REPORT ON AN EXPOSURE VISIT ON SRI ACTIVITIES IN TRIPURA, APRIL 22-24, 2007

The exposure visit to Tripura was brought about due to an invitation by Baharul Mazumder of Tripura to the WWF-ICRISAT dialogue project to visit Tripura. The team included Dr Biksham Gujja and Vinod Goud from WWF, Dr Punna Rao from ANGRAU, Dr Mahendra Kumar from Directorate of Rice Research, Dr Shambu Prasad from Xavier Institute of Management, Bhubaneswar and Sri Kishan Rao from WASSAN and Sukshetram. Apart from Mahendra none of the team members had visited Tripura before. The state of Tripura shares a border with Bangladesh on three sides and is the smallest of the North Eastern states. We visited two (West and South) of the four districts and had extensive discussions with farmers, field-level agriculture department officials, the Director of Agriculture and the Minister of Agriculture.

Two striking features of SRI in Tripura is the scale of operations with large stretches of contiguous SRI plots of 30-50 hectares and the strong policy and field support of the Department of Agriculture so much so that SRI in Tripura perhaps is not promoted by NGOs unlike in other states. Though a small state (10,491 sq km) with a cropped area of 280,000 ha, the achievement with regard to SRI is considerable and provides hope and lessons to offer for the rest of the country. An estimated 14,000 hectares of rice is under SRI that is nearly 8% of the total land area under paddy. The plan objective for the current year (2007-08) is 30,000 ha that will push the SRI coverage percent into double figures. The conversion of paddy fields into SRI is indeed remarkable in a knowledge intensive technique such as SRI and would rank as the highest in India. (States such as Tamil Nadu and Andhra Pradesh might have greater area under SRI; SRI's share of their total rice production is much lower).

The achievement of Tripura has been due to the work of a dynamic agricultural officer, Baharul Mazumder, who was responsible for introducing SRI and systematically working towards overcoming its technical hitches before arguing the case with his peers and creating a positive environment for SRI. To the credit of the state government officials and their political support Tripura has been able to provide institutional support to its farmers in enabling them making the transition. It is the combination of the social entrepreneurial skills of Baharul and the policy support of the state government that is responsible for this transition.

The Tripura story is remarkable for the achievement has been without any outside financial support either from the centre or any donor agencies though they would indeed like to support the successful initiative. This report is in three parts. In part 1, we describe the origins of SRI in Tripura and place it vis-à-vis the context of rice growing in the state. In part 2 we describe the areas visited and our impressions based on the interaction with the farmers. In part 3 we describe the policy support for SRI and the prospects and implications of the work on Tripura for SRI in the rest of the country.

1. SRI in Tripura

The story of SRI in Tripura dates back to 1999 when Baharul Mazumder first heard of SRI from people in Calcutta. He was recuperating from an angioplasty operation and was trying to get in touch with some of his friends. Subrata Rana, a Cornell alumnus, was one of them. Rana played a role similar to Subodh Kumar Gupta and Smita Rawat, also Cornell alumni, who gave information and contacts to PRADAN in Purulia about SRI.[1] Rana had earlier shared some articles with Prof Ashis Chakravorty, who passed them to Baharul. On his return to Tripura Baharul decided to try out SRI based on the information he had. He first tried out single seedling and young age seedlings (10 days, 15 days, 20 days). His initial attempts to speak to farmers and agricultural officers were met with great scepticism. He then decided to try things out by himself in an area where he had worked, East Charakbai / Baikhora in South Tripura district. Simultaneously he was trying to reach Dr Norman Uphoff at Cornell. A friend from the Fisheries Department had known and had worked with Uphoff in Bangladesh and gave him the contact. Uphoff when contacted gave Baharul a lot of information and asked him to get in touch with Dr. Alapati Satyanarayana who was doing SRI work in Andhra Pradesh. Baharul received valuable inputs from Uphoff and Satyanarayana and often asked for their practical advice and experience from the SRI fields in Tripura. By 2002 SRI was being practiced by 22 farmers in first time use.

Rice in Tripura is grown in three seasons – Aush, Aman (winter) and Boro (summer). Apart from these many parts of Tripura follow shifting agriculture or Jhum. As the table below indicates, there has been a fall in cropping area and production in the state. With a view to set right this trend and increase rice production in the state the Tripura government constituted a

[1] He, to use Malcolm Gladwell's jargon in *Tipping Point*, was an important connector with a critical information flow to a ready actor. Connectors often have an important one time role in the spread of ideas and as the case of SRI shows are often outside the subject domain. Many SRI connectors have been outside the agricultural establishment.

committee, comprising Agriculture and Allied Departments, to prepare a perspective plan for achieving self-sufficiency in food by 2010.

CROP		1996-1997	1997-1998	1999-2000	2000-2001	2001-2002
Rice – Aush	A	53.95	52.71	53.24	27.41	40.26
	P	102.89	98.90	97.97	50.37	78.70
Rice – Aman (Winter)	A	140.01	138.40	138.89	136.28	137.22
	P	308.63	316.53	298.11	319.2	312.032
Rice – Jhum	A	8.55	9.91	10.00	10.73	8.38
	P	4.30	6.00	5.80	5.46	6.10
Rice – Boro (Summer)	A	56.43	56.76	53.35	57.73	55.30
	P	129.00	114.50	89.55	130.65	63.80
Total Rice	A	258.94	257.78	255.48	232.15	241.17
	P	544.82	535.83	491.43	505.68	547.53

Area [A] in '000 ha; Production [P] in '000 MT

To achieve the main goal of food self sufficiency by 2010 the government sought to increase irrigation potential in the state, increase cropping intensity from 169% to 283%, and introduction of hybrid and HYV rice to a large extent in Kharif.[2]

In this context of a drive to increase rice production, SRI emerged as an alternative based on Baharul's initial experiments in South Tripura. In a review meeting, the then Commissioner of Agriculture, Dr. G. S. G. Iyengar, was asking the Department officials as to what were the new things that were happening in their area. When the Deputy Director of Agriculture mentioned about SRI being practiced, the Commissioner who has an agricultural doctorate, closed the meeting and expressed interest in visiting the rice field. Later in the evening, he spoke to Baharul and commended him for the effort and discussions for scaling-up began.

Demonstration plots of SRI were planned in 400 places across the state in 2004, up from 88 in 2003. The Chief Minister instructed every village pradhan or panchayat head to visit the demonstration plot and explore how it could be taken up in their village. The active involvement of the Agriculture Department officials at all levels and the village-level functionaries of the Panchayat Department in 2005-06 ensured that a plan was in place for 2006-07 for 16,000 hectares under SRI. The silent transformation of SRI in Tripura has had a few visitors. In 2004, Dr. M. S.

[2] See http://tripura.nic.in/agri/planagri.htm for details.

Swaminathan visited some of the areas and commended the work, indicating that SRI be renamed as Sustainable Rice Initiative. Radha Singh, the central government Commissioner of Agriculture, was another prominent visitor.

2. SRI in Boro season 2006-07

Our field visit coincided with the Boro season crop. Many parts of the state were short of water and even though there were extensive lift irrigation schemes, the rivulets had dried up in many places creating dry field conditions. The night of our arrival 22nd April there were heavy showers which were a big relief to farmers and they were active in their fields when we visited them. The table below indicates the areas we visited along with the SRI extent in these villages.

Block (District)	Village	SRI extent	No of Farmers	Farmers interviewed
DAY-1				
East Nuagaon (W Tripura)	Dudhpatil	33 ha	41	Karanjit Choudhury Prabhat Das Bishnav Dinesh Debnath
Teliamura (W Tripura)	Hawaibari	35 ha	70	Dwijendra Das Bijendra Sarkar
	N Krishnapur	53		Bharat Sarkar
DAY-2				
Matabadhi (S Tripura)	S Bagma	42	128	
	Barobhaia	7		Santosh Pal
	E Kuphilong	30		Babul Dutta
Mirza (S Tripura)	East Mirza	30	200	Sanjit Mazumdar Sultan Mia Balram Dutta Jiten Mazumder
	S Mirza	11		Manoranjan Das
	Shamukchura	7-10 ha	40-50	Budhi Ram Naotia
Rajnagar (S Tripura)	Lakhipur	30		Kumod Debnath

Our first halt was in the village **Dudhpatil** in E Nuagaon, Jirania block. It was our first sight of contiguous SRI plots as far as we could see. On Baharul's advise the field boundaries were demarcated using coloured flags that were yellow in colour (pink and blue were used in other areas) with SRI written on them. The use of flags instead of rigid boards is an innovative idea that could be adopted in other areas as well.

The village was using breeder seed of the Satabdi variety and farmers expressed satisfaction with SRI. Farmers involved in breeder seeds multiplication are often the first adaptors of SRI. These farmers are used to treating seed with greater care and success in their fields often acts as motivation for other farmers in the region. We interviewed Karanjit Choudhury who tried SRI in 2.2 hectares. Karanjit had done transplantation in a week with staggering and used 14 labourers during transplantation. He heard about SRI first through a panchayat meeting and had received training from the Agriculture Department. He also saw the demonstration plot. To him SRI would increase yield and reduce cost of cultivation. His average productivity was 4.5 to 5 tonnes per hectare, and he expected SRI yields to be closer to 7.2 to 7.5 tonnes per hectare. The agricultural officer estimated an even higher yield.

We also spoke to a sharecropper Prabhat Baishnab who tried out SRI in 2 kanis or 0.8 acres own and 0.5 acres sharecropping. He felt SRI involved less fertilizer and inputs. He heard about SRI through local Village Agricultural Officer and had also seen other plots of relatives in S Tripura district and then he decided to have SRI in all his 1.3 ha. He has tried short duration paddy and medium duration (MTU 7029) in his plot. We asked him about water management and weeding problems and if he thought anything was necessary to improve agriculture in the region. He was wondering if there could be some equipment that could undertake the transplantation. He was more worried about even transplantation in the field due to this system and felt that labourers were sometimes planting too deep or too shallow. A transplanter might solve the problem.

We enquired about how was it that 44 farmers had agreed to take on SRI in the village. They mentioned the existence of an informal group of farmers already involved in managing water through the lift irrigation scheme, support from the department, and the visit to the demonstration plot. Dinesh Debnath was the first farmer to take up SRI in 2005. We learned about a government incentive for SRI that amounted to a total of Rs 4500 per hectare. Of this, most was in-kind and Rs 500 in cash -- Rs 400 was for procuring organic matter for composting and Rs 100 for nursery management. The department supplied azotobacter and recommended doses of fertiliser and pesticide if required. The discussions later revealed that democratic decentralisation through the Panchayati Raj system was an important factor in the success of SRI. These officials were the best motivators for the farmers.

Fig1. A wire marker used in Dudhpatil for spacing

Fig 2: SRI rice fields in Dudhpatil Satabdi variety

Our next halt was **E. Hawaibari** in Teliamura block. The lift irrigation system in the village had gone out of order here, and there was a dry spell. Timely rains and the SRI system saved their crop. We had a good chance to look at the implements here, and there was some discussion on the weeders being used. These weeders were brought in several years back with a view to popularize the line planting system of the Japanese. The designs were given to local welders who replicated them. The weeders are supplied by the Department and do not form part of the subsidy package of Rs 4500 per hectare. Baharul later observed that through SRI, he has been able to do something that the Agriculture Department has been trying hard to convince the farmers about, namely line-planting of rice plants. The visual appeal of line planting was quite high in the fields although spacing in many places was not in a square pattern with lines only in one row.

Discussions on use of the roller-marker indicated that there is scope to build on existing practices where farmers can now use better markers as they are in use in Andhra Pradesh. Kishan Rao observed that many farmers in Tripura were doing single-row and single-side weeding. This is less labour-intensive, but not very effective as weeding is not done in perpendicular directions. However we also felt that this is a good step in the learning curve of SRI. Starting with weeding in both directions can seem formidable from the labour point of view, and this is perhaps easier to introduce when farmer interest on SRI and experimenting with it is high.

Fig 3: SRI in Teliamura block with yellow flags to mark out the SRI fields

Fig 4: SRI implements in Hawaibari, local weeder and marker

Farmers' plot sizes in Havaibari were a bit lower with nearly 70 farmers practicing SRI in 35 hectares. We had interactions with Dwijendra Das in Havaibari, a farmer who took to SRI and is now practicing it in two hectares. Birendra Sarcar, another farmer, mentioned that he expected 5.5 tonnes per hectare yield, up from the current 2.8 tonnes that he was getting currently. Yield calculations can often be tricky, and we decided to try and follow the local system of computation instead of the standard systems. Converting later to standard systems might be easier. We later discussed if we should try and send some simple format to the farmers to measure their yields.

Fig 5: Ducks enjoying the rice fields as deweeding operations are on.

Fig 6: Line planting in SRI fields in Krishnapur

At **N. Krishnapur** we saw profuse tillering in the fields and had discussions on the methods used by the Agriculture Department to take forward SRI. Most SRI areas had a simple board (see figure below) that indicated the by-line '*Sri Paddothithe Dhaan Chaas*' in Bengali -- or 'Better cultivation

through SRI'. These posters had a farmer in the background doing weeding operation. A healthy feature of the display, unlike in many parts of South India, was the audience. Display and banners were all targeted at farmers unlike rigid boards elsewhere that often have English banners that seem more directed at research staff or outside visitors than to farmers.

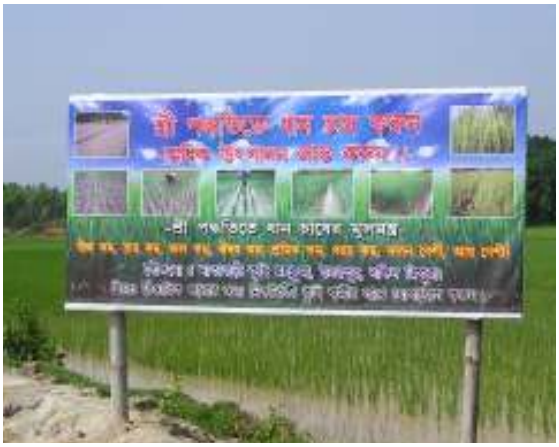

Fig 7: Poster indicating various SRI stages (S Bagma)

Fig 8: Bharat Sircar with his healthy tillered rice plant

We had some discussion on the names and modes of dissemination. The slogan used in Tripura went something like this '*Beej kam, saar kam, jal kam, aushadh kam, kharcha kam, phalan bishi, aay bishi*'. The slogan is similar to the main theme of 'more from less' in SRI and indicates lesser inputs in seed, fertiliser, pesticides, water and costs, with increased output and incomes.

Bharat Sircar's plot had vigorous tillering, and he counted 87 tillers from one plant in his field. He cultivated SRI in 0.5 hectares and expects about 4.8 tonnes yield. We tried engaging with farmers on questions of their perceptions on yields, water requirements, etc. and what could be done to improve SRI? This was more to encourage critical thinking among the farmers, and in few places we did get some ideas. We noticed that many farmers were trying out SRI with local varieties such as Pyjam and Gheekasa and Kalikhasa. An impending thunderstorm forced us to hurry our discussion with farmers.

We rushed back to Tripura for an appointment with the Director of Agriculture and the Minister, but could only meet the former as we were late and the Minister had to leave for another meeting with the Chief Minister.

Our brief conversation with Amar Das, Director of Agriculture, was more in the nature of exchanging our immediate impressions about SRI. When we expressed our amazement at the extent of the operation, he seemed pleased and even tried requesting the Minister to see if we could meet him briefly. The Minister was kind enough to agree to meet us the following day. Mr. Das mentioned that if we were so excited about West Tripura, we would probably be doubly excited after visiting South Tripura the next day.

Day 2: South Tripura, 24th April

We started early and went to **S. Bagma** and Matabadhi block in South Tripura district. SRI was being practiced in 42 hectares with 128 farmers. Irrigation for 30 hectares was by lift irrigation and 12 hectares by deep tubewell. They have been having a dry spell due to decreased inflow into the river Gomti for the past month. The rains of the previous two days led to a flurry of activity on the field with farmers busy with the weeding operations (see picture below).

Fig 9. Farmers busy with the weeding operations in S Bagma.

Fig 10: Farmers showing the wooden and iron frame weeders

We had discussions on the weeders with the Agriculture Department officials. The subsidy on weeders is 75%, and they currently cost Rs 625 with Rs 156 contributed by the farmers. We examined the weeders quite closely and found that modifications are being tried out with wooden and steel frames. However, servicing of the weeders is likely to become a major issue, and it appears that there is a lot of scope for design intervention. Kishan Rao with experience of the Mandava double-row weeders spoke to the farmers, and we realised that there was a lot of play at the main shaft. Continued use could make it dysfunctional. A detailed

workshop on weeder design perhaps needs to be done in Tripura like has been done in Andhra Pradesh.

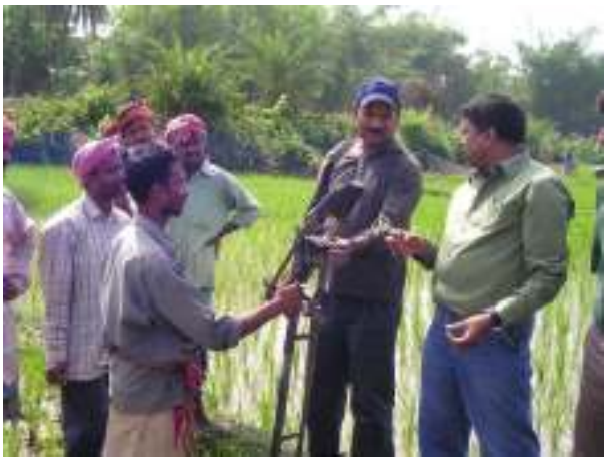

Fig 11: Farmers discussing the construction of blades with Dr Bhiksham of WWF and Baharul Mazumdar.

Fig 12: Babul Dutta and his BR 29 (Bangladeshi) rice field in Kuphilong.

We had an idea of the spread effect of SRI. Many farmers have taken to SRI even without the package scheme and hope to benefit from the package in the coming financial year. This led to discussions on what if the government withdraws the package; farmers were confident that they could manage in a few years by themselves. They also mentioned that they would have perhaps lost the crop due to the dry spell but for SRI. We also spoke to the Jala Committee (water users association) president Ms. Mukul Mazumdar. She was extremely articulate.

Our next halt was **Barobhaia,** a small (by Tripura standards) extent of 7 hectares of SRI plot. We met Santosh Pal, who had tried out SRI in 4 kanis (1.6 acres). He counted 36 tillers in the middle and 40 in the end (edge effect). Santosh was a third-time SRI farmer who had tried out SRI in last Boro, this Aman (Kharif), and now this Boro as well. He tried out Krishnahamsa, Samba Masuri and Naveen varieties in the three seasons. His first exposure to SRI was through the demonstration plot a kilometre away in 2005.

At our next halt, we also met with Babul Dutta, a farmer who tried out the Bangladeshi variety BR 29 in **E Kaphilong**. Babul had got this variety from his relatives in Bangladesh, and the variety is quite popular across the border and even in Tripura. Later we saw the border fenced with thick barbed wire and reflected on the implications of the divides in these border areas. BR 29 has not been recommended by the Agriculture Department as no trials have been done. In fact, we learned that insurance companies have been instructed to not entertain any claims on

BR 29. However, farmers had their own knowledge that spread across the border. It would be really interesting if some agency could sponsor an SRI exchange between Bangladeshi and Tripura farmers. With similar agro ecological conditions but different institutional structures, such a facilitated exchange can lead to interesting knowledge flows. The picture below with a small board indicates a healthy acceptance by the Agriculture Department of the 'illegal' farmers' knowledge.

We proceeded to the Mirza block of the district after a halt at Udaipur where we had breakfast. Like its famous counterpart in Rajasthan, this town also had its fort and lake. At **East Mirza,** SRI is being practiced in 30 hectares of a total of 150 hectares. There are 200 farmers, and 53 hectares is covered by the LI scheme. We spoke with Sanjit Mazumdar a three-time SRI farmer who was trying out SRI in 1 ha, having started with 2.5 kani (1 acre) crop in Boro 2006, with a yield of 50 mounds , Pooja variety (23.5 maunds in 5 kanis) and Krishnahamsa (25 maunds in 6.5 kanis). When asked about any problems with SRI, they referred to water management being an important issue. They also referred to labour problems during transplantation. Farmers want to take up SRI in Aush as well but cannot due to lack of water. Sultan Mai was one of the farmers with the largest landholding that we met. He had 27 kanis (4.32 ha). The discussions at East Mirza were quite animated, with the local farmers' club leader Jiten Mazumdar joining actively in the discussions. Jiten and others mentioned that the awareness of the labourers was the big issue. The fields had plants with 65-75 tillers. Greater spread was not possible in the region due to waterlogged areas.

Our next halt was SRI fields 1 km away from **Shamukchura** where we met Manoranjan Das. Das had experimented a bit with his SRI fields, trying single seedlings in 3.5 kanis, 2 seedlings in ½ kani, and 3 seedlings in another ½ kani. We also saw hybrid rice being tried out with SRI in his field. Tripura was chosen for propagation of hybrid rice quite vigorously (50% of Rabi rice) as part of the perspective plan. However, following its slower uptake, the recent Economic Survey recommended that hybrid rice area be reduced and HYV area increased.[3] We could not visit Shamukchura as we were keen to meet up with a tribal farmer growing SRI and see these fields. Budhi Ram Naotia, a tribal farmer, came over to Das's fields, and we had a brief interaction with him.

Much of the success in S Tripura seems to have been with tribal farmers although we did not get an opportunity to visit their fields. Budhi Ram had

[3] Government of Tripura. 2006: *Economic Review of Tripura*. Department of Economics and Statistics. Agartala: Government of Tripura. p35.

started SRI with ½ kani (20 cents) in Aman last season and got 12 maunds (480kgs) under rainfed conditions. The tribal farmers do not use weeders and do manual weeding. There are currently 25 farmers in Shamukchura trying out SRI. Naotia is doing it in 2.5 kanis (1 acre) currently with Krishna Hamsa variety.

Fig 13: Hybrid rice with SRI in Das's field near Shamukchura.

Fig 14: Budhi Ram Naotia narrating his SRI experience.

Our last halt in farmers' fields was in **Laksmipur** in Rajnagar block. Farmers were practicing SRI in 30 ha. We spoke to Kumod Debrath, a sharecropper who tried SRI in 3 kanis (1.2 acres). Debrath is a first-time SRI farmer and had head about SRI from the Panchayat. He has not undergone training. He tried SRI with BR 29 from Bangladesh and had got the seeds from his father-in-law. Transplantation was done between 12-16 days and was spread over four days. When asked about the differences in yields based on the physical look of the fields transplanted differently, Debrath mentioned that during winter, SRI transplantation should be between 15-20 days whereas in summer 8-10 days is enough. There are about 100 farmers operating the 30 ha SRI plot. We counted the grains per panicle in the fields, and they were quite healthy and averaged around 220.

Fig 15: Sharecropper at Laksmipur, S Tripura.

Fig 16: Grains in a single panicle Debrath's field Lakshmipur

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We were to see many more SRI fields at Dimatali, Satpara, etc. but had to rush, hoping to keep the appointment with the Minister of Agriculture.

3. Policy Support for SRI in Tripura

We met the Agriculture Minister in the evening. He was just reviewing the plan for the year. The Finance Secretary and Commissioner Mr. S. K. Roy were there along with Amar Das, the Director. Mr Venkateswarulu, the Agriculture Commissioner, was on leave, and we unfortunately could not meet him. He would have been happy to hear what people from Andhra had to say about SRI in Tripura.

The Minister Tapan Choudhury first asked us about our impressions of SRI work. Dr. Bhiksham shared with him some observations on the spread of SRI in the state, the rough calculation on the return on investment that the government was getting through its policy support of Rs 4500 per hectare in terms of improved productivity alone. He mentioned that the returns were perhaps three times. Mr. Roy concurred with him, and it was interesting to find synergy amongst the policy actors from agriculture and finance. We also shared with him our pleasure at seeing such large areas of contiguous patches under SRI, something unique to Tripura, and the excellent coordination between the Agriculture Department and the Panchayat officials. We mentioned that the rest of the country has much to learn from Tripura.

Dr. Bhiksham also mentioned that many farmers were feeling the need for better water management, and he wondered if it was possible for the

communities to have a standby for some of the motors in the LI scheme that were going bad. The Minister mentioned that there is a plan to devolve responsibilities for maintenance to the communities from the coming financial plan and discussions were on with the Water Resources Department. The Minister was very modest about the achievements and kept referring to Tripura as a small state. He also mentioned that the target for the current year is 30,000 hectares, almost double the previous years. Baharul later mentioned that the investment would also be increased from 4500 per hectare to Rs 5000. S. K. Roy was wondering if more resources could be mobilized to take some of the activities under SRI, and we expressed that it should be possible given the solid work and systems being put in place in the state of Tripura. We also mentioned that apart from financial support there can be other ways of collaboration that included research and documentation. Tripura presents several sites where detailed water estimates in SRI can be worked out. Workshops on weeders and makers as well as organic practices in SRI are other issues that can be worked on. Some of the more detailed research experiments on spacing etc. that is currently being done in other places in India can be replicated in Tripura on farmers' fields with more authentic results.

We also shared with the Minister and the Director of Agriculture our idea of having the next national workshop on SRI at Tripura. While details of this need to be worked out, this was a feeling that if indeed another workshop on SRI is to be conducted, Tripura presents itself as an ideal venue. The possibility of having thematic and more field-based workshops is indeed high in Tripura. Teams of farmers, researchers, and extensionists could visit different parts of the state and critically analyse situations, including exploring learning opportunities for their own states. It was also felt that a booklet that could capture the SRI story in Tripura is something that could be done fairly quickly. Dr. Bhiksham had some ideas on possible chapters. This field note could be a starting point for working out the contours of the Tripura experience for further discussions.

Baharul Mazumder did share with us some basic information on SRI in Tripura. The state average in Aman (Kharif 2006) under SRI from the 17 agricultural subdivisions works out to 3,519 kg/ ha, with the five-year average without SRI ending 2005 working out to be 2,618 Kg/ha, indicating a 34% increase. It was interesting to note that there were areas where SRI yields in Aman were lower than the state average and was reported as is. The figures for Boro rice are not ready but should be ready by the end of the season where much higher increments are expected, not to mention several areas where SRI worked without too much water whereas a conventional crop might have failed. SRI trials (that is a wrong word) in 2006-07 covered 5,965 ha in Kharif and 8,176 in Boro. Tripura

presents possibilities of doing a time-series analysis with many farmers having gone through SRI for three or more consecutive cropping seasons. We hope we can do some analysis based on the data that Baharul has.

Shortage of time did not allow for greater interaction with farmers; however, it is possible to have detailed discussion on certain existing practices in Tripura and work with the farmers to make improvements in the implements – weeders, markers, etc. and systems of cultivation, with discussions on how to continually increase soil fertility and reduce dependence on chemical fertilizers. Kishan Rao had some ideas on these and in fact carried pictures for discussions and demonstrations. It is possible to take further these discussions amongst farmers when Tripura farmers are slated to visit Andhra Pradesh as per their exposure visits. There is a budgetary provision for this.

The exposure visit was a great learning experience on the possibility of SRI, and the team left Agartala in a rather upbeat mood. Even discounting certain factors like high soil fertility and rainfall that Tripura seems blessed with, there are several lessons on social organisation, dedicated government officials, and policy support and systems that practitioners and policy makers could learn from the Tripura experience.

Epilogue

The upbeat mood was dampened a bit as we returned for our flight to Kolkata had serious snags, making us miss the connections to Hyderabad and Bhubaneswar. On the more positive side was the meeting with Subrata Rana for Eco Development Consultancy who played a part in getting the Tripura story started. One of us had an opportunity to exchange notes with him. Rana is currently involved in work on shifting cultivation in Tripura and expressed interest in taking up SRI more enthusiastically in West Bengal. Rana could also perhaps be involved in the planned booklet on Tripura, covering a few cases from the rainfed areas, something that we missed out.

The Tripura Chief Minister Mr Manik Sarkar has in his speech at the National Development Council Meeting held in New Delhi on May 29, 2007 had this to say about SRI. This was the first time that SRI was discussed in the context of agriculture in this high level meeting in India of the chief ministers and the planning commission members.

> "Adoption of the System of Rice Intensification (SRI) technology for paddy cultivation has increased productivity of rice from 2.5 tonnes per hectare to about 3.5 tonnes per hectare. By motivating the farmers, seed replacement rate in respect of high yielding and hybrid varieties has increased to 33 per cent. Application of lime for neutralising acidic nature of the soil has been taken up on a pilot basis in one Block during 2006-07, which has potential to enhance productivity of the soil. Adequate financial and technical support is required for extending this system to the remaining areas."[4]

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[4] See pd.cpim.org/2007/0610/06102007_manik%20speech.htm