



Madurai Symposium 2017

Building Resilience for Sustaining Development

20-24 September, 2017



Bulletin

Day 4: 23 September 2017

Emerging Trends in Processing and Value Addition of Small Millets



On the second day of the National Seminar on Small Millets, the issues, important interventions and way forward for action were discussed and presented as below:

Small Millets - Relevance to Resilience

Small millet is highly relevant for resilience because only the food crop having various capacities to withstand abnormal climatic conditions such as, flood and drought. In the same way millet food also provides highly resilience to food and nutritional security. Small millet are smart crops that can be grown in various agro-ecological situation such as, arid, semi-arid, temperate, tropical and humid climates. Millets can be grown in any season in the year, which shows enormous potential for achieving food security. Consumption of small millet at regular basis will ensure good health by preventing lifestyle diseases such as, anemia, diabetes, obesity and cardio vascular diseases. It will build health resilience of individual.

Major issues of millet value chains such as

Skill and knowledge erosion of small millets is a major issue among the new generation (for example, How to cook? How to eat? When to eat? and How frequently to eat?)

- Lack of awareness among different sections of population
- Poor quality raw materials available at farm level
- Unavailability of quality dehulling processing units
- Lack of standardization in primary and secondary small millet products

- Huge variation in awareness and consumption of small millets due to social and economic factors such as poor social status, high price and accessibility
- Young generation does not prefer millets due to modern junk foods.
- Government policies are not supportive of millet production, processing and consumption
- There is heavy competition between millets and non-millets food products

Important interventions proposed for promoting small millets

- Creating nutri clubs at village level will help ensure food and nutritional security. To ensure food and nutritional security small millets should be affordable for rural and urban population. Resilience building researches should be taken up to know exact facts from the ground.
- Quality consciousness among the consumers of small millets about unpolished rice, parboiled rice, and other standard food processing techniques should be created.
- Quality checks should be done across various stages of value chain from farm to table such as raw material at farm gate, clean and uniform unpolished rice at processing point, nutritious and tasty products at value addition unit and all consumable small millet food are safely delivered at consumer point
- Business models which are easy, open and simple operations should be built including entire value chain i.e. farmers, processors, manufacturers, finance institutions, promotional organizations, marketers, governance and consumers.
- A business support system need to be strengthened through human capital, market development, financial support, customers service and government support policies. For example, setting up technological incubation centers.
- Branding must be done for following features such as simple, unexpected, creative, credible, emotive and surprising in order to reach out to rural and urban masses including foreign consumers. Examples of branding could be “millets-super food”, “wonder grains.”
- The innovation in production, processing, manufacturing, marketing and promotion are the areas for future sustainability in small millets based economy. For example, digital marketing, innovative food products,

simple traditional foods etc.

- Attention must be given for nutritional education and communication to school and college students, housewife's and general public.
- To match demand and supply we must encourage farmers to grow small millets, we can provide potential cultivation practices, incentives and produce related quality education at farm gate level is essential for sustaining the small millet production system.

National workshop on Resilience Building in Self Help Groups through Financial Inclusion



Poor, irrespective of the context are exposed to various risks and shocks and these make them more vulnerable to such uncertainties. Consecutive years of drought, distressed migration, livelihood shocks with respect to market, natural and man-made disasters, and life cycle shocks and risks make their life miserable. DHAN's experience in promoting enabling model of Community Banking shows that the SHGs are meant not only for performing financial functions such as savings and credit, insurance and pension, but also undertaking various development agenda on health, education, livelihoods and gender issues to address the poverty issues and build resilience at the household and SHGs level. DHAN's SHGs have promoted specialized institutions for bridge financing, micro insurance and social security, business and livelihoods support, healthcare and governance for institution building which provide resilience building in financial system, livelihood support system, social security system and civic amenities system through practice of mutuality, risk sharing and mitigation. A National Workshop was held on the fourth day of Madurai Symposium with all relevant stakeholders for sharing their role in building resilience in SHGs.

Bankers' Perspective

Mr.D.Devaraj, General Manager, Indian Bank, Corporate office, Chennai, told that SHG- Bank linkage concept was introduced in Indian Bank as early in the year of 1989 by partnering with Tamilnadu Women Development Corporation and IFAD. Their total loan outstanding to SHGs

was Rs.2777 crore as on date. The portfolio to SHG finance constituted 8.37% of the total SHG lending of commercial banks. Over 54% of SHGs are operating in southern India and credit absorption is high here. Still banker's response is lukewarm in northern India. In general, many of the SHGs had more than ten years credit linkage experience with Banks and 65% of the credit utilized for strengthening their existing activities, Initiation of new Livelihood activities and creation of productive assets.

Way Forward: A specialized bank branches shall be opened where concentration of SHGs is high. A separate web portal shall be created to SHGs to directly apply online to fulfill their credit needs. Revolving Fund assistance shall be extended to SHGs for handholding and their sustainable operations. Digitalization of SHG accounts is an immediate need to get the reliable data at member and SHG level. To avoid dual membership, Aadhaar should be compulsory for all members at the time of bank account opening.

Development Agency Perspective

Ms.A. Umarani, Chief Executive of DHAN Kalanjiam Foundation shared on how the Kalanjiam Community Banking Programme has been building resilient SHGs, and financial inclusion to enhance household resilience through building the capacity of the poor in managing their household cash flow through appropriate savings and loan products; building financial discipline in using the finance frugally; helping poor identifying their household risks and vulnerabilities and Promote choice making ability – accessing financial services, setting poverty reduction strategies and participating in risk pooling and sharing initiatives for mitigating the risks. Its contributions for financial inclusion are as followed:

- SHG-Bank Linkage with sustained partnership between both SHGs and Banks
- Enrolment of individual members into government entitlement schemes – Insurance and pension
- Moved from term loan to cash credit
- Community financing for scaling up community banking by reaching out more poor and bring them under banks fold
- Demonstration of linkages through KDFS – Section 8 company
- Diversified loan products for addressing larger development issues e.g. sanitation
- Single branch concept
- Mutual financial products - insurance

Mr. Kathiresan, consultant of microfinance and Banking services introduced Ten Commandments for Self Help Groups as follows:

1. The concept of savings in SHGs needs to be relooked by way of introducing differential savings according to their cash flow at family level.
2. Savings Bank account for all the family members shall be opened.
3. The concept of CC shall be introduced at member level to address their emergency needs.
4. In loan graduation process, members who are eligible to avail loan for income generation activities needs to be educated on handling and proper utilization of credit to enhance their livelihood.
5. In order to build up the asset portfolio in SHG banking system, leader's skill and knowledge on credit appraisal and decision making needs to be upgraded through proper capacity building programmes.
6. The matured groups with consultation of members, some portion of savings and common funds can be parked as FD out of SHGs systems.
7. 100% enrollment and renewal in pension and insurance scheme is must to build resilience.
8. Systematic planning and process needed to reach the sustainability to build resilient SHGs.
9. Risk rating and auditing should be done on periodical basis by SHG federations.
10. Digitalization of records towards cashless transactions for transparent and effective governance.

Building Health Resilience through Diabetes Care and Management

The workshop focused on building resilience of community through addressing diabetes. Diabetes mellitus is one of the world's major health issue, says WHO that reports 3.4 million deaths are caused annually due complications of high blood sugar.

Dr Maruthupandian, Dean of Government Medical College, Madurai said "Diabetes is a growing health issue, affecting all economic classes. After 30 years, everyone should undergo diabetes screening, which is imperative for pregnant women as diabetes will cause many pre and post delivery for both mother and child. Government Rajaji Hospital is interested to work with institutions like SUHAM to broad base the awareness on diabetes and screening populations".

Dr Sangumani, Diabetologist said "Prevention is better than cure. There are many causes of diabetes including sedentary lifestyle, obesity, lack of physical work, eating junk foods, skipping breakfasts. Genetic factors play a major role in occurrence of diabetes. Uncontrolled diabetes leads to heart diseases and heart attack. To escape from diabetes or to manage it under control, one has to walk fast for up to 5 to 6 kilometres every day. When we walk for four Kms, it is equal to 20ml insulin injected at the cost of Rs.80."



Early symptoms of diabetes are weight loss, high thirst, over tiredness, excessive sweating. Investigations through blood testing (Range - Fasting is 80 to 120 and postprandial below 200 mg/DL). Diabetes leads to multi organs failure especially affecting major vital organs, frozen shoulders, lack of sensation in legs leading to wound unnoticed. Symptoms like burning sensation in legs, decolourisation, and black discolouration. Increased levels of LDL cholesterol in diabetic will lead to silent heart attack, blood vessel block in brain leading to paralysis. Prevention mechanisms should be followed through proper investigations once in 2 months with fasting and postprandial blood sugar, HBA1C once in four months, Lipid profile testing to be done once in 6 months and once in a year for neuropathy.

Alcohol addiction increases the risk as the fatty liver enhances the risk of ending up in diabetes and liver cirrhosis. The pregnant women with gestational diabetes deliver babies who have more probabilities for diabetes in the future. So, prevention is the best measure.

What needs to be done?

- Promoting health resilience as a preventive measure for diabetes by creating changes in dietary pattern and behaviour among the member households.
- Large-scale screening for early diagnosis of diabetes members of Kalanjiam, Vayalagam, CALL and Rainfed programme members.
- Promoting behaviour change communication methods for creating awareness about the Diabetes
- Establishing linkage with the government and private educational systems and the public health systems to access their services.

Ethical Democracy is Key for building resilient Society

"I applied for Noon-meal Organizer in Anganwadi centre. But I didn't get any reply from government department. I got opportunity to attend Para Legal Clinic and knew about Right to Information Act. Then I applied asking information about list of vacancies and placement details and came to know that there is vacancy in my village. With these details I



approached again and could get placement” said, Ms.Muthammal of Manikkampatti Village, near Madurai.

Like Muthammal, hundreds women members, youth and Panchayat leaders from five different states of India have gathered and shared about their learning and benefits obtained from the United Nations Democracy Fund supported project titled, “Ethical Democracy and Micro – Justice in India”. As part of Madurai Symposium, a one-day dissemination of learning and outcome workshop was organised by DHAN Foundation at Thamukkam Grounds.

This project is executed for two years in Tamilnadu, Karnataka, Rajasthan, Madhya Pradesh and Odisha. It has orienting youth, SHG women and Panchayat leaders on democratic processes also established Para Legal Clinics to help excluded community to access their entitlements. A campaign on Right to Information Act was undertaken and members of SHGs, farmers’ and fishermen groups have been encouraged to participate in Gramasabha meeting. The project was able to reach out to 50,000 citizens directly with democracy education para-legal support services.

Dr Mamphela Ramphela, Social Activist, associate of Nelsen Mandela and National Director, World Bank, South Africa participated in the convention and pointed out that both South Africa and India have suffered because of colonial exploitation and come out of several social stresses through democratic processes. Both countries have common issues in deepening democracy. She expressed that the role of Women and Youth in advancing democracy and build resilience are very vital. Also she suggested to document the experiments and pilots done on democracy and share to global community for scaling-up the project across various countries.

Former Additional Directors of Rural Development and Panchayat Raj experts, Mr.K.Vallinayagam, Mr.N.C.Chidambaram, Mr.K.Subramaniyan delivered special address highlighting importance of building informed citizens and grassroots democracy for building resilient Panchayats. Mr.S.Singarayar, Mr.N.Janakiraman and Mr.P.Rajan, from DHAN Foundation organized the workshop and about 200 SHG leaders, Youth from various States have participated in it.

What needs to be done?

- Democracy and Panchayat literacy should from schools
- SHGs, Farmers Groups, Youth Groups and other primary groups to get organically linked with local Panchayat system for synergistic effect
- Legal aid centres should be established in every Village Panchayat
- Access to information in the form of Citizen Charter, display hoarding on Panchayat schemes should be made available for local citizens in all Panchayats
- Reservation in the seats for Youth in Panchayat elections to be provided to encourage youth involvement in the Panchayat administration
- All three tier Panchayat elections need to be conducted on non-political party basis.

Tools and Technique in Assessing Farm Resilience

Centre for Research of DHAN Foundation organised a consultative workshop on Tools and Technique in Assessing Farm Resilience as part of Madurai Symposium. Students from Madurai Kamaraj University, Tamil Nadu Agricultural University, Tata-Dhan Academy, development practitioners and farmers attended the consultation workshop. Dr.D.Suresh Kumar, Professor, Agricultural Economics, R.Bhaskaran, Strategic Advisor of Tata Dhan Academy, Dr.P.Arunachalam, Assistant Professor in Plant Breeding and Genetics were the resource persons facilitated the consultation.

The consultation was around tools relevant to assessing the farm resilience. Rainfall, climatic variability and tank irrigation management and building were suggested as indicators for assessment. Climatic Variability is one of the vulnerabilities faced by the farmers. Climate Variability Vulnerability index (CVVI) = $IA_{vi} = f(x_{vi}; \beta) + \omega_{vi} h(x_{vi}; \delta)^{1/2}$ it is also known as JUST-POPE Model is highly relevant. First we have to identify the region and with the indicators we can compute the CVVI.

Abiotic stress is the major constraint in attaining potential yield of our crops. The main focus was on increasing yields of crops by adequate utilization of water and make farm resilience by several mitigation techniques such as drought mitigation, crop improvement, agronomic management practices including in-situ moisture conservation and cropping system approach, seed treatment, soil health management, agro forestry, improved equipments and technologies.

A field study taken up on irrigation management In Thamaraiatti Village using Participatory Rural Appraisal and GIS (Geographic Information System) revealed the criticality of information collected from local farmers by using PRA from their personal experience. GIS can be used to corroborate the data generated from PRA.

Bottom up approach is best way to institute resilience studies, it should be easy to do and cost effective. The following indicators can be studied to assess the farm resilience in a focused way.

In situ soil moisture conservation measures -

Broad bed furrow, Ridging / dead furrow, previous crop residue incorporation, mulching, ploughing of subsoil store more water, summer ploughing across the slope not along the slope, run off storage through farm ponds.

Crop system approach – Inter cropping, mixed cropping, crop rotation, adaptation of agro forestry crop (5F – Fuel, Fodder, Fertilizer, Feed and Food), arid zone fruits – canopy management, i.e. pruning and moisture conservation.

Soil health management – soil is not only parched for want of moisture, but also hungry to soil nutrition. Soils rich in organic carbon withhold moisture in a better way. Biochar, organic fertilizers, vermi-composting, cattle manure, and tank silt application, foliar spray of Pink Pigmented Facultative Methylothrophic Bacteria (PPFM) for good soil health.

Human resource management – Man power shortage is the major concern in farm resilience. Mechanization – adapting machineries like multipurpose seed driller, harvester, power weeder, and decorticator can mitigate labour paucity. Association formation and sharing of labors among the neighborhood farms facilitate farm resilience.

Workshop on Advancing Community Resilience: Mapping Changes and Visioning for Future

India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. 58.6 percent of the landmass is prone to earthquakes. About 12 percent of land (40 million hectares) is prone to floods and river erosion and of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis; 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches. Coastal Conservation and Livelihoods Programme with the support of Advanced Centre for Enabling Disaster Risk Reduction (ACEDRR) of DHAN Foundation is carrying out a disaster response programmes in Balasore district of Odisha after Phailin Cyclone 2013. Under this programme, more than 150 disaster risk reduction committees have been promoted in the vulnerable villages. More than 750 volunteers were identified and were trained on rescue and DRR.

The volunteers who were trained in DRR came together and deliberated in a Workshop organised as part of Madurai Symposium 2017 to map challenges and envision the future. The key components of the tools include acquiring necessary skills, capacity, knowledge on disaster preparedness and

response. They envisioned becoming a DRR specialist among community and gain improved understanding in using locally available resources for relief and disaster preparedness. Assimilating the outcomes of the mapping change exercise the participants engaged in deliberating the gaps in DRR preparedness to have DRR resilient communities. The process helped them list out the goals/vision they have to attain.

Some of the actions put forth for furthering DRR initiative were:

- Networking of DRR volunteers
- Creating disaster relief fund
- Using ICT for preparedness and mitigation
- Facilitating availability of relief and rescue gears and infrastructures
- Making the disaster committees function effectively in village level
- Creating database of DRR volunteers for networking and coordinated response
- Systemising meetings and trainings
- Transforming from volunteers to trainers
- Using social media groups for collective action and knowledge sharing

Agricultural Bio diversity for resilient farming: Prospects and Way forward

Biodiversity and agriculture are strongly interrelated because biodiversity is critical for agriculture, agriculture can also contribute to conservation and sustainable use of biodiversity. Maintenance of this biodiversity is essential for the sustainable production of food and other agricultural products. A workshop was organised at Madurai Symposium 2017 to discuss on the sustainability of the agricultural bio-diversity with resilience built.

Mr. Jagannatha Raja, agriculture researcher, Rajapalayam in Tamil Nadu presented on how the tree and fruit crops can help the farmers to get yearly income without much of labour work or any other investment. Tree varieties like wood apple, palmyra, Christ's thorn, Manila Tamarind (kodukapuli) can be planted at 10 feet intervals from the perimeter of their land which will grow without any water, maintenance or fertilizers. And the land inside can be utilized for cultivation when water is available and the farmer can get income from the trees planted on the outside, which will help the farmers to great extent. Mr. S. Ganesh, farmer from T. Kalupatti Vayalagam shared his experience on how the farm pond and multi cropping pattern of vegetables (cluster bean, garden bean, ladies finger and small onion), marigold, greens and small millets helped to increase his income from just from 75 cents which was more than the income he got from the two acre of his land when he has gone for mono cropping.

Another farmer Mr. B. Augustin from Saveriarpattinam, Ramanthapuram shared that farm pond helped them

increase the agricultural crop diversity. Started with four ponds supported by a Project, where the chilly yield was increased by 30 bags per acre more than the usual yield, other farmers came forward to take it seeing its benefits. With support of DHAN, they constructed 320 farm ponds and another 50 farm ponds with government funds. Uncultivated greens are also a part of agricultural biodiversity which will increase food and nutrition security at household level. Farmers also shared about small millet cultivation, tree farming, and herbal plantation on the bunds to build resilience against climate risks.

What needs to be done?

Soil fertility can be restored using tank silt application, using natural fertilizers and farm yard manure and goat penning as fertilisers. Traditional knowledge and cultivation practises have to be documented and passed on for generations. The seeds from the harvest have to be saved and utilized again. Traditional varieties of seeds based on locality and season has to be used. Multi cropping has to be adopted in order to increase their household income. Insurance which is available for mono cropping must be available to multi cropping as well. Trap crops can be used instead of insecticides/pesticides. The government interventions at policy level to increase the small millet production by adopting small millets in Mid-day meal to school children, providing small millets for one day at ration shop.

Community Dialogue on 'From Poverty to Prosperity' – Kalanjiam Way

DHAN's experience over these years showed that within SHGs people living in poverty could be grouped into Survival, Subsistence and Self-employed. The causes and consequences of poverty, indicators for measuring it, poverty graduation and mobility according to urban, tribal, rural and coastal contexts. Resilience building is aimed at overcoming the negative effects of risk exposure and vulnerability. Building social capital, creating enabling environment and introducing appropriate technology are three critical factors contributing to poverty reduction.

The community dialogue organised as part of Madurai Symposium focused on listening to people who have got moved out poverty. Case study of Siraj Bhanu of a Kalanjiam member who moved out of poverty was shared and discussed. Participants felt that poverty categorization and family categorization are critical for addressing the issues of poverty. The perception on poverty has been changed over a period of time. Family expenditure should be regulated as per the income. Promotion of share cropping, nutritional garden, herbal garden can increase their health status. Poverty reduction should help them earn dignity. Women headed families need more care and attention as they have to face multiple challenges.

- Ms.Lakshmi of Bodi Vattara Kalanjiam who owns a small mess set up with the help of Kalanjiam now earns Rs.30000 per month. She provides employment to five laborers and created assets from income earned out of this.
- Ms.Shanthi of Thenmadurai Vattara Kalanjiam, has primary savings of Rs.47000 and has been doing a special savings of Rs.3000 per year as a resilience strategy
- Ms.Lakshmi of Solai Vattara Kalanjiam shared that her Kalanjiam helped her meet the health expenditures and due to insurance she got claim of Rs.30000 with which she got a cow and surviving with the income from it.
- Ms.Poomalai of Palamedu Vattara Kalanjiam has purchased land and built house, provided higher education to her girl child. Asset building and children education has played critical role in making this member resilient.

Workshop on Resilience Building in times of Drought in Pambar Basin

Pambar Basin, a monsoon dependent basin situated between Cauvery and Vaigai basins in Tamil Nadu has witnessed continuous drought for the past four years, particularly deficit in rainfall when compared with last 120 year's average rainfall. It has rendered many water bodies remain dry and cultivable lands turned fallow, people sold their assets for their survival. Though the drought is common phenomenon in this basin the current drought affected the people more severe because, lack of proper maintenance of tank, wide spread infestation of *Prosopis juliflora* jungle in the agriculture fields and over exploitation of ground water.

A workshop on resilience building at times of drought organised as part of Madurai Symposium 2017 was organised. Mr.K.Varadharajan, Assistant Director of Horticulture explained about subsidized schemes for providing saplings, inputs, and irrigation equipments for the benefit of farmers. He suggested going for organic farming, using vermi-compost and tank silt application. Mr. Rajarajan, Assistant Horticulture Officer has suggested preserving the water bodies from encroachment, tank silt application and green manuring, sprinkler and drip irrigation, mulching and bio-pesticides, tree plantation in every house, and small millet cultivation in rainfed areas to cope up the drought.

Mr.Abraham, President of Farmers Association, Sivagangai District has shared his experience on goat rearing, and he made this activity as Sustainable livelihood by adopting traditional breeds in his farm. He has 30 acres of land covered by traditional or native trees withstanding both flood and drought. He has created water harvesting structures within those 30 acres.

Resilience Building Measures

Coconut coir pith and coir waste as mulching, crop rotation, cultivation of small millets, adopting drip irrigation system and broadcasting seeds instead of transplantation to minimize the water requirement and conserve available water resources. Preserving sacred grooves, surface water bodies, temple tanks, plantation of trees in the road sides, organic method of cultivation, and water management with Neerkattis, protection of country breeds and local crop varieties, reviving of tank cascades by integrating all drought mitigating measures, adopting micro irrigation and to place shutters in all tanks sluices were identified as resilience building measures in Pambar basin.

Workshop on Bridging the Gaps in Supply Chain and Marketing of Farmer Producer Organizations (FPOs)

Since 2013 the concept of Farmers Producer Organisations has been gaining momentum with the collective efforts of Government of India's Small Farmers Agri-business Consortium (SFAC), Tamil Nadu Small Farmers Agri-business Consortium (TNSFAC), National Bank for Agriculture and Rural Development (NABARD) in the State. So far over 200 FPOs have been promoted collectively with the involvement of NGOs. The main Focus of the FPO is to establish the market for the farmers produce so as to gain their marginal income by involving them in the Supply and Value Chain Management. The workshop organised as part of Madurai symposium was an opportunity for the farmers for co-learning between the FPOs in marketing.

Thiru Thachanamurthy, CEO, Illupur Agriculture Farmer Producer Company Limited (IAPCL) shared his experience in marketing and supply chain Management. He said focus of the FPO should always be farmers than the product. There is the need for integrated and innovative participatory mechanisms for involving the farmer from the beginning of the FIGs and FPOs. Instead of promoting company first and then promoting FIGs, First FIGs should be promoted with clear concept seeding the PC will evolve successively. The IAPCL has demonstrated it.

The Database management of the crop grown and the market situation of the area are very critical in defining the programs and intervention of the Producer Company. The company facilitates all aspects including indentifying farmers growing pulses, poultry, dairy, seed production and organic vegetable production. To provide all services, a low cost service centre has been established, for other necessities, they have established linkage with relevant service provider. Very importantly the entire forum has learnt on impact assessment should be done at every crop season at every year round, how it should be declared to the farmers.

Resilience Building for Drought through Tank Renovation: Experiences of Communities in Gundar and Vaippar Basins

DHAN's Vayalagam Programme organised a Community Dialogue on Drought and Tank Renovation as part of Madurai Symposium. Mr. P.S.Harikrishna Raj, District Development Manager, NABARD called the farmers of Gundar basin for working collectively to protect and maintain water bodies. He shared the initiatives of NABARD and appreciated the efforts of DHAN in rebuilding the community management on water bodies. Mr. A. Selvapandi, Joint Director of Agriculture, Madurai suggested summer ploughing in rainfed lands, establishment of farm ponds, insurance for risk transfer, trench cum field bunding, intercropping and multiple cropping, micro irrigation as resilience building measures. Mr. Dinesh Murthy, Executive Manager, ITC, shared that Farmers are not aware of crop water requirement and often end up with excess irrigation, which needs to be prevented and farmers must shift toward water efficient methods.

Mr. Vellaippan, Team Leader, DHAN Foundation presented that out of 2276 existing water bodies in the Gundar and Vaippar basin 361 were renovated by DHAN with the support of Hindustan Unilever Foundation. Besides renovation of water bodies land treatment and drainage line treatment were also implemented in collaboration with NABARD. Our assessment shows that in 2016-17 about five billion litres of water have been saved through renovation of water bodies and promotion of improved farm practices. He shared various resilience building measures including renovation of irrigation tanks, ooranis, establishment of farm ponds, renovation of anicuts, tank silt application, SRI method of farming etc.

What needs to be done?

Introduce and intensify the demand management measures like summer ploughing, establishment of farm ponds, SRI method of farming, silt application, crop diversification, multi-cropping, micro irrigation etc., as part of resilience building. Government must play an active role in evicting encroachment, preventing sand mining and introducing appropriate improved farm practices. There are 42 anicuts in the Gundar basin, most of them is not in good condition, needs to be renovated. Linking tank silt application with MGNREGS would benefit both farmers and the landless in the village.

Building resilience for Local livestock breeds through herbal treatment

India has many native breeds of livestock belonging to different regions. The important breeds of Tamil Nadu include Kangeyam, Pulikulam, Malaimaadu, Umbelacherry, Bargur, Vembur sheep, Kachaikatti Karuppu, Sevvadu and Kanni aadu have been described. The importance of local livestock breeds with the specific geographic value have got

adapted to the local climatic condition and have survived for many centuries and therefore they are to be protected. As per FAO statistics, there are more than 7500 breeds at global level and every month a breed is getting extinct. "Jallikattu Protest" created awareness among the Tamil communities and enhanced the pride of people who were conserving the native breeds. SEVA, a well-known NGO working on local breeds of cattle organised a workshop as part of Madurai symposium.

Now-a-days cattle are facing sever health issues due to poor feeding habits. Cattle feeding on plastics, papers and unhygienic left over rice are causing them health hazards like diarrhea and other intestinal disorders. Fallow grazing also got vanished in most part of the country due to shrinking lands. Veterinary hospitals are either inaccessible or expensive logistically. Last year drought even has worsen this issue. Farmers were pushed to sell the livestock for lower price or let it die.

Traditional herbal treatment for many diseases of the animals, could very well lead to reduction in mortality of the animals through better management. These herbs are used based on practice by various villagers. Seva realizing the importance of these herbal practices started to document them from rural practitioners.

Herbal treatment for control of mastitis, foot and mouth disease, reproductive disorders, control of internal parasites through herbal medicinal plants as ingredients have shown greater results. Demonstration of herbal masala mixture that cures digestive disorder stands testimony to the native wisdom capable of building resilience for livestock management.

Native breed cattle herder of W.Puthupatti village, Virudhunagar district has shared his experience on rearing Malaimadu cattle. He emotionally shared that his livestock strength has reduced by 80%. The major reasons behind are reduction in cattle grazing grounds, due to conversion of 'porampokku' lands to private properties, restriction to enter forest by announcing it as 'reserved forest', siltation of tank due to which dead storage is lost and increase in cattle feed cost.

Providing ID cards for herders, establishing more research stations for native livestock herds welfare, linking herders' association with tank associations for right over fodder cultivation and drinking water, creating 'herd crossings' in highway to avoid accidents, permitting traditional herders into forest with limited restriction are some of the resilient strategies that could save native breeds.

Madurai Symposium in Media

Indian Express
23 September 2017

Breast milk increases kids' IQ: e'
Madurai: Breast milk helps increase childr
Dr K Mathiarasan, Director, Institute of C
and Research Centre, Madurai. Addressi
'Building Resilience
for Intensive 1000 r
Foundation on Fri
during pregnancy
was called the c
health outcom
three phases.
baby. It will a
"Milk can b
he said. Tr

THE HINDU
23 September

Millet consumption o
STAFF REPORTER
MADURAI
A steady decline in con-
sumption of millets was a
matter of growing concern,
said speakers at the eighth
edition of Madurai Sym-

தினமணி
23 செப்டம்பர் 2017

'சிறுதானிய உணவுகளை மறந்ததே நோய்களுக்குக் காரணம்'
மதுரை, செப். 22: நமது பாரம்பரி
யமான சிறுதானிய உணவுகளை
மறந்து அரிசி உணவுக்கு மாறிய
தால் சர்க்கரை உள்ளிட்ட நோய்
களுக்கு மக்கள் ஆளாகியுள்ளனர்
என்று தமிழ்நாடு வேளாண் பல்க
லைக்கழக பேராசிரியர் வரதராஜு
பேசினார்.
தானம் அறக்கட்டளை சார்பில்
மதுரை தழுக்கம் மைகா...
கூடலரங்கம் 2017

ஆண்டுகளுக்கு முன்பு வரை மக்
களின் பிரதான உணவாக சிறு
தானியங்கள் இருந்து வந்தன.
ஆனால் வறட்சியை காரணமா
க் கொண்டு வெளிநாட்டில்
இருந்து கோதுமை அறிமுகம்
டுத்தப்பட்டது. மேலும்
அதிகரித்து வருகிறது.
சிறுதானியங்களை பெரும்பா
வான மக்கள் பயன்படுத்தக்
யாததற்கு காரணம்
இயற்கை...

mukkam C
PHOTO: G. M
llets such
rd, foxtail a
rice is
h Public Dist
, leading to

For more details, please visit <http://www.maduraisymposium.net>