

Reversing desertification through Climate Resilient Natural Farming Landscapes

A workshop is being organized by RySS(Rythu Saadhikara Samstha) and World Agro Forestry centre in Anantapur from 2-5th November on “Reversing Desertification and Climate Resilient Natural Farming Landscapes”

The experts are from RySS, World Agroforestry, Tata Trusts, Indian Climate Cooperative, Central Agroforestry Research Institute (CAFRI), WASSAN, as well as Accion Fraterna Ecology Centre, Dept of Agriculture Govt of AP, Azim Premji Philanthropic Initiatives (APPI), International Water Management Institute (IWMI), Foundation for Ecological Security (FES).

The workshop is focused on linking solutions at farm and farmer level with what happens in the broader landscape. “We need to work in ever-widening circles”, says Mr Vijay Kumar, who has been leading the roll out of ZBNF across the State and brings his vast experience as a senior administrator to this problem.

As the rains finally recede in Anantapur, they leave behind a green and verdant landscape. All seems well but look closer and it is apparent that this year only 20% of the land is being cultivated this year (less in previous years), all but the deepest borewells holes are still dry and farmers are struggling as before. “We need cash, but even in this year with all the rain, we will not be able to pay off our debts”, says farmer Laxman to members of a team that has assembled to find pathways out of the present predicament. The rains have failed for the past 12 years. Climate variability, the face of climate change, is here and making its presence felt. He goes on to reel off the debts he has, from costs of DAP fertilizer, through pesticides, to servicing previous loans and paying for the tractor to plough his fields. “My cows have died during the past 12 years of drought”, he says, and adds “the tractor alone costs Rs 800 per hour”.

It is not just nature that is suffering – trees are being cut, top soil washed or blown away, vegetation cover is failing, (over-)use of chemical fertilizer and pesticides have degraded the soil leaving it lifeless and devoid of organic carbon, monocropping has reduced options and resilience. But the social fabric is also degrading – the youth are deserting the villages in search of a better life and parents see no options for them to return as variable rainfall make agriculture a risky game of chance. The villages are emptying.

Mr Vijay Kumar, Advisor to Govt. of A.P., & Vice Chair Person, RySS and his team from RySS are convening an international workshop to reverse this trend. “I am convinced that mobilizing the social capital of the incredible women’s self-help groups, together with the economically and ecologically more sound practices of Zero Budget Natural Farming are important parts of the solution”, he informs the gathering of national and international experts at Accion Fraterna Ecology Centre in Anantapur. “But we need to look beyond the farm and the farmer, we need to understand how to harness the flow of water across landscapes, connect the dots between what the farmer grows and distant markets to strengthen, diversify and upgrade value chains and above all harness the power of nature”, he challenges the gathering.

A cluster of three villages a two-hour drive from Anantapur has been selected to develop the ‘landscape approach’ that recognizes we need to work beyond farms to harness the full potential of nature and human society. Researchers from RySS and World Agroforestry, supported by AF Ecology Centre have begun to work with the farmers and villagers to characterize their contexts and seek options out of this predicament as a first step in this landscape approach. The workshop co-funded by RySS/Govt of AP and the Climate and Land Use Alliance (CLUA) will bring the aspirations and visions of farmers and local people in that landscape together with the opportunities that present themselves for climate resilient solutions that help them make better use of available water and vegetation to improve soils, productivity and livelihoods. They are optimistic that with support from cutting edge geospatial models, processes of social mobilization and inquiry and political will the processes of desertification – social and natural – can be turned back in the next 3-5 years.

“Sixty years ago the scene was very different here”, says Dr Malla Reddy, Director, AF Ecology Centre “people grew a diversity of crops, there were more cattle, farmer indebtedness was nowhere near the chronic problem it is today and malnutrition was not as prevalent. Trees were more prominent”. He is optimistic that

agricultural models, even in rainfed areas, that are more agroecological in nature can serve people and nature better. “We have to learn to live well within our means, by this I mean less dependence on boreholes because we are mining away the water of tomorrow”, as he points to rainfed mango trees thriving over Laxman’s shoulder. Laxman has planted 200 of them. Next stop for Laxman and Dr Malla Reddy: underplant those 200 with shrubs and annuals that can generate more of the cash that Laxman needs more sustainably, or even plant long lived forage shrubs for the goats – the ‘walking gold’ – of his neighbours in the village.

“If we can restore soil fertility, develop economic and agroecological solutions that work at ‘nested scales’ of farm, landscape and state levels then we can kickstart a change towards climate resilient and productive futures”, says Dr Leigh Winowiecki, World Agroforestry’s Soil Scientist, as she explains results from the geospatial analysis being carried out under the Land Degradation Surveillance Framework (LDSF) 10 km x 10 km survey across AP by the Research team of RySS. The LDSF methodology developed by Dr Tor Vagen or World Agroforestry’s GeoSpatial Laboratory, is being coupled by the innovative use of Mid-Infrared Spectrometry to generate maps of indicators of erosion, vegetation, soil organic carbon and pH status in an effort to monitor Andhra Pradesh’s Land Health status as cutting edge science and farmer innovation, knowledge and practice seek transformative change in the near future.

Farmer Laxman’s hopes and fears for the future of his children and the children of the village ring in the ears of the workshop participants as they go about their important work. Andhra Pradesh and Anantapur have led the way before and will lead again.

About World Agroforestry (ICRAF): World Agroforestry centre of scientific and development excellence that harnesses the benefits of trees for people and the environment. Leveraging the world’s largest repository of agroforestry science and information, we develop knowledge practices, from farmers’ fields to the global sphere, to ensure food security and environmental sustainability.

ICRAF is the only institution doing globally significant agroforestry research in and for all of the developing world. Knowledge produced by ICRAF enables governments, development agencies and farmers to utilize the power of trees to make farming and livelihoods more environmentally, socially and economically sustainable at multiple scales.

We are guided by the broad development challenges pursued by CGIAR, a global research partnership for a food-secure future, which include poverty reduction, increasing food and nutritional security, and improved natural resource systems and environmental services. ICRAF's work also addresses many of the issues being tackled by the Sustainable Development Goals (SDGs),

Press Conference:

On 5th November a Press Conference is being called at 12.30 pm at AF Ecology Centre. The scientists and the organisers would participate in the press conference.

You are cordially invited for the press conference.

1. T.Vijaya Kumar, Rtd IAS.,
Vice Chairman Rythu Saadhikara Samstha
Adviser, Govt. of A.P

2. Dr. Ravi Prabhu,
Deputy Director General
World Agro Forestry Centre

3. Dr.Y.V.Malla Reddy
Director, AF Ecology Centre