

## **INPUT DELIVERY STRATEGY FOR HIGHER BORO PRODUCTION**

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**Centre for Policy Dialogue (CPD)**

House 40/C, Road 32, Dhanmondi R/A

Dhaka 1209, Bangladesh

Telephone: (+88 02) 8124770, 9141703, 9141734, 9145090

Fax: (+88 02) 8130951

E-mail: [info@cpd.org.bd](mailto:info@cpd.org.bd)

Website: [www.cpd.org.bd](http://www.cpd.org.bd)

Blog: [www.cpd.org.bd/Blog/](http://www.cpd.org.bd/Blog/)

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The **Centre for Policy Dialogue (CPD)**, established in 1993, is a civil society initiative to promote an ongoing dialogue between the principal partners in the decision making and implementing process. The dialogues are designed to address important policy issues and to seek constructive solutions to these problems. Over the past years, CPD has organised a series of such dialogues at local, regional and national levels. CPD has also organised a number of South Asian bilateral and regional dialogues as well as international dialogues to pursue for the LDC interests in various fora including WTO, UN and other multilateral organisations. These dialogues have brought together ministers, opposition frontbenchers, MPs, business leaders, NGOs, donors, professionals and other functional groups in the civil society within a non-confrontational environment to promote focused discussions. CPD seeks to create a national policy consciousness where members of civil society will be made aware of critical policy issues affecting their lives and will come together in support of particular policy agendas which they feel are conducive to the well-being of the country.

In support of the dialogue process the Centre is engaged in research programmes which are both serviced by and are intended to serve as inputs for particular dialogues organised by the Centre throughout the year. Some of the major research areas of CPD include: *Macroeconomic Performance Analysis; Resource Mobilisation and Fiscal Policies; Poverty, Inequality and Social Justice; Agriculture and Rural Development; Trade, Regional Cooperation and Global Integration; Investment Promotion, Infrastructure and Enterprise Development; Climate Change and Environment; Human Development and Social Protection; and Development Governance, Policies and Institutions*. CPD also conducts periodic public perception surveys on policy issues and issues of developmental concerns. With a view to promote vision and policy awareness amongst the young people of the country, CPD is also implementing a *Youth Leadership Programme*. CPD maintains a broad network with institutions working in common areas of interest, and has partnered with some of these in organising international events both in Bangladesh and abroad.

It may be of interest to note that in recognition of its track record in research, dialogue and policy influencing, CPD was selected as one of the awardees under the Think Tank Initiative (TTI) through a globally held competitive selection process. TTI is supported among others by Bill and Melinda Gates Foundation, William and Flora Hewlett Foundation, UK Department for International Development (DFID) and Netherlands Directorate-General for International Cooperation (DGIS), and is implemented by the International Development Research Centre (IDRC), Canada.

Dissemination of information and knowledge on critical developmental issues continues to remain an important component of CPD's activities. Pursuant to this CPD maintains an active publication programme, both in Bangla and in English. As part of CPD's publication activities, a **CPD Dialogue Report Series** is brought out in order to widely disseminate the summary of the discussions organised by the Centre.

The present report contains the highlights of the dialogue on ***Input Delivery Strategy for Higher Boro Production*** held on 9 February 2008 at the CIRDAP Auditorium, Dhaka. The dialogue was organised under CPD's *Independent Review of Bangladesh's Development (IRBD)* Programme.

**Assistant Editor:** *Anisatul Fatema Yousuf*, Director, Dialogue and Communication, CPD

**Series Editor:** *Professor Rehman Sobhan*, Chairman, CPD

## THE DIALOGUE

The Centre for Policy Dialogue (CPD) organised a dialogue titled *Input Delivery Strategy for Higher Boro Production*, on 9 February 2008, at the CIRDAP Auditorium in Dhaka. The dialogue was chaired by *Professor Rehman Sobhan*, Chairman, CPD. *Dr C S Karim*, Hon'ble Advisor to the Caretaker Government, Ministries of Agriculture and Water Resources, Government of Bangladesh; and *Dr A M M Shawkat Ali*, Hon'ble Advisor to the Caretaker Government, Ministries of Health & Family Welfare and Food & Disaster Management, Government of Bangladesh, were present as Special Guests. *Dr Quazi Shahabuddin*, Director General, Bangladesh Institute of Development Studies (BIDS) was present as the Guest of Honour. *Dr Uttam Deb*, Head, Research Division, CPD presented the keynote paper.

Experts from all sectors, including economists, researchers, agro-scientists, government officials and representatives of non-government organisations (NGOs) attended the dialogue. This report presents a brief resume of the keynote presentation and a summary of the discussion among the participants of the dialogue.

## WELCOME ADDRESS

*Professor Rehman Sobhan* initiated the dialogue by welcoming the participants. He also acknowledged the presence of *Dr Z Karim*, Chairman, Centre for Agri Research and Sustainable Environment and Entrepreneurship Development (CASEED); and *Dr M Asaduzzaman*, Research Director, BIDS as the Designated Discussants.

*Professor Sobhan* recollected the record Boro production of Bangladesh during 1998-99 season, after a devastating flood. This high production of Boro crop ensured a stable food security situation for the year, which was a significant achievement, he mentioned. *Professor Sobhan* hoped that today's dialogue session with a gathering of very distinguished people, would share many experiences and provide many such lessons for all relevant stakeholders. All the professional ideas generated from the discussion would impact positively on the current Boro production situation, he hoped.

## THE KEYNOTE PRESENTATION

*Dr Uttam Deb* began his presentation by stating that Boro is the major rice crop of Bangladesh which provides about 55 per cent of total rice production. This year however, two floods and *Sidr* have destroyed 14-20 lakh metric tonnes (MT) of rice. Under this circumstances, Ministry of Agriculture (MoA) has set a target of producing 1.75 crore MT of Boro rice in 45 lakh hectares (ha) of land. In other words, MoA has set a target of producing 16.94 per cent higher production in this Boro season, compared to the last year. Achieving this target would certainly require extra effort, particularly for supply of various inputs such as seed, fertiliser, irrigation and agricultural credit, by the concerned agencies and stakeholders. The present study has made an attempt to review the input delivery situation with a view to suggest some policy measures to attain the targets of higher production of Boro rice.

## **Boro Production Target: Is It Realistic?**

The MoA has set a target of cultivating Boro rice in 45 lakh ha of land comprising of 12.5 lakh ha of hybrid rice, 31.25 lakh ha of HYV rice and 1.25 lakh ha of local Boro rice. According to the Department of Agriculture Extension (DAE), total area under Boro rice in FY2006-07 was 43.71 lakh ha which was comprised of 3.98 lakh ha of hybrid rice, 38.11 lakh ha of HYV rice and 1.62 lakh ha of local Boro rice. In other words, this year's targeted total Boro area is 2.95 per cent higher than actual Boro area in the last year (FY2006-07). In case of hybrid, this year's target is 214.07 per cent higher than last year, while it is 18 per cent and 22.84 per cent lower for HYV and local Boro rice. In terms of rice production, target for Boro rice production is set at 1.75 crore MT which is 16.94 per cent higher than last year's actual production. The questions posed here are: is this a realistic and achievable target? *Deb* in his presentation affirms that two factors are playing in favour of such possibility – support of the irrigation infrastructure and availability and access to other inputs (e.g. seed, fertiliser, pesticide, agricultural credit, etc.).

## **Reality Check for Irrigation Infrastructure**

Boro is produced in the dry session. Therefore, availability of irrigation is a pre-condition for growing Boro rice. According to the *Minor Irrigation Survey Report 2006-07*, irrigated area in the *Rabi* season was 48.83 lakh ha which includes Boro rice, potato and other *Rabi* season crops. Available information also revealed that properly functioning irrigation equipments are also sufficiently available. As is known, currently a total of 676,588 irrigation equipments comprising 6,378 deep tubewells (DTW) (5,339 electricity-operated; 1,039 diesel-operated), 572,161 shallow tubewells (STW) (44,903 electricity-operated; 527,258 diesel-operated), 82,477 low lift pumps (LLP), and 15,572 other irrigation engines are in operation. These information indicate that such infrastructural support as regards irrigation should be adequate to achieve the Boro production target.

The study has also analysed the upazila-level irrigated area brought under modern irrigation in FY2006-07 which also suggests that the necessary infrastructure for irrigation is available to achieve the targeted Boro area.

## **Will the Target for Boro Rice Area be Achieved?**

A review of the progress in the Boro planting areas until 31 January 2008 indicates that farmers have already planted Boro rice in 28.81 lakh ha. In other words, 64 per cent of the targeted Boro rice area has already been planted. Area under hybrid rice plantation is 5.99 lakh ha, which is 48 per cent of the target. *Dr Deb* reminds the audience that plantation of hybrid rice is not recommended beyond January; and therefore, no more hybrid plantation should be expected in the current season. Instead, expansion of HYV in low-achieving districts should be emphasised.

29 districts were identified as low achievers in terms of HYV plantation. Among these, 10 districts were categorised to achieve very low progress (<40 per cent of target).

## **Input Delivery Situation**

### **Seed**

Describing the situation of seed, *Dr Deb* informed the fora that an extensive review of five leading newspapers (Prothom Alo, Daily Ittefaq, Jugantor, The Daily Star, and The Financial Express) for the period 1 December 2007 to 8 February 2008 was undertaken for the study. It revealed an adequacy of availability of rice seeds.

### **Fertiliser**

While discussing the status for fertiliser, *Dr Deb* notified that a similar review of the above mentioned newspapers disclosed that farmers of 12 upazilas under 11 districts experienced shortage of fertiliser in December 2007. Crisis was mainly reported for triple super phosphate (TSP) and muriate of potash (MoP), and for urea and diammonium phosphate (DAP) to a lower extent.

In January 2008, farmers of 26 upazilas under 15 districts had reported incidences of fertiliser shortage. According to The Daily Star (31 January 2008), fertiliser crisis dashed farmers' hope in eight northern districts where supply of TSP and MoP was reported to be only about one-fifth of the total requirement. During the first week of February (1-8) 2008, only Daily Jugantar reported that farmers of Bhola (Char Fashion and Burhanuddin) faced problem in procuring TSP fertiliser.

The gradual progression reflects the assumption that the crisis has subsided to a great extent. However, *Dr Deb* made a note of caution recalling last year's experience. Last year, a severe cry-out was broken in the form of public protest for the lack of availability and high prices of fertiliser. With the government intervention, the crisis was reduced by January. However, the predicament was back again for urea, albeit to a lower extent, in the late February and early March of 2007. Concerned authorities need to be vigilant, as we approach that lean phase, *Dr Deb* suggested.

During the CPD-BRAC joint consultations with farmers in six northern districts (Tangail, Sirajganj, Dhunot (Bogra), Gaibandha, Rangpur, Kurigram and Lalmonirhat), in October 2007, farmers opined that they would prefer to buy fertiliser from the free market rather than buying from the present system of distribution through government channels, even if they have to pay a little higher price. This is because, through the present system farmers are getting only 50-70 per cent of their requirement for fertiliser.

### **Irrigation**

Irrigation is the major obstacle for the farmers while growing crops in the dry season. *Dr Deb* presented a worrying picture of the farmers' perspective about the current situation. During the CPD-BRAC joint field visit and consultations with farmers in October 2007, farmers with diesel-operated pumps reported their concern about the rising cost of irrigation. Majority of the farmers purchase water from pump-owners. Three modes of payment for water charge are currently in place. These are: crop-sharing arrangement, fixed charge on per acre basis,

and machine rental system where the farmers directly supply diesel. The fixed water charge has increased to 2,000-2,400 per bigha for Boro paddy, which was Tk. 1,200-1,500 a few years back. Water charge is paid in installments and must be fully paid by the time of flowering of the plant. In crop-sharing arrangement, currently one-fourth of the produce is paid to the STW-owners, and the crop is shared in the field at the time of the harvest.

On the other hand, farmers having electricity-operated irrigation facilities demanded for uninterrupted electricity supply during the harvesting period. The study showed that in FY2006-07 (July-February), electricity usage for irrigation was only 39.66 MKWh, compared to 78.8 MKWh of the same period in FY2003-04, a drastic decline of about 50 per cent in two years. As a greater target is set for the current season, such decreased supply of electricity would become a pounding constraint for the farmers. Being aware of the low usage due to non-availability of electricity for irrigation, government has recently declared strict enforcement of closure of all shops and shopping malls in urban areas, by 8.00 pm.

*Dr Deb* presented the statistics of regional distribution of electricity and diesel usage for irrigation. Based on the level of dependence on electricity for irrigation all districts were grouped into six categories: (i) no electricity-operated irrigation; (ii) negligible; (iii) low; (iv) medium; (v) high and (vi) very high.

The study revealed that 11 districts have high dependence on electricity-operated engines. In terms of land area, 24 upazilas have very high dependence (>10,000 ha) on electricity-operated engines. The study also identified 73 upazilas to have high dependence (>5,000-10,000 ha) on electricity-operated engines.

*Dr Deb* next moved on to the situation of diesel-operated irrigation system. 16 districts have high dependence (>75,000 ha) on diesel-operated engines, and in terms of percentage, 15 districts have extreme dependence (above 90 per cent). Converting the status for diesel-operated engines, in terms of upazilas, it was found that 141 upazilas have very high dependence (>10,000-40,000 ha), whereas 115 upazilas have high dependence (>5,000-10,000 ha) on diesel-operated engines. In percentage, the numbers of upazilas are found to be as follows, 58 upazilas are fully diesel-operated; 247 upazilas have high dependence (>70-99 per cent); and 87 upazilas have medium dependence (>50-70 per cent).

### ***Agricultural Credit***

There is acute shortage of working capital for agriculture, particularly in the flood and *Sidr* affected areas. The farmers reported that they would require Tk. 6,000-12,000 per acre in cash for cultivation of Boro, depending on the mode of payment of the irrigation charge.

The current paper suggests that the government should have a coordinated initiative, particularly involving the private sector banks, along with the specialised government banks, to enhance the inflow of credit to rural areas. The NGOs providing microcredit could play an effective role in this area. But the usual practice of recovering microcredit in weekly installments immediately after disbursement, will not work for the supply of agricultural loans. There is a need for devising appropriate delivery and recovery mechanism for agricultural credit operations to be effective.

## **OPEN DISCUSSION**

### **Target Realistic or Ambitious?**

The first major question raised on the floor was whether the target set for the current Boro season is realistic and achievable. Almost all the participants more or less agreed that the target is well-achievable provided certain conditions are met.

*Dr M Asaduzzaman*, Research Director, BIDS, one of the designated discussants rationalised the target by saying that empirical experiences in Bangladesh suggest that when Aman crop fails, the target of Boro estimate is increased to meet up with the shortfall of food production.

*Dr M Shahidul Islam*, Director, Field Services Wing, DAE, agreed with Dr Asaduzzaman. He said that the target set for this season is certainly ambitious; referring to the 1998 disaster, he observed that at that time higher target was achieved by active participation of the farmers and other stakeholders of the relevant sector. And also all factors including climate and other inputs were very conducive towards achieving the Boro production target. He, however, said that, if the electricity and fuel distribution, along with subsidy provision is implemented properly, it can be stated confidently that the estimated goal is very much within the reach. He urged that after all the natural calamities of this season, like 1998, all stakeholders need to work together, again.

*Dr Z Karim*, Chairman, Centre for Agri Research and Sustainable Environment and Entrepreneurship Development (CASEED), the other Designated Discussant of the session also stated that achieving the target is possible.

*Dr Md Nur-E-Elahi*, Director General, Bangladesh Rice Research Institute (BRRI) echoed with most other participants by stating that hybrid rice is well known for its high yielding capacity, and the target is achievable even with some delayed plantation.

Guest of Honour of the dialogue *Dr Quazi Shahabuddin*, Director General, BIDS also agreed with the speakers in his speech, and noted that the Boro target estimated for this year is achievable, provided input deliveries reach the farmers timely and of the required quantity.

On the same issue, *Professor Mustafizur Rahman*, the Executive Director, CPD and *Dr C S Karim*, the Hon'ble Advisor to the Caretaker Government, Ministries of Agriculture and Water Resources, Government of Bangladesh and a Special Guest of the occasion posed a somewhat different point of view. They observed that this is not a question of whether the target is ambitious or not; this is about the amount required to meet the acute deficit of the food production. Responding to the critique of setting such an ambitious target the Advisor mentioned that the target was set after discussing it with all private sector stakeholders.



## Plantation Achievement

Some of the participants were apprehensive about the status of plantation. The question was – whether it would be possible to complete the plantation within the specific period.

*Dr Elahi* particularly mentioned that 15 February is the optimum time to complete the plantation. However, he claimed that BRRI is recently working on two new specimens of hybrids – one for the Boro season, and another for the Aman season, with notable success. These new breeds are showing that they are capable of fulfilling the target, even with a delay; hence, it would create interest among the farmers to grow hybrid crop later in the season, if no more natural disaster strikes.

*Dr C S Karim* observed that production cost would increase to some extent if the plantation is not completed within the stipulated time. He mentioned that the plantation schedule failed at areas where outstanding crops such as dal, mustard, etc. were cultivated in the intermediate period between Sidr and Boro, and he stressed again that it did not occur due to any shortage of input delivery.

*Dr Md Abdur Razzak*, Executive Director, Bangladesh Agricultural Research Council (BARC) informed that almost 65-70 per cent of the total estimated plantation has already been completed and only 30 per cent remaining. He expected that the climate situation is the main factor responsible for switching the pattern of crop slotting. This has delayed the Boro cultivation. Moreover, farmers required cash for their subsistence and investment for inputs on Boro, and hence they grew some short-term crops, such as mustard, as their cultivation cost was relatively low: to generate some immediate cash income. This has been a trend for the last few years, and especially this year it was highly noticeable.

*Dr Razzak*, however, noted that if the entire plantation is completed within the period, as recommended by the agro-experts, a very good harvest will be possible, and the production will even cover up the deficit of last season. *Dr Shahidul Islam* was optimistic with the statistics shown till 31 January 2008, even though the plantation rate was quite slow. He pointed out that the progress in the last few weeks is noticeable. *Mr Harun-Ar-Rashid*, Executive Director, Agricultural Advisory Society also remarked that he was sure about the possibility of achieving the target, as 6 lakh ha of plantation is already completed, and the rest of the 2 lakh ha will be completed by next month.

## Timely Input

Throughout the dialogue, it was clearly emphasised and echoed in all participants' voices that 'timing' is the key factor in having a bumper production under such a difficult condition.

Discussants of the dialogue *Dr Z Karim* and *Dr Asaduzzaman* strongly suggested to ensure all inputs for the current Boro season, including the planned aid (if any) within the stipulated period. *Dr Asaduzzaman* particularly emphasised on the application of fertiliser on right time, to have the maximum production.

While explaining the importance of the timing for input delivery *Dr Elahi* stressed that to cover the acute food deficit, an increased target of Boro production was a pragmatic approach taken by the government. The target is well-attainable, if the timely inputs are ensured. The timely availability of inputs is associated with water, fertiliser distribution mechanism, social status and economic condition of the farmers. He further elaborated that Boro as a crop is not about nourishing properly, it is more about timely completion of plantation complemented by timely delivery of other inputs. In this connection he also mentioned about the hybrid rice, and said that there is a scope of planting HYV seeds at a bit later stage. "But hybrid is a sensitive crop to manage. It is sensitive to temperature and humidity. So ensuring proper care would ensure its full potential of production, and would enable us to achieve the target," he added. *Mr Md Ruhul Amin*, Research Director, Food Planning and Monitoring Unit (FPMU), Ministry of Food and Disaster Management shared farmers' view which he received during one of his visits to the field. Farmers stated that they would prefer to buy fertiliser from the open market and would be willing to incur an increased cost to some extent if necessary, but they want to be ensured of the timely access to the required inputs.

*Dr Mohammad Abdur Razzaque*, Former MP, Bangladesh Awami League and *Begum Matia Chowdhury*, Former Minister, Ministry of Agriculture spoke in the same tune as well; stressing that delivering inputs to the farmers, in due time will be the key factor for achieving Boro production target. *Begum Matia Chowdhury* drew attention to a few reports of the newspapers, saying that at Bagerhat district, seeds (Heera and Hybrid) worth of Tk. 2 crore, which is to be distributed by the government as aid, has reached the farmers just now, when they are almost at the completion stage of plantation. These seeds will not help them any more, which could have been very important just after *Sidr*. Similarly, if there is abundance of fertiliser in the market during March, it will be of no use to the farmers. So ensuring timely input delivery is the key factor for the targeted bumper production, she said.

### **Quality of Seeds**

While speaking at the session, some of the participants focused on the quality of the inputs, especially for seeds. Quality of the seeds would complement the effort of timely delivery of inputs to the farmers and thereby enhancing the total food production, they said.

*Dr Z Karim* put forward the issue of quality of seeds as one of the vital factors in achieving the target. He said that hybrid seeds are usually supplied by private sector. The quality of seeds often differs from one dealer to another. Dealers' intentional tampering with the quality is also a problem faced quite frequently, as there is no initiative or agency present in the field with the responsibility of ensuring quality control.

*Dr C S Karim* admitted that currently there is no mechanism for quality assurance of this vital component. The government will look forward to receiving any assistance (from private sector, donors) to enhance the capacity of this sector. However, he noted that this season, seeds were available adequately, and had reached the farmers in proper time without any problem.

## **Fertiliser Distribution: Strong Monitoring could be the Answer**

Fertiliser is the most sensitive component among the agro-inputs, according to the dialogue participants. The recent increase of fertiliser prices in the global market has posed even more critical scenario on the post-disaster economic condition of the farmers. In order to smoothen the implementation of the fertiliser distribution system, some very constructive options were discussed in this dialogue.

*Dr Z Karim* recommended to increase the number of sub-dealers in the chain of suppliers of fertilisers. Presently, the district commissioner office has the sole right in employing the sub-dealers, which is creating a major problem in the supply chain of fertiliser. However, he agreed with the keynote paper by saying that distribution in the free market will be most appropriate system to ensure sufficient supply for fertiliser.

*Dr Asaduzzaman* shared his recent field experience on the actual fertiliser situation in different areas of Bangladesh. He said that the farmers suggested that there was certainly an inadequacy of fertiliser, particularly for TSP and MoP. He also agreed with Dr Deb's findings about farmers' demand to have open market sale of fertiliser.

*Professor Mustafizur Rahman*, however, disagreed with this view and said that even though the private sector or open market system is perceived as potential solution of the problem, the Bangladesh Agriculture Development Corporation (BADC) which has the strongest network for supply chain should be able to do the job more efficiently. He felt that if BADC is given this responsibility, the organisation will also have an opportunity to be restrengthened.

*Dr Quazi Shahabuddin* also agreed with these two solutions in increasing the efficiency of fertiliser distribution system during the crisis. About the monitoring of the channels he said that the government agencies (e.g. BADC) are strong enough to run the monitoring committee, if put in function.

*Dr Abdur Razzaque* drew examples of the most successful period in the history of agricultural development during 1996-2001. During that period, fertiliser and all other inputs were marketed through private channels. The total system was strongly regulated, and it worked very efficiently.

Adding to Razzaque's comment *Begum Matia Chowdhury* referred to the fact that the farmers do not come to the donors with their problems. They come to their public representatives. The present government, i.e. the Caretaker Government does not have public representative. So they are not getting proper feedback and information on irregularity of the distribution system from the field.

On the issue of dealership, she remarked that the government should not have expanded the network beyond upazila level. They do not have the network to operationalise this monitoring mechanism, and as mentioned before, the government officials will not receive appropriate feedback under the current state of emergency. So her suggestion in this regard is not to set an ambitious target through expansion of network.

Responding to some critiques over expanding the distribution network, *Dr C S Karim*, the Advisor said the number of distribution point has been increased for proper management.

*Dr Rushidan Islam Rahman*, Research Director, BIDS raised the issue of sustainability of the infrastructure for fertiliser distribution system. She strongly emphasised that the government should respond to the need for building a long-term strategy for proper fertiliser distribution system. The 'hand-to-mouth' approach only addresses the short-term requirements. Instead a protracted strategy of fertiliser distribution channel would create a lot of flexibility in the food supply, she noted.

*Mr Ad Spijkers*, the FAO Representative in Bangladesh spoke on the same issue. He said that fertiliser is the most critical input for rice production, and therefore, both immediate and long-term action plans are required to manage the availability of this input. He informed the dialogue that the Food and Agriculture Organization of the United Nations (FAO) is planning to conduct a study on needs assessment for an effective distribution system for Bangladesh on a long-term basis. However, he insisted that NGOs and private sector should come up with intervention plans to aid the farmers in this regard.

*Dr C S Karim* pointed out that even factor such as decline in river navigability, restrains the mobility of cargo barges with fertiliser and fuel, and delays the farmers' access to these inputs. He emphasised on a comprehensive solution to the problems related to the distribution system. He urged for cooperation from all stakeholders to this end.

*Professor Mustafizur Rahman* informed the dialogue that there are a considerable number of reportings on smuggling of the subsidised inputs, especially at the border regions. The prices of fertiliser and agricultural diesel are much lower in Bangladesh than the neighbouring country India, due to higher subsidy. So checking the border smuggle through proper law enforcing agency, is another key challenge.

On this note, *Dr Abdur Razzaque* also urged the government to make a thorough investigation about the speculation of fertiliser being smuggled in the border regions.

Adding another perspective to the issue, *Mr Sudhir Chandra Nath* recommended to subsequently increase the price of urea but to ensure to make it available to the farmers on time, as the government will not be able to keep subsidising urea for an unlimited period of time. This would help in eradicating fertiliser crisis as well.

### **Fertiliser Estimation: Why do we Face Crisis Every Year?**

Despite the sincere effort of the government, every year common scenario of the agriculture is the shortfall of fertiliser. Speakers at the dialogue pointed out that there is a huge gap found in the estimates of government agencies and local experts and the actual market demand.

*Dr Z Karim* presented some statistical data on fertiliser usage. Various stakeholders from different sectors, such as public and private sellers of fertiliser, importers, joint forces members have mentioned in various fora that over the last few years (2005 onwards) usage

of fertiliser has declined in Bangladesh, compared to other South Asian countries. In India, the usage growth has been 12.6 per cent, in Sri Lanka 15.2 per cent, in Pakistan 4.8 per cent; whereas in Bangladesh, it has decreased by about 4.8 per cent.

*Dr Z Karim* also mentioned that intensive interviews with upazila agricultural officers have revealed that their actual estimate of fertiliser demand is 30-40 per cent higher than their officially submitted estimate. Such underestimation could cause a fertiliser crisis during the ongoing crop cycle of *Rabi* and Boro seasons, as well. He strongly suggested that there should be monthly revisit on fertiliser demand, and increase annual projection of demand at least by 25 per cent.

Agreeing to *Dr Z Karim's* account of the fertiliser situation, *Professor Rahman* stated that for the last few years, shortage/crisis of fertiliser has been a common scenario. This is due to the fact that there is no national buffer stock for this vital input, and that farmers' production and usage estimation exceeds that of government agencies' estimation. So, it is indeed very urgent to develop a buffer stock. On the same issue *Dr Abdur Razzaque* noted that while importing fertiliser, only the requirement for rice is taken into account, not the other crops. This is why fertiliser crisis is created every season. So his first recommendation was to estimate the demand of fertiliser properly; and secondly, to develop a buffer stock for year-round use of this crucial input. A well-estimated buffer stock of fertiliser will be a key factor to attain advancement of agro-sector, especially after consecutive natural calamities, he noted.

*Dr Rushidan Islam Rahman* argued that the fertiliser projection by the author is rather conservative if one considers the size of the economy or the market. This should be revised to reflect the total requirement for a long-term effect, not only for the Boro season but also, for the upcoming Aman season.

*Dr A M M Shawkat Ali*, Hon'ble Advisor to the Caretaker Government supported *Dr Rushidan Rahman's* view, and said that the short-term requirements were fulfilled this season with much difficulty; however focus should be on the long-term sustainability.

### **Rice is a *Thirsty Crop***

Speakers of the session agreed with the keynote presentation on the importance of irrigation and put forward a few major solutions to the problems related to this component.

*Dr Z Karim* termed rice as a 'thirsty crop,' for which it is hard to predict how much water will be needed for irrigation of a certain piece of land. For effective management of irrigation he also highlighted the importance of quantity and conditions of the irrigation channels.

On the related issue *Dr Asaduzzaman* said that, to meet this year's record target, an increased acreage of land has been brought under Boro cultivation. Additional Boro cultivation area means additional equipment and additional arrangement for irrigation. Presenting some statistics on this *Dr Abdur Razzak* showed that the projected area for cultivation this year is 45 lakh ha against previous year's 38-42 lakh ha. Additional 3 lakh ha will therefore need to be brought under irrigation network. However, he also affirmed that

so far the joint support of the private sector and the government has enabled the irrigation network to cover the extended area of Boro cultivation. In this connection *Dr Razzak* mentioned that advanced technological transfer required in Boro cultivation has taken place to a great extent mainly with the initiative of the private sector. He urged them to also design appropriate training programmes for the farmers.

### **Electricity: The Key Factor for Irrigation**

Electricity, in the current Boro season, is considered as the key factor in ensuring irrigation. Traditionally, the irrigation system relied more on the diesel-operated pumps, due to electricity crisis. This year however, the government has already declared their all-out effort to ensure electricity in the rural areas for irrigation. Few such initiatives were discussed in the session.

Referring to some recent studies *Dr Z Karim* noted that over time coverage of electricity has declined, and urged the government to consider and handle the electricity situation with due sensitivity.

*Dr Razzak* proposed that the expansion of electricity network would work better to cover the additional 3-4 lakh ha of area projected for this season. He expressed his satisfaction that the government has already prepared a plan to ensure supply of electricity along with a contingency plan.

*Dr Shawkat Ali* recalled a few steps that had already been taken by the government to ensure the supply of electricity. He mentioned government's decision to cut-off electricity supply of urban areas in favour of rural regions during the harvesting season. The Advisor informed that the government would monitor the electricity situation carefully in areas that are heavily dependent on electricity for the next two months as suggested by CPD in this study.

### **Agro-credit**

In view of the two consecutive floods and cyclone *Sidr*, agro-credit has become a crucial input for Boro cultivation. The participants at the dialogue have also repeatedly mentioned that investing in Boro is expensive for the farmers.

Analysing the cost of investment on hybrid cultivation, *Dr Z Karim* pointed out that hybrid production is mainly concentrated in some specific zones. This is because specialised conditions, in terms of soil formation and climate, are required for good results of Boro production. His recommendation was to provide subsidy for agro inputs and at the same time, provide credit and related training to the farmers. In the present scenario of post-flood economy the government should concentrate on hybrid-prone regions, he noted.

In this context, *Dr Abdur Razzaque* stressed on two important issues related to distribution of agro-credit. He suggested the government to ensure, through proper monitoring, that the target farmers are getting access to credit, and provide credit to the farmers without any collateral.

*Begum Matia Chowdhury* appreciated the Bangladesh Bank's initiative to strictly monitor commercial banks as regards issuing agro-credit. She, however, was apprehensive about the initiative, capacity and competency level of the government machinery to reach such a huge target. She reminded the dialogue that during the post-98 flood period, the then-government decided that for the share-cropper farmers, loan would be sanctioned upon producing a certificate signed by the local headmaster. She was very much appreciative about that initiative, and suggested the government to be more precise and clear with their plans with agro-credit.

### **Right Time for Farmers' Subsidy**

During the post-disaster period there was a great debate on agro-subsidy. The government has planned to provide diesel subsidy to farmers for the current Boro season. The participants, however, had diversified opinions in terms of the timing and the form of such subsidies.

*Dr Z Karim* observed that if the government has made plan to provide any kind of subsidy to the farmers, right now is the appropriate time to implement that as the farmers need fund to invest on inputs and equipments for the HYVs, after floods and *Sidr*.

*Dr Asaduzzaman* noted that agro-subsidy is a major factor in Boro production, even more important than electricity. He strongly suggested against government's plan to distribute any subsidy during May, as he thinks it will not be useful for the farmers any time beyond March. Farmers need the subsidy when the crop is at the growing stage. They will need the money to procure inputs to be used at that time. The subsidy provided at a later stage could aid to the farmers' welfare, but not the production, he said.

*Begum Matia Chowdhury* also agreed with *Dr Asaduzzaman* on this point. She further emphasised that sometimes the farmers cut down their food intake and go through many other hardships to save money for an expensive crop such as Boro. Subsidy for water or diesel at a later stage of the season will not lessen the difficulties faced by the farmers.

While commenting on the irrigation systems, *Dr Asaduzzaman* pointed out that in some areas, both electricity and diesel-operated irrigation systems are being used simultaneously. In such cases, it is hard to identify the proportion of subsidy required for these two systems. *Mr Ciro Fiorillo*, Chief Technical Advisor, National Food Policy Capacity Strengthening Programme, FAO opined that in case of diesel-operated irrigation system the method of providing subsidy could influence the cultivation process.

In response to all the above issues raised by the participants, *Dr C S Karim* said that the foremost concern of the government is to ensure that the cash subsidy reaches the target farmers on time. Hence, the provision of subsidy is being delayed as at the present moment, the investment is being made by the pump-owners, not the farmers. The financial support will be provided in due time so that the farmers become the real beneficiaries of this very important assistance.

*Dr Abdur Razzaque* agreed with the view that identifying the target farmers and to make any form of subsidy available to them is the most important challenge for the government. It is often heard that the farmers are not the beneficiaries of the fertiliser subsidy. There is a lot of manipulation in the processing of such subsidies. So the government is expected to implement a strict monitoring system to ensure the access of subsidy to the actual farmers.

### **Private Sector's Role to Develop New Technologies and Train Farmers**

Speakers of the session acknowledged the significant role of the private sector in popularising the cultivation of hybrid rice in the country. Cultivation process and technology for hybrid rice is somewhat different from the traditional practice. It was the effort of the private sector in terms of input supply (especially, seed and technological support) that has not only made it well-accepted across the region, but also changed the concept of 'one-crop a season' for the farmers. The dialogue was notified by the relevant stakeholders that the advanced technological transfers required for the Boro cultivation had been possible because of the private sector initiatives.

*Dr Z Karim* pointed out that the cultivation of hybrid rice requires advanced technological trainings for the farmers. The government, therefore, should take special effort to organise appropriate training programmes for the farmers.

On the question of seed, *Mr Sudhir Nath* argued that the quality of seeds does not deteriorate due to its sensitivity to temperature and humidity. The quality deteriorates due to unskilled handling during the nursing of the seeds. *Mr Nath* noted that the technique of handling seeds for hybrid rice is a bit different and labourious. This is why the intervention with technical input is essential in succeeding with this crop. He appraised the effort of DAE in this regard, and a few private companies who have worked very hard to popularise this crop. *Mr Nath* mentioned that for the last three years, farmers have modified the cultivation technique, soil preparation and climatic adjustments to attain the best possible results with these varieties. They are extending their experiments, in various other parts of the country. This was observed in the Northern districts of Lalmonirhat and Kurigram, he added.

*Mr Nath*, however, disagreed with the concept that hybrids are adaptive only to certain regional conditions. He shared a few of his own experiences, where he found these varieties to have in fact, more capacity to adapt with different atmospheres and still generate higher production. He mentioned that he found some farmers of Southern districts to start hybrid production immediately after *Sidr*.

In this context *Dr Abdur Razzak* mentioned that after two floods and *Sidr*, the farmers have begun their own preparations in order to have higher production of crops. However, he also stressed the necessity to extend the training for the farmers on use of technical inputs for hybrid cultivation as well as for the capacity building of the trainers. They are collaborating with private entrepreneurs for having access to technical inputs.

On the same issue, *Dr Nur-E-Elahi* said the geographical location and sub-tropical environment of Bangladesh has provided the opportunity to grow rice all year round and almost everywhere in the country. This is how it is being possible to feed 150 million people.



The contribution of various Rice Research Institutions in the country is also noteworthy, who have developed 27 new varieties of rice over the last few years. The national food security now relies on three crops, instead of one. He further added that boosting success of this season could lead to enhance the target for next season.

*Mr Harun-Ar-Rashid* also acknowledged the private sector's role in introducing the hybrid technology and taking initiatives to provide its access to the farmers. However, he expressed a special note of appreciation for the 'techno-smart' farmers who have demonstrated their capacities to adapt to these technologies according to their own settings. He shared his personal experience at the Chalan Beel area, in this context, where farmers have achieved great success with hybrid production.

## **COMMENTS FROM THE SPECIAL GUESTS**

### ***Dr A M M Shawkat Ali, Hon'ble Advisor to the Caretaker Government***

*Dr Shawkat Ali* observed that the timing of the present dialogue was a bit delayed, as the Boro plantation has almost been completed by now. So this dialogue is rather a forum to make plans for next Boro season, he noted. A few facts presented in the dialogue, will however, have positive impact on the overall system of input delivery for the rice-based economy such as Bangladesh, he added.

He remarked that the present study, on input delivery situation would assist the government agencies more in terms of determining the course of action in the future. According to *Dr Ali*, the core issue for discussion at the moment is whether the target is achievable or not; and as to it he observed that the target is well-achievable.

Moving on to the private versus public channel for fertiliser distribution, he felt that the current system is an established system, and that the Caretaker Government did not want to fiddle with it.

On the issue of diesel subsidy, he noted that this session could not come up with any specific suggestion. He, however, appreciated the study findings on identifying 58 upazilas that are heavily dependent on diesel, and proposed that the diesel subsidisation programme should be tried as a pilot project in those areas.

On the issue of agro-credit, the Advisor felt that agro-credit was as important as any other inputs. He informed that for successful implementation of the agro-credit programme, the Bangladesh Bank has put forward some agro-friendly credit rules to all commercial banks. He remarked this initiative as a well-timed and excellent one.

Finally the Advisor thanked the organisers, researchers and the speakers for putting these important issues on the table, and hoped that it is the starting point for building a better future for agriculture sector in Bangladesh.

**Dr C S Karim, Hon'ble Advisor to the Caretaker Government**

*Dr Karim* disagreed with many speakers on their views about the timing of the current dialogue by saying that it is never too late to organise a forum, especially on an important issue such as this, as it gives a way for making plans for the next phases.

About the debate on the target, he mentioned that hybrid became the auto choice for the government immediately after the huge crop loss because of floods and *Sidr*. He updated the dialogue about the status of the delivery situation of each of the inputs and the government strategy concerning those. In this context, he also claimed that the seeds are available and had reached the farmers at appropriate time, without any problem.

*Dr Karim* admitted that there were some hiccups with the fertiliser situation. The government expected to meet the upfront demand for fertiliser at some stage of pre-Boro season. The survey estimated an overall demand of about 28 lakh MT of urea. However, this estimate was based on some miscalculation, as the multiple usage of urea was not taken into account. The deficit transpired when the agro-subsidised fertiliser, which was meant for agriculture sector, was bought by the industrial sector. This was very frustrating, he noted. He stressed that they are now looking forward to prepare for the upcoming Aman season, and working for an even higher target.

Regarding electricity for irrigation, the Advisor assured the dialogue that the government is fully committed to ensure the electricity supply during the harvesting period of Boro. The electricity demand is planned to be fulfilled in two ways: by using the irrigation pumps during off-peak hour, and by putting more credence towards rural demand than the urban.

Finally, he thanked the organiser, for creating such a forum, where each and every comment was a valuable lesson for the concerned service agencies.

**CONCLUDING REMARKS BY THE CHAIR**

*Professor Sobhan* wrapped up the session by saying that at the end of so many interesting discussions, ideas derived, it can be hoped that it will lead towards some positive results through the required actions taken by the Honourable Advisors present at the session. As for the timing of the dialogue, he agreed with Dr Shwakat Ali, in saying that this is not a session of the Technical Committee; rather it is to address a problem that has aroused in the present context.

He drew the conclusion thanking everyone present at the session.

## LIST OF PARTICIPANTS

(in Alphabetical Order)

*Mr Sheikh Ahaduzzaman*  
Programme Officer, FAO

*Mr C Q K Mushtaq Ahmed*  
Additional Secretary (Admin & Inputs)  
Ministry of Agriculture  
Government of Bangladesh

*Mr Mahbubul Alam*  
Joint Secretary  
Ministry of Water Resources  
Government of Bangladesh

*Dr Md Shahe Alam*  
Chief Scientific Officer and  
Head, Agricultural Economics Division  
Bangladesh Rice Research Institute (BRRI)

*Dr A M M Shawkat Ali*  
Hon'ble Advisor to the Caretaker Government  
Ministries of Health & Family Welfare and  
Food & Disaster Management  
Government of Bangladesh

*Mr S M Golam Ali*  
PRO to the Hon'ble Advisor to the  
Caretaker Government  
Ministries of Health & Family Welfare and  
Food & Disaster Management  
Government of Bangladesh

*Mr Md Ruhul Amin*  
Research Director  
Food Planning and Monitoring Unit (FPMU)  
Ministry of Food and Disaster Management  
Government of Bangladesh

*Dr M Asaduzzaman*  
Research Director  
Bangladesh Institute of Development Studies (BIDS)

*Mr Anik Ashraf*  
Research Associate  
Economic Research Group

*Mr Kbd Md Afzal Hossain Bhuiya*  
Principal Programme Coordinator  
Proshika

*Mr M Sadiqunnabi Choudhury*  
Assistant Professor  
Department of Economics  
Shahjalal University of Science and Technology

*Begum Matia Chowdhury*  
Former Minister  
Ministry of Agriculture  
Government of Bangladesh

*Dr Swapan Kumar Dasgupta*  
Joint Director  
Bangladesh Academy for Rural Development (BARD)

*Dr Uttam Kumar Deb*  
Senior Research Fellow, CPD

*Dr Md Nur-E-Elahi*  
Director General, BRRI

*Mr Ciro Fiorillo*  
Chief Technical Advisor  
National Food Policy Capacity Strengthening Programme  
Food and Agriculture Organization (FAO)

*Mr Aminul Islam Golap*  
General Secretary  
Jatio Krishak Samity

*Mr Mostafa Monzur Hasan*  
Lecturer  
Department of Business Administration  
Daffodil University

*Dr Md Elias Hossain*  
Associate Professor  
Department of Economics  
Rajshahi University

*Mr Muhammad Mosaddek Hossain*  
Lecturer  
Department of Economics  
Comilla University

*Mr Sk Sharafat Hossen*  
Lecturer  
Department of Economics  
Khulna University

*Mr Md Aminul Islam*  
Assistant Professor  
Shiddheswari College

*Dr M Shahidul Islam*  
Director, Field Services Wing  
Department of Agricultural Extension (DAE)  
Government of Bangladesh

*Mr Sirajul Islam*

Director  
Department of Agricultural Marketing (DAM)  
Government of Bangladesh

*Dr T M Tajul Islam*

Managing Director  
Horticulture and Export Foundation

*Dr A W Julfiqar*

Director (Admin), BRRI

*Dr Wais Kabir*

MD (NRM), BARC  
Director (Member)  
SAARC Agricultural Information Centre

*Dr C S Karim*

Hon'ble Advisor to the Caretaker Government  
Ministries of Agriculture and Water Resources  
Government of Bangladesh

*Dr Z Karim*

Chairman  
Centre for Agri Research and Sustainable Environment  
and Entrepreneurship Development (CASEED)

*Mr Sudhir Chandra Nath*

Programme Manager  
Agro Marketing, BRAC

*Mr Md Salauddin Palash*

Assistant Professor  
Department of Cooperation and Marketing  
Bangladesh Agricultural University

*Dr Shankar Kumar Raha*

Professor, Department of Cooperation and  
Agricultural Marketing  
Bangladesh Agricultural University

*Professor Mustafizur Rahman*

Executive Director, CPD

*Mr Md Khalilur Rahman*

Assistant Professor & Coordinator  
Department of Economics  
Asian University

*Mr Mohammad Lutfur Rahman*

Lecturer  
Department of Economics  
Jahangirnagar University

*Mr Md Matiar Rahman*

Chief Information Officer  
Agricultural Information Services (AIS)  
Ministry of Agriculture

*Professor M Mustafizur Rahman*

Former Vice Chancellor  
Bangladesh Agricultural University and  
Dean, Arts and Social Sciences, UDA

*Dr Rushidan Islam Rahman*

Research Director  
BIDS

*Mr Harun-Ar-Rashid*

Executive Director  
Agricultural Advisory Society

*Dr Md Abdur Razzak*

Executive Chairman  
Bangladesh Agricultural Research Council (BARC)

*Dr Mohammad Abdur Razzaque*

Former Member of the Parliament  
Agriculture & Cooperative Secretary  
Bangladesh Awami League

*Dr Arun Kumar Saha*

Head, Agriculture & Rural Development  
Asian Development Bank (ADB)  
Bangladesh Resident Mission

*Dr M A Salam*

Director, Research  
BRRI

*Dr Quazi Shahabuddin*

Director General, BIDS

*Professor Rehman Sobhan*

Chairman, CPD

*Mr Ad Spijkers*

FAO Representative in Bangladesh

*Dr Rezaul Karim Talukder*

Advisor, FAO and  
National Advisor  
National Food Policy Capacity Strengthening Programme  
Ministry of Food and Disaster Management  
Government of Bangladesh

*Mr Shah Md Helal Uddin*

Senior Assistant Chief  
Ministry of Agriculture  
Government of Bangladesh

## LIST OF JOURNALIST

(in Alphabetical Order)

*Mr Firoz Ahmed*  
Staff Reporter  
Bangladesh Today

*Mr Zafar Ahmed*  
Reporter  
Daily Bhorer Dak

*Mr Ashraf Ali*  
Senior Reporter  
Daily Naya Diganta

*Mr Rokonuzzaman Anjan*  
Staff Reporter  
Sangbad

*Mr Bishawjit Dutta*  
Chief Reporter  
Daily Amader Shomoy

*Mr Apurbo Stanly Gomes*  
Staff Reporter  
Radio Today

*Mr Nazmul Haque*  
Staff Reporter  
Daily Jugantor

*Mr Sadrul Hasan*  
Senior Reporter  
United News of Bangladesh (UNB)

*Mr Altab Hossain*  
Staff Reporter  
Jai Jai Din

*Mr Kamal Hossain*  
Reporter  
ATN Bangla

*Mr Humayan Kabir*  
Staff Reporter  
The Financial Express

*Mr Iftekhar Mahmud*  
Staff Reporter  
Prothom Alo

*Mr Faruk Mehedi*  
Senior Reporter  
Boishakhi Media Limited

*Mr Abu Hena Muhib*  
Staff Reporter  
Daily Amar Desh

*Mr Kawser Rahman*  
Special Correspondent  
Daily Janakantha

*Mr Remon Rahman*  
Reporter  
Daily Destiny

*Mr Sadequr Rahman*  
Staff Reporter  
Daily Sangram

*Mr Sajjadur Rahman*  
Senior Reporter  
The Daily Star

*Mr Shahadat Riad*  
Staff Reporter  
Bangla Vision