BERAS India and it's seven local food systems.

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BERAS India consists of 13 different stakeholders as founding members and with the support of BERAS International, the BERAS India secretariat has been fully operating since 2014. The objectives are to support small farmers and food businesses following the universal concepts of Ecological Regenerative Agriculture, Diets for a green planet and Local Sustainable Food Societies. The network is spread through Tamil Nadu and Pondicherry as well as Ladakh in the north. Population of Tamil Nadu is 60 million, of which 70% are in rural areas, of whom 80% are small farmers. BERAS India has currently 23 active partners from various fields; non-governmental organisations, universities, research institutes, associations, academic institutions and biodynamic farmers, policy makers in the state and central government, producers, traders and local communities representatives.

Figure….: Sitting from left to right: Mr. D.N. Sharma, Dr. Karuppuraj, Dr.Arun Kumar, Dr. Seshadri, Mr. Krishnan, Mr. ---------- Mr. Jaison J. Jerome. Standing 1st row from left: Ms. Isabell, Ms. K.A. Chandra, Dr. Unnamali, Mrs. Ambly, Mr. Thangapandian, Dr. Perumal, Mr. ---------- Mr. Jayachandran, Mr. Suresh Kanna, Dr. Kasmir Raj. Standing 2nd row from left: Dr. Menaka, Ms. -------- Ms. Dorian, Dr. Sharmila Dass, Ms. ---------- Mr. ----------Dr. Lucas, Mr. ----------Mr.---------- Mr. ----------)
Source: Eco Pro

BERAS India, Local Sustainable Food Societies and Learning Centres

Ladakh:

LEHO (Ladakh Environment and Health Organization)

Tamil Nadu:

Jezreel Farms
Kudumbam
Inba Seva Sangam
CIRHEP
Muhil
Annapurna Farm in Auroville

Ladakh - LEHO (Ladakh Environment and Health Organization)

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Picture: A.K. Hertwig

A warm welcome to the Eco Village Takmachic

From left: Phungsog Dolma, Astrid K. Hertwig, Sonam Lhamo,Raymond Auerbach,Jostein Hertwig,Tsering Angmo, Thinles Angmo,Sonam Yangdol and Mohammed Deen

Ladakh is the highest plateau in the state of Jammu and Kashmir with much of it being over 3,000 m. It extends from the Himalayan to the Kunlun Ranges and includes the upper Indus River valley. Ladakh is a high altitude desert as the Himalayas create a rain shadow, generally denying entry to monsoon clouds. The main source of water is the winter snowfall on the mountains.

The main area of work for Ladakh Environment and Health Organisation (LEHO) is sustainable development, ecology, and health. This was taken up in response to recent changes in agriculture, food habits, social values and culture of the different

Ladakhi societies. The concept of sustainable development is based on the holistic approach to using natural resources such as land, water, vegetation and livestock of the villages, integrating with the age old traditions and cultures trying to hold on to and also restore the ecological balance and social harmony which had been maintained over the past centuries.

LEHO works in 46 villages with organic farming models and education of farmers. Particular attention is on seven Eco Villages where training and capacity building programmes are organised. In these villages LEHO has together with the local community implemented projects for:

- Artificial glaciers for storing water during winter;
- Drying of fruit and other local food processing methods;
- Market development and market availability.

LEHO has a close relationship with the local government LAHDC (Ladakh Autonomous Hill Development Council) in particular to develop a policy for organic farming, organic food production and consumption.

During winters, the people of Ladakh suffer from food shortage as the extreme cold weather condition does not support any vegetation and the farming comes to a halt. Crop farming in Ladakh is limited only for five months i.e. May to September.

To solve the issue of food shortages and nutritional deficiencies, LEHO proposed the concept of protected cultivation. Protected cultivation is the introduction of *the 'passive solar greenhouse technology'* (See Figure….) to produce vegetables in winter in remote areas of mountain regions. The technology is simple, local resource based, low cost, environment friendly, efficient and having acceptability from the community. It is one of the most suitable technologies to solve nutrition deficiencies and provide food security in Ladakh, as it has the natural advantage of having lots of sunshine in the winter months.

Figure….: Source: LEHO under Geres project

Coonoor, the Nilgiris - Jezreel Farms

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The district of Nilgiris is basically hilly, lying at an elevation of 1,000 to 2,600 m. The elevation of the Nilgiris results in a much cooler and better climate than the surrounding plains. During summer the temperature reaches a maximum of 25°C and a minimum of 10°C. During winter the temperature maximum is 20°C and the minimum 0°C. The district regularly receives rain during both the Southwest Monsoon and the Northeast Monsoon. The main cultivation is plantation crops such as tea and coffee, but with some cardamom, pepper and rubber. The area has good conditions for horticulture.

A major task is to find viable organic alternatives to tea plantations. The tea plantation today covers a large area in the Nilgiris. Predominantly the plantations are conventional with intensive use of mineral fertiliser, herbicides and pesticides. This has negative health effects for the workers, the soil and the environment.

The initiative is connected to 11 individual small farms, and four NGOs representing more than 130 farmers. A general challenge for these farms is the inclusion of animals and through this to be able to produce their own manure and apply effective composting methods. Combined farmer training programmes have been conducted in a few tribal villages.

There is a need for capacity building in many other aspects of primary production and also to discuss and develop ideas on value addition for the products. A small wholesaler for organic vegetables and fruits has been established with regular deliveries both in the area and to Chennai. There are also plans for setting up an organic restaurant.

Connected to the development of the initiative, there is ongoing work with local schools on ERA farming and Diets for a Green Planet. Collaboration with a school for architects has also commenced, both for the practical work with organic farming on their land and also availability of premises for training/meeting for local farmers. There are good relationships with the Department of Horticulture and Horticulture Research Centre of Nilgiris.

Mahesh L. Melvin visiting tribal

farmers	**The BERAS team in Coonoor**

Figure…..: …….. Source: **Mahesh L. Melvin**

Kudumbam

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Kudumbam was founded in 1982 by Mr Oswald Quintal, Dr Nammalvar and Mr Perianayagasamy. At that time, rural Tamil Nadu was going through an agricultural crisis. The introduction of "Green revolution" technology in the 1960s had led to a shift in land use from diverse cropping systems, to monocultures with heavy application of chemical pesticides and fertilisers. Irrigation slowly led to the depletion of ground water, and small scale farmers found themselves more marginalised day by day. Kudumbam then started sensitising rural communities to the rights to community water bodies, and the benefits of drought tolerant traditional crop varieties. They identified rural leaders and facilitated community participation in deepening and managing of community water tanks, raising of tree nurseries and re-establishing of community forests. Kudumbam also has an organic shop in the Trichy office.

The vision of Kudumbam is to strengthen vulnerable communities through the building of a multi-stakeholder partnership for the preservation and regeneration of native flora and fauna, in order to ensure a sustainable livelihood.

Kudumbam is currently working in 15 panchayats covering about 45 villages that are undergoing periodical training programmes aimed at the creation of Bio Villages.

- They organise annual seed fairs and festivals on millets, vegetables and paddy, and encourage farmers to participate in seed distribution and seed sharing and also knowledge sharing.
- Periodical and Seasonal long training programmes, practical demonstrations, exposure visits, seed production, training on soil and water conservation techniques and livestock management are some of the education efforts.

Kolunji Ecological Farm and Training Centre

Since 1990 Kudumbam runs an ecological farm and training centre called "Kolunji" located in Odugampatty village, Pudukkottai district. The area is dry and the cultivation is dependent on the monsoon rains. The idea was that farmers in the nearby villages would be motivated and inspired to start organic farming from the practical example of Kolunji. For cultivation a number of organic inputs are prepared and used at Kolunji and the nutrients are recycled through vermicompost. Animals such as goats, cattle, hens and ducks are an important part of the nutrient circulation at the farm. Since the farm is situated in a rainfed area the rainwater is conserved and managed by ponds and mounding. Another crucial part of the sustainable

farming is the production of tree seedlings for the agroforestry system. In addition to the farm training centre there is also a home for children at Kolunji.

Kudumbam has initiated "LEISA Safe Food" (Low External Input Sustainable Agriculture). This is a market initiative supporting small farmers to get support for collective procurement, processing and marketing of their organic products.

Kudumbam collaborates with officials and authorities from departments of agriculture, animal husbandry, forestry, agriculture engineering, NABARD (National Bank for Agriculture and Rural Development), Department of Co-operatives, District Collectors, Local Panchayat Presidents, etc., and inviting them to participate in its programmes, trainings and meetings.

		
Kudumbam Farmers' Stall at the Organic Exhibition, Trichy.	A group of participants trained at Kudumbam Kolunji Local Learning Centre for organic agriculture.	Kudumbam team: Ist row from left: Mrs Pangayavalli, Mrs Revath, Mrs Viji, Mrs Hilda, Mrs Rupa, Mrs Lilly Pushpam 2nd row from left: Mr Jaising, Mr George, Mr Suresh Kanna, Mr Oswald Quintal.

Figure…: ……. Source: Kudumbam

Inba Seva Sangam (ISS) – Sevapur, Kadavur district

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Inba Seva Sangam (ISS) is an Indian NGO founded in 1968 and based on Gandhian principles of nonviolence and welfare of everyone.

Dr. K. Perumal: "Core values of ISS is truth, non-violence, selfless service, love, brotherhood, self-reliance, mutual understanding, reverence to all faiths and nature, mutual cooperation, dignity of manual labour, devotion, dedication, confidence and discipline."

ISS is the lead partner of BERAS India and coordinates its activities through a network consisting of 13 different stakeholders as founding members under the supervision of BERAS International Foundation. BERAS India secretariat has been fully operational since 2014. The objectives of BERAS India are to support small

farmers and small food and fibre businesses following the universal concepts of Ecological Regenerative Agriculture, Diets for a Green Planet and Local Sustainable Food Societies. The network is spread through Tamil Nadu and Pondicherry (Population of 60 million, of which 70% are in rural areas, of whom 80% are small farmers.) BERAS India currently consists of 23 active partners from various fields – non-governmental organisations, universities, research institutes, associations, academic institutions, biodynamic farmers, policy makers in the state and central government, producers, traders and local communities.

ISS has as its main objective to work for the rights of the rural poor, and to enhance their social and economic status. ISS also seeks to promote an ecologically sustainable way of life. ISS target groups are mainly orphans and vulnerable children, vulnerable women and poor peasant families. The organisation runs two homes for children (with a total of about 300 children) and one Higher Secondary School (HSC) up to standard XII and one Community College for rural youth and adults. It works with training and micro loans (through Self-Help Groups for women), provides literacy programmes and runs 20 "Community Evening Study Centres". ISS also works with water management and the rehabilitation of eroded and abandoned farmlands. ISS owns and runs a biodynamic farm on 13 ha and a herbal garden and nursery area of 1.5 ha for the conservation of endangered species. It has a network of contacts to the organic/biodynamic organisations across the country, and it supports eco-clubs at 140 schools and 300 self-help support groups for women in 70 villages in the area.

ISS have been working in the Kadavur region for the past 12 years empowering farmers, school children and local government thorough the Small Farmers Empowerment programme. The outcome of this programme has led to the formation of a farmer's federation consisting of about 300 certified organic produces or farmers and a scheme for selling their products through the local market. To this end Kadavur Organic Farmer's Federation (KOFA) was formed and registered under Tamil Nadu Government Society Act.

Commentato [AR((C1]: Not "Asociation"?

During the farmers empowerment programme, ISS has also worked with local schools on promoting environmental wellbeing. Here there are many reports on challenges including malnutrition and nutrition security in their midday meal programme. Based upon these findings, ISS plans a project to improve nutrition and food security of rural school children in the Kadavur valley following the BERAS principles of Diets for a Green Planet. In consultation with school authorities and stakeholders the project activities will be implemented in 15 selected rural schools in Kadavur panchayat and one community college- the school of biodynamic farming in Mavathur village panchayat in Tamil Nadu. The project will identify and ensure the participation of about 1400 children/students, 60 teachers and 300 existing certified organic farmers, retailers and market personnel, education department officials, local governments, village youths and public from the region.

ISS collaborates with officials and authorities from departments of agriculture, animal husbandry, forestry, agriculture engineering, NABARD (National Bank for Agriculture and Rural Development) Department of Co-operatives, District Collectors, Local Panchayat Presidents etc., and inviting them to participate in its programmes, trainings and meetings.

Main activities of Inba Seva Sangam (ISS)

		
Annai Lea Higher Secondary School Established as Senior School in July 2005 and subsequently elevated to the status of Higher Secondary School in 2010 with two sections in the higher classes	**Small Farmers Empowerment** To promote organic farming, land improvement measures, processing of food, sales, and to increase awareness on environment and health aspects	**BioDynamic School** ISS started the first bio-dynamic college in India. In the state of Tamil Nadu there is an urgent need to promote organic and biodynamic farm practices for sustainability purposes.

CIRHEP (Natural Resource Management)

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Centre for Improved Rural Health and Environment Protection (CIRHEP), a registered NGO established in the year 1994, functions in the districts of Dindigul, Theni and Madurai of Tamil Nadu, India. CIRHEP is committed to the cause of environment protection especially managing water and soil resources sustainably and its efficient utilisation for the benefit of present and future generations. CIRHEP works with farmers promoting organic agriculture and bio-dynamic inputs in their watershed areas, a producer company, promoting a sense of responsibility through environmental education, working for women empowerment, working with adolescent girls and children as part of an integrated community development approach with an intention to reduce poverty, improve livelihood and access to enough quality food for rural people to lead active and healthy lives.

CIRHEP has established the Kadavakurichi Sustainable Agriculture Farmers Producers Company. This market initiative supports small and marginal farmers to get support for marketing their organic products.

As part of soil and water conservation measure CIRHEP has been doing its pioneering work in watershed development programmes since its inception. The aim of watershed development is to store and conserve water where it falls, within every village, under the direction of the especially constituted village watershed committees. CIRHEP has implemented ten watershed projects so far in Dindigul District covering about 50 villages with the funding support of NABARD and TAWDEVA; there are 3,500 beneficiary farmers in an area of about 11,500 ha.

CIRHEP has a centre for natural resource management. This centre serves as a hub to transfer experiences in watershed development, biodynamic/organic agriculture,

livelihood intervention, and other related concepts to farmers, rural women, youth, children, NGO staff, government officials, students and international visitors.

CIRHEP is promoting a sense of responsibility through environmental education programmes to student communities by sharing their experience. Experienced and caring professionals are committed to positive youth development ensuring this hands-on training programme creates 'episodic memories' for the students. The Environmental Education programme is designed to offer students experiential, hands-on learning opportunities in a rural setting. This is the perfect opportunity to enhance and reinforce what is being taught in the classroom as learning beyond desks and chairs enables them to improve their socialisation, curiosity, and as an occasion for immersing themselves in a rural place for a few days.

CIRHEP works closely with local government, panchayats and development departments. They extend its programmes to communities in collaboration with departments of agriculture, animal husbandry, forestry, agriculture engineering, etc.

Below some images from the daily work of CIRHEP

Figure…: Source: CIRHEP

Muhil – **Sustainable Agriculture for Everyone (SAFE)**

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Co-workers at Muhil

Picture: A.K.Hertwig

Figure…: …..... Source: Muhil

Muhil was established in 1992 inspired by the UN project “Health for all by 2000”. It is situated in a rural area outside the city of Madurai. Muhil work covers 80 nearby villages where they offer health and other community services. Since 2004 MUHIL has been engaged in biodynamic farming among the farming families of 40 villages in the Madurai district. This work is based on a holistic approach for the village people:

- Assurance of daily occupation and medical care;
- Sustainable agricultural economy and with market facilitation;
- Prevention of migration of rural population to urban areas;
- Protection of social and natural environment as vibrant rural economy.

A major further achievement was a project to rejuvenate farm land close to the MUHIL premises and with the establishment of Karmuhil Organic Farms. This project has been extraordinarily successful. With the persistent and skilled use of intercropping, planting of trees, cow manure, different compost methods and watershed management, the soil has been regenerated and is now in full use for growing vegetables, pulses, millets, and fodder for the animals, plant and trees for the distillation of essential and aromatic oils.

KARMUHIL ORGANIC FARMS has launched an Organic Farming Project, which includes Training Programmes as follows:

1) To target a total of 600 persons, farmers (200) and farm workers (400), to be trained by the end of 2018.
2) In order to consolidate efforts completed in 125 ha to extend to another 100 ha, total 225 ha by 2018.
3) Promoting organic food or recommended diet along with the prescribed natural (herbal) remedies or medicine.

Muhil has started a producer company, a small organic shop and plans to open a restaurant.

MUHIL has been an active partner in participating in all the public sector schemes and programmes for Village Community Health Services, planting of trees to protect environment, rain water harvest plans to conserve water and prevent top soil erosion, digging of agri ponds and canals to facilitate improvement of rain-fed cultivation, etc.

Annapurna Farm in Auroville

Contact: “Tomas” (Geert Tomassen) – in charge of the farm
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Newsletter: https://www.auroville.org/contents/4154

In 1966 UNESCO commended the „Auroville Project“ in Tamil Nadu India as a project of great importance for the future of humanity, thereby giving their full encouragement. Today – almost 50 years after its inception with a population of 2550 – Auroville is recognised as the first and only internationally endorsed ongoing town–experiment, anticipating the unity of man. Auroville’s holistic thinking includes the principles of organic and sustainable agriculture; around 20 organic farms grow food for the community.

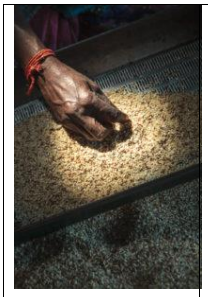
With its 55 ha Annapurna Farm is the community’s largest and only certified organic farm. The farm was started 30 years ago on a barren tract of land. Today Annapurna produces grains, fruits and dairy products for the community. Besides that it functions as the granary of Auroville by storing and processing grains grown on other Auroville farms and some organic farms from the bio-region. While growing food for the community the farm is exploring ways to improve and adjust to the ongoing challenges of the everyday reality. Many questions about sustainability, nutrition, efficiency, economics, wild life, water scarcity and much more are the daily challenges the farmers have to deal with. For this reason the farm keeps track of ongoing activities; data is being collected and learned from by farm stewards and volunteers/students.

Besides the ground reality the farm has a spiritual base in which individual growth and development has space to flourish. Working on the farm is more than getting the job done and is a means to develop one’s being.

Pictures below: Weeding the rice and farm manager “Tomas” (Geert Tomassen) presenting the dairy on an open day at the farm

Source: Annapurna Farm

Auroville's economic life includes aspects of capitalist and socialist principles; there is no private ownership of land, housing and immovable assets and on the other hand individual leadership and entrepreneurial qualities are welcome. Basically there are "service units" and "income-generating units". Stewardship is given to the individual by the working group of the particular sector. The 125 income-generating units generate profits which help to sustain part of the Auroville economy as a whole. Annapurna Farm is considered a "service unit", and is not focusing on profit generation but on producing healthy organic food for the community. The farm aims to break even and to generate a small profit to deal with eventualities. This means major infrastructure has to be provided for by fundraising or community support.



The Auroville Grain Group

Annapurna Farm functions as central granary where grains are dried, cleaned, stored and processed. The working group meets once a month on a grain farm and discusses improvements in grain cultivation, does crop planning, determines prices, reviews crop loan applications and tracks planting and harvesting. Planning is now smoother because grain group members meet regularly and peer review helps all farmers to learn and improve their standards.

Source: Annapurna Farm

~~REFERENCES~~

~~Scientific reports from BERAS projects~~