

## Ramanathapuram: A walk through arid pastures to coastal creativity

47<sup>th</sup> Shodhyatra | May 21-27, 2022 | Part I

*Sangam literature identifies five interior landscapes. We journeyed through four,<sup>1</sup> namely, 'palai' (desert), 'mullai' (forests and adjoining lands), 'marutham' (fields), and 'neythal' (seashore). Our 125 km Shodhyatra through Ramanathapuram district, Tamil Nadu brought us amongst farmers, fishers, weavers, healers and many more.*

<sup>1</sup> We did not traverse 'kurinji' - the mountains, as identified by scholar Balambal V. in "Studies in the history of the Sangam age" (1998)

Few Yatras have offered as much scope to observe such diverse landscapes and communities as this one. The fisherfolk have developed simple but effective innovations. One of these is a fishing device using only a basket, a plastic bag, and stones. Though the catch from such an apparatus is small, they have chosen not to use more advanced equipment to avoid endangering the population of fish. They cultivate seaweed for food, fertilizer, alginates as well as a source of sustainable dyes for children's toys. They also make children's toys out of palm fruit. In fact, palm has several uses in food, medicine, art and architecture. Sixty shodhyatris had the opportunity to see how the people of Ramanathapuram protect nature, their health and their culture. Honey Bee Network Volunteers from the DHAN Foundation, SEVA, The Cuckoo Forest School, GIAN and SRISTI organized the Yatra.

### Livestock Farming

People in the district have retained their animistic roots. We came across a tree at the entrance to a village on which farmers had hung plastic bags with cow placenta in them. They believe it wards off negative energy, and is a prayer

offering for the well-being of new-born calves. Kumara, a shepherd from Pirappan Valasai village, values the welfare of his goats as his young children rely on goat milk. Though goat kids fetch about Rs. 5,000, he sells them at the age of 7 years, after their teats have dropped and they can no longer lactate, for Rs. 3,000. 'Kidaai Muttu' (goat fighting) employs special breeds of fighter goats,<sup>2</sup> which sell for roughly Rs. 13,000. A shodhyatri, Shakuntala Devi has been associated with SEVA and Honey Bee Network for many years. She has helped farmers procure herbal treatments for diseases in sheep, and goats. This has saved them the trouble of going to veterinarians for minor ailments.

Mr. P. Kabilan is a member of the Thozhuvam - Farmer Producer Company Ltd. (FPCL) in Madurai. More than

<sup>2</sup> The local names for these breeds are the 'karuva' (dark brown colour), 'mayilambaadi' (black and white), 'kongu' (pure white), 'kurumbai' (Bangalore breed) and 'naatu kadaa' (South Indian breed) (L, Teena. "Madurai host to thrilling goat fights". The Times of India, July 15, 2012. Retrieved from: <https://timesofindia.indiatimes.com/madurai-host-to-thrilling-goat-fights/article-show/13741272.cms>)



*Pullikulam cow with calf (source: TNAU)*

750 FPCL members rear the Pulikulam breed of cows.<sup>3</sup> He has innovated seed pots made from this indigenous breed's nutrient-dense dung. These provide additional nutrients to seedlings in an eco-friendly way. The FPCL also produces dairy products like A2 milk, and encourages farmers in the state to revive the use of draught animals. Mr. Kabilan explains the process of 'sedaovathal' in which bulls are employed to crush weeds, and then pull a land levelling device over the crushed weeds to mix them into the soil. After the harvest, bullocks help in threshing the grains by trampling over them. Mr. Kabilan spoke of how pastoralists collect cow dung in 'kottakarams' or cattle sheds and sell it to farmers who use it as manure for a plentiful harvest. The thriving dung economy of the region depends heavily on sales to farmers in Kerala, who use manure on their plantations. Madurai's cattle owners earn about Rs 50,000 - 60,000 in a month from this, with an 80 kg bag priced at Rs 120.

The cattle population in the district is less than 90 thousand, whereas the population of sheep and goats is over 2.4 lakhs and 2.2 lakhs respectively. Farmers rear sheep and goats as they are relatively less expensive to maintain and plentiful availability of pastures. Sheep penning is done with about 200 sheep per acre. It is a natural means of restoring soil fertility.<sup>4</sup> We found a farmer experimenting with a method to train his goat kids to graze on higher branches of leaves. He would hang bunches of fresh leaves at a height which the goats could only reach by standing on their hind legs. After some time, he would raise the branches higher, helping them build their strength. Poultry is cultivated mainly 3 Pullikulam cows are maintained by migratory Konar and Thevar communities, and used for the 'jallikattu' sport of bull-fighting. Their population has been declining. (Singh, Pundir, Kumarasamy, & Vivekanandan, 2013)

4 Penning 250 sheep per acre has been shown to provide 70 - 80% of the soil's nutrient requirement. Grazing and sheep urine also help with weed and pest control (Nandhini & Suganthi, 2018)



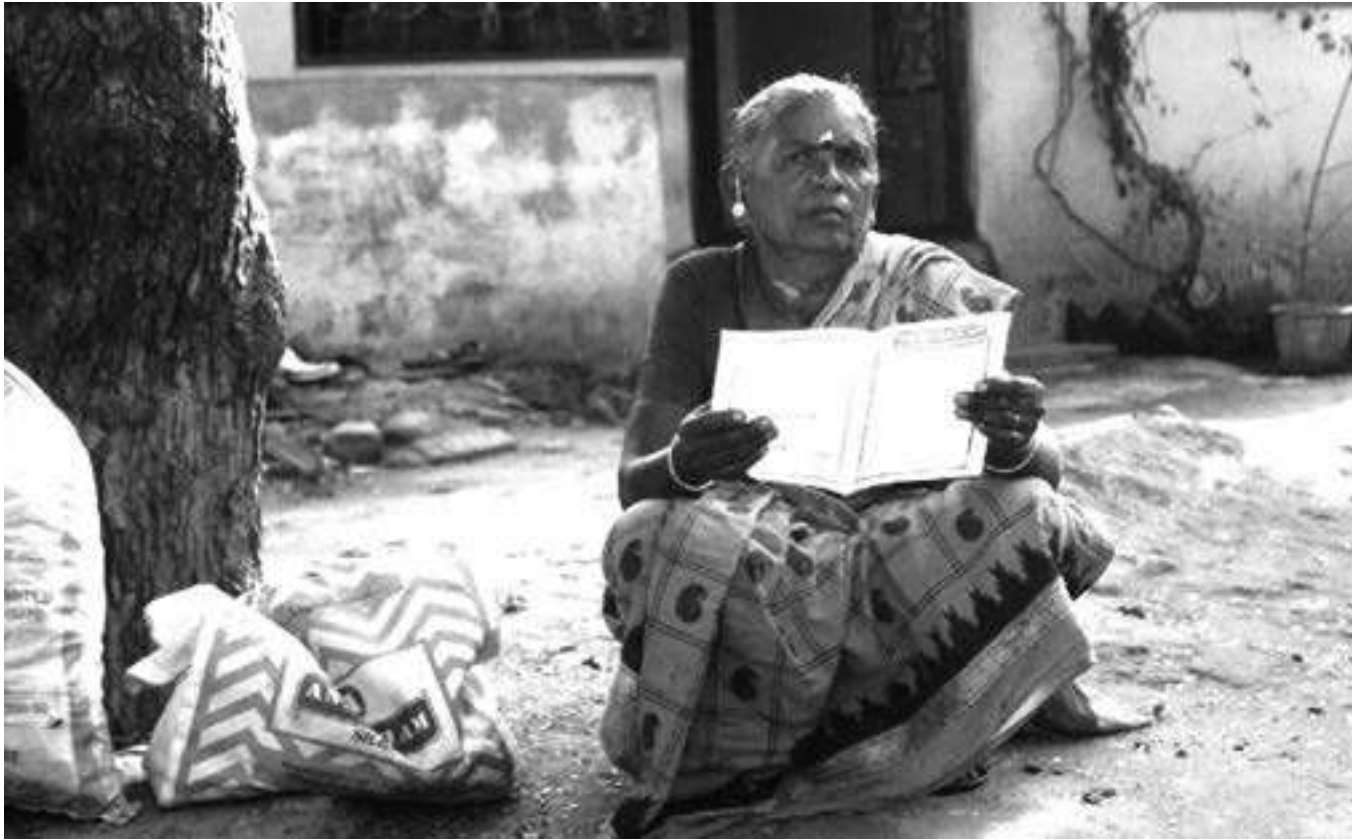
*A farmer training his goats to climb branches at higher level*

through backyard farming. We came across an initiative in a village where eggs of 'naati murgi' (country hens) were being delivered in shoeboxes lined with straw. The shopkeeper had noticed that eggs would break when he sold them in plastic bags to young children. This was a solution which also reduced waste by utilizing paddy straw, and reusing the boxes which customers return. Agriculture and a Heritage of Healthy Food.

For most farmers in the region, rearing livestock is a supplementary source of income, while their livelihood mainly depends on harvesting crops. Agriculture is rain-fed, and farmers try to avoid chemical inputs. The main crops grown in the district are paddy, ragi, pearl millet, various other millets, pulses, maize, ginger, cotton, groundnut, palm, and coconut. They are important in the region's heritage, and form the local staple diet. Mr. Segapi, whom we met in Yanivallam village, attributes his long life of 95 years to eating fresh fish and vegetables daily. The people of Ramanathapuram, regardless of age, seem to have a strong awareness of the health benefits of food. For instance, we all know about date palm jaggery but not many are aware of its use in remedies for skin diseases.

We learnt how to make several simple but highly nutritious





meals through recipe competitions for women. Vinsen Mary from Kombadi, and Sasikala from Kunappenandal shared their recipe for the digestive aid, 'kambu kulu'. It is made by combining 'kambu' (pearl millet) and salt. It regulates haemoglobin and sugar levels. Vinsen also mixes the leaves of the 'thuthuvalai' plant (*Solanum trilobatum* L.)<sup>5</sup> into a roti dough made with rice powder and onion. The leaves help in managing diabetes and increasing strength.

Ragi (finger millet) is a staple food. At Rameswaram, we were introduced to 'ragi puttu', a pudding with coconut shavings, jaggery, oil, onions and red chillies. It is said to aid digestion, control cholesterol, and strengthen bones. The recipes were given by three ladies, Muttivanachiyar, Vimala and Vattara. Jan Mary of Kombadi puts a local spin on 'ragi roti', adding jaggery, shallots, moringa leaves and cumin. This combination regulates body temperature and increases bone strength.

Popular snacks like 'paniyaram' (pan-fried dumplings made of moong dal and rice powder) and 'kolukattai' (stuffed dumplings with rice powder, coconut, jaggery, and gram flour) are believed to energize and strengthen

<sup>5</sup> This herb is used for gastric infection, coughs and ear aches, and also to counter snake venom, increase male fertility and cure lung diseases (Emmanuel, Ignacimuthu, Perumalsamy, & Amalraj, 2006)

the body. Recipes for these were shared by Uma Devi of Kunnappenandal, Ramai of Illamannur, Paapu from Theethangal, and Kalanjiam from Rameswaram. Vinnesasi from Kombadi made a refreshing thirst-quencher called 'sembarathi sarbath,' or hibiscus juice. It reduces blood pressure and prevents kidney stones. Another such drink was 'jigarthanda', made by mixing ground almonds, milk and sugar. It cools the body down and reportedly provides essential vitamins.

'Narathangi oorugai' is a pickle of the citrus fruit, with chili powder, garlic, and dry red chillies, known to improve digestion. It is important to preserve the medicinal properties of such botanicals when they undergo processing. The 'Multi-purpose processing machine' innovated by



*Yanai nerujil, which helps regulate bowel movements*



Dharamveer Kambhoj (See Honey Bee 20(1):10-12; 2009), achieves this by allowing the operator to control the internal temperature and speed. He demonstrated to farmers and other Shodhyatris how the device can be used to create juices, candies, pickles, and add value to several kinds of horticultural produce.

The Dharani Agri-research and Rural Empowerment (DARE) Foundation, founded by Mr. Dharani R. Murugesan, sells certified organic products. They have a store in Velipattinam town of the district, and an e-commerce site ([url: darefoundation.in](http://darefoundation.in)). They stock various vegetables, spices, oils, millet flours, pickles, and varieties of rice such as 'attur kichli sambar' rice, among others.

### **Traditional Knowledge of Medicinal Plants and Herbs**

The community's collection of healthy foods complements their tradition of plant-based medicine. As we walked from

Paramakudi to Rameshwaram we were introduced to over 30 plant-based remedies.

C. Mohana Krishna provided the information about the above remedies. He has acquired the knowledge from elders in his family, who were Ayurvedic specialists. He adds to this knowledge when needed with an extensive study of the flora at the foothills of the Pachamalai and Koli Hills. He has discovered several plants with ayurvedic uses. He is an organic farmer, growing and selling nearly a thousand varieties of rare medicinal plants. Innovators like Mr. Kambhoj and Mr. Krishna have found efficient ways to extract and process a wide range of horticultural plants. They aim to make them readily available around the country for those looking to adopt a healthier lifestyle. Such diffusion bolsters the people's efforts to preserve their heritage.



*Eating coconut pith (soft, white core of the stem) is believed to relieve stomach aches*

Yatris held a 'biodiversity competition' amongst children where they asked them to identify and name the uses of various local plants. In Ila Mannur, valuable information was shared by Kayash, Raiyashree, Menikashree, Harshitasri and Harshini. They won the competition. Several other children from the village also participated in building our knowledge base, including Mukil, Harishma, Keerthika, Yuga Mughileshwaram, Deepak, Poorvika, Kavinaya, Arish Kumar, and Minnadhi.

### **Horticulture**

Vegetables grown in the district include chilly, onion, eggplant, ladyfinger, and coriander. Chillies are more popular especially the endemic 'mundu chili' (*Capsicum annum L.*) which is prized for its rich flavour. About 20,000 h.a. of the district are covered



'Pandian kulam' weavers making a mat from coconut leaves by various horticultural crops. Betel vine grows well in loamy soils near the backwaters from the Gulf of Mannar and Bay of Bengal. A betel vine cultivator has to invest heavily in quality planting material, and plant protection measures.

Jasmine flowers are offered during prayers, and women wear garlands and flowery hair decorations when they visit temples. Flowers are used in perfume-making at a unit in Mandabam block. Over 13,000 farmers grow the endemic 'Ramnad gundumalli' variety of jasmine in and around Madurai. We spoke with farmers in Pirappan Valasai village, where the quality of water is good. Mr. Krishnavallie shared his deep knowledge of modern and traditional practices followed in jasmine farming.

The plants are covered with palmyra leaves for the first thirty days, after which a small opening is made through the palmyra for new jasmine buds to sprout. It is believed that pruning the flowers by 1 meter on the tenth day after the 'amavasya' (new moon) would result in more blossoms. New branches emerge within three months, and plants are further propagated through air layering. Layering allows roots to grow from a visible part of the stem, and this stem becomes an independent plant after being cut away from the mother plant. Flowers are not picked during the winter monsoon (December - January). To pick flowers during February to June, the leaves are completely removed in January.. Ramnad gundumalli requires irrigation only twice a week in sandy soils, and is grown on small plots of land ranging from 0.25 to 2 acres, at a spacing of 2.5 by 2.5 metres. Each bud sells for Rs. 1.5 - 3. Saplings grown by farmers in Ramanathapuram district are taken to Madurai, where they bloom into the famous 'Madurai Malli' jasmine. However, the GI rights are owned solely by a farmer's association in Madurai --a bone of contention with local farmers.

The lotus flower is also considered sacred. The Thamaraiikulam village is so named for its 15 acre lotus pond , which will soon be the site of a common purpose temple. A fund of Rs. 15 lakhs has been sanctioned to build it. There were so many lotus lakes around temples, which provided relief from the dry landscapes in between. Some of the water ponds were also found in the derelict condition.

Wish the technique of weaving lotus silk developed by Bijiashanti Tongbram (supported under MVIF by GIAN), could be practiced in this region too, to augment the income of local communities.



Karupatti Cafe in Ramanathapuram sells palm jaggery coffee, and organic products of other farmers such as baskets and decorative flowers crafted from palm jaggery leaves

...contd in the next issue

'Kondre' flower  
(*Peltophorum pterocarpum*  
(DC.) K.Heyne)  
The yellow flower is sun-  
dried, powdered, and  
mixed into water. This  
drink keeps blood sugar in  
check.

'Thalikodi' (*Ipomoea*  
*coptica* (L.) Roth)  
Its leaves are believed to  
prevent heat boils.

'Yanai nerunjil'  
(*Pedaliium murex* L.)  
Powder leaves and mix  
into hot water. Drink it to  
settle an upset stomach;  
also regulates bowel  
movements and other  
kidney functions.

Paramakudi

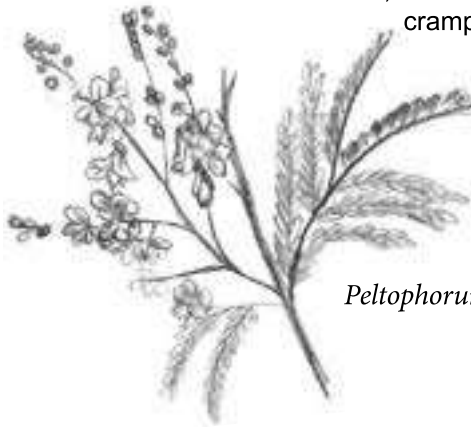
Kunappenandal

Ilamanur

Vaniyavallam

'Othiyan' flowers (*Lansea*  
*coromandelica* (Houtt.) Merr.)  
Juiced, to ease menstrual  
cramps.

'Saranai' (*Beorhavia diffusa* L.)  
Its leaves have anti-inflammatory  
properties.



*Peltophorum pterocarpum*

Areca nut  
(*Areca cathechu* L.)  
Mr. Kurpaiah, a cattle  
farmer in Kavanur told us  
that it prevents flatulence.

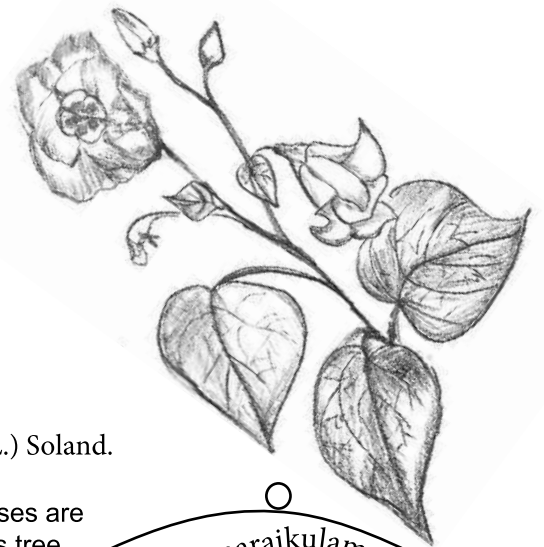
'Manjanathi' or 'noni' fruit  
(*Morinda citrifolia* L.)  
Digestive, which also reduces  
inflammation, treats skin  
conditions, and helps remedy  
liver problems.

'Mavalingans' leaves  
(*Bauhinia racemosa* Lam.)  
Eases menstrual cramp pain.

Ramnagar

Peravoor

'Nochi' (*Vitex negundo* L.)  
Nochi leaves are boiled in  
water over heat bricks, and  
the steam is inhaled to treat  
colds and coughs.



'Vishnukranthi'  
(*Evolvulus*  
*alsinoides* L.)  
Cures fevers.  
'Brain-tonic' is also  
derived from it.

'Poovarasu' leaves (*Thespesia populnea* (L.) Soland.  
ex Correa)  
Medicines for wounds and skin diseases are  
derived from the broad leaves of this tree.

Kuyavankudi

Thamaraikulam

'Kakkattan' flower  
(*Clitoria ternatea* L.)  
These blue flowers, when  
crushed under one's foot,  
release a liquid which  
heals cracks in the heel.

Vaniyankulam

'Marul' fruit  
(*Xanthium strumarium* L.)  
Heated to extract its juice,  
which relieves ear pain.

'Brahma thandu'  
(*Argemone mexicana* L.)  
Secretes a latex which  
clears cataract.

Chinna Akkiramasi

'Adathoda' (*Justicia  
adhatoda* L.)  
Cough syrup.

'Thavasi murungai'  
(*Sauropus androgynus* (L.)  
Merr.)  
Leaf paste prevents blood  
clots.

Pandiur

Theathangal

'Vellarugu' (*Calotropis procera*  
(Aiton) Dryand)  
Leaves used to make antivenom  
since snakes often invade  
residences during the rainy season.

'Kuppai keera'  
(*Amaranthus viridis* L.)  
Leaves relieve cold,  
coughs and loose motions.

Kavanur

'Nalvanee' (*Setaria italica* (L.) Beauv.)  
Leaf paste alleviates headaches.

'Rail poondu'  
(*Croton bonplandianum* Bill.)  
The leaves release an oil which  
should be applied to reduce  
itching caused by snake bites.

'Illuppai' or 'mahua' leaves  
(*Madhuca longifolia* (Roxb.) A.Chev.)  
Rat infestations are a common problem,  
for which mahua leaves are burnt. They  
are a natural rat repellent.



'Neermulli' (*Hygrophila auriculata*  
(Schumach.) Heine)  
Turmeric variety which enhances  
strength and stamina.



'Thuthi' leaves  
(*Abutilon indicum* (L.) Sweet)  
Can be eaten fresh, or dried and  
powdered. Contains antioxidants.  
Anti-inflammatory, and especially  
helpful effective against piles.

'Lasoda' or 'naruvalli'  
(*Cordia dichotoma* G. Forst.)  
Small green cherries used to treat intestinal  
worms. Juice made from the leaves  
provides relief during colds and fevers.

Pirappan Vilasai

Rameswaram

# Ramanathapuram: A walk through arid pastures to coastal creativity

47<sup>th</sup> Shodhyatra | 20-27 May, 2022 | Part II



*At nearly 4:30 am everyday, the wide coastline witnesses several fishermen embark into the sea, returning by 6:00 am with fresh catch of the day. A few amongst the fishermen proceed further, casting nine nets across a one km stretch around noon to collect crabs. They fetch them the next morning. The fisherfolk sell most of their catch to contractors who advance them the sum at a pre-decided rate rather than the current market price. Thus proceeds each day, subsisted by meagre earnings and underlined by a narrative of survival and hard work. Woven into this tapestry are the myriad stories and activities of the community. Here are a few glimpses, from arid pastures to coastal creativity in Ramanathapuram.*

Ramanathapuram district forms about one-fourth of Tamil Nadu's coast. The fishing community is heterogenous, and a few small industries have come up to market seafood<sup>1</sup>, pearls, seaweed, and *chank* (conch shell). Their catch comprises fish such as *velai meen* (Emperor Fish), *karapodi meen* (Silver Belly Fish), and *surai meen* (Tuna). The price of these fish are in the range of Rs. 150, 60 and 80 per kg, respectively.

The 237 km coastline makes Ramanathapuram well-suited for seaweed cultivation<sup>2</sup>. Women form the majority of the 300 or so seaweed collectors. They hire small boats called *vathals*, sometimes at a cost of Rs. 1,100 per trip. *Vathals* take them to islands which are three to five kms from the coast. Some stay on the islands for two to three days collecting seaweed. Wearing glass masks

enables them to easily spot seaweed beds, which are usually found at depths of six feet. About 300-350 kgs of seaweed can be transported in each boat, and will sell for roughly Rs. 4,000. They also know to collect seaweed during the *Amavasya* (New Moon) cycle, perhaps since water recedes farther during low tide<sup>3</sup>. They obtain agar-agar from a seaweed species called *marikolunthu paasi* (*Gelidiella* spp.), which is a common coagulant used in curries, desserts and biotech labs. They believe it should be made into a gel in water and used to break a fast.

The local fishers have a traditional remedy for the itchiness caused by skin contact with an octopus. They recommend rubbing rice steep on the affected area, and drinking coconut water. To neutralize sea snake bites, they apply a chili and clove paste at the site for two days.

## Troubled Waters

The fisheries in the district are in trouble due to the high prices of fuel for their trawlers. Small boats are not a viable alternative, as the government does not subsidize them, and their catch would reduce drastically. The uncertainty of catch and volatility in prices of fish has worsened in recent times. During the pandemic, they were able to earn Rs. 400/kg for crab meat, but are now only able to earn Rs. 150/kg. The hours during which they can fish are limited to early mornings.

A group of fisherfolk who had tried creating a business from seaweed cultivation, were unable to sustain it for longer than a few months. They believe it might have been a profitable venture had they been able to bypass the middlemen



who were setting unfair prices. Many fishers did not feel compensated for their labour, and stopped cultivating seaweed.

This has curtailed an avenue of income, and there were other resources being underutilized too. Along the eastern margins of the district, large areas of land remain barren due to high salinity in the soil – an unfortunate consequence of rain-scarcity and proximity to a brackish sea. Nor has any economic activity been generated from the abundant lotus resources in the 15 acre pond at Thamaraiikulam village. Some artisans have left their practice of making crafts from palm leaves as their profit margins were very low. We found a village where coconuts were being husked by using a traditional spine based husking device, which is tedious and risks injuring the workers. The safer methods recognised by HBN and NIF were showcased to the local entrepreneurs.

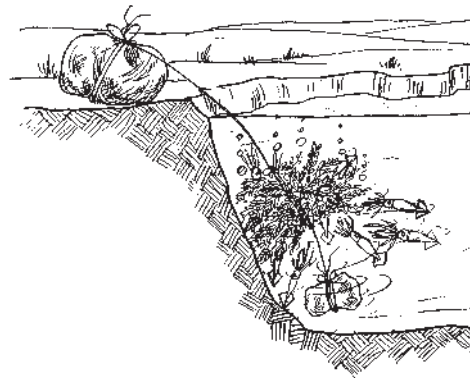
### Casting the Net for Innovation

The people of Ramanathapuram remain a resilient and resourceful lot. The fishing community stands out through their local adaptations and improvements in fishing activities. They use a traditional fishing device wherein waste fish is placed as bait in a basket, within a plastic bag attached to string. The basket is weighed down by stones, and it is lowered to a depth of about 10-12 feet underwater. When fish take the bait, the fisherman pulls on the string, closing the plastic bag and trapping



the fish within the basket. By using the simple apparatus, the community is able to put a check on overexploitation of fish. They trap 'ora meen' or rabbitfish with this device to make fish *sothi* (Stew).

Rakkamma, a fisherwoman from Kilakarai municipality has devised an innovative strategy for *kanawai* (Squid) cultivation, to save fishermen the trouble of hunting. She had observed that squid naturally gravitate towards *kolinji*, or wild indigo (*Tephrosia purpurea* (L.) Pers.)<sup>4</sup> and *avaram* (*Senna auriculata* (L.) Roxb.) plants. She ties two stones to bunches of these plants. One stone anchors the plants at a depth of about 10 feet underwater. The other stone remains at the surface so that the fisherfolk can retrieve the plant



bunches with squid in it. They use plastic bottles as buoyant ID tags to mark their bunch. Squid are cultivated for meat, and their black ink is used as dye<sup>5</sup>.

They colour toys with the pink-red and black dyes obtained from *kattakorai* (*Sargassum* sp.) and *baagoda pasi* (*Turbinaria* sp.) varieties<sup>6</sup>, respectively. The residue would be turned into fertilizer. They discussed how creating an e-commerce platform would let them set fairer prices and might lead to resuming seaweed cultivation. It would also allow them to scale up their normal fisheries business.

### Natural Crafts

Cotton grows well in the black clayey soil of the district. A brand called "Ambaram" sells pure cotton clothes for babies (website: [ambaramvirtue.com](http://ambaramvirtue.com)). Another local brand, "Nurpu", promotes cotton handloom *saris*, *dupattas* and



*vetties* (a wrap-around lower garment for men), focusing on sustainable materials and livelihoods for its weavers (website: [nurpu.in](http://nurpu.in)). Shodhyatris watched handloom silk weavers at work. Coconut and palm are heavily featured in crafts, and for decor. We observed a few artisans making origami art out of banana leaves, but this was at a very small scale.



### Adversity and Adaptation in Agriculture

Despite holding rich natural resources, the community has severe financial struggles. The district's saline groundwater and scarce rains cause distress as the population relies on rainfed agriculture. Village elders report a rising trend of the youth migrating away and out of agriculture due to lack of opportunity.

Climate change has impacted paddy farmers, leading them to also cultivate millets, chilis, groundnuts, and sesame. Some farmers have adapted by growing paddy varieties like the indigenous water-saving  *jyothi*  and  *matta* . Jasmine is somewhat drought-resistant, but is no longer a reliable source of income locally<sup>7</sup>. In Mandabam block however, about 500 traditional fishing families switched to jasmine cultivation sometime back. Recent market crashes have reduced their earnings from Rs. 1,500 per kg of jasmine to Rs. 500. Communities



also cope by harvesting coconuts, palm trees, and water lilies. Some villages store water in tanks to sustain farming, especially before the return of monsoon in October–January.

Pastoral communities are in decline due to disappearing grazelands. Foot and mouth disease, anthrax, and sheep and goat pox threaten the animal population. There is low awareness of livestock insurance, and some villages faced great setbacks a few years ago when many animals died.

Shodhyatris learnt that farmers were beginning to use chemical inputs. For instance, persistent budworm pests caused jasmine farmers to eschew customary organic practices for expensive chemical pesticides. A farmer, Kandraj, described controlling weeds and white flies in paddy using a sprayer machine that reaches up to 30 ft. However, chemical inputs are mostly a last resort. Farmers may prefer cultivating the local *mundu* chili (*Capsicum annum* L.) due to its low pesticide requirement<sup>8</sup>.

### Small Local Industries

With a few alternatives to farming and no major industry, the economy of the district is underdeveloped. A few small-scale industries of cotton and silk weaving, fisheries, salt, cement and papermaking operate. Besides farmers and fishers, we met artisans and manual workers. A few brick kiln workers had enrolled

in the Mahatma Gandhi National Rural Employment Guarantee (MGNREGA) scheme. They earn a maximum of Rs. 250 a day, for working from 8 AM to 2 PM.

An elderly lady reflected that, “*God has created a stomach for us, it is always hungry,*” explaining why she depends on her daily earning of Rs. 100 from MGNREGA work (calculated on the basis of work). None of her five grown children take care of her. The physically demanding construction work earns her just enough for two square meals.

Village elders are concerned about the weakening of conventional nature protection customs. Unchecked felling and sparse rains threaten palm trees. Mohan Krushna, an 80 year-old farmer and President of the local Palm Association worries that efforts to conserve them are inadequate. Their petitions to have palm cultivation declared a cottage industry by the state have been of no avail.

### The Path of Progress

During the night meetings, Shodhyatris discussed their perspectives on ‘progress’ in relation to caste discrimination, employment, education, and sanitation. Most people felt that reservations were secondary to bolstering the rural economy and infrastructure. In one village, local community members discussed infrastructure gaps and

attitudes hindering the adoption of toilets and good sanitation practices. Almost half the residents had no toilet, since government loans were given only to those with roofed houses, favoring concrete roofs over thatched ones. They discussed the scarcity of skilled farm labour and underutilization of cultivable land, and sought concrete solutions from the sarpanch.

We witnessed a number of simple grassroots solutions. Coconut farmers wrap tarp sheets around trees to deter rats who cannot climb such a smooth surface. (referenced in *Honey Bee Vol 33(1-2): 16, 2022*). At one place, brickmakers used wooden moulds to quickly and uniformly shape clay into bricks which are quite common in other parts too. In another village, women and young girls used trolleys to carry home 100-120 liter water jars. When discussing rural women’s well-being, suggestions included lighter



sickles, and *chulhas* (Mud Stoves) which mitigate health risks.

### Cultural Preservation and the Youth

Local brand “MotherWay” hopes to revive the love for traditional sweets like *chikki* (crunchy peanut-sesame bars) among children. They use locally sourced ingredients, such as palm jaggery, peanut, sesame, cardamom, and dry ginger. Through attractive branding and packaging, they encourage children to make healthy choices over more harmful candies.

Mr. Stalin, who volunteers at The Cuckoo Forest School, participated in the Shodhyatra. The School champions holistic education as the best hope for progress. Mr. Stalin explained how the curriculum arouses the curiosity and creativity of students through traditional arts, martial arts, socio-political

discussions, and organic farming to instil a love for nature. Since the students come from the nearby impoverished villages, the school covers their lodging and education expenses.

Among the cultural activities in the village, a young boy performed *silambam*, an ancient martial arts form. *Silambam* involves acrobatic leaps, and a complex degree of coordination between different parts of the body. A stick is used to defend oneself, usually made of bamboo.

### Many Young Kalams

Dr. A.P.J. Abdul Kalam hailed from the district, and remains an inspiration for the youth. We were reminded of his love for learning and his unwavering support to grassroots innovators when we visited his memorial at Pei Karumbu in Rameswaram. If children here had more opportunities as enriching as those offered by the Cuckoo Forest School, we might see many more Kalams emerge.

We met a few young innovators. At Ila Manur, Roshan showed us a model of a mini-windmill which could be



used to recharge a cell. Santhosh from Yaniyavallam dreamt of racing a KTM bike, so he modified his bicycle using spare parts he found within his house to go faster.

### A Land of a Thousand Blessings

The Shodhyatris observed the rich heritage of the land, visiting about 15 temples. We visited the Ramanathaswamy Temple on our last day. One of 12  *jyotirlingas* , its intricately carved gateways and pillars date back to the 12th-17th centuries. The tallest amongs its numerous *gopurams* (tiered towers) is 38 meters. The temple boasts the world's longest temple corridor, spanning 1,220 meters. Legend has it that Lord Ram built the site to

appease Lord Shiva after slaying Ravana, who was a devotee of Shiva. Due to Lord Hanuman's delayed arrival with a lingam from Mount Kailash, Sita devi crafted a lingam from sand so that Ram could pray at the appointed hour. The second lingam brought by Hanuman is located a little north of Ramanatha, and Ram declared that it would be given precedence in worship.

The district is dotted with *theerthams* (holy water tanks). Taking a dip in the Agni *theertham* absolves pilgrims of their sins. The water of the Jatayu *theertham* is potable and sweet. After morning prayers, women adorn their doorsteps with rangolis using powders and fresh flower petals. We spotted a girl doll hanging on a tree branch - likely another worship site.

The Shodhyatra is not only a discovery of people's ingenuity, but also a discovery of their innate compassion. They generously helped us understand the culture and ecology of their lands. One of many instances of our hosts' warmth and kindness was when a young girl shared with us ripe palm fruits she was cutting when she saw us walking through her village. Another was when a lady freely offered us her most ripe sponge gourds, which she had been laboriously collecting through the sunny day. Their kindness was truly a blessing.

### End Notes

1. Tondi and Mandapam taluks have fish processing plants which make export-worthy products from fish, crabs, squid, cuttlefish and prawns. There are several microventures for dried fish, which is used as feed for poultry and cattle. ([ENVIS Report on Ramanathapuram District, 2014](#))
2. "Intertidal and subtidal rocks [in the Gulf of Mannar] extend up to 1 m deep and they support abundant growth of Sargassum, Acanthophora and Hypnea species. The subtidal coral reefs are populated with Gelidiella, Turbinaria and Sargassum species. The southern Gulf of Mannar's rocky intertidal and lower intertidal regions maintain rich populations of several Ulva species." ([Ganesan, et al., 2019](#))
3. The phenomenon of Spring tides is observed between *Purnima* (full moon)



'*Sumaithangi kal*' can be interpreted as 'load-bearer'. They are remnants of a by-gone age when weary pilgrims and tradespeople would put a load on these stone benches to rest for a while. Now, most lie forgotten and in ruins. Though they are no longer used for resting, we happened to find a bench upon which bangles have been strung, where local people seem to be offering prayers.

and *Amavasya* (new moon); high tides are higher, and low tides are lower than usual. The fisherfolk also say that on *Amavasya*, seawater moves into the biodiversity-rich Athankarai estuary (which receives freshwater from the Vaigai river). This is probably during the high tide phase, which we guess might enrich the catch of fish.

4. *Kolinji* plants are also used in Ayurveda and Unani to treat a wide range of blood, heart, lung, liver, spleen and kidney disorders. ([Praveena, Pandian, & Jegadeesan, 2011](#))
5. Squid ink finds use in traditional Chinese medicine. It is known to help fight against uterine diseases and cancer, apart from having anti-inflammatory and anti-microbial properties. ([Jose, Krishnakumar, & Dineshkumar, 2018](#))
6. Both these types of brown algae are rich sources of alginate which is used in biomedicine, food, cosmetics and fertilizer industries. The average annual earning for seasonal seaweed cultivation in India was USD 1000, or about Rs. 70,000 in 2019 ([Ganesan, et al., 2019](#))
7. Jasmine shows moderate resistance to drought, giving higher yields and profits. Cultivating Ramnad gundumalli augments the livelihood of small and marginal farmers in the landlocked Namakkal district of Tamil Nadu. ([S. Karthiresan & T. Raj Pravin 2020](#))
8. Ramanathapuram's farmers may prefer these local varieties, since they feel that hybrids mean higher risks, higher spend on fertilizers and pesticides, and uncertain yields in rainfed conditions ([Schreinemachers, et al., 2015](#))