

# System of Rice Intensification in Rainfed Areas

## WORKSHOP REPORT

*Bringing together the different stakeholders—facilitating agencies, practitioners, scientists and senior government officials—on a common platform, the workshop discussed several aspects, including the achievements, concerns and ways ahead, of SRI in India.*

The National Resource Centre for Rural Livelihoods (NRCRL), hosted in PRADAN, in collaboration with the Aga Khan Foundation and Sir Dorabji Tata Trust, held a one-day experience sharing workshop on 23 December 2009 at the Institute of Defence Studies and Analyses (IDSA), New Delhi. The workshop succeeded in bringing together different stakeholders involved in promoting SRI. Presentations were made by facilitating agencies, practitioners, scientists and senior government officials. Discussions were held to evaluate the role and importance of SRI in ensuring food security in rainfed areas, as well as to identify the scope for affirmative action within the prevailing policy framework.

Over the last 50 years, 23 million hectares have been added to our Net Sown Area (NSA). Most of such landholdings fall in the ridge portions of rainfed areas and have been brought under rice cultivation. The fact that such holdings are located in the poorer parts of India makes SRI all the more relevant—precisely for the cost and yield advantages it offers on the one hand and its resilience to the water scarce conditions that characterize rainfed areas on the other. To validate the importance of SRI in this respect, a number of NGOs presented their experiences. PRADAN said that, despite delayed monsoons, households have reported enhanced yields of 4 to 7 tonnes per hectare in kharif. Likewise, the Peoples' Science Institute (PSI), Dehradun, informed the participants of the increased grain yields under SRI to the extent of 67% (2006), 89% (2007) and 53% (2008) when compared to yields obtained through conventional methods.

Where cost reduction is concerned, a study carried out by the Gujarat Institute of Development Research (GIDR) revealed that SRI farmers, being supported by the Aga Khan Rural Support Programme-India (AKRSP-I), have roughly saved Rs 10,873 per hectare more than the farmers adhering to conventional methods. In terms of resilience, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and World Wide Fund for Nature (WWF)

show that SRI has been able to withstand extended periods without irrigation. Similarly, the SRI Secretariat, Bhubaneswar, recounted that whereas 38% of the entire cropped area under SRI suffered pest attacks, the percentage stood at 45% for lands under conventional methods.

The participating NGOs shared about effective strategies and the constraints faced. Watershed Support Services And Activities Network (WASSAN), Hyderabad, spoke of how it has successfully promoted SRI in the command area of village tanks by accounting for traditional modes of tank management and training irrigation overseers (*neerugattis*) in SRI methods. The Madhya Pradesh Rural Livelihoods Programme (MRPLP) conveyed the many ways in which it has collaborated with both government and non-government agencies to upscale SRI in the tribal-dominated parts of Madhya Pradesh. M.S. Swaminathan Research Foundation (MSSSRF), Chennai, outlined how the drum seeding method can be integrated with SRI practices. In discussing the challenges faced, NGO representatives and participants voiced the need for more intensified awareness-building and training that would reach out to farmers as much as the input suppliers and department heads at the district level. SRI specifically targets rainfed regions and demands an alternative system of wetting/drying. The participants, therefore, agreed that it was crucial to dovetail in-situ soil and moisture conservation (SMC) measures such as field bunds and farm ponds along with SRI. Similarly, the need to

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contextualize SRI for boro paddy was emphasized.

The workshop also revealed a number of areas requiring further research and study. Dr. B.C. Barah from the National Centre for Agricultural Economics and Policy Research (NCAP) spoke of the complexities that circumvent the issue of food security at both the household and national levels. He said that since the nature of the problem is very different at both the levels, greater understanding is required to forge a course of action. To ensure success in the long run, the importance of assessing the reasons for disadoption of SRI practices was also emphasized. An equally important need was expressed to assess methane emissions under SRI, in order to make a case for SRI as a Clean Development Mechanism (CDM). The necessity for scientific research to ascertain the suitability of different seed varieties, both traditional and hybrid, to different agro-climatic zones was voiced. Likewise, the nutrient requirements and absorptive capacity of crops under SRI remains to be accurately ascertained in order to make for a system of good practices that will ensure timely replenishment of soil. The participants suggested that a collection of good practices in due course could be pooled to make for a comprehensive Package of Practices.

In relation to the prevailing policy framework, the modalities of National Food Security Mission (NFSM) and its working arm at the district level, namely the Agriculture Training and Management Agencies (ATMAs), were clarified. Shri. Mukesh Khullar, Mission Director, NFSM, said that the Mission

proposes to increase rice production by 10 million tonnes to meet the shortfall of food grains. The Mission is targeting 5 lakh hectares for the promotion of SRI alone. The areas identified for SRI fall predominantly in high potential districts that comprise large tracts of rainfed areas. Considering that SRI is specifically suited for such resource-poor regions, NFSM provides NGOs working towards food security a novel opportunity to intervene in such areas.

Shri. Khullar stressed the need for NGOs to partner with ATMAS for the successful expansion of SRI. He reiterated that in working with ATMAS, the Strategic Research and Extension Plans (SREPs) prepared by the ATMAS need to be pursued in all seriousness to locate the scope and strategy for SRI implementation at the district level. In addition, it was made clear that NFSM—in the hierarchy of institutions—may only be approached as a supervisory body for dealing with impediments or easing implementation in the long run. Speaking of the achievements under NFSM, Dr. M.C. Diwakar of the Ministry of Agriculture (MoA) made a comprehensive presentation, which provided great clarity on the macro-economic situation. He said that the enormity of India's food-grain needs is such that it cannot be fulfilled with imports alone. Senior representatives of NFSM and the Ministry of Agriculture (MoA), particularly Dr. Saini, highlighted the government's interest in investing in SRI for the purpose of achieving self sufficiency. They expressed that there is no dearth of funds but rather the need to strengthen collaborative ties between the government and NGOs to achieve this end.

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As part of the ongoing dialogue with senior government officials, the plenary expressed that the approach adopted by NFSM with regard to SRI is too focused on scattered demonstrations whereas the effort should be on bringing contiguous plots under SRI.

Where the NFSM works through agriculture extension workers in a top-down manner, it should ideally be farmer-led and bottom-up in its approach. Similarly, the focus should be on confidence and skill building rather than remaining confined to making physical inputs available to farmers. To achieve these, the focus should be more on compact area development. Up-scaling SRI through compact area development would require facilitating agencies to understand landscape realities. They would also be required to engage with prevailing institutions and departments. The plenary affirmed that such an approach is sure to bring contiguous tracts under SRI and generate the required synergy for replication.

The issue of subsidy found considerable mention as part of the deliberations on policy framework. The suitability of leveraging Employment Generation Programmes for supporting farm labour (engaged in SRI) was considered. The need for subsidy was also questioned, especially since SRI has already proven itself to be lucrative in practice. The participants also asked how the subsidy (if proposed) should be structured. The requirements at the individual level are not much; therefore, subsidy should be directed at creating infrastructure of common benefit for the community as a

whole, such as tools, implements, weeders, etc. The aspect of developing lands and water resources could also be achieved in this way. In addition, subsidy should be structured to ensure year-round availability and access to updated information on SRI technology. This more than subsidizing individual needs and requirements will enable the adoption of SRI at a mass level. Professor Phansalkar from the Sir Dorabji Tata Trust (SDTT) cited the example of the telecom industry, and how a shift of subsidy from individual lines to the installation of telephone towers (a common property) triggered an exponential increase in connections. It was jointly agreed that the issue of subsidy requires policy research and more careful forethought because it will have far-reaching consequences.

Shri. V.V. Sadamate, Member, Planning Commission, shared towards the end of the workshop that the provisions of the Rashtriya Krishi Vikas Yojna (RKVY) were equally

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enabling where SRI promotion is concerned. Shri. Sadamate pointed out that interested organizations should pursue the Comprehensive District Agriculture Plans (C-DAPs) and refer more specifically to the sections pertaining to SRI therein. He clarified that SRI-related sections in the C-DAPs would provide the basis for NGOs to formulate proposals

for SRI expansion, in cooperation with district-level bodies. He guaranteed that proposals with merit would be processed speedily because the government is open to partnering with NGOs.

The workshop concluded with an effective recap of the day's discussion and the prospect of evolving a two-fold strategy, which could address issues at the national and household levels. The participants were thanked and it was hoped that the clarity that emerged from the day-long workshop would result in working partnerships with the government, and the formation of nodal agencies at different levels—village, district, state and national.