering the fact that the sustenance of the entire chain hinges on when and whether or not he pays for the consignment imported from India. It is only

expected that such trade without any formal terms would involve high default risks for the stakeholders involved. Almost all the growers, mango merchants and *bariyals* cited more than one instance where their share of income was wrongly appropriated by the importers in Bangladesh.

One obvious question which arises here is why then do the mango growers, merchants and exporters prefer trading with Bangladeshi importers? Some of the major reasons, as opined by the respective stakeholders have been shown in Table 1.

Significant Changes in the Mango Economy

a) Increase in the area and production of mango

Since 2001, there has been a marked increase in the area dedicated to mango cultivation. A number of paddy fields are being rapidly converted to mango orchards, partly in search of greater profitability and partly because cultivation of food crops could not be carried out within close proximity

Table 1: Reasons Why Growers, Mango Merchants and Exporters Prefer Trading with Bangladesh

Perspective of Growers

- The price of mango in Bangladesh is higher than in any other market in India. For example, the same *Fajli* variety that sells for ₹10/kg in Indian markets will fetch anything around ₹12-13/kg when sold to a Bangladeshi importer.
- Bangladesh consumes almost 60 percent of the mango produced in Malda.
- Due to the geographical proximity of Malda and Bangladesh, chances of the consignment getting perished due to transportation lags are less.

Perspective of the Mango Merchants

- · The merchants have good trading relations with a few mango importers in Bangladesh
- It is much cheaper to export to Bangladesh as compared to other countries due to proximity, low transportation charges and loose or no quality control specifications for mango.
- They have limited knowledge about other export markets.
- The mango merchants do not directly export. They send the consignments to Bangladesh via the local exporters. Since most of the exporters are keen to send the consignments to Bangladesh, the mango merchants follow suit.

Perspective of Exporters

- The exporters have long standing trade relationship with the importers in Bangladesh.
- · Cost of transporting consignments of mango to Bangladesh is much less than any other country.
- Due to the proximity to Bangladesh the exporters can visit Bangladesh frequently and can follow up with the importers. This helps in reducing the default risk to a large extent.
- · Quantum of orders received from importers in Bangladesh is much higher as compared to any other country.

of well-grown mango orchards. Good agricultural practices, as disseminated by the DoFPI&H officials, have helped ease out the fluctuations in mango production to a large extent. The growers in Ratua-II Block agreed equivocally that while the production per hectare in 2005 was 5.5 tonnes, in 2008, the figure registered an encouraging upswing to stand at around 7.5-8 tonnes per hectare.

b) Improvement in the quality of mango orchards

The DoFPI&H, through its various schemes and training and outreach programmes, has been able to influence a large number of mango growers to stop using chemical fertilisers in their orchards. As a result, area under organic cultivation of mango is increasing every year. Almost all the growers interviewed in course of the field survey agreed that the

quality of mango is improving and that not only do they look better but also taste better than before.

c) Increase in daily wage of the labourers

With a gradual expansion in the area under cultivation of mango, there has been a corresponding increase in the demand for labourers in the orchards for various works, viz., spraying pesticides and other medicines, plucking mangoes, loading or unloading them for transportation, etc. This increase in demand has been further compounded by two important factors – firstly, the increase in employment options and opportunities under the National Rural Employment Guarantee Scheme (NREGS) and, secondly, the increasing out-migration of labourers due to better work opportunities and higher wages outside the state. Together, these factors

Table 2: Different Types of Unskilled Works in a Mango Economy		
Works for Daily Labourers in a Mango Economy	Tenure of Work (in months)	Wages (Rs/day)
Digging topsoil near the bottom of the trees and applying fertiliser	2 - 3	60-70
Clearing the weeds around the trees	1 – 2	60-70
Spraying medicines and pesticides	4 – 5	60-70
Guarding mango orchards	3 – 4	500-600 per month + mango
Plucking mangoes	3 – 4	100 or mango received from the orchard owners, which they sell in the local market
Packing mango and loading or unloading the same for transportation owners, which they sell in the local market	3 – 4	100 or mango received from the orchard

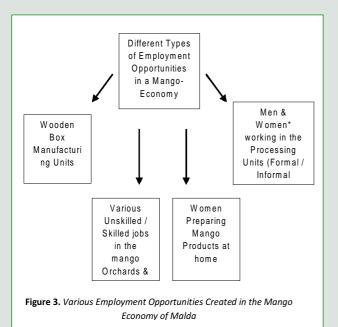
had led to a labour shortage during mango harvesting season and a corresponding increase in the daily wage for labourers. While the daily wage in 2008 was ₹50 per day, in 2008 it went up to ₹60-70 per day, which more or less tallies with the minimum wage to be paid under NREGS.

d) Increased employment in supporting sectors

Expansion of the mango economy has led to creation of employment opportunities in supporting sectors (Figure 3) like the packaging industry. There are a number of wooden box manufacturing units in and around the mango growing hubs of Englishbazar, Ratua, Milky, etc. These units manufacture the wooden boxes used for packing the mangoes. These units continue production throughout the year to avoid shortage situations during peak seasons. Production during lean season is principally a part-time activity carried out by employing part-time labourers, who are often students earning for their education. There is also a category of labourers which is specifically engaged in the job of packing the mangoes and loading and unloading of the packed boxes for transportation. In a nut shell, as pointed out by all the respondents, ... during mango harvesting season, there is no dearth of employment in Malda.

e) Exporters able to access various government schemes

The exporters have pointed out that NFTP has been beneficial for them to a great extent. Exporters of fresh fruits are getting a number of benefits like Vishesh Krishi and Gram Upaj Yojna, Duty Entitlement Pass Book, Duty Drawback schemes, etc. The exporters were of the opinion that the overall export from Malda to Bangladesh had increased to a great extent. As expressed by one of the exporters, ...NFTP is a very useful tool for facilitating international trade and it has helped us by boosting our exports. When asked about suggested changes for the next phase of the policy, he said that they were mostly happy with the present state of things. However, ...the government should not reduce the incentives given under the various



schemes in the next phase, he added. The exporters can now carry out most of the paper work and their submission online, thereby ensuring a significant reduction in the associated transaction costs.

f) Women more involved in the mango-economy

The mango economy in Malda has been witnessing a marked increase in the number of women working in the processing units. Women have little or no role in the preharvest mango season, but during the harvest season, they hardly find time for their regular household chores, the work pressure at the processing units being at its peak. A woman can earn almost ₹55-60 per day by working in the processing units either for preparing mango slices for pickles or for preparing mango jams, jelly, pickle or other mango products. In recent years, the Horticulture Department has been distributing organic cultivation kits among the women self-help groups (SHGs) to encourage a more substantial involvement of women in the mango economy. The Department is also arranging for training sessions for women.

To give a further thrust to promoting organic farming, women SHGs are being motivated to produce more vermincompost that can be both marketed as well as used by their husbands in the mango orchards. For women not engaged in any processing unit, the harvesting season has traditionally meant the time when they prepare various mango products at home, especially Mango Biscuits (*Amshawtto*). These fetch rather handsome prices in the local markets. The overall perception gathered was that the status of women in the mango economy has certainly improved, the direct fallout of which is an increased income and subsequently a better participation by them in the family decision-making process.

Some Roadblocks to a Better Mango Economy

a) Security of payment

As indicated in Figure 1 and 2, a major concern for the stakeholders is the security of payment. This is even more so in the case of the growers. The only stakeholder group who is comparatively better off in matters of payments is the exporter. Exporters having their own communication points or counterparts in Bangladesh are in a more advantageous position in pursuing payment matters. But, that can hardly be termed a fool proof arrangement. A large number of respondents, both exporters and growers, complained about the default risk involved in trading with Bangladesh. The growers said that they take such risks because the price they get for mangoes sold to Bangladeshi markets is reasonably higher, when compared to the Indian markets.

b) Growers not sure of exporting mangoes to other countries

Growers in the blocks of Ratua-II Block and Englishbazar expressed their concerns about exporting mango to other countries. Major concerns expressed by them are as follows:

 Only one or two exporters have tried exporting mango to the UK. There have been instances in the past when growers had heavily invested in their orchards based on promises of overseas export, which later turned out to be all hearsay. The growers later learnt, much to their dismay, that the promised prospects had lots of conditions and specifications that were not discussed earlier. This had resulted in huge losses for them and effectively scared them away from venturing into such territories again.

- Expense towards quality certifications necessary for export clearance is quite substantial and often not possible for a grower to afford. Moreover, there is no quality certification lab in or around Malda that is equipped enough to give the necessary clearances.
- In recent years, the price of mango has not seen any significant rise, whereas the price of input is increasing steadily. Growing export quality mango is an expensive venture and, if a grower fails to sell the produce in time, then he will have to incur huge financial losses.

c) Lack of necessary export infrastructure in Malda

The district severely lacks the necessary infrastructure required for exporting good quality mango. Though the district does have a pack house operational for the last three years, there are no quality certification labs or ripening chambers, cold chain, etc., which are pre-requisites for exports to more advanced countries. Setting up all the necessary infrastructures will not be economically feasible, unless there is a perennial demand for using the infrastructure. This, however, requires two necessary pre-conditions:

- Huge market for mangoes; and
- Sufficient number of exporters who are ready to avail the infrastructural support and export mango to various countries in large volumes.

Even though there exists reasonable demand for mango in markets worldwide, absence of appropriate promotion, training and facilitation has meant that growers are hardly aware of the prospects, markets and their requirements and specifications. This, in turn, has resulted in dearth of growers/exporters who would want to venture into the world market and consequently Malda has never quite been able to live up to the above mentioned pre-conditions. This poses a serious impediment to the development of the mango economy in Malda.

c) Processing units lack infrastructural facilities

In Malda, the number of processing units is very limited. The units do not operate on a large scale for fear of suffering losses due to overproduction, the avenues for marketing being not very robust. Their annual labour requirement varies from 20-50 labourers, with at least 20 during the lean seasons and 50 during the peak seasons. Furthermore, the last technology and machinery up-gradation that these units went through dates back to anything between 10 to 15 years, neither did any of the units receive government incentive support in the recent years to help it modernise its facilities and increase production capacity. These units have great potential of generating future employment and also acting as important safeguards for the Malda mango economy in

the event of crop failures due to various weather vagaries, like severe hailstorms and rain. However, such potential can only be realised if they are assisted by putting in proper infrastructure. The marketing infrastructure is also very weak, as opined by owners of the processing units.

Key Recommendations

This present case study is not only an attempt to explore the dynamics of the mango economy and inter-linkage among the various stakeholders, but also to identify specific bottlenecks and put forward some realistic recommendations that can address these obstacles. Some of the recommendations are as follows:

a) Promoting mangoes as a brand in international markets

It is beyond doubt that marketing forms the backbone of an organisation. Successful marketing requires advertising and brand promotion. One of the best examples had been the promotion of Brand India in recent years, which had attracted a considerable amount of Foreign Direct Investment (FDI) and Portfolio Investment (PI). This same concept can be applied for the mangoes produced in Malda. Promoting Malda Mango as a brand, supplemented with export quality production of the same, is very likely to boost up demand for the same. There are some reputed professionals working on this and they may be consulted. This is of prime importance, considering the fact that most of the consumers in overseas markets are more acquainted with the Alphonso variety produced in the Southern part of India, rather than Himsagar, Fajli and Gopalbhog varieties produced in Malda. To acquaint the overseas consumers with these varieties, one needs overseas promotional activities.

b) Orientation to local growers and exporters

The mango economy of Malda depends heavily on mango export to Bangladesh. On an average, almost 60 percent of the produce of a mango grower is exported to Bangladesh. Orientation programmes to the local growers and exporters will not only enhance their knowledge about overseas markets and the particular quality specifications necessary to operate in those markets but will also give them the extra incentive to hedge the risk involved in exporting mango to only one country. If the necessary infrastructure is provided to them, they will be able to materialise their aspirations of exploring overseas markets as well.

c) Promoting growers' cooperatives

Promotion of growers' cooperatives may also act as a key component to boost up the mango economy. This will help enhance the bargaining power of the producers and will additionally help the exporters to procure bulk produce with ease. This will further help to counter the market fluctuations in the price of mango sold. An added advantage of the cooperatives is that when it comes to creating the necessary infrastructure, the cooperative can contribute to the cost of building the infrastructure, which an individual grower may find difficult.

d) Providing necessary infrastructural support

Provision of infrastructural support is necessary for enhancing exports from Malda, but this will have to be supplemented with creation of overseas buyers as well as domestic exporters. Otherwise, the infrastructure support will not be a viable option for the government. As evident from the packhouse in Malda, it remains underutilised for most of the time, as exports have not been happening in huge quantities. According to some of the exporters, it is necessary to have overseas counters that will receive the export consignments and will subsequently distribute the same in overseas markets. However, the cost of building the same is huge (estimated at around a crore) and is entirely non-feasible for any individual exporter to consider financing such a project. In this regard, the Market Access Scheme by the Government of India may be explored to help support such initiatives.

e) Developing a market intelligence-cum-marketing network

A majority of the exporters are not aware of the benefits/ pre-conditions for exporting mango to countries other than Bangladesh. They are often not sure about the quality specification and infrastructural requirements. Moreover, they feel that unlike Bangladesh market, where they already have a well-established information network, in other countries they might face problems in realising payment for their export consignments. These gaps may well be addressed if some kind of information-cum-export handling agency is created by roping in Agricultural and Processed Food Products Export Development Authority (APEDA), Indian Institute of Foreign Trade (IIFT), Federation of Indian Export Organisations (FIEO) and few professional marketing consultants. This multidimensional body will not only provide valuable market information but will also provide assistance and help monitor the various procedures that the exporters need to follow for exporting their consignments.

f) Technological support to ailing units

Change in technology is imperative to any development in the arena of trade in the face of increasing competition. This change is not always a cost-efficient one and might call for displacement of the existing technology. The processing units in Malda are, in many ways, lacking in new-age technology and cutting edge equipments and infrastructure, which requires substantial investment, which is often not possible for weaker units to finance. If technology transfer support/assistance is provided to the ailing units, along with

marketing ideas, by roping in marketing consultancies, it is likely to benefit them in a big way. This will help them compete with big players in the processed food market, both in the common consumer segments like juice, pickles, etc., as well as in selected niche segments like – *Amshatto*, *Amchur*, etc.

g) Representation of all stakeholders in the Board of Trade

It is noticed that the primary producers and civil society organisations (CSOs) have no representation in the Board of Trade. Inclusion of these stakeholder groups in the Board is highly desirable, since that will not only ensure a wider consultation while formulating policies but will also incorporate concerns of the vulnerable and grassroot groups.

Conclusion

The NFTP may be considered as a welcome step taken by the Government of India to enhance exports of indigenous products. This policy had a considerable impact on the mango economy of Malda, as discussed in the previous sections. It had its manifestations through increase in seasonal employment in various areas of mango production and also in supporting sectors. Though in an indirect manner, it has arguably led to increase in literacy rate and women empowerment, a lot of that has been possible only because of a host of other government schemes and policies such as NREGS, Sarva Shiksha Abhiyan (SSA), Swarna Jayanti Gram Swarozgar Yojana (SGSY), promotion of women SHGs, etc.

However, the Malda mango still continues to be plagued by rather low volumes of export. Barring Bangladesh, the average amount of export to other destinations since the last couple of years has not been more than two metric tonnes. This is not a very encouraging figure, especially considering the fact that good agricultural practices in the district have led to an increase in productivity of mango. If no further export markets are explored, then most of the mango growers are likely to face the undesirable state of over-production and corresponding financial loss, which, in turn, may have an effect quite reverse to the objectives and aspirations of NFTP.

Thus, ensuring increase in exports is the need of the hour. A concerted and collective effort is needed in this direction from the Central and state governments and also all the stakeholders, including growers, exporters and processing units. Such an effort will go a long way in helping tide over the export bottlenecks and the looming marketing crises that the mango economy of Malda faces now.

This Briefing Paper has been prepared by Arnab Ganguly, Keya Ghosh and Sumanta Biswas of and for CUTS Calcutta Resource Centre, as part of the project entitled, 'Grassroots Reachout & Networking in India on Trade & Economics' (GRANITE Phase II) with support from Oxfam India & Royal Norwegian Embassy, New Delhi, India

