

**REPORT FROM CGIAR INTERNATIONAL FORUM ON WATER AND FOOD,
Vientiane, Laos, November 12-15, 2006 – Norman Uphoff, CIIFAD**

The **Challenge Program on Water and Food** (CPWF), initiated and funded by the CGIAR system as a multi-institutional, research-based initiative, was established to support increases in water productivity for agriculture in ways that concurrently improve people's livelihoods and leave more water for other users and the environment.

This Forum, conducted from November 12 to 17, was organized by the Challenge Program to bring together persons with many different experiences and backgrounds who could join in a stock-taking process that would consider what has been learned so far, half way through the planned lifetime of the CPWF initiative. The Forum was designed for discussion and debate, rather than for presentation of papers, seeking synthesis and consensus among participants on priorities and approaches.

When I first read about the Forum, it seemed like this could be a good opportunity to get the System of Rice Intensification (SRI) considered more widely as one approach to accomplish what the program said it intended: to increase water productivity for agriculture while improving livelihoods and leaving more water for other users and the environment. However, when I looked over the Forum's themes and its organization, it was not clear to me how SRI could be fitted into the deliberations, given the way these were structured. So my initial decision was not to make any plans to participate.

However, fortunately, our SRI colleagues **Abha Mishra** and **Rajendra Uprety** from Thailand and Nepal, respectively, were more ingenious and determined than I in finding some way into and onto the program than I was. When I learned that they had gotten a paper and a poster on SRI accepted by Forum organizers, I decided to attend and see what could be done, together with them, to get wider understanding and use of SRI. The event's timing was fortuitous in that it took place between an already-planned visit to Nepal (arranged in part by Rajendra -- see separate trip report [URL]) and a national symposium on SRI that was being convened in Hyderabad, India, November 17-18 ([URL]).

What I had not fully appreciated was how much progress with SRI was being made in a project led by **Dr. Prabhat Kumar** in the School of Environmental Resources and Development at the Asian Institute of Technology (AIT) in Bangkok. Kumar and Abha assisted in the writing of a proposal to the Challenge Program in 2005, and this resulted in a grant to work with farmers in several villages in northeastern Thailand, introducing SRI in combination with the interplanting of cover crops, an important extension of SRI methodology. Kumar sent a project report in June 2006 that was very encouraging, particularly considering that the area is a very water-stressed and impoverished one and farmers there are not accustomed to careful management of their rice crop ([URL])

Kumar, who happens also to be Abha's husband, has worked previously with FAO's integrated pest management (IPM) program in Asia over quite a few years. When I met Abha and Kumar the first day (Sunday), they gave me the welcome news that they had been able to arrange with Forum organizers for eight of the SRI farmers working with Kumar's project to attend the Forum,

scheduled to arrive the next day afternoon. This put a quite a different complexion on the events to follow.

Sunday morning I did not go on any of the planned field trips because I had just learned, via email, that WASSAN, an NGO partner in Hyderabad, wanted to convene a special seminar on 'post-modern agriculture' preceding the Hyderabad symposium at the end of the week. So I needed to get a paper drafted and a powerpoint presentation prepared quickly. Work on this got delayed a bit, however, because the morning email brought a very interesting report from Kerala state of India on SRI work by an NGO there which I did not know had been working with SRI, RASTA. A collaborating NGO in Karnataka state -- AME, the Agriculture-Man-Environment Foundation -- had forwarded the report to me so that CIIFAD could in turn share it with others.

My confidence in the robustness of 'the SRI effect' seldom needs any more boosting, but this report was a good boost to start the day. Wayand district where RASTA's work is focused has seen the area under paddy cultivation decline by >50% since the 1970s because of the low profitability of rice production. This has meant particularly a significant loss of income for women, and intensive use of pesticides has brought ecological and health problems. Starting from 10 farmers in 2003, the number using SRI methods has grown to 60. SRI has increased their yields by 65-80%, and their net incomes by 50 to 100%, with significant reduction in water use and no need for agrochemical inputs. The Kerala state planning board, now informed of these results, has given priority to expansion of SRI use in its 11th Five-Year Plan, the report noted. [URL]

In the Forum's opening plenary session on Monday morning, the CPWF film on water and food had a short section on SRI, from Kumar's project in Thailand, with a farmer explaining how by using SRI methods, they are able to reduce water and other inputs and get higher yields. This was unexpected good publicity for SRI. The farmer group was supposed to arrive in time for that afternoon's working session on 'The Future of Irrigation.' But they were delayed by needing to get insurance and certification to bring the vehicle driving them from Thailand into Laos.

The afternoon session on irrigation was over-facilitated in my view (and that of some others) with discussions frequently interrupted by bells or time announcements all in the name of 'participation.' Conversations were constrained by the need to get a set of boxes filled in by certain deadlines so that group outputs would be comparable. When the farmers arrived mid-afternoon, they were put on the spot to articulate 'the farmer view' on the future of irrigation. Even their capable translator could not turn this patronizing request into something meaningful.

When the other Forum participants reconvened in plenary session for talks and posters, I sat for almost an hour with the farmer group and their interpreter, **Aroon Jitsamorn**, who teaches at Phetchabun College of Agriculture and Technology in the north of Thailand. Kumar had engaged Aroon to assist with translation in the research project since otherwise there could have been no communication between these farmers and anyone who (like myself) did not speak Thai. Aroon is a superb interpreter, very interested in the subject matter and in participatory processes. From his observations of SRI performance, Aroon has become very excited about its possibilities for benefiting large areas of rural Thailand. We discussed many aspects of SRI, and I admired the

rice plants that the farmers had brought with them to show to Forum participants. The SRI plants towered above their ‘sister plants’ grown conventionally, brought along for comparison.

When the plenary session broke up, we stood by the farmers’ posters, drawn from their farmer field school experience in introducing and evaluating SRI. For me, the most interesting poster was the one on which they had drawn many different beneficial insects on the SRI plants and a variety of pests on the ‘normal’ plants. Kumar, an entomologist by training, said this is what was observed. He will soon have a lot of data on the comparisons that farmers made analyzed so we can post this on the SRI home page . The differences that he could cite from memory were large and impressive. **Dr. Vilas Salokhe**, a professor of agricultural systems and engineering (also president of the Asian Association for Agricultural Engineering), also helped with the poster representation, as did Kumar, Abha and Rajendra. Salokhe is the principal investigator for the CPWF-funded project that made this SRI work possible and is also Abha’s thesis advisor at AIT,

Unfortunately, not many Forum participants came by to see the posters and to talk with the farmers. Most were more attracted to the food and drink being provided. We did have some good conversations, however, with **Harrison Rware** from the University of Nairobi in Kenya and **Lai Wan Teng**, a graduate student from Malaysia studying at AIT in Thailand. Both said they would like to get SRI tried out in their respective countries, ones where we have not yet established any ‘beachhead’ for SRI.

At breakfast Tuesday morning, I happened to sit with **Dr. Banadda Noble** from the Food Science and Technology Department of Makerere University in Uganda, who was joined by his colleague **Dr. Dorothy Nakimbugwe**. Dorothy, by coincidence, did done her PhD at Cornell in the early 1990s under CIIFAD auspices, so we knew each other already. She said that her country’s current vice-president, Prof. Gilbert Bukenya, is doing whatever he can to promote agricultural innovations that can combat poverty and food insecurity. Rice is a priority crop in Uganda because almost all of the rice consumed there now is imported at high cost to the country. She and Noble said that they will help to get some information about SRI to him. When they get home, they will contact Makerere colleagues in the Crop Science Department to see what can be done on this. Later that morning, I was able to sit together with **Jan Ketelaar** from FAO’s Inter-country Programm for IPM in Vegetables in South and Southeast Asia. Jan is based in Laos and has been supporting work on SRI in a number of ways.

After lunch, I got together again with the Thai farmers, this time with my laptop so that I could show them powerpoint pictures about SRI in other countries. In particular, they were interested in knowing more about the beneficial effects of (a) using young seedlings (because this has been difficult and is not fully accepted) and (b) doing more soil-aerating weedings. They were especially interested to see the weeder made by Govinda Dhakal in Nepal, which cost only 20 cents to make and that cut his weeding time by almost two-thirds compared to hand weeding.

Tuesday afternoon, one of the themes was ‘matching land-use ecologies. A paper on SRI that Abha had written with Jan Ketelaar; Ngin Chhay, coordinator of the national IPM program in Cambodia; and Randy Arnst also with FAO’s IPM program, had been accepted for this session by the theme organizers. This made SRI one of the land-use strategies to be discussed and evaluated that afternoon. We had a very good group to discuss SRI in English while the Thai

farmers chose to discuss it in their language. Other topics discussed included conservation agriculture, alternate wetting-and-drying, GIS, and other resource management methods.

The way the session framed discussions was to make choices among strategies, rather than see how they could be made complementary and more mutually productive. Only one person in the SRI group was new to the subject, **Snorre Westgaard**, program director for the Norwegian NGO *Humana People to People India*, based in New Delhi. Mostly the different groups were made up of persons who were already involved with and committed to one approach or the other.

All groups were asked to propose what they thought would be ‘the most immediate practical step’ for their approach. Our suggestion was that SRI farmers should be paid a 10% premium (not a subsidy) for their SRI paddy since it gives usually a 15% higher milling outturn, because there is less chaff (fewer unfilled grains) and less shattering (fewer broken grains). There is no good reason why this windfall should all go to the millers.

Already in 2002, millers in System H of the Mahaweli irrigation scheme in Sri Lanka began offering a 10% higher price per bushel of SRI paddy even before the crop was harvested. This tipped us off to the higher milled rice outturn. If farmers would receive a justifiably higher price for their SRI paddy, this would create more incentive to use this water-saving methodology. Also, some of this benefit could be passed on to any agricultural laborers employed as their skillful management of plants and other resources helped to produce this more valuable rice. How this sharing could be operationalized and enforced is not clear, however.

During a break, Rajendra brought **Dr. B. O. Antwi** from the Soil Research Institute in Ghana over to meet me. Antwi had become interested in SRI from reading Rajendra’s poster. I reviewed for Antwi our various so-far-unsuccessful efforts to get SRI introduced in Ghana. I myself have had a long association with Ghana, having done my PhD thesis research there in 1968. Antwi, a hydrologist who has good understanding of soil biology issues, expressed interest in getting SRI work initiated at his institute and with the Crop Research Institute located adjacent to his own. This could be the entree that we have needed to get SRI started in Ghana. FAO has included SRI training in a new seven-country project funded by the Dutch and GEF, to involve 30,000 farmers over the next four years. But these countries are all Francophone, so a different avenue is needed for Ghana.

When the afternoon session was over, I happened to meet **Dr. L. P. Thuong** from IRRI, a long-time acquaintance, in the corridor. Already eight years ago he co-authored a paper published by IWMI on ‘more rice with less water.’ So he knows about SRI and related issues. His view of SRI is that it is “just best management practices,” reflecting the IRRI position that SRI represents nothing special and nothing new. The implication of this is that therefor, SRI has nothing important to contribute to advancing rice science or practice. Fortunately from our perspective, IRRI’s counterpart for Africa, WARDA, has taken a more positive view of SRI since 2000 when Dr. Kanayo Nwanza became its director-general.

Mr. K. Shimazaki, the Nippon Koei representative in Laos and consultant team leader for a community-managed irrigation project funded by the Asian Development Bank, came to the hotel where the Forum was meeting to say hello. He had been told about my attendance there by

his counterpart in Indonesia, Shuichi Sato, a key SRI proponent in that country and in Japan. Shimazaki has been following Sato-san's work with SRI in Eastern Indonesia and said that he wants to start demonstrations and evaluations in Laos under his project's auspices during the next season. That evening, Kumar and Abha hosted a dinner at a local restaurant beside the Mekong River for the Thai farmer participants, Jan, Rajenda, myself and others in 'the SRI group' at the Forum, not a large group, but an inspired one.

At breakfast the next morning, Rajendra and I happened to sit with Antwi and another Ghanaian, **Dr. Felix Ankomah Asante** from the Institute of Statistical, Social and Economic Research at the University of Ghana. To get to the all-India SRI symposium in Hyderabad, I had to leave the Forum right after breakfast. On the drive to the airport, I got acquainted **Dr. Caroline Sullivan**, senior environmental economist at the Centre for Ecology and Hydrology in Wallingford, UK, and head of its water policy and management program. Caroline immediately grasped the implications of SRI for water policy and conservation, and suggested I visit the Centre if possible during any future visit to the U.K.

All in all, the few days at the Forum were more useful for networking on behalf of SRI than I had earlier expected, thanks largely to the initiatives of Abha, Kumar and Rajendra. One disappointment was that I was not able to meet with **Dr. Zhu Defeng**, senior rice research scientist at the **China National Rice Research Institute** and volunteer coordinator for the SRI network in China. Zhu had been expected to attend the Forum, but there was no sign of him.

Having a chance to get updated on SRI progress in China would have been a much-appreciated addition to what I was able to learn from Thailand and elsewhere. Also, with more time, there would have been opportunity to make some SRI field visits in the area. Rajendra, Abha and Kumar who remained for the rest of the Forum were able to make some additional contributions to networking and information sharing on behalf of SRI. If a similar Forum is held a few years hence, we can anticipate that there will be a greater role for and consideration of SRI.